Community participation strategies to improve quality and utilisation of maternal health services in West Arsi Zone, Oromia regional state, Ethiopia

by

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Open Rubric

DEDICATION

I dedicate this thesis to the memory of my father, whose love and support guided me. May he rest in peace.

DECLARATION

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I declare that **Community participation strategies to improve quality and utilisation of maternal health services in West Arsi Zone, Oromia regional state, Ethiopia, is** my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.



_____ **JULY 2025**

SIGNATURE

Aman Urgessa Edaso **DATE**

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ABSTRACT

The purpose of this study was to evaluate maternal health care services in order to develop community participation strategies to improve the quality and utilisation of maternal health care services in West Arsi Zone, Oromia Regional State, Ethiopia.

In order to develop community participation strategies to improve the quality and utilisation of maternal health care services in West Arsi Zone, Oromia Regional State, Ethiopia, the primary goal of this study was to evaluate perceptions of women regarding the quality and utilisation of maternal health care services, as well as the experiences of midwives regarding the quality and utilisation of maternal health care services provided in hospitals and health centres. The study was conducted at Ethiopia West Arsi Zone, Oromia Regional State. A convergent parallel mixed method. A total 615 women of reproductive age participated in the study and their selection was made using purposive convenience sampling technique and data was collected using an interviewer-administered structured questionnaire for quantitative study approach. For qualitative study approach, focus groups discussions and semi-structured interviews were

conducted with 40 midwives working in five selected governmental hospitals and 25 health centres for 12 months and more from January 2022 to May 2022. Version 25 of the Statistical Package for Social Science (SPSS) was used to analyse the quantitative data. To identify factors affecting quality and utilisation of maternal health care services, multivariate logistic regression models were employed. According to quantitative results, the quality and utilisation of maternal healthcare services were significantly impacted by a number of factors, including waiting times, the conduct of healthcare professionals, the protection of women's privacy during maternal health services, the availability of supplies and medications, and the sociodemographic traits of mothers.

Five themes emerged from the qualitative data analysis, which was carried out by using Atlas TI version 8 qualitative data analysis software through thematic analysis. The researcher then used the study's findings to develop community participation strategies to improve the quality and utilisation of maternal health care services guided by the Health Belief Model (HBM).

The proposed strategies target increasing the quality of maternal health care services, which the study found to contribute to the persistent high levels of low quality and utilisation of maternal health care services in the West Arsi Zone, Oromia Regional State, Ethiopia. Recommendations about the identified factors influencing the quality and utilisation of maternal health care services such as factors related to health care workers, health facility infrastructure, community-related problems and women-related factors should be given to health facilities, West Arsi Zone Health Office, and Oromia Regional Health Bureau in both soft and hard copies of the final thesis.

KEY WORDS

Community participation; determinants; experience; health care provider; maternal health; perceptions; quality of care; strategies; utilisation

TABLE OF CONTENTS

TABLE OF CONTENTS I

LIST OF TABLES XV

LIST OF FIGURES XVIII

CHAPTER 1 1

ORIENTATION TO THE STUDY 1

1.1 INTRODUCTION 1

1.2 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM 6

1.3 STATEMENT OF THE RESEARCH PROBLEM 9

1.4 PURPOSE OF THE STUDY 12

1.5 **OBJECTIVES OF STUDY** 12

1.6 RESEARCH QUESTIONS 13

1.7 SIGNIFICANCE OF THE STUDY 14

1.8 THEORETICAL FRAMEWORK 15

1.9 THE RESEARCH PARADIGM 18

1.10 DEFINITION OF TERMS 25

1.10.1 Conceptual definitions 25

1.11 RESEARCH DESIGN AND METHODOLOGY 31

1.11.1 Study setting 32

1.11.2 Phase I 35

1.11.3 Research design and methods 35

1.11.3.1 Population and sampling 37

1.11.3.2 Data collection procedure 37

1.11.3.3 Data analysis 38

1.11.3.4 Phase II: 39

1.12 ESTABLISHING TRUSTWORTHINESS 40

1.13 ETHICAL CONSIDERATIONS 40

1.14 STRUCTURE OF THE THESIS 41

CHAPTER 2 43

LITERATURE REVIEW 43

2.1 INTRODUCTION 43
2.2 GEOGRAPHY AND CLIMATE OF ETHIOPIA 43
2.3 GOVERNMENT AND ADMINISTRATION 44
2.4 HEALTH SYSTEM ORGANISATION IN ETHIOPIA 45
2.4.1 Primary level health care 46
2.4.2 Secondary level health care 47
2.4.3 Tertiary level health care 48
2.5 NUMBER OF HEALTH CARE WORKFORCE AND POPULATION BY CATEGORY IN ETHIOPIA 49
2.6 MATERNAL HEALTH CARE SERVICES 50
2.6.1 Use of antenatal care services 55
2.6.2 Factors associated with antenatal care use 60
2.6.3 Labour and delivery care services 62
2.6.4 Factors affecting utilisation of labour and delivery services 65
2.6.5 Postnatal Care (PNC) Service 66
2.6.6 Factors affecting utilisation of postnatal services 68
2.7 QUALITY OF HEALTH CARE SERVICES 68
2.7.1 WHO standards of care and quality statements 72
2.8 COMMUNITY ENGAGEMENT TO MATERNAL HEALTH CARE SERVICES 76
2.9 STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH CARE SERVICES 77
2.10 SUMMARY 79
CHAPTER 3 80
RESEARCH DESIGN AND METHODS 80
3.1 INTRODUCTION 80
3.2 RESEARCH CONTEXT 80
3.3 THE RESEARCH DESIGN AND RESEACH APPROACH 82
3.3.1 Design chosen 83
3.3.2 Quantitative research approach 85
3.3.3 Qualitative research approach 85
3.4 RESEARCH METHOD 86
3.4.1 Sampling 86

3.4.1.1 Total population 87
3.4.1.2 Target population 88
3.4.1.3 An accessible population 88
3.4.1.3.1 Inclusion criteria 89
3.4.1.3.2 Exclusion criteria 89
3.4.2 Sampling technique 90
3.4.2.1 Sampling frame 93
3.4.3 Ethical issues related to sampling 93
3.4.4 Sample 96
3.4.5 Data collection 97
3.4.5.1 Data collection approach and method 97
3.4.5.2 Development and testing of the data collection instruments 100
3.4.6 Data collection process 103
3.4.7 Ethical considerations related to data collection 104
3.4.8 Description of variables 106
3.4.8.1 Independent variables 106
3.4.8.2 Dependent variable 106
3.4.9 Data analysis 106
3.5 RIGOUR OF THE STUDY: VALIDITY AND RELIABILITY/TRUSTWORTHINESS 109
3.5.1 Validity and reliability in quantitative research 109
3.5.2 Trustworthiness in qualitative research 111
3.6 SUMMARY 113
CHAPTER 4 114
ANALYSIS, PRESENTATION AND DESCRIPTION OF FINDINGS 114
4.1 INTRODUCTION 114
4.2 QUANTITATIVE DATA MANAGEMENT AND ANALYSIS 114
4.2.1 Data cleaning: consistency and completeness 114
4.2.2 Response rate 115
4.3 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE WOMEN 116
4.3.1 Age distribution of women 116
4.3.2 Marital status of women 116

4.3.3 Ethnicity of women 117
4.3.4 Religion of women 118
4.3.5 Women's level of education 119
4.3.6 Husbands' educational status 119
4.3.7 Women's occupational status 120
4.3.8 Monthly income of women 120
4.3.9 Women's payment status for services 121
4.3.10 Women's payment rates for services 121
4.3.11 Women's residential status 122
4.3.12 Distance of health facility 123
4.4 MATERNAL HEALTH CARE SERVICES 123
4.4.1 Maternal health education 123
4.4.2 Source of maternal health education for women 124
4.4.3 Status of pregnancy 125
4.4.4 Utilisation of antenatal care services in previous pregnancy 126
4.4.4.1 Antenatal care services provided for women 126
4.4.4.2 Number of antenatal care services visits 128
4.4.4.3 Women's reasons for not attending antenatal care services 128
4.4.4.4 Timing of the first antenatal care visit 129
4.4.4.5 Preference of women for returning for ANC services 130
4.4.4.6 Recommendation of antenatal care services for their friends 131
4.4.4.7 Number of pregnancies 131
4.4.5 Respondents' place of delivery 132
4.4.5.1 Women's place of delivery for the last pregnancy 132
4.4.5.2 Women's health facilities for delivery 133
4.4.5.3 Reason for not delivering in the health facility 133
4.4.5.4 Difference in giving birth at home and in health facility 135
4.4.5.5 Decision relating to place of delivery 136
4.4.5.6 Mode of delivery 136
4.4.5.7 Maternal and fetal conditions outcomes 137
4.4.6 Health facilities visit within two days for postnatal care services 138

4.4.6.1 Postnatal care services given for women 138
4.4.6.2 Maternal health care services recommendation for others 140
4.5 FACTORS AFFECTING MATERNAL HEALTH CARE SERVICES 140
4.5.1 Waiting time 140
4.5.2 Behaviour of health care provider 142
4.5.3 Maintaining privacy of women during maternal health care services 142
4.5.4 Availability of drugs and supplies 143
4.6 FACTORS ASSOCIATED WITH MATERNAL HEALTH CARE SERVICES 144
4.6.1 Socio-demographic factors associated with utilisation of maternal health care services 145
4.6.1.1 Socio-demographic factors associated with utilisation of antenatal care services…. 145
4.6.1.2 Socio-demographic factors associated with utilisation of labour and delivery services 149
4.6.1.3 Socio-demographic factors associated with utilisation of postnatal care services… 152
4.6.2 Past obstetric history of mothers associated with utilisation of maternal health care services 155
4.6.2.1 Past obstetric history of mothers associated with utilisation of antenatal care services 155
4.6.2.2 Past obstetric history of mothers associated with utilisation of labour and delivery care services 158
4.6.2.3 Past obstetric history of mothers associated with utilisation of postnatal care services 161
4.6.3 Multivariate analysis of socio-demographic factors associated with utilisation of maternal health care services 164
4.6.3.1 Socio-demographic factors associated with utilisation of antenatal care services… 164
4.6.3.2 Socio-demographic factors associated with utilisation of labour and delivery care services 167
4.6.3.3 Socio-demographic factors associated with utilisation of postnatal care services… 169
4.6.4 Multivariate analysis of past obstetric factors associated with the utilisation of maternal health care services 171

4.6.4.1 Past obstetric history of mothers associated with utilisation of antenatal care services 171

4.6.4.2 Past obstetric history of mothers associated with utilisation of labour and delivery care services 174

4.6.4.3 Past obstetric history of mothers associated with utilisation of postnatal care services 176

4.7 QUALITATIVE DATA MANAGEMENT AND ANALYSIS 179

4.7.1 Sociodemographic characteristics of midwives 183

4.7.1.1 Sociodemographic profile of the FGDs with midwives 183

4.8 ANALYSIS OF DATA OBTAINED FROM THE MIDWIVES 185

4.8.1 Themes emerged during the analysis of FGDs 186

4.8.2 Theme 4.1: Factors that affect improving the quality and utilisation of maternal health care services 187

4.8.2.1 Category 4.1.1: Reasons related to the health care providers 187

4.8.2.2 Category 4.1.2: Health facility related factors 193

4.8.2.3 Category 4.1.3: Lack of medical equipment, medical supplies, and drugs…… 197

4.8.2.4 Category 4.1.4: Delay in offering health care services 200

4.8.2.5 Category 4.1.5: Lack of basic and life-saving services 201

4.8.2.6 Category 4.1.6: Lack of health education programs 204

4.8.3 Theme 4.2: Problems mothers have in the community related to maternal health care services 205

4.8.3.1 Category 4.2.1: Community-related problems 205

4.8.3.2 Category 4.2.2: Reasons related to the mothers 209

4.8.3.3 Category 4.2.3: Distance and access to transportation services 211

4.8.3.4 Category 4.2.4: Socio-cultural factors 213

4.8.4 Theme 4.3: Reasons for non-utilisation of maternal health care services ... 215

4.8.4.1 Category 4.3.1: Socio-cultural factors 215

4.8.4.2 Category 4.3.2: Women-related factors 218

4.8.4.3 Category 4.3.3: Negative experience of maternal health care services utilisation. 220

4.8.4.4 Category 4.3.4 Transportation-related factors 222

4.8.4.5 Category 4.3.5: Health facility-related factors 225

4.8.4.6 Category 4.3.6: Lack of respectful maternity care 229
4.8.4.7 Category 4.3.7: Health care providers-related factors 231
4.8.5 Theme 4.4: Strategies currently implemented within health facilities to improve quality and utilisation of maternal health care services 237
4.8.5.1 Category 4.4.1: Supportive supervision 237
4.8.5.2 Category 4.4.2: Outreach maternal health care services 238
4.8.5.3 Category 4.4.3: Cultural ceremony in health facility 240
4.8.6 Theme 4.5: Strategies suggested to be put in place to improve the quality and utilisation of maternal health services 240
4.8.6.1 Category 4.5.1: Community participation strategies 241
4.8.6.2 Category 4.5.2: Maternity waiting home 242
4.8.6.3 Category 4.5.3: Giving benefit packages for midwives 243
4.8.6.4 Category 4.5.4: Establishment of emergency obstetrics and gynaecology triage…… 245
4.8.6.5 Category 4.5.5: Provision of cultural ceremony 246
4.8.6.6 Category 4.5.6: Provision of incentive and preparing comfortable areas for mothers…. 246
4.8.6.7 Category 4.5.7: Strengthening health extension services 247
4.8.6.8 Category 4.5.8: *Developing a system for identification of pregnant mothers in the communities* 248
4.9 SUMMARY 249
CHAPTER 5 250
DISCUSSION OF THE STUDY FINDINGS 250
5.1 INTRODUCTION 250
5.2 DISCUSSION ON SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE WOMEN…. 250
5.3 MATERNAL HEALTH CARE SERVICES 251
5.3.1 Health education given to women on maternal health 251
5.3.2 Status of pregnancy 252
5.3.3 Utilisation of antenatal care services during the previous pregnancy 253
5.3.3.1 Utilisation of ANC services during the previous pregnancy 253
5.3.3.2 ANC services provided for women 254
5.3.3.3 Number of ANC clinic visits 255

5.3.3.4 Women's reasons for not attending ANC clinic visits 256
5.3.3.5 Timing of the first ANC clinic visit 256
5.3.3.6 Women's preference to come again for the next ANC visit 257
5.3.3.7 Women's recommendation of ANC services to their friends 257
5.3.3.8 Parity 258
5.3.4 Utilisation of labour and delivery services during the previous Pregnancy 258
5.3.4.1 Place of delivery for the previous pregnancy 259
5.3.4.2 Women's health facilities for delivery 259
5.3.4.3 Reasons for not delivering in the health facility 259
5.3.4.4 Difference for giving birth at home and in the health facility 260
5.3.4.5 Making decision for the place of delivery 260
5.3.4.6 Mode of delivery 261
5.3.4.7 Maternal and fetal condition outcome 261
5.3.5 Utilisation of postnatal care services in previous pregnancy 261
5.3.5.1 Women's visit to the health facility two days for postnatal care services 262
5.3.5.2 Postnatal care services given to women 263
5.3.5.3 Women's recommendations of postnatal health care services to others 263
5.4 FACTORS AFFECTING MATERNAL HEALTH CARE SERVICES 264
5.4.1 Waiting time 264
5.4.2 Behaviour of health care provider 265
5.4.3 Maintaining the privacy of women during maternal health care services 265
5.4.4 Availability of drugs and supplies 266
5.5 FACTORS ASSOCIATED WITH UTILISATION OF MATERNAL HEALTH CARE SERVICES 266
5.5.1 Socio-demographic factors associated with the utilisation of maternal health care services 266
5.5.1.1 Socio-demographic factors associated with the utilisation of antenatal care services 267
5.5.1.2 Socio-demographic factors associated with utilisation of labour and delivery care services 268
5.5.1.3 Socio-demographic factors associated with the utilisation of postnatal care services 270

5.5.2 Past obstetric history of mothers associated with utilisation of maternal health care services 271

5.5.2.1 Past obstetric history of mothers associated with utilisation of antenatal care services 272

5.5.2.2 Past obstetric history of mothers associated with utilisation of labour and delivery care services 273

5.5.2.3 Past obstetric history of mothers associated with utilisation of postnatal care services 275

5.6 DISCUSSION ON QUALITATIVE FINDINGS 276

5.6.1 Qualitative data findings discussion 276

5.6.2 Sociodemographic characteristics of midwives 277

5.6.3 Theme 1: Factors that affect improving the quality of maternal health care services utilisation in health facilities 280

5.6.3.1 Category 1: Reasons related to health care workers 280

5.6.3.2 Category 2: Health facility-related factors 286

5.6.3.3 Category 3: Lack of medical equipment, medical supplies, and drugs 289

5.6.3.4 Category 4: Delay in offering health care service 292

5.6.3.5 Category 5: Lack of basic and life-saving services 293

5.6.3.6 Category 6: Lack of health education programs 295

5.6.4 Theme 2: Problems mothers have in the community related to maternal health care services 296

5.6.4.1 Category 1: Community-related problems 296

5.6.4.2 Category 2: Reasons related to the mothers 298

5.6.4.3 Category 3: Distance and access to transportation services 299

5.6.4.4 Category 4: Socio-cultural factors 300

5.6.5 Theme 3: Reasons for non-utilisation of maternal healthcare services 302

5.6.5.1 Category 1: Socio-cultural factors 302

5.6.5.2 Category 2: Women-related factors 304

5.6.5.3 Category 3: Experience of maternal health care services utilisation 305

5.6.5.4 Category 4: Transportation-related factors 307

5.6.5.5 Category 5: Health facility-related factors 308

5.6.5.6 Category 6: Respectful maternity care 311

5.6.5.7 Category 7: Health care provider-related factors 312

5.6.6 Theme 4: Strategies currently implemented within health facilities 317
5.6.6.1 Category 1: Supportive supervision 317
5.6.6.2 Category 2: Cultural ceremony in health facility 319
5.6.7 Theme 5: Strategies suggested to be put in place to improve the quality of maternal health services 320
5.6.7.1 Category 1: Community participation strategies 320
5.6.7.2 Category 2: Maternity waiting home 321
5.6.7.3 Category 3: Giving benefit packages for midwives 322
5.6.7.4 Category 4: Establishment of emergency obstetrics and gynaecology triage……. 324
5.6.7.5 Category 5: Provision of cultural ceremony 324
5.6.7.6 Category 6: Provision of incentives and preparing comfortable areas for mothers…. 325
5.6.7.7 Category 7: Strengthening health extension services 325
5.7 SUMMARY 327
CHAPTER 6 328
INTEGRATION OF QUANTITATIVE AND QUALITATIVE FINDINGS 328
6.1 INTRODUCTION 328
6.2 INTEGRATION PROCESS 328
6.3 THEORETICAL FRAMEWORK 330
6.3.1 Integrating quantitative and qualitative data 330
6.3.2 Applying the HBM to improve community participation 331
6.3.3 Developing community participation strategies 332
6.4 INTEGRATED FINDINGS AND INTERPRETATION 332
6.4.1 Utilisation of maternal health care services 333
6.4.1.1 Maternal health education and its sources 333
6.4.1.2 Utilisation of antenatal care services in previous pregnancy 334
6.4.1.3 Recommendation of antenatal care services 336
5.4.1.3 Women's place of delivery for the last pregnancy 337
6.4.1.4 Difference in giving birth at home and in health facility 339
6.4.1.5 Mode of delivery and maternal and fetal conditions outcomes 340
6.4.1.6 Health facility visits within two days for postnatal care services 341

6.4.1.7 Maternal health care services recommendation for others 343
6.4.2 Factors affecting utilisation maternal health care services 344
6.4.2.1 Waiting time 344
6.4.2.2 Behaviour of health care provider 345
6.4.2.3 Maintaining privacy of women during maternal health care services 346
6.4.2.4 Availability of drugs and supplies 348
6.4.2.5 Women's religion 349
6.4.2.6 Academic status of mothers and husbands 351
6.4.2.7 Maternal health education 352
6.4.2.8 Distance and access to transportation 354
6.4.2.9 Occupational status of women 356
6.4.2.10 Parity 356
6.4.2.11 Mode of delivery, and maternal and fetal conditions outcomes 357
6.4.2.12 Status of pregnancy 359
6.4.2.13 Decision making power of women 359
6.5 SUMMARY 363
CHAPTER 7 364
COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH SERVICES 364
7.1 INTRODUCTION 364
7.2 STRATEGIES DEVELOPMENT 367
7.2.1 Process of strategies development 367
7.2.2 The range of the proposed strategies 369
7.2.3 Purpose of the proposed strategies 369
7.2.4 Strengths, Weakness, Opportunities and Threats (SWOT) analysis 369
7.2.5 Objective of the proposed strategies 373
7.3 GROUNDWORK STRATEGIES 373
7.3.1 Strategies towards health care workers 375
7.3.1.1 Giving training for health workers 378
7.3.1.2 Community health education tools and resources 379
7.3.1.3 *Community meetings* 381

7.3.1.4 ***Supporting care health workers*** 382
7.3.1.5 ***Partner with community organisations*** 383
7.3.1.6 ***Hire community health workers*** 384
7.3.1.7 ***Community advisory boards*** 385
7.3.1.8 ***Conduct community needs assessments*** 385
7.3.1.9 ***Provide culturally competent care*** 385
7.3.2 Strategies targeting women 386
7.3.2.1 Women's age at the first birth 388
7.3.2.2 Academic status of women 388
7.3.2.3 Economic status of women 389
7.3.2.4 Empowerment and decision-making power of women 389
7.3.2.5 Experiences of mothers with the utilisation of maternal health care services… 390
7.3.2.6 Women's knowledge of obstetric danger signs and complications 390
7.3.3 Strategies targeting the health facility 391
7.3.3.1 Improve availability of rooms, beds and delivery couches 392
7.3.3.2 Improving electricity and water supply 393
7.3.3.3 Improve availability of infection prevention materials 394
7.3.3.4 Establish separate obstetrics and gynaecology triage 394
7.3.4 Strategies targeting to improve women-centred care in the health facility . 395
7.3.4.1 Women-centred maternal health care in the health facility 397
7.3.5 Strategies targeting delaying in offering health care service 398
7.3.5.1 Delay in offering maternal health care service 400
7.3.6 Strategies targeting distance and access to transportation services 400
7.3.6.1 Presence and utilisation of ambulance services 402
7.3.6.2 High transportation costs and lack of transportation 402
7.3.6.3 Long distance from health facilities 403
7.3.7 Strategies targeting medical equipment, medical supplies, and drugs 404
7.3.7.1 Available medical equipment, medical supplies, and drugs 404
7.3.8 Strategies relating to community 405
7.3.8.1 Improve the community's awareness, beliefs, and attitude regarding the utilisation of maternal health services 406

7.3.8.2 Improve community participation 407
7.3.8.3 Improve health education provision at the community level 407
7.3.8.4 Improve security 408
7.3.8.5 Providing outreach services for non-emergency obstetrics 408
7.4 INTERIM STRATEGIES 409
7.5 VALIDATION OF THE STRATEGIES 417
7.6 FINAL STRATEGIES 422
7.7 SUMMARY 423
CHAPTER 8 424
CONCLUSION AND RECOMMENDATIONS OF THE STUDY 424
8.1 INTRODUCTION 424
8.2 RESEARCH DESIGN AND METHODS 424
8.2.1 Phase I 425
8.2.2 Phase II 426
8.3 SUMMARY AND INTERPRETATION OF THE RESEARCH FINDINGS 427
8.3.1 Phase I 427
8.3.2 Phase II 430
8.4 CONCLUSIONS AND RECOMMENDATIONS 431
8.4.1 Recommendations for health centres, hospitals, and West Arsi Zonal Health Office…. 431
8.4.2 Recommendations for governments and policy makers 433
8.4.3 Recommendations for communities 434
8.4.4 Recommendations for further research 435
8.4.5 Recommendations for education and training in nursing 436
8.4.6 Recommendations for dissemination of study findings 437
8.4.7 Implementation of the proposed strategies 438
8.5 CONTRIBUTION OF THE STUDY 438
8.5.1 The strengths of the study in relation to its contribution to improving quality of care… 438
8.5.2 The strengths of the study in relation to its contribution at the level of methodology 439

8.5.3 The strengths of the study in relation to its contribution at the level of policy…. 440

8.6 LIMITATIONS OF THE STUDY 440

8.7 CONCLUDING REMARKS 441

ANNEXURES 471

ANNEXURE A: ETHICAL CLEARANCE FROM UNISA 472

ANNEXURE B: LETTER OF SUPPORT FROM UNISA REGIONAL LEARNING CENTER TO CONDUCT THE STUDY 474

ANNEXURE C: LETTER OF PERMISSION REQUEST TO OROMIA REGIONAL HEALTH BUREAU 475

ANNEXURE D: LETTER OF PERMISSION FROM REGIONAL HEALTH BUREAU TO CONDUCT THE STUDY 476

ANNEXURE E: ENGLISH VERSION SEMI-STRUCTURED QUESTIONNAIRE 477

ANNEXURE F: AFAN OROMO VERSION SEMI-STRUCTURED QUESTIONNAIRE 485

ANNEXURE G: FOCUSED GROUP DISCUSSION GUIDE FOR MIDWIVES 498

ANNEXURE H: INFORMATION LEAFLET FOR WOMEN 500

ANNEXURE I: INFORMATION LEAFLET FOR WOMEN (AFAN OROMO) 502

ANNEXURE J: INFORMATION LEAFLET FOR MIDWIVES 504

ANNEXURE K: INFORMED CONSENT FORM FOR WOMEN 506

ANNEXURE L: INFORMED CONSENT FORM FOR MIDWIVES 507

ANNEXURE M: ASSENT FORM FOR A YOUTH (MINOR LESS THAN 18 YEARS) 508

ANNEXURE N: CONFIDETIAL AGREEMENT FORM FOR WOMEN 509

ANNEXURE O: CONFIDETIAL AGREEMENT FORM FOR MIDWIVES 510

ANNEXURE P: EDITOR'S DECLARATION 511

ANNEXURE Q: TURNITIN ORIGINALITY REPORT 512

LIST OF TABLES

Table 1.1: Lists of public health facilities found in West Arsi Zone 33
Table 2.1: Health worker force in Ethiopia (FHAPCO 2021:21) 50
Table 4.1: Age distribution of women (N = 615) 116
Table 4. 2: Marital status of women (N = 615) 117
Table 4.3: Educational status of women (N = 615) 119
Table 4.4:Educational status of women's husbands (N = 615) 120
Table 4.5: Women's occupational status (N = 615) 120
Table 4.6: Women's monthly income (N = 615) 121
Table 4.7: Women's payment status for maternal health care services (N = 615) 121
Table 4.8: Women's payment rates for the maternal health care services (n = 37) 122
Table 4.9: Respondents' distance from health facility (N = 615) 123
Table 4.10: Source of health education (n = 451) 125
Table 4.11: Status of your pregnancy (N = 615) 125
Table 4.12: Women who received different ANC services (n = 547) 127
Table 4.13: Number of ANC services visits (n = 547) 128
Table 4.14: Women's reasons for not attending ANC services (n = 68) 129
Table 4.15: Months at which women started ANC services (n = 547) 129
Table 4.16: Women current parity (N = 615) 132
Table 4.17: Women's health facilities for delivery (n = 540) 133
Table 4.18:Women's reason for not delivering in health facility (n = 75) 133
Table 4.19: Difference in giving birth at home and in health facility (N = 615) 135
Table 4.20: Who will make decision where women should give birth (N = 615) 136
Table 4.21: Mode of delivery for previous birth (N = 615) 137
Table 4.22: Maternal and fetal condition outcome (N = 615) 137
Table 4.23: Health facility visits within two days for postnatal care services (N = 615) 138
Table 4.24: Postnatal care services given for women within two days facility visit (n = 129) 139
Table 4.25: Maternal health care services recommendation for others (N = 615) 140
Table 4.26: Waiting time to gate maternal health care services (N = 615) 141

Table 4.27: Behaviours of health care services providers (N = 615) 142
Table 4.28: Privacy during care provision (N = 615) 143
Table 4.29: Availability of drugs and supplies (N=615) 144
Table 4.30: Socio-demographic factors that associated with utilisation of antenatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615) 147
Table 4.31: Socio-demographic factors associated with utilisation of labour and delivery services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615) 150
Table 4.32: Socio-demographic factors that associated with utilisation of postnatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615) 153
Table 4.33: Past obstetric history of mothers associated with utilisation of antenatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615) 156
Table 4.34: Past obstetric history of mothers associated with utilisation of labour and delivery care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615) 159
Table 4.35: Past obstetric history of mothers associated with utilisation of postnatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615) 162
Table 4.36: Socio-demographic factors associated with utilisation of antenatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615) 165
Table 4.37: Socio-demographic factors associated with utilisation of labour and delivery care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)..... 167
Table 4.38: Socio-demographic factors associated with utilisation of postnatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615) 169
Table 4.39: Past obstetric history of mothers associated with utilisation of antenatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N=615) 172
Table 4.40: Past obstetric history of mothers associated with utilisation of labour and delivery care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615) 175
Table 4.41: Past obstetric history of mothers associated with utilisation of postnatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615) 177
Table 4. 42: Summary of characteristics of midwives (N = 40) 180
Table 4.43: *Sociodemographic characteristics of midwives (N=40)* 184

Table 4.44: Schematic presentation of themes and categories 185
Table 6.1:Characteristics of midwives (N = 40) 278
Table 7.1 Summary of SWOT analysis 372
Table 7.2 Strategies targeting health care workers 376
Table 7.3 Strategies targeting women 386
Table 7.4 Strategies targeting health facility 391
Table 7.5 Strategies targeting improvement of women-centred care in the health facility 395
Table 7.6 Strategies targeting delaying in offering healthcare services 398
Table 7.7 Strategies targeting creation of interventions that enhance transportation services and physical accessibility 401
Table 7. 8 Strategies targeting medical equipment, medical supplies and drugs 404
Table 7.9 Strategies targeting community 405
Table 7.10 Expert evaluators' information 418
Table 7.11 Standards for assessing the interim strategies 419
Table 7.12 An explanation of the validation group's scores 421

LIST OF FIGURES

Figure 1. 1 : Health Belief Model (Champion & Skinner 2008:49) 16

Figure 2.1 Map of Regional states of Ethiopia (Country of Origin Information 2020:13) 45

Figure 2.2: Ethiopian health care tier system (FHAPCO 2021:20) 49

Figure 2. 3: Trends in childhood mortality rates (MOH 2021:20) 54

Figure 2.4: Antenatal Care Coverage- trend during HSTP I period (FMOH Performance Report 2020:29) 60

Figure 2.5: Births attended by skilled health personnel; trend during HSTP period (FMOH Performance Report 202:30) 64

Figure 2. 6: Early postnatal care, Trend during HSTP I Period (FMOH Performance Report 2020:31 & 33). 67

Figure 2.7: Operational definitions of the characteristics of quality of care (WHO 2016:14) 70

Figure 3. 1: Map of West Arsi Zone (West Arsi Zone Health Office Department Report 2024:1). 82

Figure 4. 1: Percentage distribution of women by their ethnicity (n = 615) 117

Figure 4. 2: Percentage distribution of women by their religion (N = 615) 118

Figure 4.3: Percentage distribution of women by their residential status (N = 615) 122

Figure 4. 4: Health education on maternal health care services 124

Figure 4. 5: Utilisation of antenatal care services in previous pregnancy (n = 547) 126

Figure 4.6: Preference of women to come again for ANC services for the next pregnancy (n = 547) 130

Figure 4. 7: Percentage distribution of ANC services referring for friends (n = 547) ... 131

Figure 4.8: Percentage distribution of women places of delivery for the last pregnancy (N=615) 132

Figure 7.1: Methodology for development of strategies 366

Figure 7.2: Framework of themes for strategies development 374

LIST OF ABBREVIATIONS

ANC	Antenatal Care
BEmONC	Basic Emergency Obstetric and Newborn Care
C/S	Caesarean Section
CEmONC	Comprehensive Emergency Obstetric and Newborn Care
CHW	Community Health Worker
EDHS	Ethiopian Demographic and Health Survey
EFY	Ethiopian Fiscal Year
EMDHS	Ethiopian Mini Demographic Health Survey
EPHI	Ethiopian Public Health Institute
FHAPCO	Federal HIV/AIDS Prevention and Control Office
FMOH	Federal Ministry of Health
HBM	Health Belief Model
HC	Health Centre
HEP	Health Extension Program
HEW	Health Extension Worker
HIV	Human Immunodeficiency Virus
HP	Health Posts
HSDP	Health Sector Development Plan
MMR	Maternal Mortality Rate
MNCH	Maternal Neonatal Child Health
PBEN	Perceived Benefits
PBER	Perceived Barrier
PCC	Person Centred Care
PHCU	Primary Health Care Unit
PMTCT	Prevention of Mother-to-child transmission

PPH	Postpartum Haemorrhage
SBA	Skilled Birth Attendant
SDG	Sustainable Development Goal
SNNPR	Southern Nation and Nationalities and Peoples Region
TFR	Total Fertility Rate
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNISA	University of South Africa
WDA	Women Development Army
WHO	World Health Organization

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

In 2020, it was anticipated that 287,000 maternal deaths worldwide (with an uncertainty interval [UI] of 273,000 to 343,000) or 223 maternal deaths worldwide (with a UI of 202 to 255) for every 100,000 live births. In 185 countries and territories covered in this analysis, around 800 women died every day from preventable causes associated with pregnancy and delivery, or one woman every two minutes. The only location with a very high MMR of 545 per 100,000 live births (UI 477 to 654) in 2020 was sub-Saharan Africa, which was responsible for around 70% of all maternal fatalities worldwide. Southern and Central Asia came next, making up nearly 17% (World Health Organization (WHO), United Nations Fund for Population Agency (UNFPA) & World Bank Estimates 2023:30).

With an estimated 415 maternal deaths per 100,000 live births (UI 396 to 477), the MMR in developing nations is high. It is over 40 times higher than the MMR in Europe (10; UI 9 to 11) and almost 60 times higher than that of Australia and New Zealand (7; UI 6 to 8) (WHO 2019:33).

The Ghanaian study shows that improving the quality of care during labour and delivery, high quality of care, and evidence-based obstetric and neonatal care are among the highest priorities to reduce illness and death in mothers and their newborn babies. The majority of maternal deaths are preventable because improving the quality of maternal health care can prevent or manage pregnancy and birth complications. MMR and the percentage of births attended by skilled personnel are important indicators for improving the quality and utilisation of maternal health care services (Adongo, Dapaah, Azumah & Onzaberigu 2024:13).

Quality of care is the extent to which medical services provided to individuals and patient groups improve desired health outcomes; it necessitates that medical treatment be people-centred, safe, efficient, timely, and equitable (WHO 2020:4). The Quality-of-Care Network was established in 2017 by the WHO, UNFPA, and UNICEF to improve the quality of care for maternal, newborn, and child health. In order to achieve quality care and improve outcomes, physicians, nurses, and midwives must have the necessary training, resources, and incentives to treat every mother and child in a timely, efficient, and respectful manner. The United Nations Children's Fund (UNICEF) (2020:3) defined quality of care as the extent to which health care services improve desired health outcomes.

Essential health services, such as having at least four antenatal care (ANC4) contacts, having a skilled birth attendant (SBA), and receiving postnatal care (PNC) within the first two days after delivery, must be covered in order to prevent and manage complications that may arise during pregnancy, delivery, and the postnatal period, as well as to lower maternal and newborn morbidity, mortality, and stillbirths (WHO 2023:3).

Ethiopia has made great progress in improving health outcomes over the last 20 years. These achievements were made possible once the Health Extension Program (HEP) was established, which extended basic health care services to homes and communities. The initiative began in agricultural areas in 2003 (the 1997 Ethiopian Fiscal Year (EFY), then in 2006 and 2009 it was adjusted for pastoral and Agaro-pastoral environments and urban areas, respectively (Federal Ministry of Health (FMOH) Performance Report 2020:18).

According to a study conducted in Ethiopia to assess the quality of maternal and newborn health care services in a selection of hospitals and health centres across four regions, most healthcare facilities fall well short of the WHO's and the Health Sector Transformation in Quality's (HSTQ) quality standards for these services (Biadgo, Legesse, Estifanos, Singh, Mulissa, Kiflie, Magge, Bitewulign, Abate & Alemu 2021:7).

Only by providing high-quality, affordable maternity and neonatal health care services will women be able to access competent, knowledgeable, and compassionate midwifery care throughout pregnancy, delivery, the postnatal period, and the first few months of infancy, thereby improving the quality of maternal health care services (Mordal, Hanssen, Biratu & Vatne 2021:9).

The International Code of Ethics for Midwives states that all women, regardless of their origin, should be treated with dignity and equality. The results of a study conducted in rural Ethiopia to assess mothers' experiences and opinions of facility-based delivering care revealed that customs and conventions influenced women's experiences of facility-based childbirth. The study recommended that midwives, supervisors, and healthcare facilities make sure that women giving birth are treated with dignity (Mordal et al 2021:6).

According to the Ethiopian Federal Ministry of Health Report (2022:11) and the Ethiopian Public Health Institute (EPHI), postpartum haemorrhage accounts for the bulk of mother fatalities. Thirty percent of all maternal deaths are caused by postpartum haemorrhage from uterine atony, retained products of conception, vaginal, perineal, or cervical tears. Obstructed labour comes in second with twenty-two percent, followed by sepsis with fifteen percent, anaemia with ten percent, unsafe abortion with ten percent, and malaria with four percent. All other direct causes of death (9·6%) and embolism (3.2%) are the remaining causes of maternal death. Human immunodeficiency virus (HIV), trauma, and malaria are the primary indirect causes of maternal mortality.

WHO, strategic framework for Ending Preventable Maternal Mortality (EPMM) identified five strategic objectives as follows (WHO 2023:44):

Five strategic objectives for EPMM

1. Resolve disparities in the quality and accessibility of maternity, infant, sexual, and reproductive health care.
2. For complete maternity, neonatal, sexual, and reproductive health care, universal health coverage should be guaranteed.

3. Reproductive and maternal morbidities, associated disabilities, and all causes of maternal mortality should be addressed.
4. Strengthen health systems to respond to the needs and priorities of women and girls.
5. It is necessary to address all causes of maternal mortality as well as reproductive and maternal morbidities and related impairments.

Groups of individuals with similar interests, concerns, or identities are referred to as communities in contexts that are defined by geography, culture, administrative borders, or geopolitical regions, or that are connected to common activities like work or leisure. Depending on the field and setting, the idea of community may change. Stakeholder and community engagement is the process of establishing connections that enable stakeholders to work together and have access to processes for analysing, planning, directing, carrying out, supervising, and evaluating policies, programs, and actions to enhance the quality of maternal and newborn and child health (MNCH) services (WHO 2020:4).

It may be possible to increase the use of maternity and child health care services, such as child vaccinations and condom distributions, by methodically involving community people in the monitoring of health care service quality. HIV testing among pregnant women was found to be positively impacted by the community involvement intervention (Alhassan, Nketiah-Amponsah, Ayanore, Afaya, Salia, Milipaak, Ansah & Owusu-Agyei. 2019:5). Increased knowledge and better application of strategies aimed at enhancing outcomes for women and newborns can result from community involvement. Little is known about how participatory methods work and how they impact intervention outcomes (Miltenburg, Pelt, Bruin & Zeeman 2019:5 & 6).

The study conducted in Tanzania's rural district demonstrates how community involvement can lead to a better knowledge and more successful application of methods aimed at improving the outcomes for women and new-borns. When it comes to increasing the quality of mother and newborn health outcomes, community involvement

in health care services during the planning, management, and evaluation stages is more credible than other approaches. medical service (Miltenburg et al 2019:1).

Community participation in health care services at the planning, administration, and evaluation stages has more sound than others to be heard in enhancing the quality of maternal and neonatal health outcomes (Miltenburg et al 2019:1).

Maternal mortality and maternity care usage coverage are extremely low in Ethiopia. Ethiopia's health sector transformation plan II strategies include encouraging active community involvement in service delivery, establishing high-performing primary health care units to ensure equity in the delivery of excellent health services, and continuously improving clinical care outcomes (FMOH 2021:11).

Several policies, strategies, protocols, and guidelines have been designed and implemented by Ethiopia's Ministry of Health to improve the quality of maternal and reproductive health care services since 2000. Among the major initiatives during the strategic period were capacity-building trainings, the deployment of health workforce, infrastructure expansion, improved supply and logistics availability, institutionalisation of new initiatives like maternity waiting homes, PNC 24-hour stay and care, catchment-based clinical mentorship, supportive supervision, and strengthening surveillance systems. As a result of the aforementioned intervention, the maternal mortality ratio has dropped from 676 deaths per 100,000 live births in 2011 to the current level (FMOH Performance Report 2020:25).

According to the Ethiopian Demographic Health Survey (EDHS), Ethiopia's MMR is 412/100,000 live births, which is still high worldwide. This suggests that maternal health services in the nation are underutilised and poorly supplied (FMOH & Central Statistical Agency (CSA) of Ethiopia 2016:47).

ANC, SBA, and PNC utilisation rates were 74% (even for a single visit during pregnancy), 50%, and 34%, respectively, according to the Ethiopian Mini Demographic Health Survey (EMDHS) report. This indicates underutilisation of services in sub-Saharan African

nations, and coverage varies even more between regions and between urban and rural areas (EPHI, FMOH & CSA 2019:13 &14).

Therefore, improving the quality of care during the prenatal, delivery, and postnatal stages through community involvement is one of the most crucial strategies to reduce mother and infant mortality in developing nations like Ethiopia. Merely expanding access to institutionalised care has not solved significant quality barriers to safe, effective, patient-centred, timely, and fair treatment. Multifaceted quality improvement that prioritises person-centred care (PCC) and community involvement is essential to reducing maternal mortality and increasing the usage of maternal health services.

1.2 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM

Every day, almost 800 women worldwide pass away because of avoidable pregnancy and delivery-related problems. A death occurs every two minutes as a result. 99% of these maternal deaths take place in developing nations, with over half taking place in sub-Saharan Africa and over one-third in South Asia. Adolescents are more likely than older women to experience pregnancy-related problems and death, and these deaths are more common among women in rural areas and impoverished communities. Enhancing the standard of expert care before to, during, and following childbirth can save these women's and the new-borns' lives (WHO 2023:29).

According to the United Nations Population Division, WHO, UNICEF, UNFPA, and World Bank Group, sub-Saharan Africa was the only region with an extremely high MMR in 2017—an estimated 66% (542). Maternal mortality risk was 1 in 37 over the course of a lifetime, but in Australia and New Zealand it was just 1 in 7800. The world will fall more than a million lives short of the 2030 target of eliminating avoidable maternal deaths at the current rate of progress. Maternal health conditions influence and reflect initiatives to increase care quality and accessibility. Improving maternal health care services and survival rates is urgently needed in order to maintain high (WHO 2019:2 & 52).

Enhancing women's access to effective interventions and high-quality reproductive health care could have saved most maternal fatalities worldwide. Many women pass away as a result of poor health at conception and inadequate treatment that is necessary for both the mother and the unborn child to have a healthy pregnancy (Jebena, Tesfaye, Abashula, Balina, Jackson, Assefa, Kifle, Tesfaye, Yilma, Hiruy, Teklu, Bahru, Demissie, Mitike & Tushune 2022:13).

Maternal health care services and survival must continue to improve to maintain a high position on the global health and development agenda, as the state of maternal health influences and reflects efforts to improve the quality and accessibility of care. At the current rate of progress, the world will fall more than a million lives short of the 2030 target of eliminating avoidable maternal deaths. In addition to the risks to the environment, efforts to provide more women with access to skilled and qualified care prior to, during, and following childbirth must take into account outside variables like migration, climate change, and humanitarian crises (WHO 2019a:2&52).

Between 2016 and 2030, the Global Strategy for Women's, Children's, and Adolescent Health outlines the goal of enhancing the health of every woman and child worldwide (WHO 2019a:46).

Many factors have contributed to the lack of access to effective maternal health care for rural people, including hospital and obstetric department closures, a lack of staff, and challenges in accessing care because of social determinants of health. These factors may lead to a number of negative maternal health outcomes, including low birth weight, early birth, maternal death, severe maternal morbidity, and an increased risk of postpartum depression (Centers For Medicare & Medic AID Services (CMS) 2022:1).

Maternal mortality, particularly in developing nations, can be increased by inadequate maternal health care services during ANC, which can result in delayed referral to emergency obstetrical treatment or missing detection of danger symptoms. The health workforce's skill and knowledge limitations frequently limit the quality of ANC (Manzi, Mugunga, Nyirazinyoye, Laetitia, Hedt-Gauthier, Hirschhorn & Ntaganira 2019:1).

To meet the 2025 Every Newborn Action Plan (ENAP) and Ending Preventable Maternal Mortality (EPMM) coverage targets, WHO, UNICEF, and UNFPA progress reports from 2023 recommended quality care for every pregnancy at every birth. These recommendations included having at least four ANC contacts, SBA, and PNC within the first two days after birth, which is crucial to help prevent and manage complications that may arise during pregnancy, birth, and postnatally, as well as to reduce maternal and newborn morbidity, mortality, and stillbirths (WHO 2023:3).

Better quality professional care during pregnancy, labour, and the postpartum period can reduce mother and infant morbidity and mortality. Even though increasing access to antenatal care services can improve the quality of maternal health care services, only 74% of Ethiopian women received prenatal care from a trained practitioner in 2019. Of these women, 43 percent had four or more trips to the ANC (EPHI, FMOH & CSA 2019:12 &13).

Women who have healthier pregnancies and postpartum periods are more likely to have healthier children, adolescents, and adults as well as better delivery results. As a result, women's health and wellbeing are important for all individuals, communities, and nations, and they are essential to achieving the Sustainable Development Goals (SDGs) (Oridanigo 2022:7).

Mistreatment, being left unattended, delayed care and assistance, and lack of timely attention are among the factors that affect the quality of maternal health care services; socioeconomic status, physical facility access, privacy and confidentiality, and cultural values are among the determinants of access to care; and facility-level factors, such as inadequate medication and equipment at the medical facility, a lack of skilled personnel, unfavourable attitudes and behaviours of service providers, and inadequate communication with women, were the most significant factors affecting the quality of maternal health care services (Mengistu, Beyene, Desta & Bayeta 2019:9).

Maternal health care services that did not maintain privacy and confidentiality by health providers during childbirth in the health facility, like exposing women during childbirth,

leaving them naked, or leaving them to deliver under a tree, were the factors that affected the use of maternal health care services and ultimately the decisions of women and their families to attend such facilities (Mweemba, Mapulanga, Jacobs, Katowa-Mukwato & Maimbolwa 2021:7).

Ethiopia has one of the highest rates in Africa, with an estimated MMR of 412 per 100,000 live births. Among women aged 15 to 49, these factors are responsible for 30% of all deaths. Even though there is a strong commitment to lowering maternal mortality and improving mother health, very few women have access to skilled birth attendants (SBAs), postnatal care, and appropriate prenatal care, which is much lower in pastoralist areas. Compared to the 15% national average, only 7% of women in Ethiopia's northern Afar region gave birth with an SBA (FMOH & CSA 2016:8).

To develop community participation strategies to enhance the quality and utilisation of maternal health services in the Oromia Regional State of the West Arsi Zone, Ethiopia, this study set out to evaluate maternal health care services.

1.3 STATEMENT OF THE RESEARCH PROBLEM

Ethiopia has one of the highest rates of maternal and newborn mortality and morbidity in the world, according to the CSA of Ethiopia statistics. A range of chronic illnesses account for 85% of these deaths, which are directly tied to pregnancy and are brought on by subpar maternal health care services (FMOH & CSA 2016:8). In Ethiopia, as in most low-resource environments, low utilisation of maternal health care is a major problem (Shudura et al 2020:2).

Ethiopia has one of the highest rates in Africa, with an estimated MMR of 412 per 100,000 live births. Among women aged 15 to 49 years, these factors are responsible for 30% of all deaths. Even though there is a strong commitment to lowering maternal mortality and improving mother health, very few women have access to skilled birth

attendants (SBAs), postnatal care, and appropriate prenatal care. It is much lower in pastoralist areas. Compared to the 15% national average, only 7% of women in Ethiopia's northern Afar region gave birth with a SBA (FMOH & CSA 2016:8). According to Federal Ministry Health report, ANC coverage improved from 28% in 2005 to 74% in 2019 (EPHI & ICF, 2019:1). However, only 43% of pregnant women had four or more visits, and only 20% of women started ANC visit at the recommended time. Only 50% of women delivered in a health facility in 2019 and quality of care also remained a concern (Federal Ministry of Health-Ethiopia 2021:24).

Maternal health is one of the six priority areas in the nation's reproductive health strategy (the social and institutional aspects of women's health, family planning and fertility, HIV/AIDS, youth reproductive health, and cancers of reproductive organs) to improve maternal and child health across the continuum of care. The use of currently available intervention can avert over 90% of these deaths, particularly when it comes to getting quality treatment throughout pregnancy, childbirth, and the first few days after delivery (Shudura et al 202:2).

Better quality professional care during pregnancy, labour, and the postpartum period could reduce mother and infant morbidity and mortality. Even though increasing access to antenatal care services could improve the quality and utilisation of maternal health care services, only 74% of Ethiopian women received prenatal care from a trained practitioner in 2019. Of these women, 43% percent had four or more trips to the ANC (EPHI, FMOH & CSA 2019:12 &13).

The usage of maternal health care services increased somewhat between 2000 and 2016, according to Ethiopian Demographic Health Survey (DHS) data. Despite this, between 2000 and 2016, PNC service usage rose by 10% while SBA service usage nearly doubled. Compared to other nations, the use these services is low in Ethiopia (Woldeamanuel & Aga 2021:8).

According to a study carried out in Ethiopia's Sidama region, ANC use was influenced by women's perceptions of the quality and knowledge of ANC as well as their plans for

complication readiness and delivery preparation, while health issues influencing PNC use during the postpartum period were, women's knowledge of PNC, urban residency, and community-level poverty. Household middle wealth rank, women's perception of the quality of Health Facility Delivery (HFD), ANC follow-up, and community-level women's literacy were factors influencing HFD use (Yoseph, Teklesilasie, Grima & Astatkie 2023:11).

The systematic review and meta-analysis aimed to assess the pooled prevalence and associated factors of a continuum of maternal health care services utilisation in Ethiopia showed that secondary and high educational status, being an employed mother, ANC visit before 16 weeks, being an autonomous mother and women with planned pregnancies were more likely to improve quality and utilisation of maternal health care services continuously (Addisu, Mekie, Melkie, Abie, Dagnew, Bezie, Degu, Biru & Chanie 2022:9). Poor quality and utilisation of maternal health care services is a contributing factor to the high rate of maternal deaths, especially in low- and middle-income countries (WHO 2023:29).

According to a study done in Chad, there is a statistically significant ($P < 0.01$) correlation between the use of maternal health care and several characteristics, such as education level, marital status, media access, educational attainment and occupation of husbands or partners, and current contraceptive usage (Kim, Kim, Kim & Kim 2019:9). Despite the significance of PNC services, its quality and utility are currently underutilised; regional disparities are most noticeable in low- and middle-income countries (Asumah, Abubakari, Abdulai, Nukpezah, Boateng, Faridu & Padhi 2023:7).

Enhancing maternal health care quality necessitates a multifaceted strategy that tackles the several causes of unfavourable results. To enhance the delivery of health care systems, especially maternal health care services, the Ethiopian government is now funding health care infrastructure, educating healthcare professionals, empowering women, and supporting community health initiatives. Despite all the government's efforts, traditional beliefs, habits, and a lack of knowledge about maternal health care services, as well as an inadequate health care workforce, can still affect women's access to and

use of health care services. Women's access to health care is limited by decision-making authority and resource control, Insufficient funding for medical infrastructure, training, and equipment results in both insufficient access and subpar service. The study is necessary because these circumstances raise the risk of maternal and infant morbidity and mortality as well as low-quality maternal health care services. Therefore, there is a need for research on the community participation strategies to improve quality and utilisation of maternal health care services in Ethiopia.

1.4. PURPOSE OF THE STUDY

- The purpose of this study was to evaluate maternal health care services to develop community participation strategies to improve the quality and utilisation of maternal health services in the West Arsi Zone, Oromia Regional State, Ethiopia.

1.5 OBJECTIVES OF STUDY

Phase I: Quantitative

- To assess the perceptions of women regarding the quality and utilisation of maternal health care services rendered in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia.
- To identify factors affecting the quality and utilisation of maternal health care services rendered in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia.

Phase I: Qualitative

- To explore the experiences of midwives on the factors affecting the improving of the quality and utilisation of maternal health care services during antenatal, labour

delivery, and postnatal care services in the West Arsi Zone, Oromia Regional State, Ethiopia

Phase II: Development of strategies

- To develop community participation strategies that can be used to improve the quality and utilisation of maternal health care services in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia.

1.6 RESEARCH QUESTIONS

Phase I: Quantitative

- What are the perceptions of women regarding the quality and utilisation of maternal health care services provided in hospitals and health centres in West Arsi Zone, Oromia Regional State, Ethiopia?
- What are the factors affecting the quality and utilisation of maternal health care services rendered in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia?

Phase I: Qualitative

- What are the experiences of midwives on the factors affecting the improving of the quality and utilisation of maternal health care services during antenatal, labour delivery, and postnatal care services in the West Arsi Zone, Oromia Regional State, Ethiopia***?***

Phase II: Development of strategies

- What are community participation strategies that can be used to improve the quality and utilisation of maternal health care services in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia?

1.7 SIGNIFICANCE OF THE STUDY

As discussed in the background, improving women's access to effective interventions and high-quality reproductive health care could have saved most maternal fatalities worldwide. Many women pass away as a result of poor health at conception and inadequate care that is necessary for both the mother and the unborn child to have a healthy pregnancy (Jebena et al 2022:13).

In Ethiopia, little evidence is available on community participation strategies that can be used to improve quality and utilisation of maternal health care services. The study used facility-based approach to add perceptions of women and experiences of midwives on determinants of improving quality and utilisation of maternal health care services to develop community participation strategies.

This study is crucial for identifying effective community participation strategies that can lead to improved maternal health outcomes by focusing on the quality and utilisation of maternal health services, thereby addressing high maternal morbidity and mortality rates in the region. Understanding how communities can actively engage in health service delivery empowers them to take ownership of their health, fostering a sense of responsibility that encourages more women to seek necessary maternal health care services. The research explored culturally appropriate strategies that resonate with the local population, integrating community perspectives to tailor maternal health services to better meet the needs and preferences of women in the West Arsi Zone. Findings from this study can inform local and national health policies by providing evidence-based recommendations for enhancing community participation in maternal health programs, leading to more effective allocation of resources and improved health infrastructure. Engaging communities in health service planning and implementation can result in more sustainable health interventions, revealing ways to build local capacity and foster long-term commitment to maternal health initiatives. Additionally, the research can identify specific barriers preventing women from accessing maternal health services, such as cultural beliefs, lack of information, or logistical challenges, which are essential for

developing targeted strategies to improve service utilisation. This study adds to the body of knowledge on maternal health and community participation, particularly within the Ethiopian context, and may serve as a reference for future research and interventions aimed at improving health outcomes in similar settings. Furthermore, it can promote collaboration between health care providers, community leaders, and local organizations, fostering a multi-sectoral approach to improving maternal health services.

Therefore, to improve the quality and utilisation of maternal health care services in the West Arsi Zone of Oromia Region State, Ethiopia, policymakers, health managers, health care professionals, researchers, and other stakeholders may employ the methods that were developed from this study as a guide.

1.8 THEORETICAL FRAMEWORK

Patient compliance and preventive health care practices are the primary goals of the Health Belief Model (HBM), which guided the study, developed research questions, explained the findings, and provided support. The model states that a person's behaviour when seeking medical attention is influenced by their perception of the threat posed by a health issue and the benefits of taking action to reduce that threat (Boulos & Hassan 2023:3; Green, Murphy & Gryboski 2021:4).

Three main components comprise HBM, which aims to explain how people behave when using health care. Several key concepts in HBM predict the reasons behind people's actions to avoid, detect, or manage medical disorders: self-efficacy, cues to action, advantages and impediments to activity, seriousness, and susceptibility (Green, Murphy & Gryboski 2021:4), as well as how women behave when using maternal health care services in the context of this proposed study. HBM aided in the exploration and description of the following for the quantitative study approach:

Individual perceptions of women who have given birth in the last 12 months and during data collection period regarding the quality and utilisation of maternal health care services:

- The following are some modifiable factors that may affect women's attitudes and actions regarding the use of high-quality maternal health care services: Demographic factors like age and ethnicity; sociodemographic factors like personality, social factors, and economic factors; and structural factors pertaining to women's awareness of the advantages of using and risks of not using high-quality maternal health care services.
- Determinants that affect the likelihood of women's utilisation of maternal health care services.

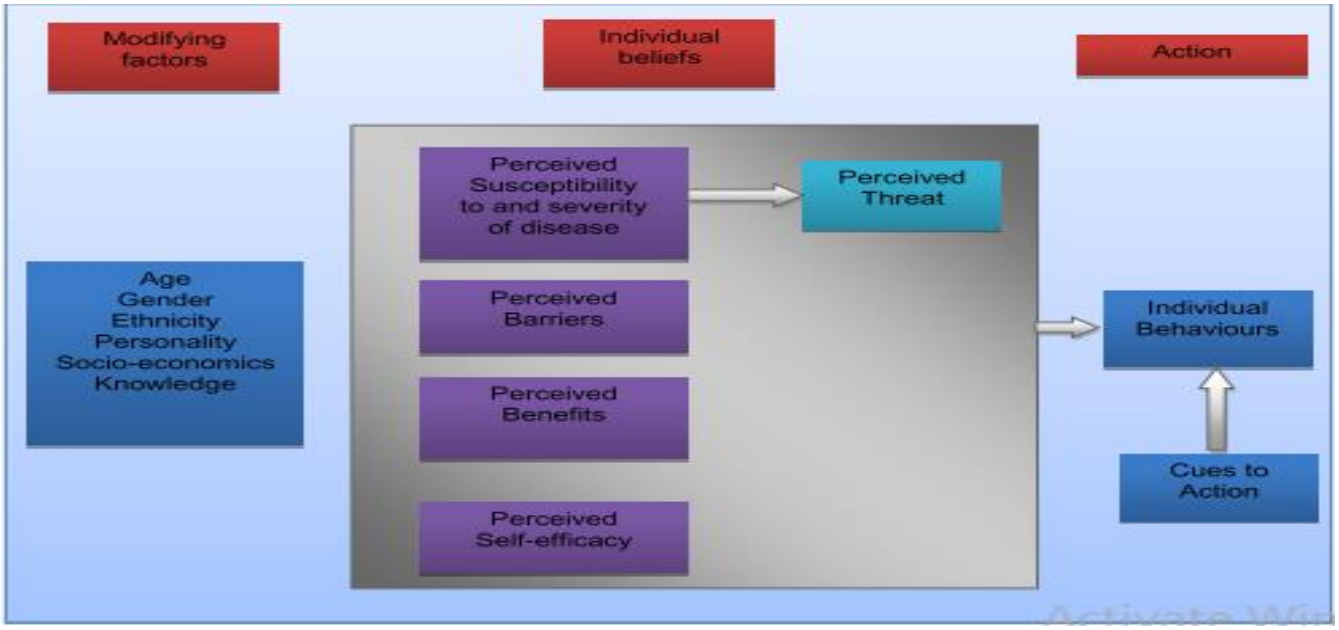


Figure 1. 1 : Health Belief Model (Champion & Skinner 2008:49)

For the qualitative study approach, HBM guided in explaining the midwives' perceptions; Perceived barrier and Perceived benefits regarding the utilisation of quality maternal health care services to develop community participation strategies that will be used to improve the quality and utilisation of maternal health care services.

Perceived benefits: A person's evaluation of the worth or effectiveness of adopting a health-promoting behaviour to lower their risk of illness is known as perceived benefits. Any human being who thinks that a certain action may lessen the likelihood of developing a health problem or its severity will engage in that behaviour regardless of how successful the action is. A person will direct his/her action depending on his/her beliefs of action (Boulos & Hassan 2023:3; Green, Murphy & Gryboski 2021:4).

Perceived barrier: Perceived barriers pertain to an individual's perception of the obstacle for behaviour change. In a life-threatening scenario, if the individual believes that a particular action will decrease the risk, then likewise barriers will prevent him from those activities (Boulos & Hassan 2023:3; Green et al 2021:4).

The research was guided by additional HBM in the following areas: how to conduct focus group discussions (FGDs) with midwives to obtain qualitative insights into their beliefs and attitudes regarding factors affecting the quality and utilisation of maternal health care services; how to frame data collection, analysis, and interpretation by including questions that assess women's perceptions of their risk of maternal health issues (e.g., complications during pregnancy or childbirth); and barriers to accessing these services, such as cost, distance, lack of transportation, or cultural beliefs. It provided guidance on how to use statistical methods to analyse survey data by correlating perceived susceptibility, severity, benefits, barriers, and cues to action with actual rates of maternal health service utilisation. Key themes pertaining to the HBM components (susceptibility, severity, advantages, barriers, and cues to action) that surface from participant replies were identified using thematic analysis, which was the method employed for the qualitative portion of the study.

Therefore, some women use maternal health care services during pregnancy, labour, delivery, and postnatal care to avoid health problems, while others do not. The HBM in this proposed study explains this. To improve the quality and uptake of maternal health care, HBM once again guided the research by using the perspectives of women and midwives to develop community engagement initiatives.

1.9 THE RESEARCH PARADIGM

A paradigm is a set of conventions that profile our understanding of how we acquire knowing. Articulating the research paradigm that guides a study explains the rationale that supports its chosen methodology (Elgeddawy & Abouraia 2024:71). Research paradigms are fundamental ideas about a particular subject that have implications for theory and methodology (Kaushik & Walsh 2019:2).

Mixed methods and the study's overall methodologies are based on three philosophical presuppositions: axiology (assumptions about the nature of value and the role of the researcher), ontological view (assumptions about world reality), and epistemological view (assumptions about the pursuit of knowledge) (Shan 2023:3, Dawadi & Giri 2021:26).

The single paradigm approach employed in this study was pragmatism, involves the fusion of qualitative and quantitative methods. Pragmatism has the potential to produce results that are more effective and reliable, providing diverse viewpoints on a single phenomenon and thus enhancing the overall comprehension of the subject (Masadeh 2024:777, Njonge 2023:106). The problem may be handled from multiple angles by adopting a mixed methods approach and embracing pragmatism. It acts as a new paradigm to replace an older way of thinking about research procedures by viewing the differences between them as social contexts for inquiry as a form of social activity rather than as abstract philosophical systems (Brierley 2017:8). The following additional paradigms and presumptions were discussed in addition to the pragmatic paradigm used in this study.

***Postpositivist* research paradigm:** It is the type of paradigm used in the quantitative study design. The postpositivist research paradigm, which employs a deterministic mindset in which causes (likely) determine consequences of outcomes, was employed in this study. The need to identify and assess the factors influencing results, even those obtained from experiments, is thus reflected in postpositivist concerns. For a quantitative

study design approach, which claims that the researcher collected data on instruments using either participant-completed measures or researcher-recorded observations, it is also reductionistic because the objective is to distil the concepts into a limited, discrete set for testing, such as the variables that comprise research questions and hypotheses (Kumar 2019:34).

Constructivist research paradigm: This paradigm focuses on how people interpret their own experiences on a particular issue in their own subjective ways, taking into account the social and historical context of the subject matter (Kamal 2019:1389). Within this study, the researcher collected information from midwives about their subjective perceptions and experiences regarding the quality and utilisation of maternal health care services.

Since they acted as a guide for the study's design, data collection methods, analysis, and interpretation of the findings, the theoretical presumptions that support the research on community participation strategies to enhance the quality and utilisation of maternal health care services must be made explicit. This comprehensive approach ensures that the quantitative and qualitative elements are appropriately integrated and consistent with the study's objectives. These core assumptions, which are categorised into methodological, axiological, ontological, and epistemological perspectives, apply to both quantitative and qualitative study designs.

Methodological assumptions

Methodological assumptions refer to the systematic approach and framework that researchers used to identify, collect, analyse, and interpret data in order to answer research questions or test hypotheses (Tombs & Pugsley 2020:2). It encompasses the rationale behind the selection of specific methods, techniques, and procedures for conducting research, as well as the theoretical underpinnings that guide these choices. This includes both qualitative and quantitative methods, as well as the strategies for validating findings and ensuring the reliability and validity of the research process (Gannon, Taheri & Azer 2022:6).

The following were the assumptions made in the current study: subjectivity, contextual understanding, and rich descriptions for the qualitative design, and objectivity, generalisability, measurement validity, and reliability for the quantitative study design:

Assumption of objectivity: The study assumes that information gathered via surveys or structured questionnaires can be objectively examined and that the findings will accurately represent trends in maternal health service use and community involvement.

Assumption of generalisability: If suitable sampling methods are applied, the results from the West Arsi Zone sample population can be extrapolated to comparable localities.

Assumption of measurement validity and reliability: It is expected that the data collecting tools (such as questionnaires) are trustworthy (providing consistent findings across diverse contexts) and valid (measuring what they are supposed to assess).

Assumption of subjectivity: In order to better understand the factors influencing the quality and use of maternal health care services, the qualitative method acknowledges the subjective experiences and interpretations of midwives and community members.

Assumption of contextual understanding: Accurate interpretation of the qualitative data is presumed to need knowledge of the local context, culture, and community dynamics.

Assumption of rich descriptions: The study anticipates that detailed narratives from participants would provide a deeper knowledge of community participation techniques and their impact on the quality and use of maternal health care services.

Axiological assumptions

When it comes to medical research, axiological assumptions are the fundamental attitudes and ideas that shape the entire process, from choosing study topics to formulating research questions to interpreting results. These presumptions influence what researchers view as significant, moral, and worthwhile in relation to health and medicine (Moroi 2021:130).

In current study, axiological assumptions can guide the study as follows:

Value of community engagement: The study assume that community involvement is necessary to raise the standard and usage of maternal health care services. This viewpoint emphasises how crucial it is to include local communities in decision-making processes aimed at enhancing the standard and accessibility of maternal health care.

Equity and access: A commitment to equity may be reflected in axiological assumptions, which can influence the research questions and aims by highlighting the need of ensuring that all members of the community, particularly those from marginalised groups, have access to and use maternal health care services.

Cultural sensitivity: The research may assume that understanding and respecting local cultural values and practices are crucial for effective maternal health care strategies. This assumption could guide how data is collected, ensuring that it is culturally appropriate and relevant.

Empowerment: The study might be guided by the belief that empowering communities to take part in health care decisions leads to better outcomes. This value can influence the design of interventions aimed at enhancing community participation.

Holistic approach: Axiological assumptions may advocate for a holistic view of health that considers social determinants of health, emphasising that improvements in quality and utilisation of maternal health care services require addressing broader social, economic, and environmental factors.

Sustainability: The belief in sustainable practices may guide the research towards identifying community participation strategies that are not only effective in the short term but also sustainable over time.

Ontological assumptions

The beliefs and understandings about the nature of reality and existence that serve as the foundation for medical research are referred to as ontological assumptions. These presumptions influence how scientists view health, sickness, and the biological, psychological, and social determinants of these phenomena . Ontological assumptions state that positivism, which holds that reality is distinct, palpable, and divisible, is the foundation of quantitative inquiry. However, qualitative research is based on constructivism and interpretivism, which hold that realities are multifaceted, socially created, and comprehensive (Tombs & Pugsley 2020:2).

In this study, ontological assumptions could guide the study as follows:

Understanding of community: The research assumes that communities are not monolithic entities but rather composed of diverse groups with varying needs, beliefs, and practices. This assumption influences how researchers define and engage with the community in the West Arsi Zone, recognising the importance of local contexts and dynamics.

Reality of health care services: The study may operate under the assumption that maternal health care services exist within a complex interplay of social, cultural, economic, and political factors. This ontological stance leads researchers to explore not only the services themselves but also the broader systems and structures that impact their quality and utilisation.

Perception of participation: The research may assume that community participation is an essential component of health care improvement. This implies that the act of participation is not merely a procedural formality but a significant contributor to the perceived quality and effectiveness of maternal health services.

Subjectivity of experience: The ontological assumption may acknowledge that individuals' experiences and perceptions of maternal health care are subjective and

influenced by their cultural backgrounds, personal beliefs, and social contexts. This perspective encourages qualitative methods that capture these diverse experiences.

Dynamic nature of reality: The research might assume that social realities are dynamic and can change over time because of interventions, community engagement, and shifts in attitudes toward health care. This assumption supports a longitudinal approach to studying the impacts of community participation on health outcomes.

Role of local knowledge: The research may operate under the belief that local knowledge and practices are valid and valuable in understanding and improving maternal health care services. This ontological stance promotes collaboration with community members to co-create knowledge and solutions.

Interconnectedness: There may be an assumption that health care is interconnected with other social determinants such as education, economic status, and gender roles. This perspective leads researchers to consider a holistic approach when examining community participation strategies.

Epistemological assumptions

Epistemological assumptions in the context of medical research refer to the beliefs and theories regarding the nature, scope, and sources of knowledge. These assumptions influence how researchers understand what constitutes valid knowledge in the field of medicine, how they acquire that knowledge, and how they interpret their findings (Moroi 2021:129). Epistemological assumptions are rooted in a positivist framework, which asserts that knowledge is derived from empirical interviews. In contrast, an interpretivist epistemology suggests that knowledge is constructed through social interactions and interpretations, focusing on understanding participants' meanings and experiences related to the quality and utilisation of maternal health care services (Tombs & Pugsley 2020:2). This perspective holds that objective truths about community participation strategies can be uncovered through statistical analysis.

In the current study, epistemological assumptions could guide the research in following ways:

Nature of knowledge: The research may assume that knowledge about maternal health care services is produced through the experiences and insights of community people, health care professionals, and researchers. This assumption fosters a participative approach to data gathering and analysis, emphasising local knowledge and opinions.

Methods of inquiry:

Depending on the epistemological stance, the study used both quantitative and qualitative methods (interviews and focus groups). A mixed-methods approach was used to integrate quantitative data with qualitative narratives to gain a more comprehensive understanding of the issue and to gain detailed insights into the experiences and perspectives of women and midwives regarding improving the quality and utilisation of maternal health care services.

Role of context: The study operated under the assumption that knowledge is context-specific and shaped by cultural, social, and economic factors unique to the West Arsi Zone. This perspective emphasises the importance of understanding local contexts when developing and evaluating community participation strategies.

Validity of knowledge: The study assumed that knowledge gained through community engagement and participatory research methods is as valid as that obtained through traditional scientific methods. This assumption supports the inclusion of community voices in the research process, recognising their contributions as essential to understanding and improving the quality and utilisation of maternal health care services.

Reflexivity: The study embraced an epistemological stance that values reflexivity, where the researcher critically reflects on his own biases, assumptions, and positions in relation to the community being studied. This reflexive approach can enhance the credibility of the research findings and foster trust between researcher and participants.

Collaborative knowledge creation: The assumption that knowledge is best created collaboratively could guide the design of participatory workshops or focus groups where community members actively contribute to identifying issues, generating solutions, and evaluating strategies for improving quality and utilisation of maternal health care services.

Interdisciplinary perspectives: The study might assume that understanding maternal health care services requires an interdisciplinary approach that integrates insights from public health, sociology, anthropology, and other fields. This epistemological stance encourages researchers to draw on diverse theoretical frameworks and methodologies to enrich their analysis.

Empowerment through knowledge: The study might operate under the belief that empowering communities with knowledge about maternal health care services can lead to increased utilisation and improved quality of care. This assumption highlights the importance of education and awareness-raising as part of community participation strategies.

1.10 DEFINITION OF TERMS

This subheading provided a definition for the terms used in this study.

1.10.1 Conceptual definitions

Maternal health: The study's definition of maternal health includes the well-being of women before to, during, and after pregnancy (Kiruja 2023:13).

In this study, maternal health refers to the physical, emotional, and social well-being of women throughout their reproductive lifetimes. Preconception, prenatal, intrapartum, and postnatal care are all included in this, with an emphasis on the quality of services received and how they are used in relation to community involvement.

Maternal death: The death of a pregnant woman or within 42 days after giving birth, from any cause related to or exacerbated by pregnancy or its treatment, but excluding accidental or incidental causes, regardless of the length or location of the pregnancy (WHO 2023:7).

Maternal death, as defined by the study, is defined as any cause related to or exacerbated by the pregnancy or its care, but not accidental or incidental causes, that occurs during pregnancy or within 42 days after giving birth, regardless of the length or location of the pregnancy in this study.

Late maternal death: The death of a woman from direct or indirect obstetric causes which occurred more than 42 days but less than one year after termination of pregnancy (WHO 2023:8).

For this study, late maternal death is the death of a woman from direct or indirect obstetric causes longer than 42 days but less than one year after termination of pregnancy, generally caused by issues that were either not identified or not appropriately treated during pregnancy or childbirth. Examples include serious infections after childbirth, venous thromboembolism, long-term effects of high blood pressure during pregnancy, cardiac problems associated to pregnancy, and postpartum depression or other mental health difficulties.

Pregnancy-related death: Any woman who passes away during pregnancy or within 42 days of giving birth, regardless of the reason of death (WHO 2023:7).

In this study, pregnancy-related death means death from any cause during pregnancy or within 42 days postpartum. This means it encompasses death from causes unrelated to the pregnancy but that occurred during the pregnancy period. For instance, a woman might die from a car accident during pregnancy, and that would be classified as a pregnancy-related death, though not a maternal death.

Antenatal care (ANC): The care a pregnant woman receives from the moment of conception to the start of labour in order to monitor her health and maximise the wellbeing of both mother and foetus (FMOH 2021:19).

In this study, antenatal care refers to care that is given to pregnant women like:

- **Regular check-ups:** Including blood pressure monitoring, weight checks, urine tests, and fetal assessments (e.g., ultrasound, fetal heart rate monitoring).
- **Vaccinations**: Pregnant women are given treatment with a vaccine to prevent infections, e.g., tetanus-toxoids is given to prevent tetanus.
- **Nutritional counselling**: Education on nutrition is given to pregnant women to ensure they get adequate nutrients for both herself and the baby.
- **Education about healthy lifestyle choices:** Education on proper diet, exercise, and avoiding harmful substances are given during ANC.
- **Counselling on childbirth preparation:** Women are advised to decide where the birth will take place, to choose a health care professional to provide care during pregnancy, preparation of money and pain management techniques and breastfeeding support.
- **Screening for medical conditions:** Medical conditions such as diabetes, anaemia, and infections are checked.

Labour: is the physiological process by which the foetus, membranes, umbilical cord, and placenta are evacuated from the uterus, or the process by which the uterus contracts to release its contents through the birth canal (Cunningham, Leveno, Bloom, Spong, Dashe, Hoffman, Casey & Sheffield 2022:433).

In the context of this study, labour is the process by which a baby is born. It is a series of involuntary uterine contractions that cause the cervix to dilate (open) and efface (thin) and eventually result in the expulsion of the foetus and placenta.

Postnatal care: (PNC) is the care provided to the mother and her infant during the first six weeks of life after delivery (FMOH 2021:80) given to a woman and her newborn following childbirth.

In this study, it includes the care given immediately following delivery and up to six weeks (or more, depending on the situation and the needs of the individual) after giving birth. This care consists of:

This care includes:

- **Regular check-ups:** Physical examinations to assess healing, blood pressure, and overall well-being.
- **Monitoring vital signs:** Regularly checking temperature, pulse, blood pressure, and respiratory rate.
- **Nutritional counselling:** Guidance on healthy eating to support recovery and breastfeeding.
- **Breastfeeding support:** Assistance with latch, milk production, and addressing common breastfeeding challenges.
- **Family planning education and counselling:** Information on various contraception methods and support for choosing a suitable option.
- **Mental health assessment:** Screening for postpartum depression and anxiety and providing appropriate referrals.
- **New-born care education:** Guidance on safe sleep practices, feeding, hygiene, and recognising signs of illness.
- **Immunisation:** Administering recommended vaccines for the newborn.

Skilled birth attendant (SBA): A certified health professional who has undergone the education and training required to manage normal (uncomplicated) pregnancies, deliveries, and the immediate postpartum period, as well as to identify, treat, and refer women and newborns with complications, is an example of a midwife, doctor, or nurse (WHO 2023:3). A health professional who has received training to give care during childbirth, such as a doctor, nurse, or midwife, is commonly referred to as an SBA in the context of this study. She is prepared to oversee routine births and identify potential issues, guaranteeing that mothers and newborns receive the proper care. She may also entail addressing cultural beliefs, enhancing transportation and access to medical

facilities, and teaching pregnant mothers about the advantages of having an SBA present at delivery.

Quality of care: Quality of care is the extent to which health care services improve desired health outcomes. Among the many components that comprise high-quality health care are technical expertise, service accessibility, efficacy, interpersonal relationships, continuity, safety, and incentives (UNICEF 2020:3).

The term "quality of care" in this study refers to a broad notion that includes several elements that guarantee women receive safe, efficient, and considerate care during their entire pregnancy, delivery, and postpartum period. It encompasses more than just the lack of medical errors and consists of:

1. **Effectiveness**
    - Appropriate and timely interventions: According to individual needs and evidence-based criteria, giving the appropriate care at the appropriate time. This involves making the right recommendations as necessary.
    - Successful outcomes: Decreasing maternal and neonatal mortality and morbidity to achieve favourable health outcomes for both mother and child.
    - Prevention of complications: Minimising adverse effects through early detection and efficient management of possible issues.
2. **Safety**
    - Minimising harm: Ensuring that care is administered without creating undue injury or problems. This includes infection control and drug safety.
    - Error prevention: putting in place procedures and systems to stop adverse events and medical mistakes.
3. **Emergency preparedness**
    - Having appropriate processes and resources in place to treat obstetric crises.
4. **Respectful and person-centred care**
    - Empowerment: Valuing women's independence and allowing them to participate in care decision-making.

- Dignity and privacy: Guaranteeing women's privacy, dignity, and respect throughout their care journey.
- Cultural sensitivity: Considering the cultural values and preferences of women when providing care.
- Communication: Effective, courteous, and transparent communication between women and healthcare professionals.

5. **Accessibility**
   - Making care available to all women, irrespective of their location, financial situation, or other characteristics.
6. **Timeliness**
   - Prompt attention to needs: Responding quickly and effectively to the needs and concerns of women.
   - Reduced waiting times: Lowering service wait times to increase accessibility and lessen anxiety.
7. **Efficient referral systems**
   - Referral processes that are quick and effective for people in need of specialised care.
8. **Equity**
   - Fair and just access: Making certain that every woman has equitable access to high-quality maternal health care, irrespective of her location or background.
   - Addressing disparities: Addressing disparities in care quality and access, making sure that vulnerable groups receive fair treatment.

Technical competence: Refers to the clinical methods used by the provider, such as their abilities, demeanour, compliance with procedures, and asepsis in clinical settings, as well as their level of empathy, rapport, trust, confidentiality, and sensitivity to the needs of the client (Valizadeh, Zamanzadeh, Eskandari & Alizadeh 2019:3 & 5). According to recognised clinical guidelines and best practices, technical competence in this study refers to the knowledge, skills, and capacities of healthcare professionals to carry out particular procedures and deliver appropriate treatment.

Perceptions: Perceptions are an individual's beliefs, values, attitudes, needs, and interests regarding something or a point of view (Yoseph, Teklesilasie, Guillen-grima, Astatkie & Scholar 2023:5). In this study, perceptions refer to the opinions of midwives, women, and medical professionals on improving the quality and utilisation of maternal health care services.

Experiences: Characterised as events that have affected people's thoughts and behaviours (Valizadeh et al 2019:5).

For this study, experiences mean the sum of interactions, events, and perceptions of a woman and midwife related to the quality and utilisation of maternal health care services.

Strategies: Complex network of ideas, perceptions, goals, experiences, knowledge, memories, expectations, and thoughts that offer broad direction for particular activities in pursuit of specific objectives is referred to as a strategy (Bukhari 2019:2). Strategies for community participation are suggested as ways to improve the quality and utilisation of maternal health care services in the context of this study.

1.11 RESEARCH DESIGN AND METHODOLOGY

Research designs, according to Mishra and Alok (2019:3), are the types of studies that fit into the mixed-methods, qualitative, and quantitative technique categories and that provide particular direction for the processes in a research design. There are two types of research methods: qualitative and quantitative. While qualitative research design offers a deeper understanding of the viewpoints and experiences of many situations from the participants themselves, quantitative research design is focused on making observations, formulating hypotheses, making predictions, and evaluating the predictions.

Mixed-method research is an approach and methodology used in the social, behavioural, and health sciences where the researcher gathers both quantitative and qualitative data,

combines or integrates the two, and then draws conclusions from the integration that go beyond what can be inferred from the quantitative or qualitative data alone (Creswell 2022:2).

According to Kumar (2019:46 & 47), there are three primary types of study designs: descriptive, correlational, and experimental. Descriptive research approaches are used to build and test descriptive theories, experimental designs are used to test prediction theories, and correlation designs are used to test explanatory theories.

Therefore, this study used mixed method design to address the researcher's research questions. Gathering evidence to prepare and develop strategies is the focus of the study's two interconnected parts.

Phase I: Evaluation of maternal health care services.

The purpose of this study was to evaluate maternal health care services to develop community participation strategies to improve quality and utilisation of maternal health services in the West Arsi Zone, Oromia Regional State, Ethiopia. This study involved the collection, analysis, and interpretation of empirical data.

Phase II: Development of strategies.

It involved developing strategies for community involvement to improve the quality and utilisation of maternal health care services. The empirical data gathered and examined during Phase I served as the foundation for the strategies' development process.

1.11.1 Study setting

The study was conducted at the government hospitals and health centres in the West Arsi Zone of Oromia Regional State, which is 250 kilometres south of Addis Ababa, the capital of Ethiopia, and has a population of approximately 2956182. It is one of the 12 administrative zones of Oromia Regional State, and the West Arsi Zone has two city

administrations, fifteen rural districts or woredas, 343 rural kebeles, 326 health posts, 90 health centres, one zonal referral hospital, and six district hospitals (West Arsi Zonal Health Office Master Facility Lists 2024:2).

Table 1.1: Lists of public health facilities found in West Arsi Zone

Sno	List of woreda	List of health centres	List of hospitals
1	Ababa	✓ Adaba Health Centre ✓ Hunte Health Centre ✓ Lajo Health Centre ✓ Gededo Health Centre ✓ Hako Health Centre ✓ Wosha Health Centre ✓ Dubisa Health Centre ✓ Bucha Health Centre ✓ Ibsa Health Centre	
2	Dodola*	✓ Negele Metama Health Centre** ✓ Serofta Health Centre** ✓ Heraro Health Centre** ✓ Edo Health Centre** ✓ Aluma Health Centre ✓ Geneta Health Centre	Dodola General Hospital***
3	Hasasa	✓ Hasasa Health Centre ✓ Hinja Health Centre ✓ Huluko Health Centre ✓ Waltai Health Centre ✓ Tijo Wakantira Health Centre ✓ Shashe Health Centre ✓ Negele Sigalo Health Centre	
4	Heban Arsi*	✓ Goljota Health Centre** ✓ Meti Health Centre** ✓ Dawe Langano Health Centre	
4	Kofale	✓ Kofale Health Centre ✓ Ilka Health Centre ✓ Roba Health Centre ✓ Guche Health Centre ✓ Wabe Health Centre ✓ Robe Ashoka Health Centre ✓ Kebete Health Centre ✓ Sire Shifa Health Centre	
5	Kokosa*	✓ Kokosa Health Centre** ✓ Gerba Harufa Health Centre ✓ Hebano Health Centre** ✓ Bokore Health Centre** ✓ Ararso Health Centre ✓ Hogiso Health Centre**	Kokosa Primary Hospital***

		✓ Boro Health Centre	
6	Kore	✓ Kore Health Centre ✓ Lencha Ansha Health Centre ✓ Bata Health Centre ✓ Shire Health Centre ✓ Gobe Health Centre	Gembo General Hospital
7	Nagele Arsi*	✓ Nagele Health Centre** ✓ Dole Health Centre ✓ Beseku Health Centre** ✓ Kelo Health Centre ✓ Gode Health Centre** ✓ Shela Bila Health Centre** ✓ Gembelto Health Centre	Nagele Primary Hospital***
8	Nansebo	✓ Worka Health Centre ✓ Shambel Kedir Health Centre ✓ Gerambabo Health Centre ✓ Nensebo Cabi Health Centre ✓ Fechea Health Centre	
9	Shala*	✓ Aje Health centre** ✓ Sanbete Shala Health Centre** ✓ Fande Ejersa Health Centre ✓ Awara Health Centre ✓ Abure Health Centre** ✓ Kerensa Kubi Health Centre** ✓ Oreshibibo Health Centre	
10	Shashemane rural*	✓ Hursa Health Centre** ✓ Fagigole Health Centre ✓ Aredano Health Centre ✓ Jalo Health Centre**	
11	Shashemane Town*	✓ Abosto Health Centre** ✓ Awasho Health Centre** ✓ Bulchana Health Centre** ✓ Cabi Health Centre ✓ Arada Health Centre** ✓ Dida Boke Health Centre ✓ Elemo Health Centre ✓ Harabate Health Centre ✓ Toga Health Centre**	Shashemane Referal Hospital*** Melka Oda General Hospital***
12	Siraro	✓ Batu Siraro Health Centre ✓ Sanbate Sinkile Health Centre ✓ Rophi Health Centre ✓ Shasha Health Centre ✓ Belala Health Centre	Loke Primary Hospital
13	Wondo	✓ Shasha Health Centre ✓ Bucil Health Centre ✓ Busa Health Centre	

Key=* Selected woredas, **=Selected health centres, ***= Selected hospitals

The study was conducted in the six (6) selected woredas (Arsi Nagelle, Shashemane, Dodola, Kokkosa, Shalla and Heban Arsi) and in five (5) government hospitals (1) referral hospital (Shashemane Referral hospital and four (4) district hospitals (Malka Oda Hospital, Nagelle Arsi Hospital, Dodola Hospital and Kokkosa Hospital) all were included, and twenty-five (25) health centres were selected by using simple random sampling method from the woredas. A thorough description of the study environment is given in Chapter 3.

1.11.2 Phase I

A cross-sectional survey on women of reproductive age groups (15-49 years) who had given birth in five selected governmental hospitals and 25 health centres found in West Arsi Zone in the last 12 months and during data collection period was conducted.

1.11.3 Research design and methods

Research designs are methods for conducting research (Creswell 2022:49). This study used a convergent parallel mixed methods design, which is a type of mixed methods design where the researcher collects both quantitative and qualitative data to provide a comprehensive understanding of the research problem. Typically, the researcher collects both types of data at roughly the same time and then incorporates the data into the analysis of the overall findings (Kumar 2019:68).

The researcher integrated quantitative data from statistical trends with qualitative data from perceptions and personal experiences to develop community participation strategies aimed at improving the quality and utilisation of maternal health care services in West Arsi Zone, Oromia Regional State, Ethiopia. The factors influencing the quality

and utilisation of maternal health care services in the study areas were better understood through combined methods.

Quantitative research: One technique for evaluating objective theories is quantitative research. These variables can then be measured, typically via equipment, to analyse numbered data using statistical approaches. An introduction, literature and theory, methods, findings, and comments make up the final written report's planned structure. Like qualitative researchers, those who do this kind of study make assumptions on the deductive testing of concepts, the incorporation of bias-prevention measures, the management of competing theories, and the capacity to generalise and reproduce the findings (Creswell 2022:4).

As a means of exploring and understanding the meaning that individuals or groups ascribe to a social or human issue, Kumar (2019:309 & 310) defines qualitative research methods. The research process includes the following: data that is typically collected in the participant's surroundings, data analysis that inductively expands from details to more general themes, emerging questions and processes, and the researcher's evaluation of the data's importance. This form of research supports an approach to research that respects an inductive method, an emphasis on human relevance, and the importance of capturing the intricacy of a situation. The final written report's structure is flexible.

Convergent parallel mixed-method designs can be chosen for a variety of reasons, including the nature of the research challenges and the preferences and/or experiences of the researchers. Therefore, to investigate and characterise the perspectives and experiences of health care professionals and the community with respect to factors that improve the quality and use of maternal health care services, the study uses an exploratory, descriptive, and qualitative research approach.

1.11.3.1 Population and sampling

The percentage of women who utilised all components of maternal health care services, as reported in the 2019 Ethiopian Mini Demographic Health Survey report, was used to calculate the number of study participants. The quantitative study design used ANC, labour and delivery, and PNC, while the qualitative study design part used purposive sampling with subpopulations to choose study participants.

The samples were made up of town inhabitants, midwives currently employed at certain hospitals and health centres, and mothers who had given birth within the 12 months prior to the poll. The sample size for each study participant was established by the level of information saturation during data collection. Chapter 3 includes a full explanation of the target population and the study sample.

1.11.3.2 Data collection procedure

A standardised questionnaire was utilised to gather information on women's perceptions of care, service usage habits, and socioeconomic variables through semi-structured interviews and focus groups. Responses to the questionnaire were pre-coded. A language expert prepared it in English, translated it into Afaan Oromo and Amharic (the local language of communication), and then translated it back into English to make sure the translation accurately captured the original meaning. A technique utilised by comparable studies served as the model for the questions included in the surveys.

Open-ended questions were used in the instruments for the qualitative study design to increase the depth of the data gathering. Focus groups with midwives who have worked for 12 months or longer in 25 health centres and five chosen governmental hospitals were conducted by the researcher. Every FGD was recorded on audio. While gathering data, the researcher made field notes of observations. A thorough explanation of the data collection process will be provided in Chapter 3.

1.11.3.3 Data analysis

For the quantitative portion of the study, the researcher entered data into the Software Package for Social Sciences (SPSS) version 25; a database was created using the codes and data fields in the questionnaire; and SPSS was used for data analysis, which the researcher completed with assistance from the IT specialist.

The sample population's utilisation patterns of high-quality maternal health care services were described using standard descriptive methods in connection to the sociodemographic traits of the respondents. Logistic regression was also used for bivariate analysis. Logistic regression models and chi-square tests were used because all of the response variables were categorical. The determinants of enhancing the quality and utilisation of maternal health care services were identified using a chi-square test. A p-value of 0.05 indicated that the results were significant. Confounder modifications were conducted in accordance with the results of the multiple logistic regression analysis. The relevant factors (effects of variables) on the quality of utilisation of maternal health care services at the level of health institutions were estimated using multivariate logistic regression models. Based on the covariate ranks, the covariates' strength was also examined.

Odds ratios and 95% confidence intervals were used to show the estimated impacts of variables on service usage. Use of maternal health care services is not different from the reference category if the calculated odds ratio is 1. If it is greater than 1, the likelihood of use is higher than the reference group. The likelihood of using care is lower than the reference group if it is less than 1.

Data gathering and qualitative data analysis were done at the same time. Daily summaries were penned and included with the pertinent field note. This study's methodology, inductive thematic analysis, produced themes that were grounded in the data. The software Atlas TI version 8 was utilised to examine the qualitative data. Reading, coding, showing, decreasing, and interpreting were the basic steps for the

qualitative data analysis in the current study. A comprehensive account of the data analysis was given in Chapter 3.

1.11.3.4 Phase II:

Development of community participation strategies to improve the quality and utilisation of maternal health care services.

The development of community participation strategies to improve the quality of maternal health care service usage was the main goal of phase II. The process of developing the strategies was based on the empirical data collected and analysed in phase I. The design of community engagement strategies to promote the quality and utilisation of maternal health care services was the goal of the current study, which resulted from the analysis and synthesis of phase I data.

The research finished with the development of draft strategies based on the themes that were identified, the development of strategy statements, the explanation for their existence, and the presentation of these strategy statements as draft strategies. After being operationalised and summarised, the draft strategies were translated into interim strategies. Managers and qualified health professionals examined and approved the intermediate efforts prior to their finalisation.

Using recommendations from the validated interim strategies, the researcher developed final strategies, which were discussed in detail in Chapter 7, and some of the original Phase I participants as well as other experts from health bureaus and Universities were shown similar strategies.

1.12 ESTABLISHING TRUSTWORTHINESS

"The credibility of the findings in a piece of qualitative research and the extent to which readers can have trust in the research and its findings" is how Kakar, Rasheed, Rashid, and Akhter (2023:151) define trustworthiness. Trustworthiness, which guarantees the degree to which the study findings can be regarded, characterises the rigour of the qualitative research (Stahl & King 2020:26). By establishing the research's credibility, dependability, confirmability, transferability, and authenticity, all of which are criteria for trustworthiness, the study guaranteed the validity of its conclusions (Kakar et al., 2023:160). By establishing the research's credibility, dependability, confirmability, transferability, and authenticity, all of which are criteria for trustworthiness, the study guaranteed the validity of its conclusions (Kakar et al 2023:160). Chapter 3 covered a thorough explanation of the five criteria and other aspects of trustworthiness.

1.13 ETHICAL CONSIDERATIONS

This study was approved by the University of South Africa (UNISA) Department of Health Studies' Higher Degrees Committee and the Oromia Regional Health Bureau's Research and Laboratory Department. UNISA Ethiopia and the Regional Learning Centre asked that a letter of support be sent to the Oromia Regional Health Bureau to obtain this ethical clearance for the project, and the Oromia Regional Health Bureau again sent a letter of support to the West Arsi Zonal Health Department asking for permission to conduct the study. Following the writing of a letter of support by the West Arsi Zonal Health Department, access was granted to the selected district health offices.

The West Arsi Zonal Health Department then wrote a letter of support and granted access to the selected district health offices. The heads of the district health offices, hospital medical directors, and primary health care unit (PHCU) directors verbally consented to the study's conduct in the selected district health offices, hospitals, and

health centres. The current study contained the letters of support and ethical clearance certifications as an appendix. The current study complies with the moral principles of beneficence, equity, preventing harm, and respect for human beings. Chapter 3 provided a detailed description of these.

1.14 STRUCTURE OF THE THESIS

There are eight chapters in this thesis report, and the content of each is described in the section that follows:

Chapter 1: Orientation of the study

This chapter provides a summary of the entire study, covering the following subjects: background, research problem, research problem statement, study goals and objectives, study significance, theoretical framework, research design and technique, reliability, ethical consideration, and thesis layout.

Chapter 2: Literature review

This chapter reviews the literature on the factors impacting the improvement of maternal health care service quality and utilisation. Along with the theoretical framework, reasons for not using maternal health care services, and a summary of the factors influencing the quality of the use of antenatal care, skilled birth attendance, and postnatal care services, the chapter highlighted the theoretical concept for the use of maternal health care services. Additionally, the efforts to increase the quality and utilisation of maternal health care services were addressed.

Chapter 3: Research design and method

The study's research paradigm and design, data gathering strategy and techniques, data collection tools and analysis, reliability, and, lastly, ethical considerations for the research process are all covered in Chapter 3.

Chapter 4: Analysis and presentation of the research findings

The description of research findings and data analysis were covered in this chapter.

Chapter 5: Discussion of the research findings

The research findings are presented and discussed in this chapter.

Chapter 6: Integration of quantitative and qualitative findings

The integration of study data from both quantitative and qualitative methods was given in this chapter.

Chapter 7: Development of community participation strategies to improve quality and utilisation of maternal health care services utilisation.

This chapter will outline the strategies' development process and present the finished strategies.

Chapter 8: Conclusion and recommendations of the study

This chapter covers the study's limitations, conclusion, suggestions for additional research, and more.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter discusses the study's literature review. A literature review comprises locating and summarising the research on a topic (Kumar 2019:103). To perform this study, the chapter reviewed the literature on the effectiveness and utilisation of maternal health care services from the perspectives of mothers and medical professionals.

Since the quality of maternal health care services is the specific focus of this study, literature about the kinds of services or outcome variables considered in the current study was reviewed. This included local, national, regional, and international sources about maternal health care services during pregnancy, delivery, and the postnatal period. This was carried out to create plans for enhancing the standard and usage of maternal health care services.

2.2 GEOGRAPHY AND CLIMATE OF ETHIOPIA

Ethiopia is the oldest nation in Africa to be independent. Having a land area of 1 million square kilometres and a water area of 104,300 square kilometres, it is the largest part of the Horn of Africa, making it the tenth largest country in Africa. Eritrea borders it to the north-northeast, Somalia and Djibouti to the east, Kenya to the south, and Sudan to the west-southwest. Its coordinates are 8 00 N to 38 00 E around the globe. Ethiopia has a very diverse topography, with peaks reaching 4,550 meters above sea level and a depression 110 meters below. Above 1,500 meters, more than half of the nation is located.

The three main climatic variations are the "Kolla," or hot lowlands, below about 1,500 meters; the "Wayna Degas," or 1,500–2,400 meters; and the "Dega," or cool temperate

highlands, above 2,400 meters. The predominant climate type is tropical monsoon (Country of Origin Information 2020:10).

2.3 GOVERNMENT AND ADMINISTRATION

Ten Tigray, Afar, Amhara, Benishangul Gumuz, Gambella, Harari, Oromia, Somali, Southern Nation and Nationalities and Peoples Region (SNNPR), and the City Administration Councils of Dire Dawa and Addis Ababa are the ten Regional States that comprise the Federal Democratic Republic of Ethiopia. Sidama was formerly a zone within SNNPR but was declared a regional state on June 18, 2020, after a referendum on November 20, 2919. The regional states and city administrations are composed on 817 administrative Woredas, or districts. A woreda or district, which has an elected administrative council, is the basic decentralised administrative unit. The 1000 Woredas are further subdivided into the 17,000 Kebeles, the smallest administrative district (Federal HIV/AIDS Prevention and Control Office (FHAPCO) 2021:17; FMOH 2021:15; Country of Origin Information 2020:11& 12; FMOH, EPHI & CSA of Ethiopia 2019:3).



Figure 2.1 Map of Regional states of Ethiopia (Country of Origin Information 2020:13)

2.4 HEALTH SYSTEM ORGANISATION IN ETHIOPIA

Ethiopia's health care system is poor, with its health indicators among the worst in the world. Resources in Ethiopia are scant, but it also requires workers, equipment and supplies. In remote areas, it is much harder to access medical personnel or facilities. The health system has made great strides in the past 20 years with the growing number of medical facilities, and the number of medical professionals working across the country and 1000 Woredas (Country of Origin Information 2020:78).

The primary supplier of health care services in Ethiopia is the government. As explained below, the nation's health delivery system is organised into three tiers: primary, secondary, and tertiary levels of care (Argaw, Desta, Bele & Ayne 2019:3 & 46).

2.4.1 Primary level health care

A primary hospital (PH), five satellite health posts (HPs), and a health centre (HC) make up Ethiopia's primary health care system (Argaw et al 2019:4). A health centre should typically employ 20 workers, and the population it serves ranges from 15,000 to 25,000 for rural health centres and 40,000 for metropolitan health centres. In addition to offering preventive and curative services, the health facilities are anticipated to act as referral hubs and hands-on training locations for Health Extension Workers (HEWs).

This structure states that a health centre should provide most of the reproductive health services outlined in Ethiopia's Essential Health services package, as well as the seven Basic Emergency Obstetric and Newborn Care (BEmONC) signal functions. Among other things, the following health centre activities are specific to reproductive health (RH):

- Giving targeted ANC.
- PNC and delivery.
- PMTCT for prevention of mother-to-child transmission of the HIV virus.
- Pregnancy complications: prevention and treatment.
- Coordinating emergency transportation and referrals.
- Offering long-acting contraceptives as part of family planning services.
- Delivering safe prenatal and postpartum care.
- RH services tailored to adolescents and young people.

With two HEWs per Kebele, the health care post is the lowest tier of the Ethiopian healthcare system and serves a catchment population of 3,000–5,000 people (Manang

2019:11). The following reproductive health services are intended to be provided by the health care post.

- Basic ANC, which covers the management of pregnancy-related anaemia, malaria, and hookworm.
- Mother and child immunisation.
- PNC includes contraception and nutrition counselling.
- Promotion of nutrition for mothers and children, development tracking, iron and vitamin A supplements, and demonstration.
- Contraception services and counselling.
- Services for adolescent and youth reproductive health (AYRH), such as HIV counselling, sexuality counselling, and counselling on harmful customs.

An average population of 60,000 to 100,000 people is served by a primary hospital's inpatient and outpatient services. A primary hospital offers emergency surgical services, including caesarean sections, blood transfusions (all ten Comprehensive Emergency Obstetrics Newborn Care (CEmONC) signal functions), clinical management for cases of sexual assault, and rape clinical management in addition to what a health centre can offer. In addition, it acts as a practical training facility for undergraduate students and a referral centre for health facilities within its service areas. The inpatient capacity of a primary hospital is 25–50 beds.

2.4.2 Secondary level health care

A general hospital serving an average of 1 million to 1.5 million people offers both inpatient and outpatient services as part of secondary level health care. With an average of 234 employees, it acts as a referral centre for primary hospitals and a hands-on

teaching ground for medical and other health sciences undergraduate and graduate programs.

2.4.3 Tertiary level health care

This level of care consists of a specialist hospital that serves between 3.5 and 5 million people on average, employs 440 medical professionals on average, and acts as a referral centre for other hospitals. According to Ethiopia's Federal Ministry of Health (FMOH) report for 2018–19, there were roughly 17,162 health posts, 3,678 health facilities, and 314 public hospitals. 108 hospitals, 86 HCs, and 425 more health posts were under construction. According to the Federal HIV/AIDS Prevention and Control Office, there are 397 hospitals in the country, including about 65 private and non-governmental organisation (NGO) hospitals (FHAPCO) 2021:20; Desta, Azeb, Ismael, Mesele & Sualiha 2020:4 & 6).

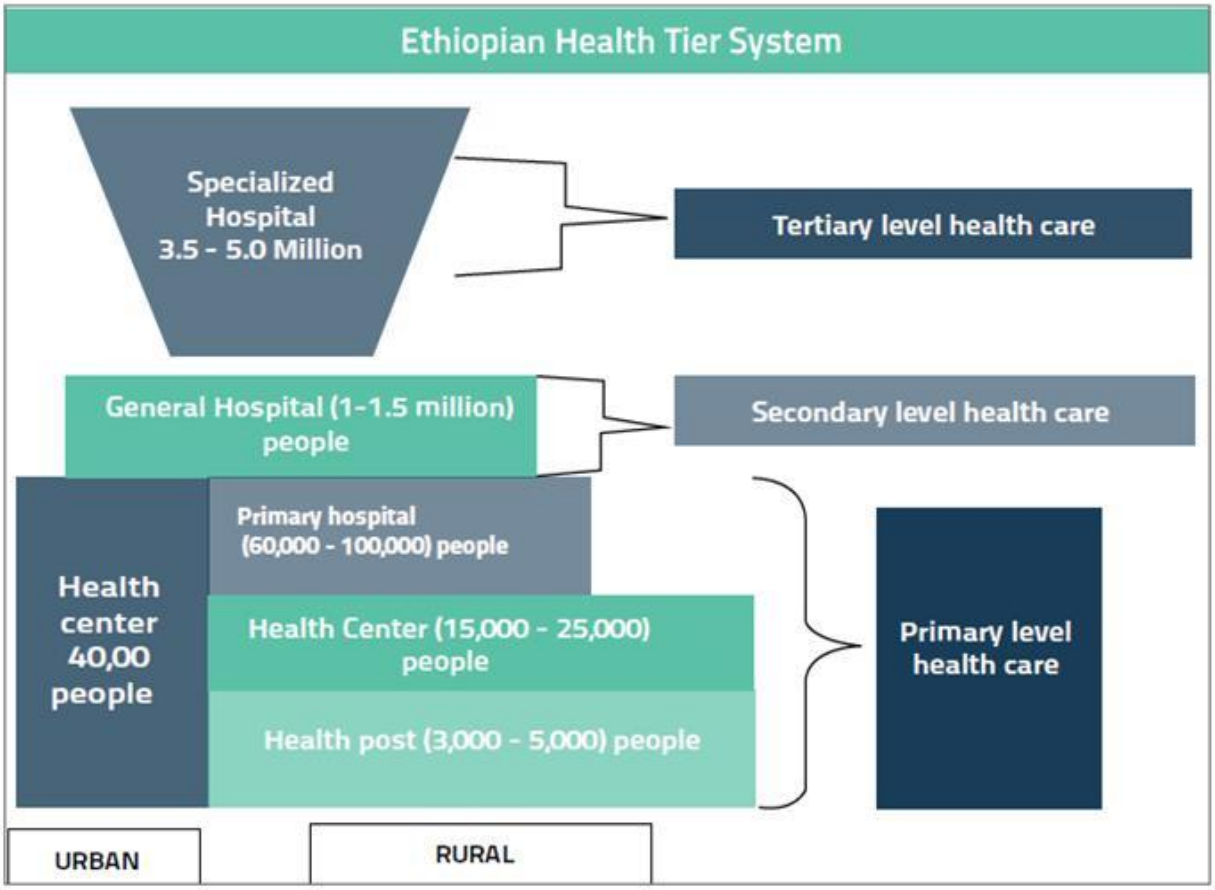


Figure 2.2: Ethiopian health care tier system (FHAPCO 2021:20)

2.5 NUMBER OF HEALTH CARE WORKFORCE AND POPULATION BY CATEGORY IN ETHIOPIA

To raise the standard of healthcare services, Ethiopia has invested heavily in health worker training during the last ten years. To improve access to primary health care services in all nations, the FMOH has trained HEWs. Of the 39,878 health extension workers, 5,036 are stationed in metropolitan areas. Even though there are now more health extension workers, issues with training quality, national deployment equity, and health system performance persist (FHAPCO) 2021:20; Desta et al 2020:4 & 6).

Table 2.1: Health worker force in Ethiopia (FHAPCO 2021:21)

Category	Absolute Number	Population ratio
Physicians	10,194	1: 10,521
Health Officers	10,953	1: 8,820
Nurses (Diploma, degree, specialist)	59,469	1: 1,624
Midwives	16,087	1:6,005
Pharmacists	10,626	1: 9,091
Lab technicians/technologists	9,468	1: 10,773
Health Extension Workers	39,878	1:2,362

2.6 MATERNAL HEALTH CARE SERVICES

Maternal health care services are the services that women receive to obtain high-quality maternal health before to, during, and following pregnancy. The parents' overall health, lifestyle choices, and prenatal health can all influence fertility, maternal health, and the chance that their children will grow up to suffer from chronic illnesses. Women who want to get pregnant should have any health conditions that need to be identified and addressed before getting pregnant examined for (Kiruja 2023:13).

A study conducted in the rural Sehala Seyemit district found that women's intention to use maternal health care services was influenced by several factors, including maternal age, media exposure, positive subjective norms, obstetric danger signs in the most recent pregnancy, travel time to the closest medical facility, and birth assistance for the most recent delivery (Taye, Kebede & Wondie 2022:7). Additionally, moms with moderate media exposure (AOR = 1.29, 95% CI = 1.29–1.33) and complete media exposure (AOR = 1.70, 95% CI = 1.58–1.83) were more likely to seek maternal health care services than mothers without media exposure (Shanto, Al-Zubayer, Ahammed, Sarder, Keramat, Hashmi, Haque & Alam 2023:6).

Every day, almost 800 women worldwide pass away because of avoidable pregnancy and delivery-related problems. Death occurs every two minutes as a result. 99% of these maternal deaths take place in underdeveloped nations, with South Asia accounting for over one-third and sub-Saharan Africa for over half. Adolescents are more likely than older women to experience pregnancy-related problems and death, and these deaths are more common among women in rural areas and impoverished communities. Enhancing the standard of expert care before to, during, and following childbirth can save these women's and the new-borns' lives (WHO 2023:29).

No nation should have a maternal mortality rate (MMR) more than 140 deaths per 100,000 live births; the global average is fewer than 70 deaths per 100,000 live births. By 2030, every country should reduce its MMR by at least two-thirds compared to the baseline from 2010. The goal is to improve the health of all women and children worldwide between 2016 and 2030, according to the Global Strategy for Women's, Children's, and Adolescents' Health (WHO 2019:44 & 46).

Maternal and newborn mortality decreases are still happening slowly, despite a major improvement in the coverage of maternal health care services, such as giving birth in a medical facility, over the previous 20 years on a global scale. Since the period before labour is the most critical for saving the lives of the mother and newborn and preventing stillbirths, attention has shifted to improving the quality of treatment as the number of births in medical facilities rises. Poor care raises morbidity and mortality. "Every pregnant woman and newborn receive high-quality care throughout pregnancy, childbirth, and the postnatal period" going forward, according to the World Health Organisation. In order to accomplish this, WHO has created a framework for improving patient care quality (WHO 2016:16).

According to estimates, the MMR in developing countries is 415 per 100,000 live births (uncertainty interval (UI) 396 to 477). This is more than 40 times higher than the MMR in Europe (10; UI 9 to 11) and almost 60 times higher than the MMR in Australia and New Zealand (7; UI 6 to 8). In the world's least developed countries, where an estimated

130,000 maternal fatalities occurred in 2017, the estimated lifetime risk of maternal mortality was 1 in 56 (WHO 2019:33).

To improve the quality of maternal health care services, MMR and the proportion of deliveries attended by qualified experts are essential indicators. Most maternal deaths are avoidable because problems during pregnancy and delivery can be avoided or controlled by improving the standard and utilisation of maternal health care. This study indicates that improving the quality of care during labour and delivery, offering high-quality care, and utilising evidence-based obstetric and neonatal care are among the top goals to reduce illness and mortality rates among women and their newborns (Centers For Medicare & Medic AID Services (CMS) 2022:1)

One problem in Ethiopia is the steady supply of life-saving medications, especially misoprostol and magnesium sulphate, at lower levels of care. Numerous reasons, such as supply chain delays, inadequate policy implementation, and low community awareness, contribute to this lack of availability. To save mothers' and babies' lives, maternal health products must be accessible when and where they are required (Mohamed, Bocher, Magan, Omar, Mutai, Mohamoud & Omer 2021:1157).

The level of satisfaction with maternity care increased with increasing perception by postnatal women of facility cleanliness, availability of prescribed drugs inside the facility pharmacies, and reduced waiting time to acquire services (Kitila, Feyissa & Wordofa 2023:9; Gashaye, Tsegaye, Shiferaw, Worku & Abebe 2019:10).

Inadequate supplies, drugs, and waiting times for services are the main obstacles to implementing quality maternal services, according to a study done in Nigeria that found a significant statistical association between the cleanliness of facility wards and the availability of drugs and maternal satisfaction (Esan, Sokan-Adeaga & Rasaq 2022:8).

Facility-level factors, such as inadequate medication and equipment at the medical facility, a lack of trained personnel, unfavourable attitudes and behaviours of service providers, and poor communication with women, are the main factors influencing the quality and use of maternal health care services. At the facility level, service satisfaction,

emotional support during childbirth, and trust in medical staff were all positive determinants. Access to care was influenced by a number of factors, including socioeconomic status, physical access to the facility, non-private maternal health care services (such as exposing women during childbirth, leaving them nude, or leaving them to deliver), confidentiality by healthcare providers during childbirth, cultural values, and lack of prompt attention, delay in receiving care and support, and being left unattended and mistreated (Shiferaw & Modiba 2020:8).

By improving the mobilisation, allocation, and utilisation of resources and aiming for high performance, Woredas could improve the administration and performance of the health system, especially maternal health care services (Argaw et al 2019:12).

Even though the population's health has significantly improved over the past 15 years, key health indicators from the 2019 Ethiopian Mini Demographic and Health Survey showed that the use of maternal health care services, such as ANC, institutional delivery by qualified health care providers, and post-natal care, remained very low (74, 48, and 34, respectively). The health of the Ethiopian populace is still comparatively poor, and the country's morbidity and mortality rates are still high. Infectious diseases, nutritional inadequacies, and avoidable obstetric complications are the main causes of maternal mortality and morbidity in Ethiopia. Postpartum haemorrhage (PPH), or uncontrollable bleeding after childbirth, and pregnancy-induced hypertension (pre-eclampsia/eclampsia, or PE/E), which results in high blood pressure and seizures during pregnancy, are the two main causes of maternal death in Ethiopia. Both disorders can be treated with affordable, effective maternal health medications: oxytocin and misoprostol for PPH prevention and therapy, and magnesium sulphate for PE/E. In terms of mortality among children under five, pneumonia, diarrhoea, malaria, newborn issues, malnourishment, and HIV/AIDS account for over 90% of child fatalities, frequently in combination (FMOH, EPHI & CSA of Ethiopia 2019:14; Manang 2019:2).

The country has improved women's and children's health significantly during the last 20 years. Between 1990 and 2015, there were two-thirds fewer child fatalities. The under-5 mortality rate decreased from 123 per 1,000 live births in 2005 to 59 in 2019. Similarly,

the infant mortality rate decreased from 77 per 1,000 live births in 2019 to 47. However, rates of maternal and neonatal death remain high. By 2017, there were only 401 maternal deaths for per 100,000 live births, down from 871 in 2000. Likewise, the number of newborn deaths dropped somewhat from 39 per 1,000 live births in 2000 to 33 in 2019 (MOH 2021:20).

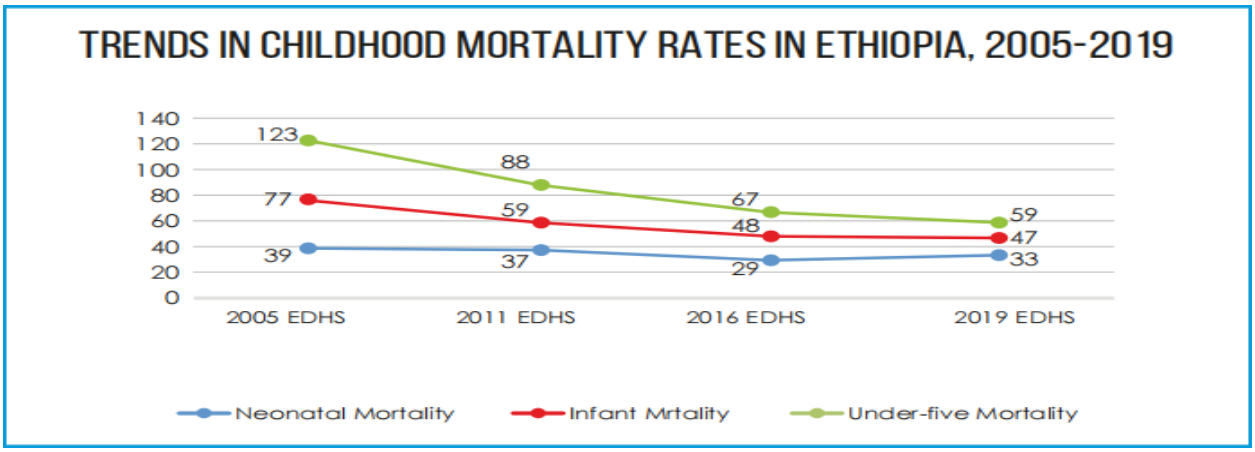


Figure 2. 3: Trends in childhood mortality rates (MOH 2021:20)

In Ethiopia, maternal mortality was responsible for 25% of all deaths among women aged 15 to 49 between 2009 and 2016. The MMR for this time period is 412/100,000 live births, which is still high globally and indicates that the nation's maternal health services are not well-provided and utilised (FMOH & CSA Of Ethiopia 2016:47).

The report of the 2019 Ethiopian Mini Demographic Health Survey (EMDHS) showed that coverage of ANC, SBA, and PNC utilisation was 74% (even for one visit during pregnancy), 50%, and 34%, respectively, which is underutilisation of the services in sub-Saharan African countries, and this coverage is even different within the country from region to region and urban to rural (FMOH, EPHI & CSA of Ethiopia 2019 2019:13 & 14).

Improving the quality of maternal health care services: The country's health sector transformation plan (HSTP I) states that improving the health of mothers, newborns, and children is one of Ethiopia's main strategic goals. Ethiopia has one of Africa's highest fertility rates, so governments work to ensure that everyone has equitable access to safe,

effective, and affordable contraception. According to EDHS, the Total Fertility Rate (TFR), which measures the average number of children a woman will have in her lifetime, has decreased from 5.5 in 2000 to 4.6 in 2016. Despite the decline over time (3.0), the TFR remains higher than the goal set at the end of HSTP I (3.0) (FMOH Performance Report 2020:25).

Even though maternal care in Ethiopian public facilities is legally free, moms have reported paying a portion of the costs for such treatment. The availability of more services could lower the cost of care (Manang 2019:23).

2.6.1 Use of antenatal care services

To ensure a healthy pregnancy and a seamless transition to labour and delivery for both mother and child, it is imperative to get excellent prenatal care during pregnancy. Pregnant parents should get education and clearly comprehensible information about health care as part of these prenatal care services (CMS 2022:1). When a woman receives all of her care from a familiar medical provider, continuity of care allows for the growth of a relationship and improves the quality of ANC (FMOH 2022:1). The following cares could enhance continuity of care:

- Information sharing, such as recording all evaluations, lessens the need for a woman to "tell her story" Over and over.
- Developing management plans collaboratively guarantees that they are in line with resources that are accessible locally.
- Creating connections and networks
- Modifying locally effective care delivery methods (Gebremedhin, Dawson & Hayen 2023:10).

Prenatal care appointments should preferably be booked as early in pregnancy as possible, followed by appointments at 28–32 weeks, 36 weeks, and ultimately before the woman's due date or whenever she wishes to consult, according to the World Health Organization's recommendations. But according to statistics from around the world, just roughly half of all expectant mothers receive the appropriate level of care (FMOH, EPHI & CSA of Ethiopia 2019:14). Maternal mortality can be increased by inadequate ANC, particularly in developing nations, as it may result in delayed referral to emergency obstetrical care or missing detection of danger symptoms. The health workforce's skill and knowledge limitations frequently limit the quality of ANC (Carvajal, Hancock, Lewney, Hagan, Jamieson & Cooke 2023:9).

Better, more competent care can significantly reduce pregnancy-related morbidity and mortality among mothers and newborns. In 2019, only 74% of Ethiopian women received prenatal care from a competent practitioner, with 43% of these women having four or more ANC visits. This is despite the fact that expanding the availability of antenatal care services will improve the quality of maternal health care services (FMOH, EPHI & CSA of Ethiopia 2019:13).

The following factors were found to be the main determinants of the improvement of maternal health care services in the Sidama zone of southern Ethiopia: cultural and traditional beliefs; lack of knowledge about danger signs and the benefits of maternal health services; lack of trust in Traditional Birth Attendants (TBAs); lack of women's decision-making power; previous negative experiences with health facilities; fear of going to an unfamiliar setting; lack of privacy; and perceived costs of maternal health services (Woldeamanuel 2022:10; Woldeamanuel 2020:13).

A study on the use of maternity care and rural health facility access conducted in Ethiopia found that women are more likely to use antenatal care services when they have easier access to these facilities. There was a about 24% rise in the percentage of moms who attended the four prenatal care appointments that are advised. However, there was no

effect on the usage of trained birth attendants, delivery facilities, or the decrease in pregnancy problems (Manang 2019:22 & 24).

Managing medical, nutritional, and health education is part of antenatal care. Reducing maternal and foetal mortality and morbidity, lowering preterm births and congenital defects, and encouraging health monitoring and normal foetal growth and development are its goals (Id, Contreras, Id & Cornwell 2019:3). Ethiopian standards state that all pregnant women should receive ANC from a qualified health professional. This consists of a thorough physical examination, blood tests for anaemia and infection screening, a urine test, injections of tetanus toxoid, iron and folate supplements, and medications for deworming (Alemayehu, Gebrehiwot, Medhanyie, Desta, Abrha & Godefy 2020:4).

There were no ultrasound check-ups for any of the pregnant women in the Southern Ethiopian study; only 454 (46.3%) had a haemoglobin test at the first visit, 397 (40.5%) at the fourth, 980 (100%) had RH and blood group tests, 763 (77.9%) had VDRL tests, 843 (86%) had HIV testing, and 202 (20.6%) had urine tests and ultrasound check-ups at 24 weeks. The appropriate treatments and implementations were only given to 242 (24.7%) of the pregnant women during their lifetime visits, which spanned the duration of their pregnancy. At the first appointment, 502 (51.2%) of the women received iron or folic acid, followed by 547 (55.7%) at the second, 547 (55.7%) at the third, and 571 (58.3%) at the fourth visit (Berehe & Modibia 2020:5).

In populations where anaemia among pregnant women is less than 20% and if daily iron is intolerable due to side effects, intermittent oral iron and folic acid supplementation with 120 mg of elemental iron and 2800 µg (2.8 mg) of folic acid once weekly is advised to improve maternal and newborn outcomes (FMOH 2022:23).

Iron and folic acid supplements taken at least 90 times a year during pregnancy have been shown to reduce the risk of iron deficiency and anaemia. In the 2012 fiscal year, 3,332,744 (98%) pregnant women took at least 90+ iron and folic acid supplements. When compared to previous year's accomplishment, this year's performance is 10% better. Gambella did the poorest in terms of regional variances, with 46%, followed by

Somalia (53%), and Afar (56%). Five regions achieved 100%: Tigray, Oromia, SNNP, Harari, and Addis Ababa. With the exception of Dire Dawa, every region has outperformed its baseline (79% vs. 81%) (FMOH Performance Report 2020:30).

Research indicates that pregnant women who take iron and folic acid supplements at least 90+ times a year are less likely to get iron deficiency and anaemia. 3,332,744 pregnant women (98%) got iron and folic acid supplements for at least 90 days during the 2012 EFY. When compared to previous year's accomplishment, this year's performance is 10% better. In terms of regional differences, Gambella performed the worst (46%), followed by Somali (53%), and Afar (56%). Tigray, Oromia, SNNP, Harari, and Addis Ababa were the five regions that attained 100%. Every region has outperformed their baseline, with the exception of Dire Dawa (79% vs. 81%) (FMOH 2022:23).

ANC is seen as a component of the care continuum required to enhance mother survival and health. ANC offers a number of ways to connect with expectant mothers and educate them about safe delivery and pregnancy care. The number of ANC contacts and the time of ANC contacts throughout pregnancy determine how well ANC interventions work to improve foetal outcomes, including tetanus immunisation, malaria treatment and prevention, anaemia and STI care, and proper nutrition (FMOH 2022:24).

Since ANC frequently serves as a woman's initial point of contact with a formal health service, it provides a gateway to integrated care, encourages healthy lifestyle choices, influences health-seeking behaviours like breastfeeding, early postnatal care, and planning for the ideal spacing between pregnancies, and connects pregnant women with complications to a referral system. Women who have had at least one ANC visit are more likely to give birth with a skilled attendant, therefore it also offers an opportunity to promote the use of trained attendance at delivery (Lattof, Moran, Kidula, Molle, Jayathilaka & Diaz 2020:3).

The impact and efficacy of care during labour and postnatal care, which lowers maternal and neonatal morbidity and death, will be increased by successful programs provided by

ANC. Antenatal care helps women recognise the warning signs of pregnancy and childbirth and prepare for delivery. It can be a source of vitamin supplements, tetanus vaccinations, HIV testing, treatment of hypertension to prevent eclampsia, and drugs to prevent HIV transfer from mother to child in pregnant women with HIV. Health professionals can also provide pregnant women medication and insecticide-treated mosquito netting in places where malaria is endemic to help prevent this crippling and occasionally fatal illness (FMOH 2021:26 & 28).

During the 2012 Ethiopian Fiscal Year (EFY), HEWs or other medical professionals were able to provide at least one prenatal care visit to nearly all expectant mothers. But the care's continuity and content continue to fall short of expectations. This has a negative impact on a trained attendant's ability to deliver a baby because over a million pregnant women who had one ANC contact were not kept under care until at least the fourth contact. Furthermore, only 63% of women were screened for syphilis, which means that 37% of expectant mothers had not had the chance. The care continuum will be significantly impacted if pregnant women who received at least one ANC from HEW are more successfully sent to health centres and hospitals for a thorough assessment (FMOH Performance Report 2020:28).

Women and babies may be saved if antenatal care is started early and continued for four or more sessions, offering crucial evidence-based interventions known as targeted antenatal care. Additionally, ANC offers an opportunity to promote the usage of professional birth attendance and healthful behaviours like breastfeeding, early postnatal care, and spacing out pregnancies as much as possible. One measure of ongoing prenatal care utilisation is the fourth prenatal care visit (FMOH Performance Report 2020:28).

In general, ANC 4+ coverage in HSTP I has been declining over time. In the 2012 EFY, 2,336,321 pregnant women nationwide (69%) had four or more prenatal care appointments. Compared to last year, this coverage is 1% lower. Only 28% of the first ANC visits in the 2012 EFY occurred before 16 weeks of gestation, despite the fact that early ANC visits (before 16 weeks) are predicted. Just 3.4% of moms got postpartum

contraception right away. The Somali (71%) and Addis Ababa (100%) regions outperformed the national average. With ANC 4+ coverage of 25%, Gambella has the lowest recorded coverage, followed by Dire Dawa at 44%. Except for Gambella, Tigray, Addis Ababa, and Somalia, all regions had lower scores than their baseline. The only region to reach the target this year is Addis Ababa (FMOH Performance Report 2020:29).

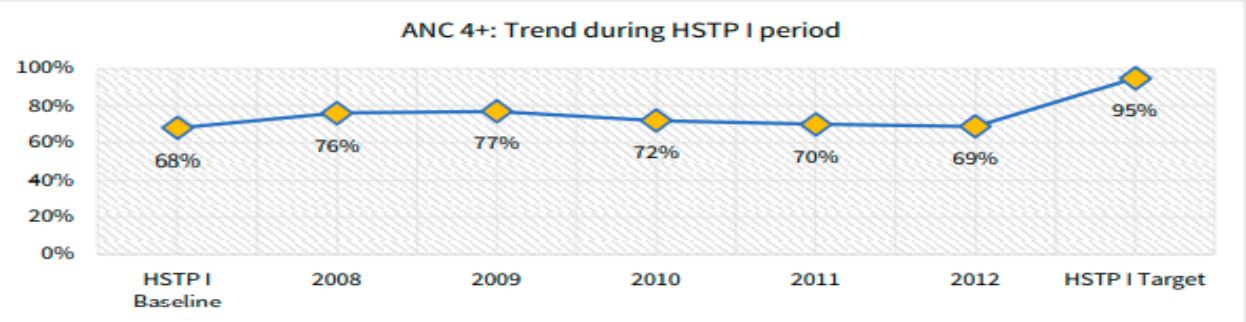


Figure 2.4: Antenatal Care Coverage- trend during HSTP I period (FMOH Performance Report 2020:29)

2.6.2 Factors associated with antenatal care use

To reduce the risks of problems, impairment, and mortality for both women and their unborn children, professional prenatal care (ANC) is crucial for monitoring pregnancies. However, a cross-sectional survey carried out in Ghana found that women who were unmarried (i.e., single, divorced, or widowed), whose partners were uneducated (middle, junior secondary (JSS), or junior high school (JHS), those without health insurance, the poorest women, and those who had an unintended pregnancy were less likely to have attended ANC at least four times than those who were economically well-off (AOR: 2.69; 95% CI: 1.14–6.36), married, educated (AOR: 1.64; 95% CI: 1.02–2.64), had health insurance (AOR: 1.67; 95% CI: 1.14–2.38), and wanted to get pregnant (AOR: 2.62; 95% CI: 1.15–5.98), in that order (Okedo-alex, Akamike, Ezeanosike & Uneke 2019:5).

It was shown that there was a substantial correlation between the utilisation of maternity health care services with education, income, the costs of seeking care, travel time and

distance, and staff attitude. Research from Southern Ethiopia, Nigeria, Cambodia, and Nepal concluded that treatment costs, travel time and distance, income level, and women's autonomy were important factors in determining the use of maternity care services (Berehe & Modibia 2020:6 & 7; Stephen, Bond & Matheson 2019:2 & 3; Cameron,Suare & Cornwell 2019:7).

A South Sudanese study found that women do not use maternity and child health care facilities because they are unaware of obstetric and postpartum challenges. According to this study, providing moms with health information during ANC improves their knowledge and ability to make decisions regarding the health of both themselves and their children. Additionally, women are more likely to attend skilled births when they understand that every pregnancy contains some risk of difficulties. The likelihood of giving birth in front of a trained birth attendant was higher for women who received health education on birth preparedness and complication readiness (BPCR) during ANC. Usage of early postnatal care, however, did not differ between moms who received BPCR health education during ANC and those who did not (Izudi, Grace, Mccoy, Bajunirwe, & Kadengye 2019:81; Cameron et al 2019:4).

The most popular options for maternal health care services varied greatly by setting, per a study done in Central Myanmar to determine the factors that encourage and hinder the utilisation of maternal health care services. Traditional birth attendants have only been utilised in rural areas. Women from homes with the highest level of education being less than high school were around seven times more likely to choose traditional birth attendants than women from households with high school education and above (Milkowska-Shibata, Aye, Yi & Oo 2020:5).

If the client obtains ANC treatment from a qualified health care provider, the quality of ANC services is maintained. These included blood pressure checks, blood and urine tests, information about potential pregnancy issues, dietary counselling, and suggestions for a birth readiness plan (Raru, Ayana, Bahiru, Deressa, Alemu, Birhanu, Yuya, Merga, Negash & Letta 2022:3).

According to the Donabedian approach, ANC quality is likewise evaluated in three dimensions: input, procedure, and outcome. Input dimensions include things like medical medications, immunisations, equipment, supplies, skilled personnel, documentation, and physical infrastructure. Furthermore, process attributes include counselling, clinical examination, history-taking, interpersonal communication, health screening, and preventive actions (Amare Wudu & Bekalu 2023:2).

Additionally, overcrowding in institutions can lead to poor communication and strained relationships between employees and clients, which may make clients feel mistreated (Mweemba et al 2021:7).

2.6.3 Labour and delivery care services

Providing high-quality, evidence-based obstetric and neonatal care during delivery is one of the top priorities for lowering sickness and mortality among women and their babies. Since both the mother and the newborn have a higher chance of dying in the first week following delivery, it is imperative to monitor their health during this time. The risk of complications and death is reduced by early symptom identification and treatment (Lazzerini, Valente, Covi, Semenzato & Ciuch 2019:5).

A study conducted in Uttar Pradesh, India, found that almost half of the cases were not evaluated for bleeding control and postpartum infection during the third stage of labour, which includes palpating the uterus, checking vital signs, administering antibiotics, removing the placenta and membranes completely, and assessing for perineal and vaginal lacerations (Saxena, Srivastava, Dwivedi & Id 2018:9).

Offering labour and delivery care services is the most important way to lower mother and neonatal morbidity and mortality. It guarantees a safe birth, lowers actual and potential problems, and improves the chances of survival for the majority of moms and new-borns (Bayou, Grant, Riley & Bradley 2022:1).

Women who are in the richest percentile of wealth, have finished secondary or higher education, live in a city, have only one child, are not at risk of becoming pregnant, and received adequate antenatal care (ANC) are much more likely to give birth in a health facility, according to a study done in rural Ghana (Dantas, Singh & Lample 2020:7).

One-third of Ethiopian government hospitals lacked the necessary equipment to offer basic labour and delivery care services, according to an analysis of the structural quality of these services.

Sixty-eight (68.2%) of these hospitals met the structural requirements for excellent labour and delivery care. The availability of materials and equipment needed for infection control received the highest score of any facility audit criterion (88%), followed by environmental friendliness, women's comfort, and safety (76.4%). While the availability of the necessary general infrastructural components scored 64.6%, the availability of qualified health professionals and quality management practices received 72.5% each. Laboratory services and blood supply were the two critical domains with the lowest scores (50%) and the availability of necessary medications, supplies, and equipment (52.2%) (Bayou et al 2022:1).

Skilled delivery attendance is the proportion of postpartum women who gave birth in a hospital setting while being watched over by a trained health professional. The percentage of postpartum moms who sought postnatal care services between two to seven days after giving birth is known as early postnatal care utilisation (Izudi et al 2019:80 & 52).

Ethiopia has poor utilisation of skilled delivery care in the Sub-Saharan and a high maternal mortality ratio (Manang 2019:24). Skilled birth attendance coverage has generally dropped during the HSTP I period, and the current performance falls considerably short of the 90% HSTP target. However, Ethiopia's institutional delivery rate increased significantly from 28% in 2016 to 50% in 2019, according to EDHS. In the 2012 EFY, 2,142,707 (63%) of the pregnant women were delivered by a trained delivery

attendant. Despite being 1% better than the baseline, this performance is still well behind the 91% target for the year (FMOH Performance Report 2020:30)

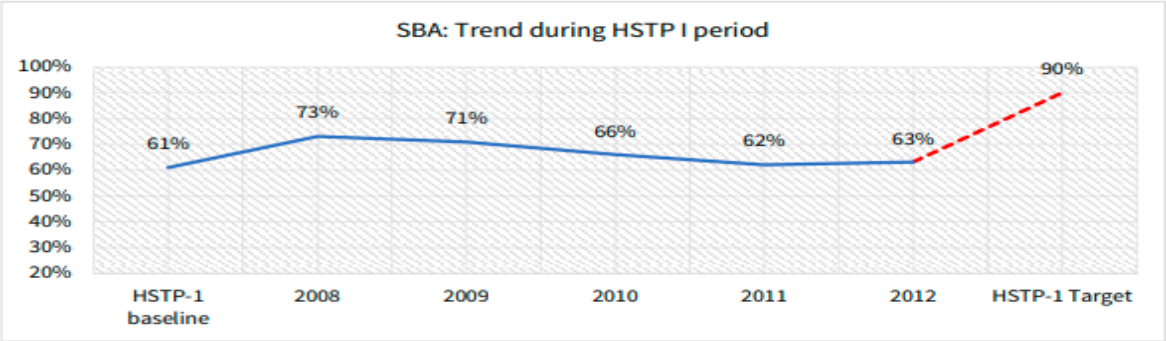


Figure 2.5: Births attended by skilled health personnel; trend during HSTP period (FMOH Performance Report 202:30)

Only two regions (Addis Ababa and Harari) were able to fulfil the 2012 EFY objective, and three regions—Afar, Benshangul-Gumuz, and Dire Dawa—performed below their baseline. Afar had the lowest skilled delivery attendance (29%) followed by Somali (37%) regions. At 100%, Addis Ababa and Harari, along with Tigray and SNNP, both outperformed the national average (FMOH Performance Report 2020:30).

The delivery service's general level of quality is below what is outlined in the national criteria, according to a study done in Southern Ethiopia to evaluate the quality of treatment during childbirth. Sixty-six percent of the hospitals satisfied the quality standards for critical delivery care. The domains with the highest mean percentage score were following Active Management of Third Stage of Labour (AMTSL) guidelines (42.2%, SD 12.2 percentage points), following immediate and essential newborn care practices (86.8%, SD 11.8 percentage points), and the second and third stages of labour (77.9%, SD 20.6 percentage points). In terms of mean percentage score, the areas with the lowest scores were the initial assessment of the labouring lady, interpersonal communication, and compliance with AMTSL criteria (47.2%, SD 38.4 percentage points) (Bayou et al 2022:11).

2.6.4 Factors affecting utilisation of labour and delivery services

After adjusting for median income, a study conducted in Central Mynammar by Milkowska-Shibata et al (2020:8) found that women from households without compulsory education were approximately three times (AOR = 3.31; 95% CI 1.72–6.38; p < 0.01) more likely to give birth at home than those with compulsory education (2020:8). While women who sought antenatal care services from traditional birth attendants would give birth at home, those who sought prenatal care from traditional care provider would give birth at traditional medical facilities.

Pregnant women who were dissatisfied with the care given for them during labour and delivery were less likely to return to medical facilities for their subsequent pregnancies and were less likely to refer others to maternal health services because they believed they had not been adequately treated during their prior visit (Dantas et al 2020:10). Among the factors influencing the quality of care during childbirth are techniques for reducing pain during labour and delivery (Solomon, Kassie, Mekonnen, Mihret, Abate & Dessie 2021:4).

After experiencing a complication, women who were referred from one facility to another stated that they were not given an ambulance. The participants observed that the patient is typically requested to fuel the ambulance, and that there is always a problem with either the driver or the fuel needed to get the ambulance to the designated facility. According to one participant, "if an ambulance is available in the facility, it may not have fuel in it, and occasionally the facility may suggest that the patient buy fuel for the ambulance, and the roads were very bad." Like this study, study participants demonstrated that health care ineptitude can impact participants' future behaviour regarding the use of health care services during pregnancy, delivery, and the immediate postpartum period. Participants attributed health care incompetence in health care facilities to a lack of management and communication skills, and they suggested that the first barrier to receiving timely and appropriate care after arriving at the medical facility

may be failing to meet the on-duty consulting physician or midwife after obstetrics complications (Stephen et al 2019:5).

The findings of the Indian Demographic and Health Survey 2015-16 indicate that women who live in urban areas, have higher levels of education, and are regularly exposed to the media are more likely to use a trained birth attendant, even while giving birth at home. The study also discovered that it is more common for Indian women who are overweight and from wealthy families to give birth in a health care institution. Women who obtain prenatal care during pregnancy and a tetanus vaccine early in pregnancy are more likely to employ expert delivery services (Islam, Naha, Siddiquee, Toma, Hoque & Hossain 2024:13).

Most women have given birth at home because they are unaware of the value of maternal health care services, how to use them, and the advantages of giving birth in a medical facility. Furthermore, women who had previously given birth at home with safety appeared to be more like to want to do so again, whereas women who had previously given birth at home were more likely to use routine maternal health services (Yoseph et al 2023:8; Mordal et al 2021:6).

2.6.5 Postnatal Care (PNC) Service

According to WHO guidelines, within the first 24 hours after giving birth, all postpartum women should have regular assessments of their temperature, fundal height, uterine tone, heart rate (pulse), and vaginal haemorrhage. After birth, blood pressure should be measured as soon as feasible. If it is normal, the second blood pressure check should be done within six hours. Within six hours, a urine void should be also noted (WHO 2022:13).

Most women's stays ranged from 6 to 10 hours for daytime deliveries and up to 24 hours for late-night deliveries, despite the WHO's recommendation that women stay in health

facilities for 24 hours after giving birth and that uterotonic drugs be given after that time. Additionally, in certain cases, uterotonic drugs were given before giving birth in order to induce labour pains, which is against both national and international guidelines (Dickson, Ayebeng & Adu-gyamfi 2023:4).

Receiving postnatal care is crucial for coping with challenges and averting most postnatal mother and neonatal deaths, particularly in the first seven days following birth, a period known as early postnatal care. During the HSTP-I period, early PNC coverage generally shown a declining tendency; however, since 2011 EFY, it has begun to increase. Changes in the definition of indicators are primarily to blame for this. Performance in the 2012 EFY was enhanced by the adoption of the new postnatal care strategy, which calls for 24-hour care and stay following delivery (FMOH Performance Report 2020:32).

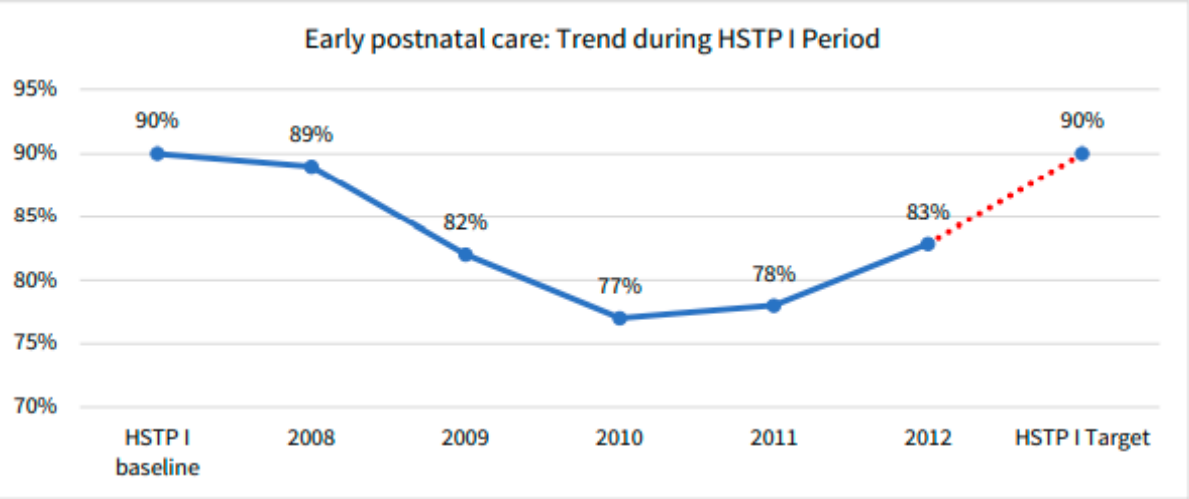


Figure 2. 6: Early postnatal care, Trend during HSTP I Period (FMOH Performance Report 2020:31 & 33).

PNC was administered to 2,809,497 women (83%) within seven days of giving delivery during the 2012 EFY, with 59% of those cases taking place within 24 hours. The national average has been surpassed by Tigray (85%), Harari (91%), Addis Ababa (100%), SNNP (94%), and Oromia (85%). Gambella had the lowest performance, at 43%,

followed by Afar at 48%. The areas of Benshangul Gumuz, Diredawa, and Harari experienced decreases from their baseline, in decreasing order. The goal for the year was only reached by the Addis Ababa region (FMOH Performance Report 2020:31 & 33).

2.6.6 Factors affecting utilisation of postnatal services

Of the postnatal women who expressed high levels of satisfaction, 80 (39.5%) had completed postsecondary education, and more than half 111 (55.0%) had finished secondary education. In Kenya, a research study assessing postpartum women's happiness with maternity care at public hospitals in Nairobi city revealed a substantial statistical correlation (p=0.001) between the greatest degree of education acquired and maternal satisfaction.

Experiencing immediate labour pains, referrals from friends or family, the impression of excellent care, and the hospital's proximity to the patient's house were the main reasons for giving birth there. Additionally, qualitative findings showed that increased education makes women happier by demythologising pregnancy-related beliefs regarding maternal problems (Geoffrey 2018:34 & 35).

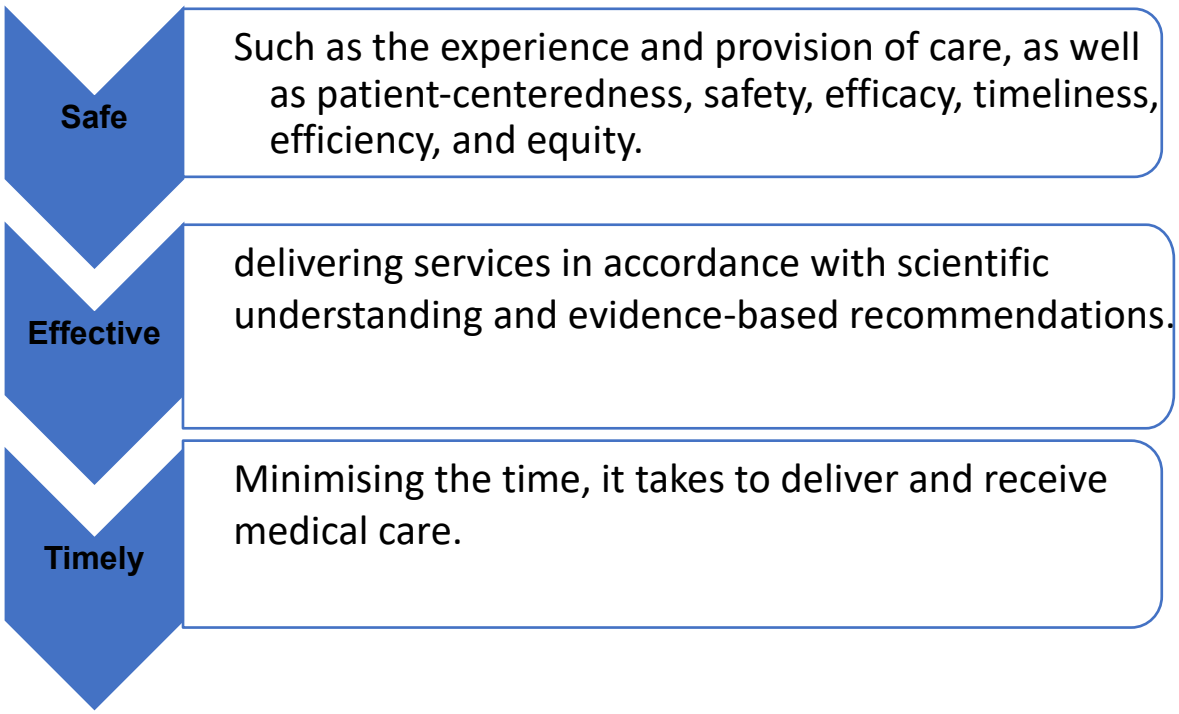
The utilisation of facility-based PNC services in Ethiopia was found to be correlated with employment, ANC visits, caesarean section deliveries, and rural residency (Ayele, Woldu, Gebrehiwot, Wellay, Hadgu, Gebretnsae, Abrha & Gebre-egziabher 2021:4).

2.7 QUALITY OF HEALTH CARE SERVICES

The degree to which health care services offered to patients and patient groups enhance the intended health outcomes is known as quality of care (Kiruja 2023:21). To do this, health care needs to be people-centred, safe, efficient, timely, and equitable (WHO 2020:4). Ethiopian Training manual for health care provider on quality improvement,

defined raising the standard of medical care services as the process that is patient-centred, evidence based and effective on timely and efficient approaches that would be the only means of achieving universal health coverage to all Ethiopian by 2020 (FMOH 2018:1).

Health care professionals in both industrialised and undeveloped countries have placed a greater emphasis on patient happiness and service quality in recent years. There is not a single, widely recognised the literature's definition of quality of care. It has been discovered that health care quality is multifaceted and can be characterised by patients, managers, and healthcare professionals, as well as by quality attributes such as patient-centeredness, safety, effectiveness, timeliness, efficiency, and equity, in addition to the experience and delivery of care (Figure 2.7) (WHO 2016:13 & 14).



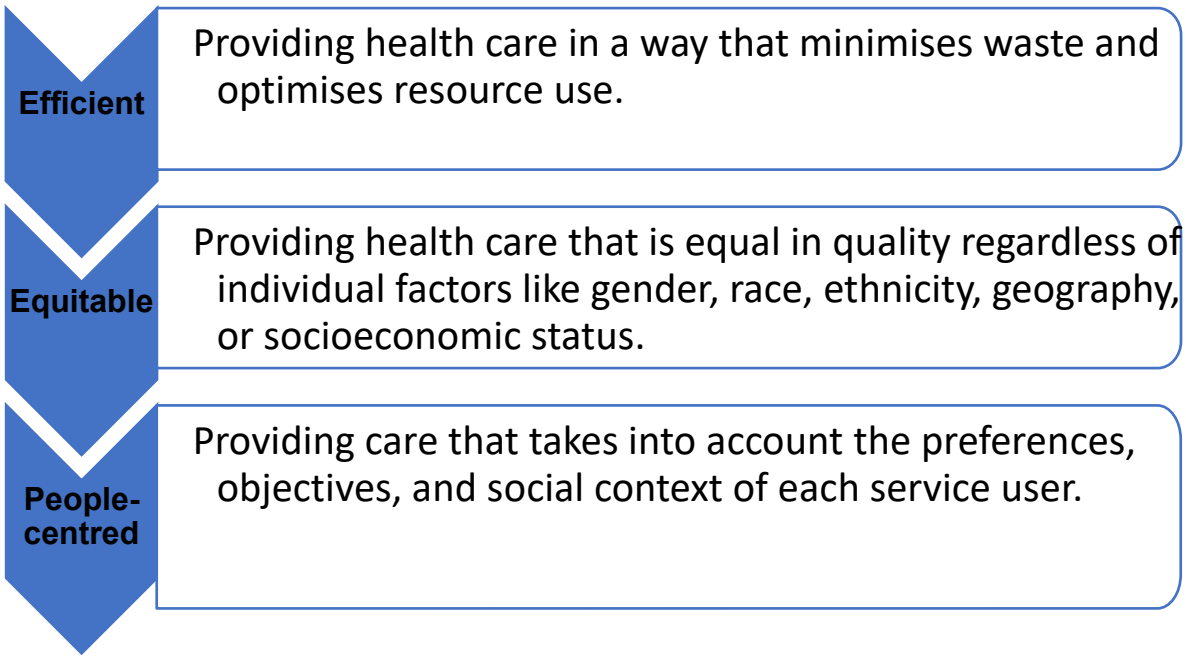


Figure 2.7: Operational definitions of the characteristics of quality of care (WHO 2016:14)

The low adoption of trained birth attendants in community settings and the inconsistent use of maternal health services during pregnancy provide crucial evidence for bettering policy action (Milkowska-Shibata, Aye, Yi & Oo 2020:11).

For women during pregnancy and childbirth, having access to high-quality, guaranteed maternal health products can mean the difference between life and death. Ineffective or even dangerous medications have the potential to kill both mothers and their unborn children. As a result, it is essential but challenging to maintain the quality of maternal health products across the supply chain. Every step of the supply chain, from producer to user, must be worked on to guarantee that women obtain a product that is both safe and effective (Manzi et al 2019:3-6).

Gloves, sutures, sterilisers, water, power, and even restrooms were among the health care services whose quality was impacted by a lack of resources or the need to have

such resources available at medical facilities (Kitila et al 2023:4; Mweemba et al 2021:6; Dahab & Sakellariou 2020:6 & 7).

In order to create a high-performing health system, one of the transformation agendas in Health Strategy Transformation Plan I (HSTP I) has placed a high priority on health care quality and equity (FMOH Performance Report 2020:14).

The Health Extension Program (HEP), which was initially introduced in agrarian areas in 2003 (1997 EFY), then adjusted for pastoral and Agaro-pastoral contexts in 2006, and finally for urban areas in 2009, has helped Ethiopia make tremendous progress in improving health outcomes over the last 20 years. This initiative increased access to primary healthcare services for communities and households (FMOH Performance Report 2020:18).

The WHO's framework for quality-of-care guidelines include eight quality of care domains that the health system should evaluate, enhance, and track. The framework for receiving high-quality treatment in the two crucial, interrelated domains of care delivery and experience is provided by the health system. In line with its mandate and within this framework, WHO will seek to realise its vision in six important areas. These topics will form the cornerstone of a systematic, evidence-based strategy that offers suggestions for improving the quality of care for expectant mothers and babies. The six categories are: clinical guidelines, care standards, effective interventions, care quality measurements, relevant research, and capacity building. Since there isn't any useful guidance anymore, even though it. As with any other health care service, standards clearly define what is required to deliver high-quality care during pregnancy, labour, and the postoperative period. By guaranteeing that all women and newborns receive routine, evidence-based care and that complications during labour, delivery, and the early postnatal period are managed, the following list of eight standards of care and thirty-one quality statements seeks to improve the quality of maternal and newborn care in health care facilities (WHO 2016:1-4).

2.7.1 WHO standards of care and quality statements

Standard 1: WHO criteria for routine, evidence-based care, and management of issues during labour, delivery, and the early postnatal period are followed for all women and new-borns.

Quality statements

1.1a: In addition to receiving timely, appropriate care, women are routinely assessed both when they are admitted and during labour and delivery.

1.1b: As soon as they are born, new-borns receive routine care.

1.1c: Postnatal care is routinely provided to mothers and newborns.

1.2: According to WHO recommendations, women who have eclampsia or pre-eclampsia are swiftly given the right interventions.

1.3: WHO guidelines state that women who experience postpartum haemorrhage receive the right care as soon as possible.

1.4: Women with delay in birth or whose labour is obstructed get appropriate interventions, according to WHO criteria.

1.5: According to WHO recommendations, new-borns who are not breathing on their own are given the proper stimulation and bag-and-mask resuscitation within a minute of birth.

1.6a: According to WHO guidelines, preterm labour women are guaranteed the appropriate interventions for both themselves and their unborn children.

1.6b: Preterm and small newborns receive the appropriate care in compliance with WHO standards.

1.7a: The appropriate treatments are promptly administered to women who are infected or at risk for infection during labour, delivery, or the early postnatal period in compliance with WHO guidelines.

1.7b: According to WHO standards, new-borns with suspected infections or risk factors for infections receive antibiotic therapy as away.

1.8: All new-borns and women are treated in in compliance with accepted practices to avoid infections contracted in hospitals.

1.9: During labour, delivery, and the early postpartum phase, no woman or baby is exposed to needless or dangerous procedures.

Standard 2: The health care information system makes it possible to use data to guarantee prompt, appropriate action to enhance each woman's and newborn’s care.

Quality statements

2.1: Throughout labour, delivery, as well as the initial days following delivery, each mother and baby have a comprehensive, precise, and standardised medical record.

2.2: As part of its operations, every healthcare facility has a procedure for gathering, analysing, and providing feedback on data to track and enhance performance during labour.

Standard 3: Referrals are made for each mother and baby whose condition or situations that the available resources cannot effectively address.

Quality statements

3.1: The choice to refer is taken promptly after each mother and baby are suitably evaluated upon admission, through labour, and in immediate postnatal period to ascertain if a referral is necessary.

3.2: All women and baby that must referred follows a predetermined plan that can be put into action right away at any time.

3.3: Every time a mother with her infant is referred within or between medical facilities, the proper information is shared, and the appropriate medical staff is notified.

Standard 4: Effective communication that taking into consideration the needs and preferences of women and their families is maintained.

Quality statements

4.1: Every woman and her family informed about the care and has productive conversations with the staff.

4.2: Every woman and her family receive coordinated care, with important health and social care professionals exchanging precise and understandable information.

Standard 5: The dignity and respect of women and new-borns are preserved during their care.

Quality statements

5.1: During labour and delivery, all mothers and new-borns have privacy, and their confidentiality is protected.

5.2: Mistreatment of any kind, including physical, sexual, or verbal abuse, discrimination, neglect, detention, extortion, or denial of assistance, is prohibited for women and new-borns.

5.3: All women are given the opportunity to make educated decisions about the services they receive, and the justifications for any interventions or results are made explicit.

Standard 6: Each woman and her family receive emotional assistance that is tailored to their requirements and enhances their potential.

Quality statements

6.1: All women are given the opportunity to go through labour and delivery with the partner of their choice.

6.2: Each woman and her family receive emotional treatment that is adapted to their requirements and develops their ability.

S**tandard 7:** Competent, driven staff members are constantly on hand to handle difficulties and offer normal care for every mother and newborn.

Quality statements

7.1: Every woman and child always have access to a trained birth attendant and support staff for routine care and problem-solving.

7.2: The experienced birth attendants and support professionals have suitable competence and skills mix to satisfy the requirements of labour, childbirth, and the early postnatal period.

7.3: Every health care facility has clinical and managerial leadership that works together to create and implement suitable policies and create an atmosphere that encourages facility employees to continuously improve their quality of care.

Standard 8: With adequate energy, water, and sanitation resources, as well as medications, supplies, and equipment for routine care of mothers and babies and the management of difficulties, the medical facility is physically appropriate.

Quality statements

8.1: Facilities for trash disposal, energy, sanitation, hand hygiene, and water are practical, dependable, secure, and adequate to meet the needs of employees, women, and their families.

8.2: In order to enable the continuity of treatment, areas for labour, delivery, and postpartum care are planned, coordinated, and maintained to allow each mother and newborn to receive private care tailored to their needs.

8.3: There is a sufficient supply of medications, equipment, and supplies on hand for both routine treatment and the management of problems.

2.8 COMMUNITY ENGAGEMENT TO MATERNAL HEALTH CARE SERVICES

The concept of community might vary depending on the discipline and context. The process of developing connections that enable stakeholders to work together and obtain access to procedures for evaluating, analysing, planning, directing, carrying out, overseeing, and assessing policies, programs, and actions aimed at improving the quality of maternal and newborn and child health (MNCH) services is known as stakeholder and community engagement. Communities are groups of people that share shared interests, concerns (WHO 2020:4).

In pastoralist contexts, social mobilisation committees function as platforms for community engagement; the Women Development Army (WDA) has been expanded to nearly universal coverage in agrarian settings and partial coverage in urban settings; and interventions have been made to increase the capacity of WDAs through competency-based trainings, training nearly half a million WDA leaders. In order to achieve Ethiopian HSTP-I's strategic goals, community participation has been a fundamental tenet and strategy (MOH 2021:34).

Study conducted in Ghana to investigate potential of community engagement to improve mother and child health in Northern Ghana, found some favourable connections between community engagement treatments implemented and increasing levels of certain mother and child health-promoting behaviours (Kassim, Newton, Dormechele, Rahinatu, Yanbom, Yankson & Otupiri 2023:8).

By carefully incorporating community members in the monitoring of health care service quality, it would be able to enhance the usage of maternity and child healthcare services, such as child vaccines and condom distributions. The community involvement intervention was found to have a beneficial effect on HIV testing among pregnant women (Alhassan, Nketiah-Amponsah, Ayanore, Afaya, Salia, Milipaak, Ansah & Owusu-Agyei 2019:5). Increased knowledge and better application of strategy aimed at enhancing outcomes for women and newborns can result from community involvement. Little is

known about how participatory methods work and how they impact intervention outcomes (Miltenburg et al 2019:5 & 6).

2.9 STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH CARE SERVICES

A study in a rural Tanzanian district demonstrated that community participation can increase understanding and more effectively implement strategies that seek to enhance the health of expectant mothers and babies. Evidence from various literatures suggests that a skilled health provider providing maternal health care services is a crucial strategy for raising the quality of services for maternal health care. The community's engagement with medical services at the planning, management, and evaluation stage has more weight than other strategies when it comes to improving the quality of maternal and newborn health outcomes (Miltenburg et al 2019:1).

Maternal mortality and maternity care utilisation coverage are extremely low in Ethiopia. Ethiopia's Health Sector Transformation Plan II strategies include encouraging active community involvement in service delivery, establishing high-performing primary health care units to ensure equity in the delivery of excellent health services, and continuously improving clinical care outcomes (MOH 2021:11).

By formulating and putting into practice numerous policies, programs, protocols, and recommendations for improving the quality of maternal and reproductive health care services, Ethiopia's Ministry of Health has significantly reduced maternal mortality in the nation since 2000. Trainings to increase capacity, the deployment of medical personnel, the construction of infrastructure, improved supply and logistics accessibility, the institutionalisation of new programs such maternity waiting homes, PNC 24-hour stay, and care, catchment-based clinical mentorship, supportive supervision, and surveillance system strengthening were some of the primary initiatives throughout the strategic phase.

The maternal mortality ratio reduced from 676 deaths per 100,000 live births in 2011 as a result of the previously mentioned strategy (FMOH Performance Report 2020:25).

To reach families and the community with health extension packages, the health sector has been using the Women Development Army (WDA) as a platform for community involvement for the last nine years. This platform has proven successful when there is committed leadership to support the women's development team and 1 to 5 networks, according to field-level observations and reports. However, each location has a different implementation status. The health ministries have noted that the functionality of this platform and the execution of the health extension packages have been declining and require improvement based on regular performance monitoring and review. A competency-based training program was started in 2011 EFY with the goal of revitalising the WDA. It was planned to be delivered to 600,000 women development team members in 2012 EFY. Although 130,730 people were enrolled in the program, only 162,717 (27%) have completed the training, and 92.5% of those who took the competency test were found to be competent in the 2012 EFY (FMOH Performance Report 2020:18).

The second-generation health extension program, which was introduced in 2016, has been implemented to improve quality and access to health services by prioritising level IV health extension workers, improving the quality and content of the health extension packages, reviewing the implementation strategies, making improvements to the infrastructure and organisation of the health care posts, and further enhancing community ownership and participation. There are now 18 health extension packages instead of just 16 (FMOH Performance Report 2020:18).

The road map suggests six interrelated strategic goals: guaranteeing fair access to necessary health services; enhancing the standard of health services delivered by the Health Extension Program (HEP); guaranteeing sustainable funding and removing financial hardship from HEP services; and enhancing community empowerment and engagement; ensuring resilience by continuing to provide essential services during emergencies; and maintaining and strengthening political leadership, multi-sectoral engagement, and partnership (FMOH Performance Report 2020:19).

The findings by Manang (2019:25) indicate that although HEP was somewhat successfully to increase investment in the health infrastructure, Ethiopian health policies must closely monitor additional obstacles to the use of maternal care, such as the spread of information about the significance of using maternal care service.

2.10 SUMMARY

This chapter provided a comprehensive literature analysis on the research topic and determinants of maternal health care services, to establish community participation methods to increase the quality and utilisation of maternal health care services. It also looked at the extent to which maternal health care services are currently provided globally, in sub-Saharan Africa, and in Ethiopia, as well as the strategic implementations being made to improve these services. It also moulded a better comprehension of the studied matter. It made it possible for the researcher to connect the study's findings to what is already known about the subject. Chapter 3 presents the research design and methodology.

CHAPTER 3

RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

Before starting the empirical phase of a study, the researcher must decide on the research design and methodology, including the sample and sampling methodologies to be employed in the selection of the study population. The researcher discussed the methods and research design that would be appropriate to meet the objectives and questions of the study. The study approach includes discussions of the research population, sampling strategy, data gathering methods, and data processing. The validity, reliability, and ethical implications of the instrument were examined.

3.2 RESEARCH CONTEXT

The government hospitals and health facilities in Ethiopia's West Arsi Zone of Oromia Regional State served as the study's locations. With a total population of about 2,956,182, West Arsi Zone is one of Oromia Regional State's 12 administrative zones. It is situated 250 km to the south of Ethiopia's capital, Addis Ababa. There are two city administrations, 15 rural districts or woredas, 343 rural kebeles, 326 health posts, 90 health centres, one zonal referral hospital, and six district hospitals in the West Arsi Zone (West Arsi Zonal Health Office Master facility listings 2024:2).

In current study, West Arsi zone study location was selected for the following possible reasons:

Resource (budget) and time constraints

Budget and logistical limitations necessitated focusing on a single zone to ensure the quality and feasibility of data collection and analysis.

Strategic importance to policymakers and stakeholders

The zone was selected based on its strategic importance to policymakers or stakeholders who are likely to act on the research findings. West Arsi zone has different types of top graphics such as areas accessible to health facilities and areas not accessible and not utilisation maternal health care services. Therefore, based on the above reasons, West Arsi Zone of Oromia Regional State was selected as the study location

A simple random sampling method was used to select twenty-five (25) health centres from the six (6) chosen woredas (Arsi Nagelle, Shashemane, Dodola, Kokkosa, Shalla, and Heban Arsi) and all five (5) government hospitals found in these selected woredas were included purposely (one referral hospital, Shashemane Referral Hospital, and four

(4) district hospitals, Malka Oda Hospital, Nagelle Arsi Hospital, Dodola Hospital, and Kokkosa Hospital).

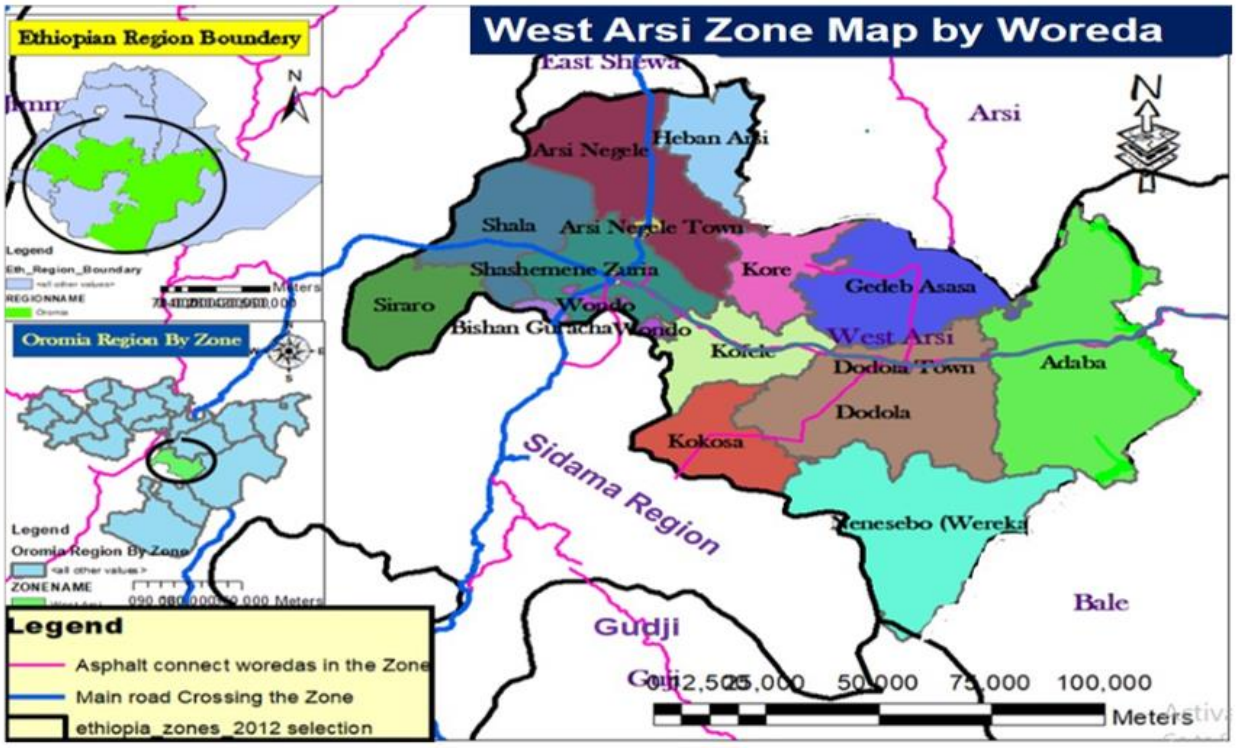


Figure 3.1: Map of West Arsi Zone (West Arsi Zone Health Office Department Report 2024:1)

3.3 THE RESEARCH DESIGN AND RESEACH APPROACH

The broad process a researcher uses to integrate the different study components logically and consistently is known as research design. It serves as a guide for gathering, measuring, and analysing data, as well as providing specifics on the study population, time period, and methodology (Mishra & Alok 2019:8). To deliver the most precise, reliable, impartial, and economical responses to his or her study questions, the researcher employed this design roadmap. It is a method, structure, and strategy for carrying out research to address problems or research questions (Kumar 2019:208).

3.3.1 Design chosen

By selecting the appropriate research design, one may prevent erroneous conclusions and ensure that the various research procedures go smoothly, producing a study that is as professional as possible and that yields the most information with the least amount of time, money, and effort (Casteel & Bridier 2021:353). This was a good research design prepared after a research problem was clearly stated (Mishra & Alok 2019:7).

For this study, a mixed methods research approach was selected. It entails gathering and combining qualitative and quantitative data in a single study, leading to a more thorough comprehension of the topic being studied. It is a problem-centred research methodology where theories and methodologies are applied instrumentally according to how well they fit the investigation (Dawadi & Giri 2021:27).

Convergent parallel mixed methods, a type of mixed methods design, were employed in this study. This approach combines quantitative and qualitative data to offer a thorough analysis of the research problem. In this strategy, the researcher usually used both quantitative and qualitative research methods to gather data simultaneously, then combined the data to analyse the overall findings. Additionally, a researcher gathers and examines both quantitative and qualitative data, then evaluates the results to determine if they support or contradict one another (Creswell 2022:2).

Strengths of using mixed method research design

- ✓ Compared to quantitative or qualitative research alone, it offers greater proof for examining a research problem.
- ✓ Instead, then being limited to the kinds of data gathering instruments usually associated with quantitative or qualitative research, researchers are free to employ all the accessible tools.
- ✓ It aids in providing answers to study topics that neither quantitative nor qualitative methods alone can address.

- ✓ It provides fresh perspectives that transcend distinct quantitative and qualitative findings (Sharma, Bidari, Bidari, Neupane & Sapkota 2023:5&6).

Limitations of using mixed method research design

- ✓ It isn't the solution to every research challenge or researcher.
  The importance of performing a study that is solely quantitative or qualitative is not diminished by its utilisation. For significant data collection and analysis, researchers need specific abilities, time, and resources. They also need to be able to teach others who might not be as familiar with the fundamental concepts of mixed method research (Sharma et al 2023:6).

To prepare for and establish strategies, the study was divided into two interdependent **phases** that concentrated on gathering evidence.

The study's **I** phase involved gathering, analysing, and interpreting empirical data.
This phase's goal was to evaluate maternal health care services to develop community participation strategies that would address objectives **I, II and III.**

The development of strategies for community participation was **phase II.** The empirical data gathered, examined, and validated during phase **I** served as the foundation for the development of these methods.

This phase's objective was to address objective number four **(IV)** by development community participation techniques that may be applied to enhance the quality and utilisation of maternal health care services in hospitals and health facilities.

As mentioned above under section 3.3.1, this study employed convergent parallel mixed methods, a type of mixed methods design where quantitative and qualitative research approaches were combined. Under sections 3.3.2 and 3.3.3, more detailed information about quantitative and qualitative research approaches was discussed.

3.3.2 Quantitative research approach

It is described as a deductive method of conducting research that aims to validate, refute, or support pre-existing hypotheses. To identify patterns, correlations, or causal linkages, this kind of research entails measuring variables and examining the interactions between them. Linear approaches to data collecting and analysis can be used by researchers to produce statistical data (Mishra & Alok 2019:3). The researcher tested objective ideas in this study by looking at the relationship between variables using a descriptive quantitative study approach. Researchers in quantitative studies follow a linear series of stages that are generally the same from the start of the study (posing a question) to the finish (obtaining an answer). Most of the quantitative data that quantitative researchers gather is numerical in nature. In turn, these variables can be measured, usually with devices, allowing numbered data to be evaluated by statistical methods (Kamal 2019:1387). By employing this methodology, the researcher provided a descriptive overview of the responses to all pertinent questions for the sample of women who participated in the study, as well as a description and measurement of factors that contribute to the improvement of the quality and utilisation of maternal health care services.

3.3.3 Qualitative research approach

Researchers gathered qualitative information in the form of narrative descriptions for qualitative studies. By using this method, narrative information can be gathered through participant interviews, meticulous notes on human behaviour in naturalistic environments, or narrative records, like diaries, which look for patterns of association to reveal the dimensionality and underlying meaning of phenomena. To comprehend the entire thing, patterns of related topics and processes are found (Kumar 2019:309 & 310).

Based on the qualitative study design, the researcher used focus group discussions (FGDs) in the current investigation. FDG is a type of qualitative strategy wherein group

members and researchers freely and openly discuss attitudes, ideas, or perceptions on a problem, product, service, or program (Kumar 2019:253). To investigate and comprehend the significance that people or groups attach to a social or human issue concerning the factors that influence the quality of maternal health care services, the researcher in this study employed an exploratory qualitative study approach in parallel with a quantitative research approach. By employing this method, the researcher investigated and detailed midwives' experiences to create community engagement plans that would enhance the standard and uptake of maternal health care services.

3.4 RESEARCH METHOD

Study methods encompass all of the strategies and tactics used during the entire study operation, including data collecting, statistical analysis, and assessment of the accuracy of the findings (Mishra & Alok 2019:1). The broad research plan that describes how a research project is to be carried out and, among other things, determines the methodologies to be utilised in it is known as methodology, according to Willie (2024:75), and it is to be undertaken and, among other things, identifies the methods to be used in it.

3.4.1 Sampling

The method by which researchers choose the participants for the sample is known as sampling. One of two general methods is used to recruit it from the sampling frame: probability sampling or non-probability sampling (Casteel & Bridier 2021:9). It is unlikely that the researcher will be able to gather information from every example to address the study questions without sampling. It works with all goals to determine the boundaries of accuracy of such estimations and to collect accurate and trustworthy knowledge about the universe with the least amount of money, time, and effort. It enables thorough and

intense research using significantly less time, money, and material, a practice that is more common in research, and when choosing participants from the public so that each person has an equal chance of being included in the sample (Taherdoost 2020:3 &18). For the quantitative study approach, the researcher included all five (5) hospitals found in six woredas purposefully by convenience sampling techniques, and twenty-five (25) health centres from six selected woredas by using simple random selection techniques, and 615 women were selected purposefully by convenience sampling when the mothers were discharged from post-natal, immunisation and family planning units. Similarly, for the qualitative approach, the researcher selected two (2) hospitals and two (2) health centres from the six selected woredas purposefully by convenience sampling, and 40 midwives were selected purposefully by convenience sampling techniques. Number of study subjects in each hospital and health centres were determined by proportion to population size from reviewing the first and second quarter report of 2021 delivery services.

3.4.1.1 Total population

The term "population" refers to all individuals worldwide who fit the criteria for the people a researcher is interested in and on which the study's findings are applied (Casteel & Bridier 2021:343). It frequently includes people whose participation would go against the purpose, presumptions, and/or environment of the study (Shukla 2020:2). All women aged 15 to 49 and all midwives aged 21 to 60 who had been employed for 12 months or longer at government hospitals and health centres located in the West Arsi Zone made up the study's total population.

3.4.1.2 Target population

The nature of the population of interest is represented by the particular, conceptually limited set of possible participants to which the researcher may have access, and it is always this theoretically accessible group to which the researcher anticipates generalising his findings (Willie 2024:76). Occasionally, this group is the same as the entire population that the researcher began with. In order to successfully define the target population, the researcher must iteratively review all boundary concerns to make sure the final definition of the target population is comprehensive enough to supply adequate data for the study. Additionally, the target group must be sufficiently narrowly specified to prevent participants from not reflecting the needs of the study, which would distort the population of interest (Casteel & Bridier 2021:344).

All women aged 15 to 49 who gave birth in West Arsi Zone's government hospitals and health centres during the previous 12 months and during the data collecting period were the target population for the quantitative approach. All midwives between the ages of 21 and 60 who had been employed by the West Arsi Zone's government hospitals and health centres for the previous 12 months or longer, as well as within the time frame for data collection, were the target population for the qualitative approach.

3.4.1.3 An accessible population

It refers to a group that a researcher may reasonably access or the population from which a sample is drawn. It represents the sampling frame and is the last group of participants from which data is gathered by surveying either all of its members or a sample selected from it (Asiamah, Mensah & Oteng-abayie 2017:1613). During the data collection period, which ran from January 2022 to May 2022, all women aged 15 to 49 who had given birth in five selected governmental hospitals and 25 health centres located in the West Arsi Zone within the previous 12 months were considered an accessible

population for the quantitative study approach. Additionally, all 225 midwives aged 21 to 60 who had been employed for at least 12 months at five selected governmental hospitals and 25 health centres were considered an accessible population for the qualitative study approach. The inclusion and exclusion criteria listed below were used to choose the study population. Prior to their visit, data collectors were given lists of inclusion and exclusion criteria.

3.4.1.3.1 Inclusion criteria

It is employed to consistently, reliably, uniformly, and objectively identify the study population (Hornberger & Rangu 2020:2). The inclusion criteria outline the various prerequisites that must be fulfilled in order to be eligible to take part in the study (Connelly 2020:4). The inclusion criteria for this study include:

- ✓ Women of reproductive age groups (15-49 years).
- ✓ Women who had given birth in five selected governmental hospitals and 25 health centres found in West Arsi Zone in the last 12 months and during data collection periods.
- ✓ Midwives working in 5 selected governmental hospitals and 25 selected health centres for 12 months and more were included for qualitative study approach.
- ✓ Midwives having more than 21 years of age were included.

3.4.1.3.2 Exclusion criteria

It is a list of features that a researcher has immediately excluded and were ineligible to participate in the study (Connelly 2020:4). It is the list of factors or characteristics that

make the recruited population ineligible for the study (Hornberger & Rangu 2020:2). The exclusion criteria in this research include:

- ✓ Women without a history of childbirth or those who have never given birth in the last 12 months before data collection.
- ✓ Women who are not residents of West Arsi Zone or visitors.
- ✓ Midwives who have less than 12 months of work experience in selected governmental hospitals and health centres.
- ✓ Midwives working in private hospitals and private health centres.
- ✓ Midwives less than 21 years of age, working duty night and on leave were excluded because data were collected during the working days shifts.

3.4.2 Sampling technique

The process of selecting a subset from a selected sampling frame or complete population is known as the sampling technique. Sampling can be used to draw conclusions about a population or to draw broad conclusions about preexisting theories (Casteel & Bridier 2021:347; Taherdoost 2020:20). Before choosing a specific type of sampling technique, it is needed to decide broad sampling technique.

To obtain the necessary study participants for the current investigation, the researcher employed a multistage sampling strategy. Moving from a large to a narrow sample through a methodical process is known as multi-stage sampling (Wood & Ross-Kerr 2016:160). Out of the 17 woredas in the West Arsi Zone, six (6) were chosen for this study by utilising simple random sampling. Five (5) government hospitals (one referral hospital and four (4) district hospitals) were included from these chosen woredas (Arsi Nagelle, Shashemane, Dodola, Kokkosa, Shalla, and Heban Arsi) by convenience sampling techniques. Additionally, twenty-five (25) health centres were chosen by using

simple random sampling technique from these chosen woredas located in the West Arsi Zone. For qualitative approach, two hospitals and two health centres were sampled by convenience sampling techniques from health institutions selected by simple random sampling. Regarding to the study unit, for the quantitative study approach, 615 women were selected purposefully by convenience sampling when the mothers were discharged from post-natal, immunisation and family planning units. Similarly, for the qualitative approach, 40 midwives were selected purposefully by convenience sampling techniques. Number of study subjects in each hospital and health centres were determined by proportion to population size from reviewing the first and second quarter report of 2021 delivery services for quantitative phase and for the qualitative study approach, a total of 4 FGDs of midwives were selected purposively, two (2) from the five sampled hospitals and two (2) from twenty-five (25) sampled health centres found in the West Arsi Zone, depending on data saturation. On average, one FGD session had 8 to 12 midwives.

The following rationale guided and informed the research to select health facilities and study sites as follow (Ali Khan, Raman, Sambamoorthy & Prashanth 2023:117):

Geographic representation: Selecting facilities from different geographic areas within the West Arsi Zone ensures that the study captures a diverse range of community contexts, including urban, peri-urban, and rural settings. This diversity can influence maternal health service utilisation and quality.

Variability in service delivery: The selected facilities may exhibit different levels of service delivery quality, resource availability, and community engagement. Including facilities with varying characteristics allows for a more comprehensive understanding of how community participation strategies can be tailored to improve services.

Stakeholder engagement: Facilities that already have some level of community engagement or participation can be selected to assess existing strategies and identify best practices. This can also facilitate collaboration with local health authorities and community leaders.

Accessibility and feasibility: Practical considerations, such as the accessibility of facilities for data collection, the willingness of health workers to participate, and existing relationships with the community, can influence facility selection.

Health outcomes: Facilities with varying maternal health outcomes may be chosen to assess the impact of community participation on improving these outcomes. This helps in understanding which strategies are most effective in different contexts.

Population size: The total population served by the selected facilities should be considered. A larger population may warrant a larger sample size to ensure representativeness and generalizability of findings.

Therefore, based on the above criteria, all hospitals were included from six selected woredas, and health centres were chosen by simple random sampling techniques for quantitative approach. The researcher used purposive convenient sampling strategies to choose women. The women were interviewed in private rooms at specific government hospitals and health facilities prior to their departure or return home. The sample was taken after the women were released from the postnatal unit following birth, family planning, and immunisation services. For qualitative approach, two (2) of the five (5) government hospitals and two (2) of the twenty-five (25) health centres chosen from the ninety (90) health centres in the West Arsi Zone were included for focus group discussions (FGDs) as part of the qualitative methodology purposively. The researcher employed purposive convenient sampling strategies to choose midwives (FDG participants) from the chosen government hospitals and health facilities. There were four FGDs and forty (40) midwives in all, with eight to twelve (8–12) midwives in each, two (2) FGDs from hospitals, and two (2) FGDs from health centres.

Strengths of multi-stage sampling

- ✓ Includes all important subpopulation, precision.
- ✓ When the population is sizable or dispersed over larger geographic areas, it is an effective tactic.

Weaknesses of Multi-Stage Sampling

- ✓ Difficult to select relevant stratification variables; not feasible to stratify on many.
- ✓ A multistage sampling is subject to multiple sampling errors, resulting in less accurate sample variables and expensive (Casteel & Bridier 2021:347).

3.4.2.1 Sampling frame

A list of people from which we draw samples is called a sampling frame. The set of units from which the sample is drawn is an operationalised representation of the target population. The specific group of units, frequently individuals, that were asked to participate in the study (Casteel & Bridier 2021:345). The lists of woredas and hospitals and health centres served as the sampling frames for the first and second stages of this study, respectively. The study's sampling units were women and midwives. The population members from whose measurements are obtained during sampling are known as sample units. Elementary units or collections of them that are useful for sampling because they are distinct, observable, and well-defined (Casteel & Bridier 2021:357).

3.4.3 Ethical issues related to sampling

The UNISA College of Human Sciences Health Research Ethics Committee granted ethical approval for the current study, and the Oromia Regional Health Bureau Research and Laboratory Department granted permission Once more, letters of support were sent from the Oromia Regional Health Bureau to the West Arsi zonal health department to obtain clearance for the study. The chosen district health offices were then made accessible after a letter of support was written by the West Arsi Zonal Health Department. The current study included the letters of support and ethical clearance certifications as

an appendix (See Annexures A, B, C & D). The study adhered to ethical standards of regard for human dignity; the women and midwives were informed of the research's dangers and advantages, as well as how it might benefit them personally or society as a whole. Prior to data collection, verbal consent was acquired from every manager of the government hospital and health centre.

The researcher is certain that the chosen issue, which has a great potential to enhance the quality and utilisation of maternal health care services, ensures the ethical nature of the research. Additionally, the following steps were taken to guarantee that the moral precepts of beneficence, fairness, avoidance of damage, and respect for persons were upheld during the study period. The Bureau of Oromia Regional Health Office, the West Arsi Zone Health Office, and a few government hospitals and health centres also granted authorisation for the study's fieldwork and data gathering.

Participants' autonomy: Participants in social science studies shouldn't be coerced into providing information against their choice. As a result, research participants are not compelled to participate against their will, and their freedom to exit from the interview at any moment is appropriately recognised. The freedom to leave the study at any moment without facing any repercussions will be guaranteed to participants. Participants will be informed of the study's general goals and objectives before agreeing to participate voluntarily (Kumar 2019:439). By addressing concerns like the participants' right to withdraw from the study at any moment and providing them with assurances that they would not suffer any damage, the researcher in this study was guaranteeing their safety.

Confidentiality*:* It refers to the researcher's pledges to either conceal information from third parties or to keep the data collected from research subjects confidential. Ensuring that responders won't face embarrassment for disclosing information to a third party is crucial (Kumar 2019:665). Confidentiality was maintained in this study by excluding from the data collection instruments any information that may be used to identify study participants. The participants' information was kept private and utilised exclusively for the study's objectives. Participants were identified solely by codes and audiotape recorders. Because codes were used to preserve anonymity, it was challenging to

identify specific individuals from the responses. The information gathered was kept completely confidential and was not shared with outside parties. After the study was finished, audiocassette tapes were also deleted. To preserve anonymity, only general demographic data was disclosed.

Avoidance of harm: It means that the researcher must make sure that the research participants are safe from any danger of physical or mental injury (Li, Ruijs & Lu 2023:43). By addressing concerns like the participants' right to withdraw from the study at any moment and providing them with assurances that they would not suffer any damage, the researcher in this study made sure that the participants were safe. To reduce the risk of COVID-19, the data collectors also practiced social distancing, cough etiquette, and hand hygiene during the data collection period. The women and midwives who took part in the study were also given masks and other personal protective equipment, and the researcher, under the supervision of supervisors, kept an eye on the study sites. Additionally, the researcher followed the COVID-19 ethics requirements set forth by UNISA. So, they would not be harmed. To reduce the risk of COVID-19, the data collectors also practiced social distancing, cough etiquette, and hand hygiene during the data collection period. The women and midwives who took part in the study were also given masks and other personal protective equipment, and the researcher, under the supervision of supervisors, kept an eye on the study sites. Additionally, the researcher followed the COVID-19 ethics requirements set forth by UNISA.

Ethical aspects related to the researcher: The researcher bears the obligation of ensuring that the participant is completely aware of the purpose of the study, that the information supplied is thorough, concise, and non-technical, and that consent is obtained prior to the start of data collection. Furthermore, participants should understand that they have the right to withdraw their consent, decline to (continue) to participate, and have their data deleted from the study at any time (Li et al 2023:39). Before starting data collecting, the researcher informed the women and midwives about the study's risks and advantages in order to get their consent (See ANNEXURES I, J & M).

3.4.4 Sample

Any subset of measurements chosen from the population is called a sample (Shukla 2020:67). One of two general methods, probability sampling or non-probability sampling, is used to select the sample from the sampling frame. The sampling method is the process one employs to get the sample members (Casteel & Bridier 2021). The process of determining the appropriate sample size to represent the entire population and the degree of confidence in the mean of the findings is known as sample size calculation (Taherdoost 2020:25).

Based on the following hypotheses, the sample size for the quantitative phase of this study was calculated using the method for a single population proportion.

$$n = \frac{(Z\alpha/2)^2}{d^2} p(1-p) = \frac{(Z\alpha/2)^2}{0.05} p(1-p)$$

1. Prevalence of antenatal care, labour-delivery, and postnatal care, 70.8%, 43.7% and 26.1% coverage respectively in Oromia Regional State from EPHI, FMOH and CSA of Ethiopia (2019:13).
2. Margin of error d= 5% is accepted
3. A confidence interval of 95% is assumed (Zα/2=1.96).

$n = \frac{(1.96)^2\ 0.708(1-0.708)}{(0.05)^2}$ = **318,** for antenatal care

$n = \frac{(1.96)^2\ 0.437(1-0.437)}{(0.05)^2}$ = **378,** for labour and delivery

$n = \frac{(1.96)^2\ 0.261(1-0.261)}{}$ = **296,** for postnatal care.

Based on the above calculation, the largest sample size, 378, was taken, plus a non-response rate of 10%=415.8, plus considering a design effect of 1.5 (415.8x1.5), a total

of **624** women who had given birth in the last 12 months were required for the quantitative study approach. The sample size for this study approach was selected from the women who came to the hospitals and health centres for labour-deliver, post-natal care, family planning, and immunisation services during the data collection period. For the qualitative study approach, a total of 4 FGDs of midwives were selected purposively, two (2) from the five sampled hospitals and two (2) from twenty-five (25) sampled health centres found in the West Arsi Zone, depending on data saturation. On average, one FGD session had 8 to 12 midwives.

3.4.5 Data collection

An essential part of every research project is gathering data. Surveys, tests, and analysis of data from reports, censuses, and earlier research are examples of data collection procedures. Selecting the appropriate data gathering technique is the most crucial aspect of study (Kumar 2019:273).

3.4.5.1 Data collection approach and method

The method by which a researcher decides to collect data regarding a circumstance, individual, issue, or phenomena is known as the data collection methodology (Kumar 2019:271).

Data collection approach for quantitative data

An essential component of empirical communication studies and social science research in general is data collection (Ahmad 2019:188). To collect quantitative data for this investigation, structured interview questions were used. A structured interview questionnaire, which consists of a predefined series of questions with the same language and order, is a widely used method for obtaining information from people in face-to-face

or other person-to-person encounters between two or more people with a specific aim in mind (Kumar 2019:280 & 282).

Structured questionnaires were employed to acquire data from the women in the current investigation. Data collector communicated with health care provider on duty to know when women discharged from these units. When the woman was released from the postnatal unit following delivery, family planning, and immunisation, interviews took place in an exclusive room to discuss sociodemographic characteristics and patterns in the utilisation of services for maternal health in hospitals and health centres.

Advantages of structured interview questionnaires

- ✓ In a short length of time and at a reasonable cost, a lot of information may be gathered from a lot of people.
- ✓ Can be conducted by the researcher or by many people, with little impact on the reliability and validity of the results.
- ✓ In most cases, a researcher or a software program can instantly and simply quantify the questionnaire results.
- ✓ Can be analysed more scientifically and objectively than other forms of research.
- ✓ Quantified data can be used to measure change and to compare other studies.
- ✓ According to positivists, quantitative data can be utilised to evaluate pre-existing hypotheses or develop new ones.
- ✓ It provides uniform information.
- ✓ It requires fewer interviewing skills.
- ✓ The interviewer and interviewee do not need to establish a rapport (Li et al 2023:16).

Disadvantages of structured interview questionnaires

- ✓ Insufficient in understanding certain kinds of information, like changes in emotions, behaviour, and sentiments, among others.
- ✓ Phenomenologists contend that quantitative research is a researcher-fabricated concept since it only requests a little amount of data without offering an explanation.
- ✓ Structured interview questions cannot determine the truthfulfulness of a respondent, and his level of thought cannot be gauged.
- ✓ The respondent can be forgetful or fail to consider the matter in its whole.
- ✓ Individuals may perceive each question differently, therefore their responses may vary depending on how they understand it (Li et al 2023:17).
- ✓ Individuals may perceive each question differently thus their responses will depend on how they understand it.

Data collection approach for qualitative data

Semi-structured, open-ended, and non-directive FGD instructions were used to gather data from midwives for the qualitative study approach. These guides were taken and adapted from prior relevant studies. In order to triangulate the midwives' replies to the semi-structured questionnaire on community participation strategies to improve the quality and utilisation of services for maternal health care, as well as their views of care and experiences, the FGD instructions were adjusted in accordance with this study. Eight midwives were chosen from twenty-five (25) health facilities and all-selected hospitals using a purposive convenient sampling technique. Four (4) focus group discussions were held. Two FGDs from hospitals and similarly two FGDs were conducted among midwifes selected from two health centres using a purposive convenient sampling technique. There were eight to twelve (8–12) midwives in each FGD. During data collection, field notes on observations were also taken by the researcher, and all focus group discussions were recorded on audio. Eight midwives with diplomas and two with a

bachelor's degree were enlisted as supervisors and data collectors from outside the study sites to preserve the quality of the data that would be gathered.

3.4.5.2 Development and testing of the data collection instruments

The development of research instruments or tools is a crucial component of any study since the sort of information gathered by the researcher using such instruments or tools determines what the researcher finds or concludes (Kumar 2019:301).

Development of quantitative research instruments or tools

The English version of the semi-structured questionnaire was used for women who gave birth in the last 12 months and during the data collection period in government hospitals and health centres after the authors reviewed several related literatures on the quality and use of maternal health care services. The survey questionnaire was adapted and modified from different studies (Tolossa, Bala, Dufera, Mekuria, Ifa & Deriba 2022:461; Eritero, Gebreslasie, Asgedom, Areba, Wudneh, Bayisa & Molla 2022:4; Kim & Kim 2019:7; Ousman, Mdala, Thorsen & Sundby 2019:7; Seifu & Meressa 2017:5). Firstly, a questionnaire was prepared in English, and later it was translated to the local language (Afan Oromo) by language experts to suit the local setting, and then it was retranslated back to English to compare its consistency. The questionnaire was evaluated and prepared with advice from a statistician prior to data collection, and because the study was gathered in a language other than English, a translator was consulted when preparing the questionnaire in Afan Oromo (See Annexure F).

The original questionnaire was modified in line with the present research objectives and used to interview women face to face with data collector. The present tool included the following parts (see the respective sections of Annexure E):

Part One: Socio-Demographic Characteristic (Age, marital status, ethnicity, religion, education status, occupation, woman monthly income, payment status for services, residence, and health facility distance).

Part two: Questions on maternal health care services (Health education on maternal health care services, status of your pregnancy, utilisation of maternal health services, current parity, place of deliver during the previous pregnancy, mode of delivery for your previous birth, health facility visits within two days for postnatal care).

Part Three: Questions about factors associated with maternal health care services (waiting time, the way women were handled by health service providers during maternal health care services, privacy during maternal health care services, satisfaction on drugs and supplies).

Development of qualitative research instruments or tools

The FGD guidelines for midwives working in West Arsi Zone hospitals and health centres that were used in this study were adopted from a tool that was used by related studies after the permission to use it was granted from the authors (See Annexure G) (Shiferwa & Modiba 2017:304).

Advantages of FGD guides

- ✓ Research topics that call for a consensus and the meanings that underlie those opinions (such as their experiences and beliefs) must spark debate or discussion.
- ✓ Used to collect in-depth information from several people at the same time.
- ✓ FGDs save time as they provide multiple views in one session.
- ✓ The purpose of FGDs is to investigate a subject and gather data or stories for use in other phases of the study, such as testing stories.
- ✓ Findings, such as the reasons behind certain resources, are clarified and expanded upon through FGDs (Anthea 2020:2; Taherdoost 2021:16).

Disadvantages of FGD guides

- ✓ There is a chance that members' expectations will be raised beyond what can be met or that "strategic" group biases would be expected.
- ✓ Organising and conducting them might take a lot of time.
- ✓ Speaking in front of the group may make some individuals hesitant.
- ✓ Depending on the dynamics of the participants, they may not freely express their views and opinions or be reluctant to participate in the researcher's topic of interest if they are uncomfortable with one another or if societal stigmatisation may result from the disclosure.
- ✓ They can take a lot of time and be challenging to analyse (Anthea 2020:2; Taherdoost 2021:16).

Pre-test of data collection instruments

A pre-test of a research data collection tool comprises a critical analysis of each question to determine its clarity and potential respondents' comprehension in order to identify any potential issues (Kumar 2019:655). During the current study, the lead investigator trained the chosen supervisors (research assistants) and data collectors on the study's goals, advantages, informed consent, individual rights, and interviewing methodologies for one day. Following their training, a pre-test was administered to 5% of the sample outside of the study locations in East Shoa Zone hospitals and health centres before the actual gathering of data. A similar FGD pilot test was carried out to determine how long it would take to conduct FGDs, to enhance FGD guides and questions, to ensure that data collection procedures were appropriate, and to acquaint the researcher, supervisors (2 BSc Midwives), and data collectors (8 diploma holders' midwives) with the data recording materials, including audiotape recorder.

3.4.6 Data collection process

Getting permission to do fieldwork: Following UNISA's ethical clearance, a letter of authorisation to do so was received from the Oromia Regional Health Bureau of Health. Copies of the relevant hospitals located in Woredas, and the West Arsi Zone administration were also obtained. The offices received a letter of application asking for authorisation to do the work. Choosing interviewers or data collectors: According to pre-test estimates, the average time spent completing the questionnaire in the current study was thirty minutes. Eight diploma-holding midwives were then hired as interviewers to gather data in a span of 15 to 20 days. Those who had prior expertise collecting data for facility-based studies were selected as data collectors.

Training of data collectors: Eight midwives with diplomas and two with a bachelor's degree in Afan Oromo received the training to make sure they grasped the questions and topics. Data collectors had the opportunity to discuss their experiences, including any difficulties encountered in the field from prior exposures of a similar nature. It took one day to train the interviewers. Facilitated by the primary investigator, the training was conducted on January 15, 2022, at the Madda Walabu University Shashemane Campus Training Hall, which was facilitated by principal investigator.

Data collection process in the quantitative study approach

This study's methodology involved approaching all women who fit the inclusion criteria at the chosen hospitals and health centres until the 624-respondent quota was met, after which each woman was informed of the study's goal. Before beginning any part of the study, each responder provided written consent. Because each participant was given a unique code to maintain anonymity, respondents were reassured that all study results would be kept private. The women who were illiterate were asked for their verbal informed permission.

Participants in the study were also given the assurance that they would not be penalised if they choose to withdraw from it. The data collector conducted one-on-one interviews

in a separate room to complete questionnaires. Lastly, participants were told that there would be no financial benefit to taking part in the study.

Data collection process in the qualitative study approach

Before the FGDs began, each midwife was given an explanation of the study's goal to follow the qualitative study approach. Furthermore, all respondents were guaranteed anonymity and confidentiality by promising that no information about them would ever be shared with any other person or organisation without their consent. Although midwives were graciously asked to participate in the study, they were informed that they had the freedom to decline.

Following the agreement, midwives signed a consent form, and FGDs were held in designated rooms at hospitals or health centres. To establish a strategy to raise the quality and use of maternal health care, the researcher conducted focus group discussions (FGDs) with midwives who had worked for at least a year to learn about their perceptions and experiences of these services.

3.4.7 Ethical considerations related to data collection

Informed consent: Before beginning to collect data from study participants, the researcher should obtain their informed consent. After the respondents have been fully and accurately told, about every facet of the study, willingly, and free from compulsion, informed consent is gained. After the researcher has informed the study participants about the information being gathered, its purpose, its intended use, the expectations for their participation in the study, and its potential direct or indirect effects, informed permission is gained (Kumar 2019:439).

Non-maleficence: Since the data was gathered during the COVID-19 pandemic, precautions like hand washing, coughing etiquette, and social distancing were used to

reduce the risk of contracting the illness. Masks and other personal protective equipment were given to the women and midwives who took part in the study.

Autonomy: Clear and thorough information concerning the objectives, procedures, risks, benefits, and participants' freedom to stop taking part at any time without facing penalties was given by the researcher. Simple-to-understand informed consent forms were used to communicate this information. Furthermore, participants were allowed to withdraw from the study at any moment and were made aware that it was entirely voluntary without facing any repercussions if they chose not to answer any particular questions.

Confidentiality: Strong data protection measures were put in place by the researcher in this study to guarantee that private data is kept safe and that only authorised individuals may access it. When required, encryption and the usage of safe databases are part of this. Participants were also given clear information by the researcher about the usage of their data, who would have access to it, and the privacy safeguards in place. Any sharing of data with stakeholders or other researchers will be done in a way that respects ethical standards and safeguards participant identities.

Anonymity: Where feasible, the researcher collected data for the current study using anonymous means. No identifiable information, like names or addresses, was collected for quantitative surveys.

Using codes or pseudonyms, the results of qualitative interviews were reported. To prevent individual responses from being connected to participants during analysis and reporting, data were aggregated. When discussing delicate subjects pertaining to maternal health care, extra care was taken to guarantee that participant narratives could not be linked to specific persons.

3.4.8 Description of variables

3.4.8.1 Independent variables

Based on HBM, the independent variables for this investigation were chosen. Three distinct sets of factors, the predisposing, enabling, and need factors, were identified for this study in relation to people's health care-seeking behaviours. Demographic characteristics like age and marital status as well as social structure characteristics like education, occupation, and ethnicity were considered at the individual, family, and community levels under the predisposing factors. The need and enabling factors were maternal health care services, maternal health care-related factors, and structural variables pertaining to women's awareness of the advantages of using and hazards of not using maternal health care services.

3.4.8.2 Dependent variable

The dependent variable in this study is the quality and use of maternal health care services, including prenatal care, labour and delivery care, and postnatal care services.

3.4.9 Data analysis

Entails examining quantitative and qualitative data independently using quantitative and qualitative methodologies, respectively (Sarwono 2019:120).

Data analysis for quantitative study approach

Assigning numerical values to each response transforms raw data into a format that may be used for data analysis in quantitative research (Ali 2021:2). The data fields and codes in the questionnaire were used to create a database for the current investigation. SPSS version 25 was used by the researcher to analyse the data. A statistician and an

information technology (IT) specialist assisted the researcher with data analysis. The sample population's patterns of maternal health care consumption were described using standard descriptive statistics in reference to the sociodemographic traits of the respondents. There was a bivariate analysis. Chi-square tests and logistic regression models were used because all the answer variables are categorical. Determinants of raising the quality of maternal health care services are found using the chi-square test. A p-value of 0.05 indicates that the results are significant. Confounder modifications were conducted in accordance with the results of the multiple logistic regression analysis. The relevant determinants (effects of covariates) on the usage of maternal health care services at hospitals and health centres were estimated using multivariate logistic regression models. The covariate ranks were used to verify the covariates' strength. Odds ratios and 95% confidence intervals were used to show the estimated impacts of variables on service usage. usage of maternal health care services is not different from the reference category if the calculated odds ratio is equal to one; if it is greater than one, the likelihood of usage is higher than the reference group. The likelihood of using care is lower than the reference group if it is less than 1.

Data analysis for qualitative study approach

Transcribing information from observations and interviews into words or text is the first step in data analysis for qualitative research (Sarwono 2019:104). Analysing qualitative data was done concurrently with data collection in the current study. Summaries of each day were written and appended to the relevant field note by data collectors. Inductive thematic analysis was the method used in this study, and the themes that arose from it were well-founded in the data. The qualitative investigation's data was analysed using Atlas TI version 8 qualitative data analysis software. The present study uses reading, coding, showing, reducing, and interpreting as the fundamental procedures for the qualitative data analysis.

Content analysis, narrative analysis, and framework analysis were among the qualitative data analysis techniques that were employed.

Content analysis: It is the process of classifying behavioural or verbal information for tabulation, summarisation, and classification; alternatively, it is the analysis of interview or observational field note content to determine the primary themes that emerge from respondents' responses or researcher-made observational notes (Kumar 2019:297). Inductive reasoning, which emerged from the researcher's meticulous review and continuous comparison of the data, was employed in this study's qualitative content analysis to distil the raw data into groups or themes based on trustworthy deductions and interpretations (Shava, Tlou, Hleza, Smarntha & Mathonsi 2021:554).

Narrative analysis: Using this approach, respondents' tales are formed while considering the particulars of each case and their individual experiences. In this study, midwives' experiences with the factors that influence the quality and usage of maternal health care services were transcribed using a narrative analytic method. The researcher must sift, consider, improve, and offer the qualitative data in a revised format to the reader during the analysis process (Ntinda 2020:6).

Framework analysis: This qualitative data analysis method includes the following steps: discovering a thematic framework (the first coding framework that is developed from both a priori and emergent issues), familiarising oneself with the data (transcription and reading), coding (using textual or numerical codes to identify specific pieces of data that correspond to different themes), charting (charts created using headings from the thematic framework), mapping, and interpretation a framework analysis was used in this study to record midwives' perceptions of elements that enhance the quality and utilisation of maternal health care services (Goldsmith 2021:2073). The researcher had to organise and provide the data in a revised format for the reader during the qualitative data analysis process.

3.5 RIGOUR OF THE STUDY: VALIDITY AND RELIABILITY/TRUSTWORTHINESS

This part covered the study's validity as well as its reliability and trustworthiness.

3.5.1 Validity and reliability in quantitative research

Validity: The degree to which participant scores are significant predictors of the construct being assessed is known as validity in quantitative research (Ali 2021:8). It alludes to how appropriate and accurate each step of the research process, which is primarily related to measuring techniques and the ability of an instrument to measure the things it is supposed to measure (Kumar 2019:340).

Internal validity: Internal validity is a measure of how well the observed results represent reality in the population we are studying (Colorado State University 2024:4).

External validity: Is used to describe the level of generalisability or validity of a study's findings (Colorado State University 2024:4).

The three categories of validity in quantitative research are as follows (Kumar 2019:342). These are:

- ✓ Face and content validity
- ✓ Concurrent and predictive validity
- ✓ Construct validity

Face and content validity: The logical connection between the study's goals and the questions is the main basis for the conclusion that an instrument is measuring what it should (Kumar 2019:343). Face validity is a personal judgement based on the researcher's feelings, ideas, and intuition regarding how the measuring device works (Sürücü & Maslakci 2020:2706). The present study examined the face and content

validity of the research questionnaires by making sure they addressed all necessary determinants of maternal health care services.

Concurrent and predictive validity: Predictive validity is the extent to which a research instrument can accurately anticipate an outcome, while concurrent validity is quantified by comparing it to some observable criterion or reliable findings (Kumar 2019:344). To evaluate contemporaneous and predictive validity, pre-test the data collection instrument, and ascertain the project's viability, the current study employed a pilot study. Interaction effects were estimated and tested during the study using the multiple logistic regression technique.

Construct validity: The degree to which an instrument assesses the notion, behaviour, idea, or quality that is, a theoretical construct that it claims to measure, or the distinction between individuals who exhibit the behaviour or quality to be tested and those who do not is known as construct validity (Sürücü & Maslakci 2020:2700). It shows how well a research tool is able to measure what it is intended to measure (Kumar 2019:344). Construct validity was employed in this study to make sure that the questionnaires used to create strategies for community participation aimed at improving the quality of maternal health care services were, in fact, evaluating the variables that affect the services' use and quality.

Reliability: In quantitative research, reliability is the degree to which participant scores remain constant and steady across time. It is the ability of measurement tools repeatability yield similar results when employed at different times (Sürücü & Maslakci 2020:2707). According to the Kumar (2019:345) definition, reliability is a research instrument that is able to provide similar result when repeatedly used under similar conditions. To ensure reliability, the questionnaire in this study was organised logically, with clear, concise, and unambiguous instructions; questions that were superfluous, repetitive, or inappropriate were avoided; and data collectors received effective training to reduce the possibility of errors resulting from a lack of understanding of the instrument's purpose and content and from incorrect recording. After being translated into the local Afan Oromo language, the data collection tool was backtranslated into

English, the original language. The date of the interview was planned right before mothers were leaving hospitals or health centres after getting maternal health care services. When coding and performing mathematical calculations for data analysis and interpretation, great care was given.

3.5.2 Trustworthiness in qualitative research

A good social research study must have truth value, applicability, consistency, and neutrality. In qualitative research, these issues are called credibility, transferability, dependability, and confirmability rather than internal validity, external validity/generalizability, reliability, and objectivity, which are used in quantitative research.

These issues are acknowledged as markers of research reliability, and the debate criteria are a widely used technique to assess the qualitative of social inquiry and the dependability of qualitative research (Kakar et al 2023:151).

The researcher was thinking of carrying out member checking, triangulation, meticulous transcription, a methodical strategy, and coding to the degree that the study findings can be assessed under the following to guarantee the rigour and reliability of the qualitative study technique.

Credibility: It describes a situation in which the study participants are content with the qualitative research findings and assesses if the findings accurately reflect the participants' initial ideas and constitute reliable information based on their original data (Kakar et al 2023:155). Confidence in the veracity of the gathered data and its interpretation, including an accurate comprehension of the context, is what it means (Kumar 2019:351). In the current study, midwives demonstrated credibility when they recognised the reported research findings as their own perceptions and experiences regarding the quality of maternal services.

Transferability: It is the degree to which qualitative research findings can be applied to many contexts or circumstances involving various people, and the researcher helps a possible user make this determination by providing detailed descriptions (Kakar et al 2023:155). Midwives who have worked for a year or more at particular hospitals and health centres were included in the current study and have a close connection to the context under investigation.

Dependability: If the same thing could be seen twice, we would get very similar results in qualitative research (Kumar 2019:355). To assure reliability, the researcher in this study kept the collected data and analysis for future researchers who might be interested in cross-checking or verifying the data.

Confirmability: It is the extent to which other people could validate or corroborate the findings of qualitative study (Kumar 2019:355). To guarantee the study's confirmability, the current study's data collection procedures, choices about what data to gather, raw data, analysis notes, and data interpretation were all documented.

Authenticity: Authenticity in research relates to ensuring that the information collected and displayed is trustworthy, ethically sourced, and genuine. This improves the overall reliability and dependability of the study (Sánchez-Obando 2023:9). To encourage genuine responses in the current study, the researcher used techniques including source integrity, transparency, and anonymity or secrecy to make sure the data came from trustworthy and legitimate sources. This could entail confirming the participants' credentials, the precision of their answers, and the dependability of the instruments or procedures employed to gather the data.

3.6 SUMMARY

The researcher covered the study's design, data gathering techniques, data analysis, reliability, and ethical considerations in this chapter. Also covered were the measures used to guarantee the study's validity, reliability, and trustworthiness. The outcomes of the inquiry will be presented, reviewed, and debated in the upcoming chapter.

CHAPTER 4

ANALYSIS, PRESENTATION AND DESCRIPTION OF FINDINGS

4.1 INTRODUCTION

This chapter provides the data analysis and interpretation for the study, which aimed to assess maternal health care services in the West Arsi Zone of Oromia Regional State, Ethiopia, to develop community participation strategies that would improve the quality and utilisation of maternal health services. Both descriptive and inferential statistics were used in the analysis and presentation of the data. Results pertaining to the designated study subjects are presented in the following sections.

4.2 QUANTITATIVE DATA MANAGEMENT AND ANALYSIS

By pre-testing the questionnaires in the local Afan Oromo language, training interviewers, closely monitoring field workers, and hiring and orienting experienced data entry operators, this study focused on preserving the quality of the data before, during, and after data collection. Like this, prior to performing additional statistical analysis, the study participants' sociodemographic traits and questionnaire response rate were assessed.

4.2.1 Data cleaning: consistency and completeness

Data cleaning is the process of identifying the nature of the defective data and deleting, editing, or leaving the data as it is before processing the data for analysis. It is also the process of checking the data accuracy and consistency as much as possible and understanding all types and sources of possible errors during data collection and entry processes (Sarwono 2019:76). Data in the current study were cleaned for consistency

and completeness before analysis, during data entry, and throughout daily data collecting. Prior to analysis, SPSS version 25 was used to run frequency, crosstabs, and sort the variables of interest in order to ensure the data was full and consistent. Prior to conducting additional data analysis, outliers, erroneous values, and missing values were found by running the frequencies of the variables. The completeness of the data was verified in the field by the principal investigator while collecting it, by the data entry expert during data input, and by the principal investigator prior to analysis. Nine records were eliminated prior to data entry for incompleteness of information after the completeness of the data was verified.

4.2.2 Response rate

The number of completed interviews divided by the total number of participants contacted or all potential interviews is known as the response rate (Taherdoost 2020:26). Increased questionnaire response rates improve the study's validity and usefulness. A total of 624 respondents were interviewed for this study, and nine of them (98.6%) had incomplete questionnaires. Indicative of the interviewers' understanding, the quality of their training, and the daily supervision of the principal investigator, higher questionnaire answer rates were seen in this study.

4.3 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE WOMEN

Under this sub-section, sociodemographic characteristics of women were discussed.

4.3.1 Age distribution of women

Table 4.1 displays the ages of the 615 respondents. Nearly half of the participants (45.9%; n = 282) were in the 25–29 age range. This could be because most women get married and begin having children at this age.

Table 4.1: Age distribution of women (N = 615)

Age	Frequency	percent
≤20 years	54	8.8
20-24 years	149	24.2
25-29 years	282	45.9
30-34 years	100	16.3
≥35 years	30	4.9
Total	**615**	**100.0**

4.3.2 Marital status of women

In reference to marital status, the majority (96.7%; n = 595) were married and living with their spouses, while others (3.3%; n=20) had others marital status like single, divorced, and widowed.

Table 4. 2: Marital status of women (N = 615)

Marital status of women	Frequency	Percent
Married	595	96.7
Others marital status	20	3.3
Total	**615**	**100.0**

Married women made up most responders. To determine if marital status was linked to the use of high-quality maternal health care services, information on marital status was gathered.

4.3.3 Ethnicity of women

Seventy-one percent (n = 468) of the 615 respondents identified as Oromo, whereas 12.03% (n = 74) identified as Amhara, 5.85% (n = 36) as Sidama, 2.76% (n = 17) as Gurage, and 2.76% (n = 14) as Walayta, according to Figure 4.1.

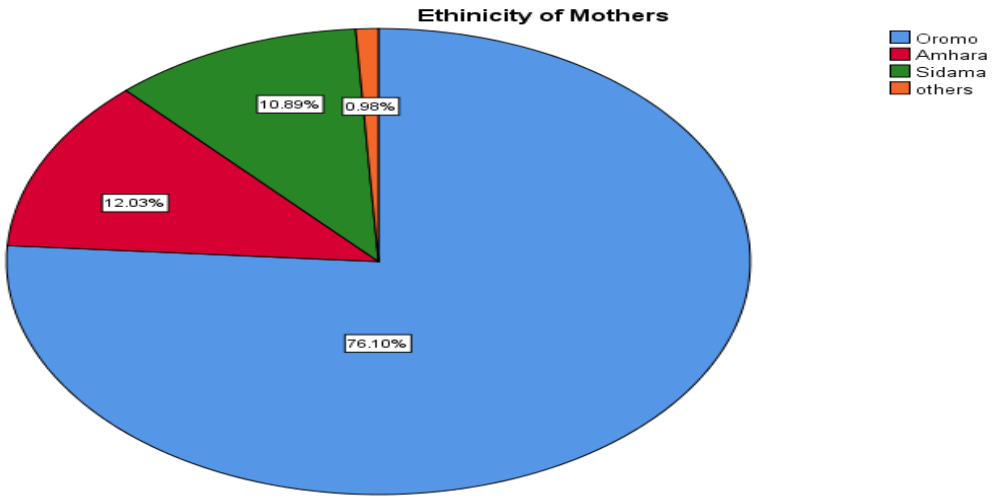


Figure 4. 1: Percentage distribution of women by their ethnicity (n = 615)

4.3.4 Religion of women

There were 615 correct answers about the women's religion. Most of the women (61.46%; n = 378) identified as Muslim and the rest followed Christian religion faith (38.54%; n=237) as shown below in the Figure 4.2.

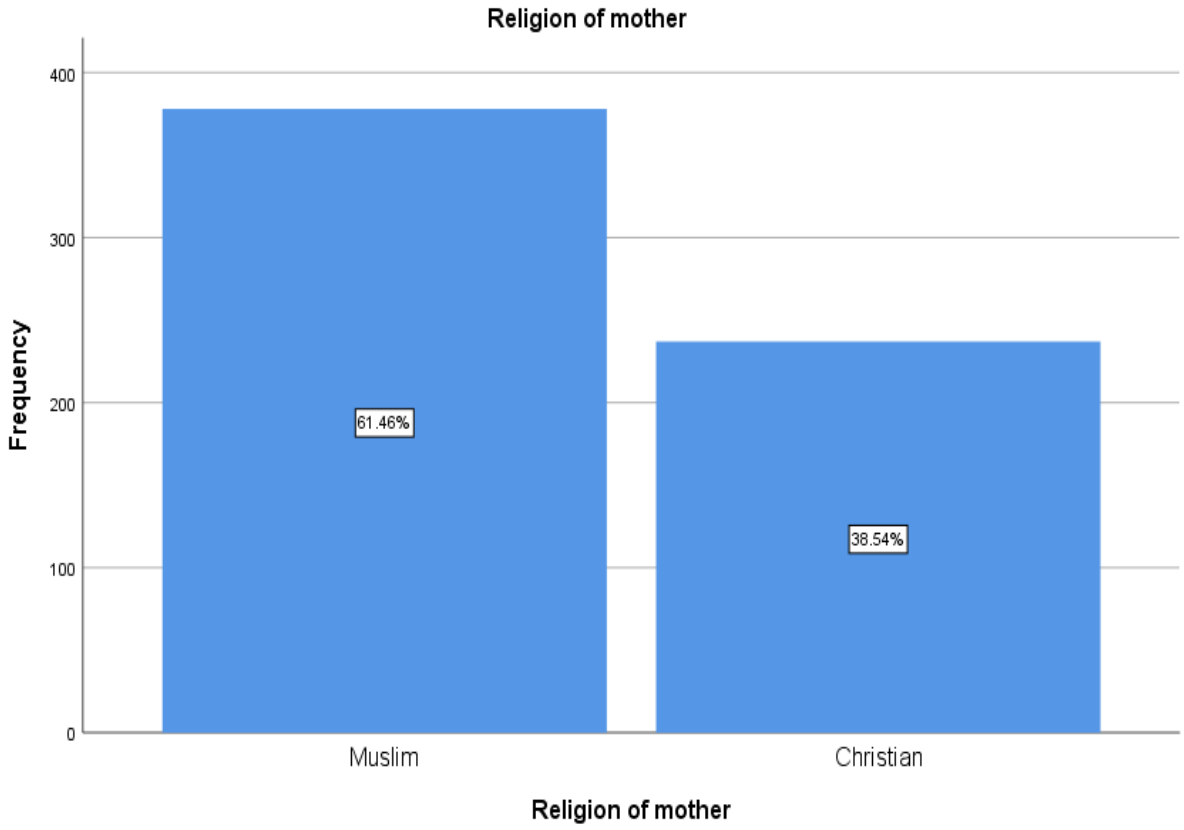


Figure 4. 2: Percentage distribution of women by their religion (N = 615)

4.3.5 Women's level of education

Most of the women had participated in a basic education program that involved learning to read or write. From those involved in basic education, most respondents (36.9%; n = 227) had completed primary grades (1-8) education, while 31.5% (n = 194) had completed secondary grades (9-12) education, ten percent (10.1%, n = 64) had completed college education, and 7.5% (n = 46) had completed higher or university education, as depicted in Table 4.3.

Table 4.3: Educational status of women (N = 615)

Educational status of respondents	Frequency	percent
No education/Illiterate	86	14.0
Primary (1-8)	227	36.9
Secondary (9-12)	194	31.5
College	62	10.1
Higher/University	46	7.5
Total	**615**	**100.0**

4.3.6 Husbands' educational status

Regarding the husband's or partner's educational status, there were 615 valid responses. As indicated in Table 4.4, about 38.4% (n = 236) of respondents' husbands or partners completed secondary (9-12) education, and 9.10% (n = 56) of respondents' husbands or partners were not having any form of education.

Table 4.4:Educational status of women's husbands (N = 615)

Educational status of Women's Husbands or partner	Frequency	Percent
No education	56	9.1
Primary (1-8)	155	25.2
Secondary (9-12)	236	38.4
Technical /Vocational(college)	92	15.0
Higher /University	76	12.4
Total	**615**	**100.0**

4.3.7 Women's occupational status

As indicated in Table 4.5 below, 69.3% (n = 426) were housewives. This showed that most women were financially dependent on their husbands or someone.

Table 4.5: Women's occupational status (N = 615)

Respondents' occupational status	Frequency	percent
Housewife	426	69.3
Others (governmental employee, merchant, farmer, and student)	189	30.7
Total	**615**	**100.0**

4.3.8 Monthly income of women

Out of 624 respondents, 615 respondents gave answers to the question on their average monthly income. From these, 74.1% (n = 456) of respondents have an average monthly income of less than or equal to 500 Ethiopian Birr, and 25.9% (n = 98) have more than 500 Ethiopian Birr in average monthly income.

Table 4.6: Women's monthly income (N = 615)

Respondents' *monthly income in Ethiopian Birr*	Frequency	percent
≤500	456	74.1
>500	159	25.9
Total	**615**	**100.0**

4.3.9 Women's payment status for services

In terms of service costs to maternal health care services, almost all women, 94.0% (n = 578), did not pay for services given for them, while 6.0% (n = 37) did pay for services given for them. From this information, the researcher may conclude that almost all the respondents got services without payment to the hospitals or health centres.

Table 4.7: Women's payment status for maternal health care services (N = 615)

Respondents' payment status for services	Frequency	percent
Paid	37	6.0
Free	578	94.0
Total	**615**	**100.0**

4.3.10 Women's payment rates for services

Among respondents who paid money to those services offered for them, 48.6% (n=18) indicated moderate payment, while 40.6% (n = 15) reported very expensive payment they paid for services provided for the maternal health care as shown in Table 4.8.

Table 4.8:Women's payment rates for the maternal health care services (n = 37)

Payment status for services	Frequency	percent
Very expensive	15	40.6
Moderate	18	48.6
Fair	2	5.4
Exorbitant	2	5.4
Total	**37**	**100.0**

4.3.11 Women's residential status

Of the interviewed respondents, more than half of the women, 67% (n = 412), lived in urban residential areas, and 33% (n = 203) lived in rural residential areas, as shown below in Figure 4.3.

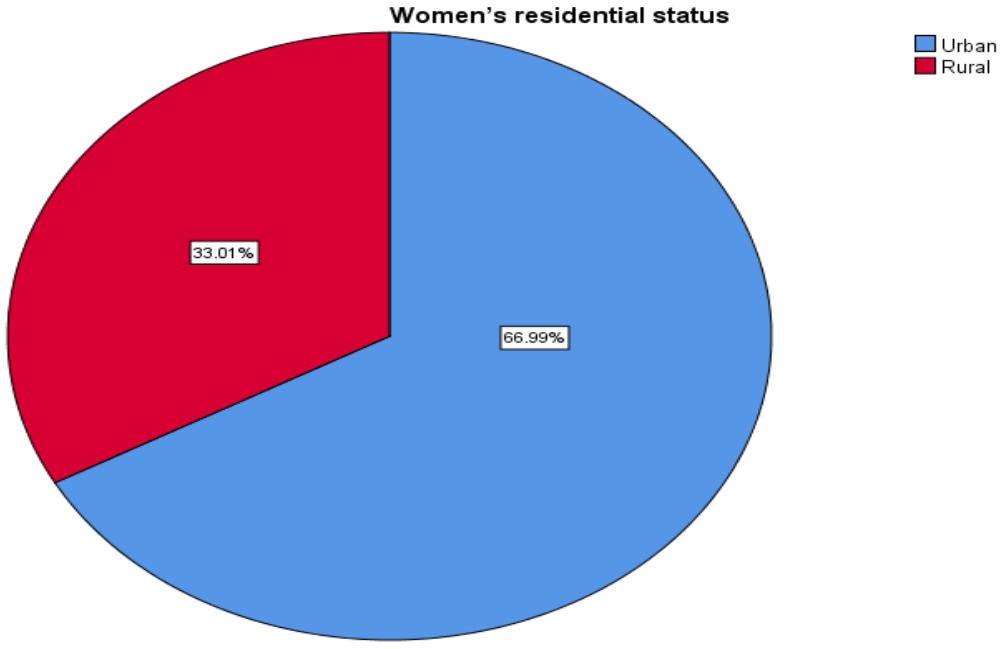


Figure 4.3: Percentage distribution of women by their residential status (N = 615)

4.3.12 Distance of health facility

From the interviewed respondents, 44.7% (n = 275) live within less than 5 kilometers distance from a health facility, and 27.0% (n = 203) were living more than 15 kilometers distance from a health facility, as shown below in Table 4.9.

Table 4.9: Respondents' distance from health facility (N = 615)

Distance of Health facility	Frequency	percent
<5km	275	44.7
5-15km	174	28.3
>15km	166	27.0
Total	**615**	**100.0**

4.4 MATERNAL HEALTH CARE SERVICES

This section describes health education on maternal health care services, status of pregnancy, and utilisation of antenatal care services; utilisation of maternal health care services provided during antenatal care services; number of antenatal care services visits; utilisation of labour and delivery care services; utilisation of postnatal care services; and the outcomes of previous pregnancies.

4.4.1 Maternal health education

Regarding the provision of health education on maternal health care services during pregnancy, labour, and the postpartum period, 615 women responded to the questions. From these, most respondents, 73.3% (n = 451), received maternal health education,

and while 26.7% (n = 164) said that they did not receive maternal health education during their visits.

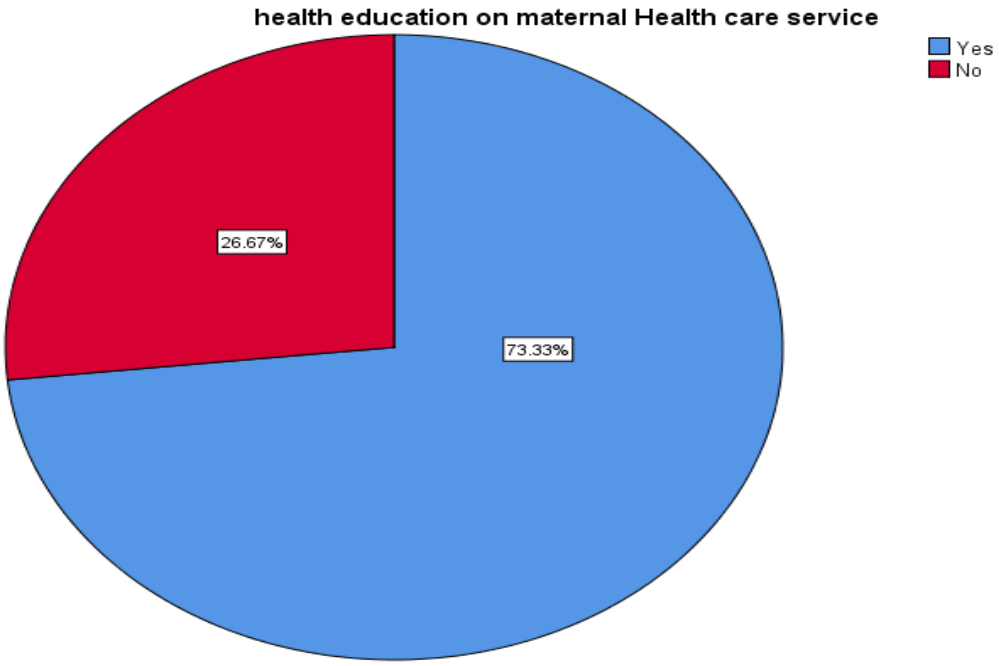


Figure 4. 4: Health education on maternal health care services

4.4.2 Source of maternal health education for women

Among the women who received health education, 86.0% (n = 388) received health education from the health care providers, and 46.3% (n = 209) of the respondents received it from media.

Table 4.10:Source of health education (n = 451)

Source of health education	Frequency		Percent
Parents	Yes	9	20
	No	442	98.0
	Total	**451**	**100.0**
Traditional Birth attendants	Yes	Yes	23
	No	No	428
	Total	**451**	**100.0**
Health care provider	Yes	388	86.0
	No	227	36.9
	Total	**451**	**100.0**
Media	Yes	209	46.3
	No	242	53.7
	Total	**451**	**100.0**

4.4.3 Status of pregnancy

Most of the respondents, 92.2% (n = 567), indicated that their current pregnancy was wanted, while 7.8% (n = 48) specified that their pregnancy was unwanted.

Table 4.11:Status of your pregnancy (N = 615)

Status of your pregnancy	Frequency	Percent
Wanted	567	92.2
Unwanted	48	7.8
Total	**615**	**100.0**

4.4.4 Utilisation of antenatal care services in previous pregnancy

The women in this study were questioned about whether they had used prenatal care services during a prior pregnancy. Eighty-eight-point nine percent (88.9%) (n = 547) of the 615 respondents said they had previously attended ANC services, whilst 11.1% (n = 68) said they had not.

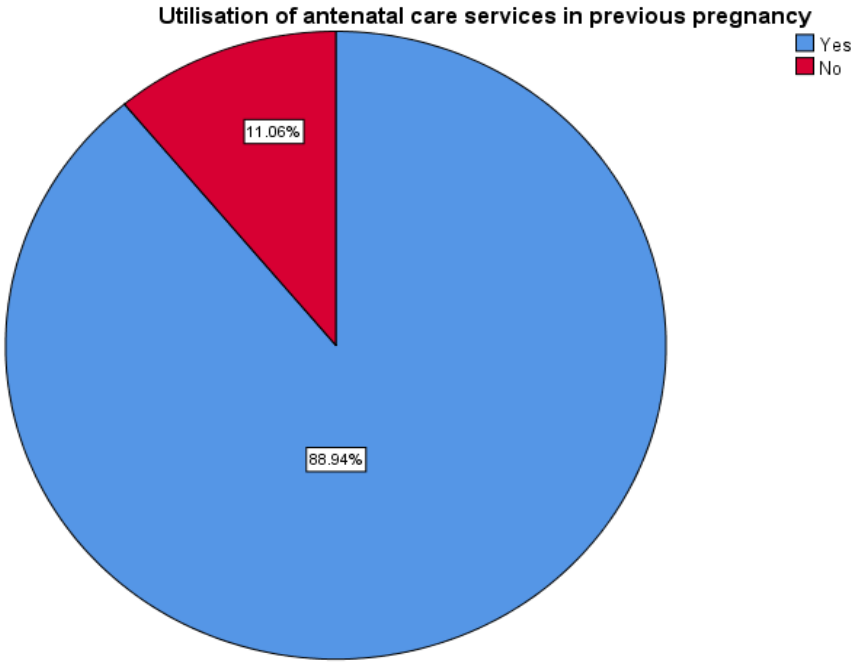


Figure 4. 5: Utilisation of antenatal care services in previous pregnancy (n = 547)

4.4.4.1 Antenatal care services provided for women

From the women who visited health facilities for ANC care services, most of the women (95.6%; n = 523) received tetanus vaccine, 87% (n = 476) of the respondents were tested for blood, 58.3% (n = 319) of the respondents received ultrasound examination, and for

56.7% (n = 310) of women, physical examination was performed. Even though the Ethiopian Ministry of Health recommended to all ANC visitors to perform HIV/AIDS examinations, only 39% (n=213) of the respondents received the services; for 18.8% (n=103) of the respondents, nutritional supplementation was given, and 4.4% (n=27) of the respondents received gynaecological examination.

Table 4.12: Women who received different ANC services (n = 547)

ANC Services	Frequency		Percent
Physical examination	Yes	310	56.7
	No	237	43.3
	Total	**547**	**100.0**
Tetanus vaccination	Yes	523	95.6
	No	24	4.4
	Total	**547**	**100.0**
Blood test	Yes	476	87.0
	No	71	13.0
	Total	**547**	**100.0**
Nutritional supplement	Yes	103	18.8
	No	444	81.2
	Total	**547**	**100.0**
Ultrasound examination	Yes	319	58.3
	No	228	41.7
	Total	**547**	**100.0**
Gynaecological examination	Yes	27	4.9
	No	*520*	*95.1*
	Total	**547**	**100**
HIV/AIDS examination	Yes	213	38.9
	No	334	61.1
	Total	**547**	**100**

4.4.4.2 Number of antenatal care services visits

Of the 547 respondents who answered the question about how many ANC visits they had during their previous pregnancy, 34.9% (n = 191) went to the health facility twice, around 32.9% (n = 72) went three times, and 23.4% (n = 128) went four times.

Table 4.13: Number of ANC services visits (n = 547)

Number of ANC services visits	Frequency	Percent
One visit	48	8.8
Two visits	191	34.9
Three visits	180	32.9
Four visits	128	24.4
Total	**547**	**100.0**

4.4.4.3 Women's reasons for not attending antenatal care services

Among 68 respondents, who did not attend ANC services during their previous pregnancy, around 45.6% (n=31) were due to cruel health care providers, 44.1% (n = 30) respondents' facility is far, 39.7% (n = 27) were perceived as unnecessary, while 38.2% (n = 26) were due to lack of money.

Table 4.14: Women's reasons for not attending ANC services (n = 68)

Reasons for not attending ANC services	Frequency		Percent
Lack of money	Yes	26	38.2
	No	42	61.8
Facility is far	Yes	30	44.1
	No	38	55.9
Perceived as Unnecessary	Yes	27	39.7
	No	41	60.3
Health providers are cruel	Yes	31	45.6
	No	37	54.4
Lack of transportation	Yes	23	33.8
	No	45	66.2

4.4.4.4 Timing of the first antenatal care visit

While 15.7% (n = 86) and 15.6% (n = 85) of the women had their first ANC visit at 7-9 months and 0-3 months, respectively, the majority, or 68.7% (n = 376), had their first ANC visit around 4-6 months (13-24 weeks).

Table 4.15: Months at which women started ANC services (n = 547)

Months at which ANC started	Frequency	Percent
0-3 months (0-12 weeks)	85	15.6
4- 6months (13-24 weeks)	376	68.7
7-9 months (25-36 weeks)	86	15.7
Total	**547**	**100.0**

4.4.4.5 Preference of women for returning for ANC services

From 547 women who utilised ANC services, almost all, 94.74% (n = 518), preferred to come again for the next pregnancy for ANC services, while 5.26% (n = 29) preferred not to come again for the next ANC services.

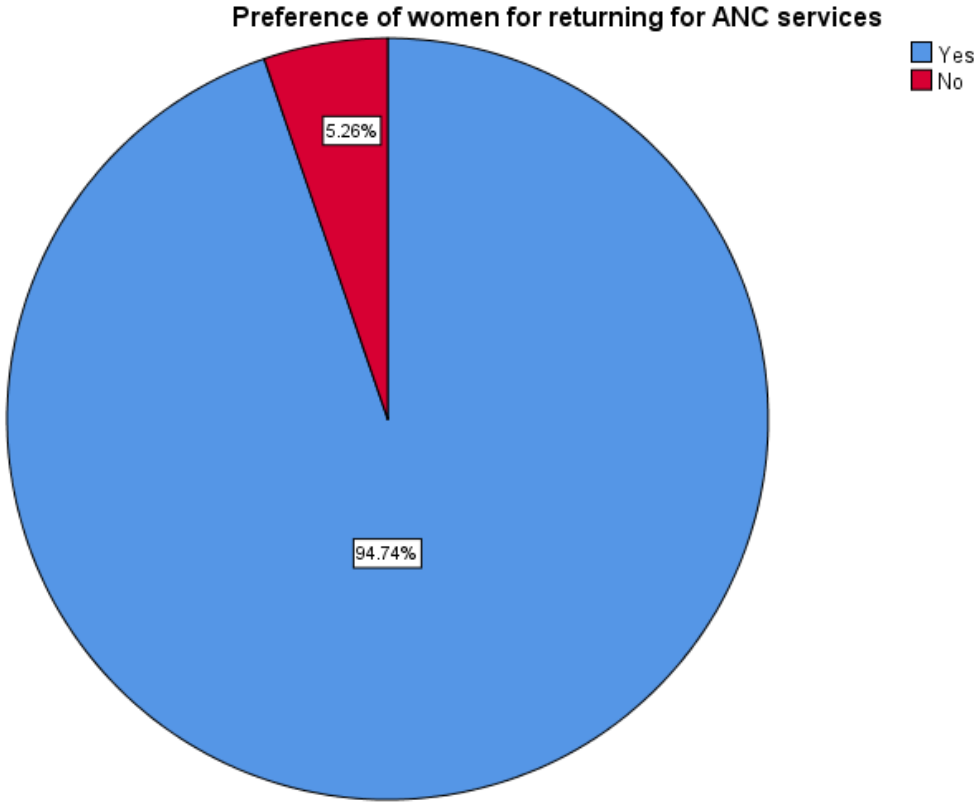


Figure 4.6: Preference of women to come again for ANC services for the next pregnancy (n = 547)

4.4.4.6 Recommendation of antenatal care services for their friends

From the respondents who used ANC services, 93.01% (n = 572) indicated that they will recommend their friends to utilise ANC services in the hospital or health centres.

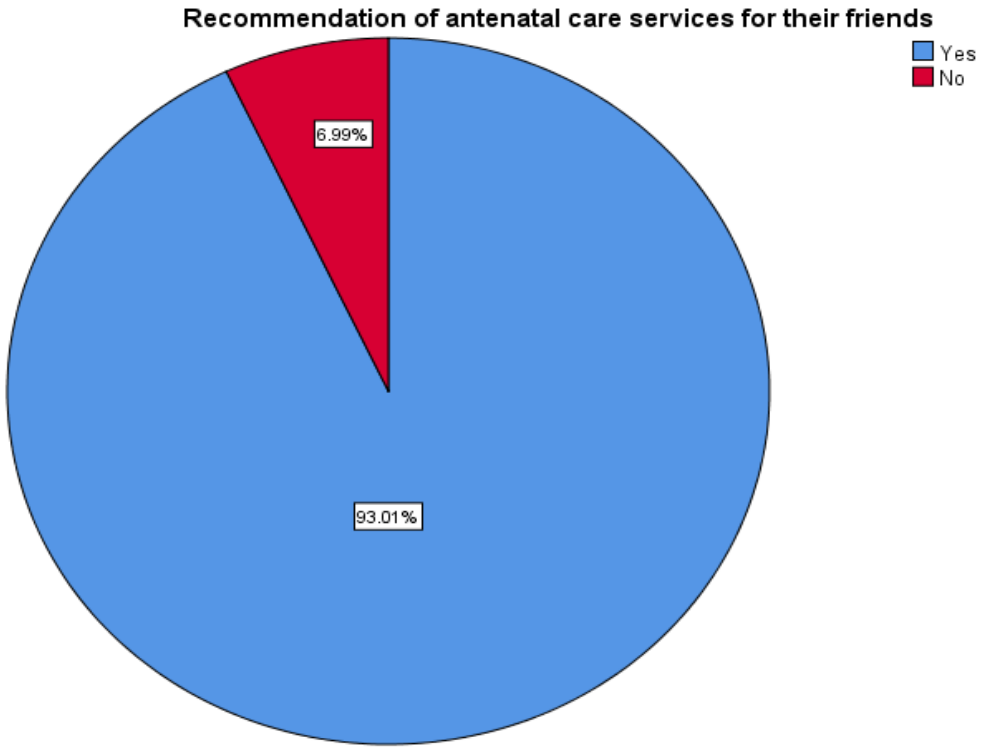


Figure 4. 7: Percentage distribution of ANC services referring for friends (n = 547)

4.4.4.7 Number of pregnancies

In this study, out of the 615 study participants, 29.1% (n = 179) reported that they had three parities, twenty-two percent (22.0%; n=135) had two parities, about 19.8% (n = 122) of participants had four parities, and 10.9% (n = 67) had five or more parities.

Table 4.16:Women current parity (N = 615)

Parity		Frequency	Percent
One		112	18.2
Two		135	22.0
Three		179	29.1
Four		122	19.8
Five and above		67	10.9
Total		**615**	**100.0**

4.4.5 Respondents' place of delivery

4.4.5.1 Women's place of delivery for the last pregnancy

Out of 615 survey participants, 87.80% (n = 540) gave birth at a medical facility, whereas 12.20% (n = 75) gave birth at home when asked where they had given birth in the past.

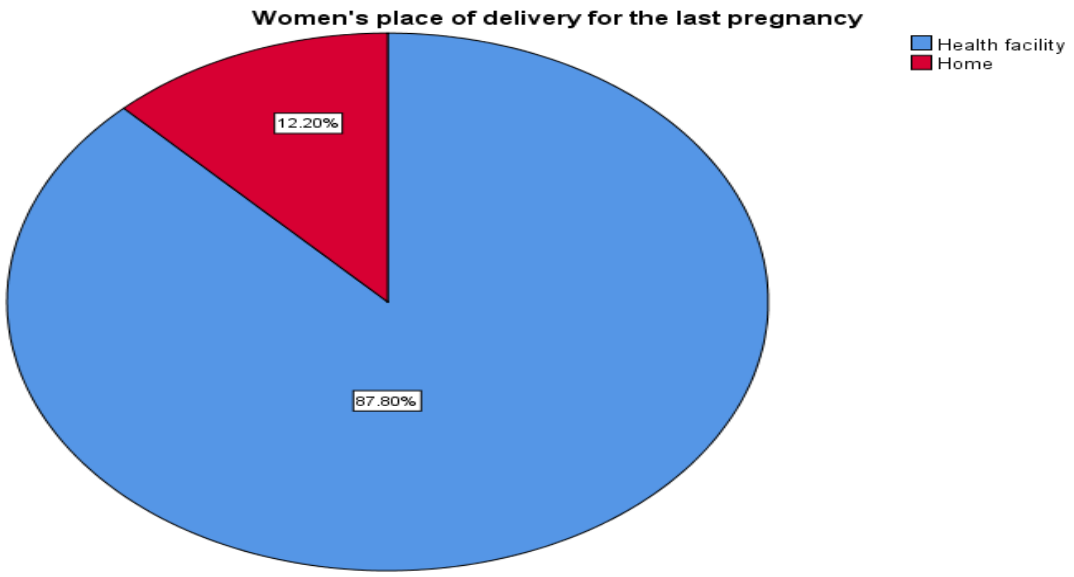


Figure 4.8: Percentage distribution of women places of delivery for the last pregnancy (N=615)

4.4.5.2 Women's health facilities for delivery

Out of 540 women who gave birth in a medical institution, 86.7% (n = 468) did so as planned, whereas 11.7% (n = 72) gave birth in a hospital or health centre after being referred.

Table 4.17: Women's health facilities for delivery (n = 540)

Women's health facilities for delivery	Frequency	Percent
Planned for delivery	468	86.7
Referral for delivery	72	11.7
Total	**540**	**87.8**

4.4.5.3 Reason for not delivering in the health facility

The women were questioned about why they chose not to give birth in a medical facility. Of the 75 respondents who gave birth to their previous child at home, 42.7% (n = 32) did so because the health facility was far away, and 28.0% (n = 21) did so because the hospital did not provide privacy during labour and delivery.

Table 4.18:Women's reason for not delivering in health facility (n = 75)

Reasons for not delivering in health facility	Frequency		Percent
No privacy during labour and delivery	Yes	21	28
	No	54	72
	Total	**75**	**100.0**
Health providers are cruel	Yes	20	26.7
	No	55	73.3

	Total	**75**	**100.0**
Facility is far	Yes	32	42.7
	No	43	57.3
	Total	**75**	**100.0**
Prefer home delivery	Yes	19	25.3
	No	56	74.7
	Total	**75**	**100.0**
Lack of money	Yes	12	16
	No	63	84
	Total	**75**	**100.0**
Lack of transportation	Yes	20	26.7
	No	55	73.3
	Total	**75**	**100.0**
Precipitating labour	Yes	2	2.7
	No	73	97.3
	Total	**75**	**100.0**
No medication	Yes	4	5.3
	No	71	94.7
	Total	**75**	**100.0**
Facility is not clean	Yes	5	6.7
	No	70	93.3
	Total	**75**	**100.0**
Precipitating labour	Yes	2	2.7
	No	73	97.3
	Total	**75**	**100.0**
Perceived unnecessary	Yes	1	1.3
	No	74	98.7
	Total	**75**	**100.0**

4.4.5.4 Difference in giving birth at home and in health facility

The study participants were questioned regarding the distinctions between giving birth in a medical setting and at home. According to the findings, 94.6% of the respondents (n = 582) thought there was a difference between the two settings, whilst 5.4% (n = 33) said there was none. Of those who said they would rather give birth in a medical facility, 88.8% (n = 546) said it was for the mother's safety, almost 82.6% (n = 508) said it was for the child's protection, and 56.7% (n = 349) said it was because the facility was clean.

Table 4.19: Difference in giving birth at home and in health facility (N = 615)

Difference in giving birth at home and in health facility	Frequency		Percent
Facility is Clean	Yes	349	56.7
	No	266	43.3
	Total	**615**	**100.0**
Safe mother	Yes	546	88.8
	No	69	11.2
	Total	**615**	**100.0**
Save the child	Yes	508	82.6
	No	107	17.4
	Total		**100.0**
Able to pay for services	Yes	10	1.6
	No	605	98.4
	Total	**615**	**100.0**
No difference	Yes	33	5.4
	No	582	94.6
	Total	**615**	**100.0**

4.4.5.5 Decision relating to place of delivery

In terms of where to give birth, 43.7% (n = 269) of them chose their husbands, 29.1% (n = 179) chose both, and 17.4% (n = 107) chose themselves. According to this conclusion, most women are unable to choose where to give birth, whilst only 17.4% of women are able to do it on their own.

Table 4.20: Who will make decision where women should give birth (N = 615)

Who make decision	Frequency	Percent
My self	107	17.4
My husband	269	43.7
Both of us	179	29.1
Community health worker	31	5.0
My relatives	3	.5
Others (Religion fathers and traditional birth attendants)	26	4.2
Total	**615**	**100.0**

4.4.5.6 Mode of delivery

From the women who had indicated their previous pregnancy mode of delivery, the majority, that is, 64.6% (n = 397), had a spontaneous vaginal delivery (SVD); 35.4% (n = 134) had an operative delivery, such as a *caesarean section*; 13.2% (n = 81) had an assisted delivery; and 0.5% (n = 3) had a destructive delivery.

Table 4.21: Mode of delivery for previous birth (N = 615)

Mode of delivery for previous birth	Frequency	Percent
Spontaneous vaginal Delivery (SVD)	397	64.6
Operative delivery*	218	35.4
Total	**615**	**100.0**

*Key note: * Operative delivery includes, caesarean section, vacuum and forceps delivery and Destructive delivery.*

4.4.5.7 Maternal and fetal conditions outcomes

The question concerning the consequences of maternal and foetal illnesses was answered by 615 respondents. A significant majority, or 93.8% (n = 577), reported having normal maternal and foetal health outcomes, whereas 6.2% (n = 38) reported having issues with both during a previous pregnancy.

Table 4.22: Maternal and fetal condition outcome (N = 615)

Maternal and fetal outcome	Frequency	Percent
Normal	577	93.8
With complication	38	6.2
Total	**615**	**100.0**

4.4.6 Health facilities visit within two days for postnatal care services

Of the 624 women surveyed, 615 said they would use PNC services within two days of giving birth. Within two days after giving birth, 79.0% (n = 486) of the 615 respondents did not attend a health facility for postnatal care services, whereas 21.0% (n = 129) did.

Table 4.23: Health facility visits within two days for postnatal care services (N = 615)

Postnatal care	Frequency	Percent
Yes	129	21.0
No	486	79.0
Total	**615**	**100.0**

4.4.6.1 Postnatal care services given for women

When the women were asked about the types of PNC services, they had during health facility visits within two days after delivery, 129 women responded. More than half of the women (58.9%; n = 76) indicated that they had utilised physical examination service, 76.7% (n = 99) utilised breastfeeding counselling service, 23.3% (n = 30) utilised child growth and weight monitoring service, 13.2% (n = 13) utilised nutritional supplementation service, 76.0% (n = 98) utilised postnatal family planning counselling service, and 33.3% (n = 43) utilised blood test for anaemia.

Table 4.24: Postnatal care services given for women within two days facility visit (n = 129)

Postnatal care service	Frequency		Percent
Physical examination	Yes	76	58.9
	No	53	41.1
	Total	**129**	**100.0**
Breast feeding counselling	Yes	99	76.7
	No	30	23.3
	Total	**129**	**100.0**
Child growth and weight	Yes	30	23.3
	No	99	76.7
	Total	**129**	**100.**
Nutritional supplements	Yes	17	13.2
	No	112	86.8
	Total	**129**	**100.0**
New parents counselling	**Yes**	6	4.7
	No	123	95.5
	Total	**129**	**100.0**
Family planning counselling	**Yes**	98	76.0
	No	31	24.0
	Total	**129**	**100.0**
Postpartum depression counselling	**Yes**	14	10.9
	No	125	89.1
	Total	**129**	**100.0**
Blood test for anaemia	**Yes**	43	33.3
	No	86	66.7
	Total	**129**	**100.0**

4.4.6.2 Maternal health care services recommendation for others

Of 615 respondents, 91.2% (n = 561) stated that they would recommend the institution where they received their maternity care to a friend or relative, whilst 8.8% (n = 54) said they would not recommend the hospital to a friend or relative.

Table 4.25: Maternal health care services recommendation for others (N = 615)

Would you encourage a friend to go to the facility			
		Frequency	**Percent**
Valid	Yes	561	91.2
	No	54	8.8
	Total	**615**	**100.0**

4.5 FACTORS AFFECTING MATERNAL HEALTH CARE SERVICES

This section discusses the factors that may affect maternal health care services. Participants were asked which factors they thought would influence women's utilisation of maternal health care services during pregnancy, labour, delivery, and the postnatal period, including. These included service waiting times, medical staff behaviour, privacy, and the availability of drugs and supplies in hospitals.

4.5.1 Waiting time

Out of 615 respondents, 75.8% (n = 466) agreed that waiting time is affecting utilisation of maternal health care services, while 21.1% (n = 130) did not agree, and 3.1% (n = 19) indicated that they did not know whether waiting time is affecting utilisation of maternal health care services. Among participants asked to rate waiting time to gate services in Maternal and Child Health (MCH) clinic, majority 75.4% (n = 464) responded it as enough

or convenient, while 15.1% (n = 93) responded as long and 9.4% (n = 58) responded it as too long time. Regarding the women's view on these waiting times, the majority, that is, 78.7% (n = 484), responded that it was adequate time to gate services, 10.4% (n = 64) responded that it was inadequate, and 10.7% (n = 67) of respondents said they were not sure.

Table 4.26: Waiting time to get maternal health care services (N = 615)

Do you think that waiting time to get maternal health care services influences utilisation of maternal health care services?	**Frequency**	**Percent**
Yes	466	75.8
No	130	21.1
I don't' know	19	3.1
Total	**615**	**100.0**
How can you rate waiting time in MCH clinic?		
Enough/Convenient	464	75.4
Long	93	15.1
Too long	58	9.4
Total	**615**	**100.0**
What are your views on these hours?		
They are adequate	484	78.7
They are inadequate	64	10.4
I am not sure	67	10.9
Total	**615**	**100.0**

4.5.2 Behaviour of health care provider

In this study, women were asked about the behaviour of health care providers during care provision. Of the 615 women, a majority, 62.10% (n = 382), reported that providers were friendly. Twenty-three percent (23.1%; n = 142) indicated they were partly friendly, while 6.7% (n = 41) reported that services were delayed without reason, 6.0% (n = 37) reported health care providers were arrogant, and 2.1% (n = 13) indicated they were insulted.

Table 4.27: Behaviours of health care services providers (N = 615)

Behaviours of health care services providers	Frequency	Percent
They were friendly	382	62.1
They were somehow/partly friendly	142	23.1
They were arrogant	37	6.0
I was insulted	13	2.1
The service was delayed for no reason	41	6.7
Total	**615**	**100.0**

4.5.3 Maintaining privacy of women during maternal health care services

Regarding privacy, women were questioned about whether they believed that the privacy of medical services affected the use of maternal health care services. 7.8% (n = 48) of the 615 respondents disagreed, while the majority, at 92.2% (n = 567), agreed. Twenty-five percent (n = 126) of respondents were dissatisfied with the steps implemented to ensure their privacy during care giving, whereas about 80 percent (79.5%; n = 489) were satisfied.

Table 4.28: Privacy during care provision (N = 615)

Do you think privacy of health services influences utilisation of maternal health care services?	Frequency	Percent
Yes	567	92.2
No	48	7.8
Total	**615**	**100.0**
Do you satisfy with the privacy of the services		
Yes	489	79.5
No	126	20.5
Total	**615**	**100.0**

4.5.4 Availability of drugs and supplies

From the women who were asked, drugs and supplies were ordered for them; 88.0% (n = 541) responded as ordered for them, and 12.0% (n = 74) indicated as not ordered for them. Most respondents, 71.2% (n = 438), were satisfied with the availability of drugs and supplies ordered for them, and 28.8% (n = 177) were unsatisfied.

Table 4.29: Availability of drugs and supplies (N = 615)

Were drugs and supplies ordered for you during follow up		
	Frequency	**Percent**
Yes	541	88.0
No	74	12.0
Total	**615**	**100.0**
Satisfaction with the availability of drugs and supplies		
Very satisfied	47	7.6
Satisfied	391	63.6
Neutral	98	15.9
Dissatisfied	60	9.8
Very dissatisfied	19	3.1
Total	**615**	**100.0**

4.6 FACTORS ASSOCIATED WITH MATERNAL HEALTH CARE SERVICES

This section describes the factors that were associated with the utilisation of maternal health care services. Both binary and multivariable logistic regression were used in this study to assess the factors influencing the usage of maternal health care services. Factors with $p < 0.2$ at 95% CI in bivariate logistic regression were moved to multivariate logistic regression to account for confounding. Lastly, the cut-off values for the significance of the association between the independent and dependent variables were set at an AOR with 95% CI and a p-value of less than 0.05 in the multiple logistic regression analysis.

4.6.1 Socio-demographic factors associated with utilisation of maternal health care services

Sociodemographic characteristics related to mothers' use of prenatal, labour and delivery, and postnatal care services were covered under this section.

4.6.1.1 Socio-demographic factors associated with utilisation of antenatal care services

The use of antenatal care services was found to be related to the mothers' age, religion, educational attainment, payment status for services, occupation, residence, and proximity to medical facilities, according to the bivariate analysis.

Mothers aged 20–24, 25–29, and 30-34 years had two times the likelihood of using antenatal care services compared to women under 20 years of age (COR = 2.283, 95% CI: 0.903-5.773; COR = 2.056, 95% CI: 1.901-4.692 and COR = 2.022, 95% CI: 0.751-5.445). However, compared to mothers under 20 years of age, mothers over 35 years were less likely to utilise prenatal care services (COR = 0.262, 95% CI: 0.095-0.723).

The study also demonstrated a relationship between women' use of prenatal care services and their religion. Compared to mothers who practiced Islam, Christian mothers were three times more likely to use prenatal care services (COR = 3.261, 95% CI: 1.709-6.223).

Compared to mothers with only primary education, those with an educational status above secondary level were approximately five times more likely to use antenatal care services (COR = 5.873, 95% CI: 1.399-24.660). The use of prenatal care was likewise linked to the spouses' educational attainment. Prenatal care services were three times more likely to be used by mothers whose husbands had completed secondary school (Grades 9–12) or above than by mothers whose husbands had no formal education (COR = 3.296, 95% CI: 1.489-7.295).

Current study found that mothers with occupational status other than housewife like governmental employee, merchant and students were four times likely to utilise antenatal care services (COR = 4.345, 95% CI: 1.948-9.691). Additional mothers who have an average monthly income greater than 500 ETB are six times more likely to utilise antenatal care services compared to mothers who have less than or equal to 500 ETB in average monthly income (COR = 6.327, 95% CI: 2.265–17.670). Similarly, this study found a correlation between mothers' payment status and their use of prenatal care services. Compared to mothers who paid for antenatal care services, those who received free services had twice the likelihood of using them (COR = 2.827, 95% CI: 1.273-6.279).

In the study, the use of prenatal care was also substantially correlated with residence and proximity to medical services. Compared to rural mothers and those who lived more than 15 kilometres from health facilities, urban mothers and those who lived less than 5 kilometres from them were more likely to use antenatal care services (COR = 0.365, 95% CI: 0.365-0.219) and (COR = 0.299, 95% CI: 0.164-0.546), respectively.

Table 4.30: Socio-demographic factors that associated with utilisation of antenatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

Variable	Utilisation of antenatal care services			
	Yes n (%)	No n (%)	COR (95%CI)	p-value
Age of mothers				
≤20 years	45(83.33)	9(16.67)	1.00	
20-24 years	137(91.95)	12(8.05)	2.283 (0 .903-5.773) *	0.081
25-29 years	257 (91.13)	25(8.87)	2.056 (0.901-4.692) *	0.087
30-34 years	91(91.00)	9(9.00)	2.022(0.751-5.445) *	0.164
≥35 years	17(56.67)	13(43.33)	0.262 (0.095-0.723) *	0.010
Marital status of mothers				
Married	533 (89.58)	62(10.42)	1.00	
Other marital status**	14 (70.00)	6(30.00)	0.271(0.101-0.732) *	0.010
Religion of mothers				
Muslim	322 (85.19)	56 (14.81)	1.00	
Christian	225(94.94)	12(5.06)	3.261(1.709-6.223) *	0.001
Educational status of mothers				
Primary education (1-8)	379 (90.02)	42(9.98)	1.00	
Secondary and above educational program	106 (98.15)	2(1.85)	5.873(1.399-24.660) *	0.016
Husbands' educational status				
No education	46(82.14)	10(17.86)	1.00	
Primary (1-8)	122(78.71)	33(21.29)	0.804 (0.367-1.761)	0.585
Secondary (9-12) and above	379(93.81)	25(6.19)	3.296 (1.489-7.295) *	0.003
Occupation of mothers				
Housewife	365 (85.68)	61(14.32)	1.00	

Others (Government employee, merchant and students)	182 (96.30)	7(3.70)	4.345(1.948-9.691) *	0.001
Women's monthly income *in Ethiopian Birr*				
≤500	392(85.96)	64(14.04)	1.00	
>500	155(97.48)	4(2.52)	6.327 (2.265-17.670) *	0.001
Payment status				
Paid	28(75.68)	9(24.32)	1.00	
Free	519 (89.79)	59 (10.21)	2.827(1.273-6.279) *	0.011
Residence of mothers				
Urban	381(92.48)	31(7.52)	1.00	
Rural	166 (81.77)	37(18.23)	0.365 (0.365-0. 219) *	0.001
Health facility distance				
<5km	256(93.09)	19(6.91)	1.00	
5-15km	158 (90.80)	16(9.20)	0.733(.366-1.467)	
Over 15 km	133(80.12)	33(19.88)	0.299(0.164-0.546) *	0.001

Keynote: * P-value less than 0.2

** Others marital status (single, widowed and divorced)

*** Others ethnicity (Tigre, Gurage, Walaita and Sidama

4.6.1.2 Socio-demographic factors associated with utilisation of labour and delivery services

Age, marital status, religion, educational attainment, husbands' educational attainment, occupation, residential status, and distance from medical facilities were all found to be related to mothers' use of labour and delivery services in the bivariate analysis. Compared to women under 20, moms between the ages of 20 and 34 were more likely to use labour and delivery services (COR = 13.250, 95% CI: 1.511-116.190). Furthermore, compared to moms who practiced Islam, Christian mothers were roughly twice as likely to use labour and delivery services (COR = 2.346, 95% CI: 1.330-4.136).

Additionally, a higher level of education among mothers was linked to a higher use of labour and delivery services. Compared to mothers with only a primary education, those with a secondary education or above were twice as likely to use these services (COR = 2.580, 95% CI: 0.900-7.392). Mothers whose husbands had completed elementary or secondary school or higher were also more likely to use labour and delivery services than mothers whose husbands had no formal education (COR = 1.898, 95% CI: 0.968-3.724 and COR = 8.506, 95% CI: 4.245-17.045, respectively).

Furthermore, mothers in urban regions were more likely than those in rural areas to use these services (COR = 0.258, 95% CI: 0.157-0.426). Additionally, mothers who lived more than 15 kilometres from medical facilities were less likely than those who lived fewer than 5 kilometres away to use labour and delivery services (COR = 0.299, 95% CI: 0.167-0.532).

Table 4.31: Socio-demographic factors associated with utilisation of labour and delivery services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

Variable	Labor and delivery services			
	Yes n (%)	No n (%)	COR (95%CI)	p-value
Age of mothers				
≤20 years	53(98.15)	1(1.85)	1.00	
20-24 years	132(88.59)	17(11.41)	13.250 (1.511-116.190) *	0.020
25-29 years	242(85.82)	40(14.18)	2.023 (0.679-6.029)	0.206
30-34 years	89(89.00)	11(11.00)	1.513 (0.582-3.931)	0.396
≥35 years	24(80.00)	6(20.00)	1.941 (0.695-5.423)	0.206
Marital status of mothers				
Married	523 (87.90)	72 (12.10)	1.00	
Other marital status**	17 (85.00)	3 (15.00)	0.780 (0.223-2.728)	0.697
Religion of mothers				
Muslim	320 (84.66)	58 (15.34)	1.00	
Christian	220 (92.83)	17(7.17)	2.346 (1.330-4.136) *	0.001
Educational status of mothers				
Primary education (1-8)	383(90.97)	38(9.03)	1.00	
Secondary and above educational program	104 (96.30)	4 (3.70)	2.580(0.900-7.392) *	0.078
Husbands' educational status				
No education	37(66.07)	19 (33.93)	1.00	
Primary (1-8)	122(78.71)	33(21.29)	1.898(0.968-3.724)	0.062
Secondary (9-12) and above	381(94.31)	23 (5.69)	8.506(4.245-17.045) *	0.001

Occupation of mothers				
Housewife	370 (86.85)	56 (13.15)	1.00	
Others (Government employee, merchant and student)	170(89.95)	19(10.05)	0.738 (0.426-1.2816)	0.281
Women's monthly income *in Ethiopian Birr*				
≤500	399 (87.50)	57(12.50)	1.000	
>500	141(88.68)	18(11.32)	0.894 (0.509-1.570)	0.696
Payment status of mothers				
Paid	33 (89.19)	4 (10.81)	1.00	
Free	507 (87.72)	71 (12.28)	0.866(0.298-2.516)	0.791
Residence of mothers				
Urban	383 (92.96)	29 (7.04)	1.00	
Rural	157 (77.34)	46 (22.66)	0.258(.157-.426) *	0.001
Health facility distance				
<5km	254 (92.36)	21(7.64)	1.00	
5-15km	156 (89.66)	18(10.34)	0.717(.370-1.387)	
Over 15 km	130 (78.31)	36 (21.69)	0.299(0.167-.532) *	0.001

Keynote: * P-value less than 0.2

** Other marital status (single, widowed and divorced)

*** Other ethnicities (Tigre, Gurage, Walaita and Sidama)

4.6.1.3 Socio-demographic factors associated with utilisation of postnatal care services

The use of postnatal care services was found to be correlated with younger maternal age, ethnicity, religion, husbands' educational attainment, mothers' occupational status, residential status, and distance from medical facilities, according to bivariate logistic regression analysis.

Compared to mothers under the age of 20, mothers over the age of 20 were less likely to use postnatal care services (COR = 0.041, 95% CI: 0.020-0.083). Comparing mothers from the Amhara and Oromo ethnic groups, the former were less likely to use postnatal care services (COR = 0.647, 95% CI: 0.343-1.220).

Additionally, mothers who had husbands with elementary, secondary, or higher education were roughly twice as likely to use postnatal care services as mothers whose husbands had no education (COR = 1.949, 95% CI: 0.853-4.455 and COR = 1.967, 95% CI: 0.817-4.735), according to the study.

Postnatal care services were also less likely to be used by housewife compared to others occupational status of mothers like government employee, merchants, and students (COR = 0.690, 95% CI: 0.459-1.036). Compared to mothers in rural regions, mothers in urban areas were more likely to use postnatal care services (COR = 0.608, 95% CI: 0.391-0.944). Additionally, mothers who lived five to fifteen kilometres or more from health facilities were less likely to use postnatal care services than moms who lived fewer than five kilometres away (COR = 0.401, 95% CI: 0.449-1.132) respectively).

Table 4.32: Socio-demographic factors that associated with utilisation of postnatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

Variable	Utilisation of postnatal care services			
	Yes n (%)	No n (%)	COR (95%CI)	p-value
Age of mothers				
≤20 years	43(79.63)	11(20.37)	1.00	
20-24 years	26(17.45)	123(82.55)	0.054 (0.025-0.119) *	0.001
25-29 years	42(51.22)	40(48.78)	0.045 (0.021-.094) *	0.001
30-34 years	5(5.00)	95(95.00)	0.013 (0.004-0.041) *	0.001
≥35 years	13(43.33)	17(56.67)	0.196 (0.073-.521) *	0.001
Marital status of mothers				
Married	127(21.34)	468 (78.66)	1.00	
Other marital status**	2 (10.00)	18 (90.00)	0.409(.094-1.788)	0.235
Religion of mothers				
Muslim	94 (24.87)	284(75.13)	1.00	
Christian	35 (14.77)	202 (85.23)	0.523(0.341-0.803) *	0.003
Educational status of mothers				
Primary education (1-8)	87(20.67)	334 (79.33)	1.00	
Secondary and above educational program	21 (19.44)	87 (80.56)	0.927(0.545-1.577)	0.779
Husbands' educational status				
No education	34 (21.94)	121 (78.06)	1.00	
Primary (1-8)	88 (21.78)	316 (78.22)	1.949(.853-4.455) *	0.131
Secondary (9-12) and above	34 (21.94)	121 (78.06)	1.967(0.817-4.735) *	0.113
Occupation of mothers				
Housewife	81 (19.01)	345 (80.99)	1.00	

Others occupational status (Governmental employee, merchant, and student)	48 (25.40)	141(74.60)	0.690 (0.459-1.036) *	0.074
Payment status				
Paid	19 (51.35)	18 (48.65)	0.223(0.113-0.438) *	0.011
Free	110 (19.03)	468 (80.97)	1.00	
Residence of mothers				
Urban	97 (23.54)	315 (76.46)	1.00	
Rural	32 (15.76)	171 (84.24)	0.608(0.391-0.944) *	0.027
Health facility distance				
<5km	34 (14.41)	202(85.59)	1.00	
5-15km	22 (12.64)	152 (87.36)	0.401 (0.238-0.674) *	0.001
Over 15 km	73 (35.61)	132 (64.39)	0.713(.449-1.132) *	0.151

Keynote: * P-value less than 0.2

** Other marital status (single, widowed and divorced)

*** Others ethnicity (Tigre, Gurage, Walaita and Sidama)

4.6.2 Past obstetric history of mothers associated with utilisation of maternal health care services

Mothers' prior obstetrical histories related to the use of prenatal care, labour and delivery, and postnatal care services were covered under this topic.

4.6.2.1 Past obstetric history of mothers associated with utilisation of antenatal care services

In By using binary logistic regression, it was discovered that the use of antenatal care services was significantly correlated with the mothers', past obstetric history, including health education regarding maternal health care services, pregnancy and parity status, decision-making regarding the use of maternal health care services, maternal and foetal outcomes, and privacy during the provision of maternal health care. The likelihood of using antenatal care services was about 99% lower for mothers who did not receive health education on maternal health care services than for those who did (COR = 0.018, 95% CI: 0.007-0.046).

The study also found a correlation between the use of prenatal care and the mothers' parity and pregnancy status. Compared to mothers with planned pregnancies, women with unwanted pregnancies were less likely to utilise prenatal care (COR = 0.116, 95% CI: 0.061-0.221). Furthermore, antenatal care utilisation was twice as common among moms with two or three children as it was among mothers with only one child (COR = 2.342, 95% CI: 0.837-6.547 and COR = 2.328, 95% CI: 0.906-5.980, respectively).

Compared to mothers whose privacy was not guaranteed during their most recent visit, mothers who had their privacy protected during their most recent maternal health care service usage were roughly seven times more likely to receive antenatal care services (COR = 7.598, 95% CI: 3.406-16.950). Similarly, antenatal care services were less

frequently used by mothers who had problems during maternal and foetal care than by those who did not (COR = 0.313, 95% CI: 0.145-0.677).

Mothers whose privacy was ensured during their last maternal health care service utilisation were approximately seven times more likely to use antenatal care services compared to those whose privacy was not assured during their last visit (COR = 7.598, 95% CI: 3.406-16.950). Similarly, mothers who experienced complications during maternal and fetal care were less likely to utilise antenatal care services compared to those who did not experience complications (COR = 0.313, 95% CI: 0.145-0.677).

Table 4.33: Past obstetric history of mothers associated with utilisation of antenatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

Variable	Utilisation of antenatal care services			
	Yes n (%)	No n (%)	COR (95%CI)	p-value
Health education on maternal health care services				
Yes	446 (98.89)	5 (1.11)	1.00	
No	101 (61.59)	63 (38.41)	0.018(0.007-0.046) *	0.001
Status of pregnancy				
Wanted	520 (95.06)	27 (4.94)	1.00	
Unwanted	47 (69.12)	21 (30.88)	0.116 (0.061-0.221) *	0.001
Parity status				
One	101 (90.18)	11 (9.82)	1.00	
Two	129 (95.56)	6 (4.44)	2.342(0.837-6.547) *	0.105
Three	171 (95.53)	8 (4.47)	2.328(0.906-5.980) *	0.079
Four	109 (89.34)	13 (1066)	0.913(0.391-2.131)	0.834
Five and above	37 (55.22)	30 (44.78)	0.134 (0.061-0.295) *	0.001
Decision on the maternal health care services utilisation				

My self	91 (85.05)	16 (14.95)	1.00	
Husband	243 (90.33)	26 (9.67)	1.643 (0.843-3.204	0.145
Both	165 (92.18)	14 (7.82)	2.813 (0.968-4.438) *	0.061
Others**	5 (33.33)	10 (66.67)	2.813(.613-12.916) *	0.183
Previous birth mode of delivery				
Spontaneous vaginal delivery (SVD)	350(88.16)	47(11.84)	1.00	
Operative delivery***	197 (90.37)	21 (9.63)	1.260(0.732-2.169)	0.405
Maternal and Fetal outcome				
Normal	519 (89.95)	58 (10.05)	1.00	
With complication	28 (73.68)	10 (26.32)	0.313(0.145-0.677) *	0.003
Privacy of maternal health care services				
Yes	511 (90.12)	56 (90.88)	7.598(3.406-16.950) *	0.001
No	36 (75.00)	12 (25.00)	1.00	

**Keynote: *** P-value less than 0.2

** Others (Community health workers, relatives, and traditional birth attendants

*** Operative delivery (Caesarean section, Vacuum or forceps delivery and destructive delivery)

4.6.2.2 Past obstetric history of mothers associated with utilisation of labour and delivery care services

The researcher applied binary logistic regression and, discovered that the use of labour and delivery care services was significantly correlated with the mothers' past obstetrics history, including receiving health education on maternal health care services, pregnancy status, parity, decision-makers for maternal health care utilisation, previous mode of delivery, and maintaining privacy during maternal health care provision.

The likelihood of using labour and delivery care services was higher among mothers who received health education on maternal health care services than among those who did not (COR = 0.107, 95% CI: 0.063-0.184). Similarly, compared to moms with unexpected pregnancies, those with planned pregnancies were more likely to use labour and delivery care services (COR = 0.072, 95% CI: 0.038-0.137).

Compared to mothers with two, three, four, or five children, mothers with one child were more likely to use labour and delivery care services (COR = 0.078, 95% CI: 0.010-0.602), (COR = 0.098, 95% CI: 0.013-0.756), (COR = 0.046, 95% CI: 0.006-0.349), and (COR = 0.015, 95% CI: 0.002-0.115), respectively. Mothers who had their husbands, partners, or other people make decisions about their use of maternal health care were twice as likely to use labour and delivery care services as mothers who make their own decisions (COR = 2.142, 95% CI: 1.193-3.845), (COR = 4.887, 95% CI: 2.233-10.693), and (COR = 4.627, 95% CI: 1.033-20.715), respectively.

In addition, mothers with prior operative delivery or aided deliveries were more likely to use labour and delivery care services than mothers with prior vaginal deliveries (COR = 7.433, 95% CI: 3.171-17.424). Finally, compared to women without challenges, those who had problems during their prior delivery were less likely to use labour and delivery care services (COR = 0.724, 95% CI: 0.292-1.795). Furthermore, compared to women whose privacy was guaranteed in prior maternal health care services, mothers whose privacy

was not guaranteed were less likely to use labour and delivery care services (COR = 0.571, 95% CI: 0.265-1.232).

Table 4.34: Past obstetric history of mothers associated with utilisation of labour and delivery care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

Variable	Utilisation of labour and delivery care services			
	Yes n (%)	No n (%)	COR (95%CI)	p-value
Health education on maternal health care services				
Yes	429 (79.44)	111 (20.56)	1.00	
No	22 (29.33)	53 (70.67)	0.107 (0.063-0.184) *	0.001
Status of pregnancy				
Wanted	519 (91.53)	48 (8.47)	1.00	
Unwanted	21 (50.00)	21 (50.00)	0.072 (0.038-0.137) *	0.001
Parity status				
One	111 (99.11)	1 (0.89)	1.00	
Two	121(89.63)	14 (10.37)	.078 (.010-.602) *	0.014
Three	164 (91.62)	15 (8.38)	0.098 (0.013-0.756) *	0.026
Four	102 (83.61)	20 (16.39)	0.046 (0.006-0.349) *	.003
Five and above	42 (62.69)	25 (37.31)	0.015 (0.002-0.115) *	0.001
Decision on the maternal health care services utilisation				
My self	83 (77.57)	24 (22.43)	1.00	
Husband	263 (89.15)	32 (10.85)	2.142(1.193-3.845) *	0.011
Both	169 (94.41)	10 (5.59)	4.887(2.233-10.693) *	0.001
Others**	32 (94.12)	2 (5.88)	4.627(1.033-20.715) *	0.045
Previous birth mode of delivery				

Spontaneous vaginal delivery (SVD)	328 (82.62)	69(17.38)	1.00	
Operative delivery***	212 (97.25)	6 (2.75)	7.433(3.171-17.424) *	0.001
Maternal and Fetal outcome				
Normal	508 (88.04)	69 (11.96)	1.00	
With complication	32 (84.21)	6 (15.79)	0.724(0.292-1.795)	0.486
Privacy of maternal health care services assured				
Yes	501(88.36)	66 (11.64)	1.00	
No	39 (81.25)	9 (18.75)	0.571(.265-1.232) *	0.153

**Keynote: *** P-value less than 0.2

** Others (Community health workers, relatives, and traditional birth attendants)

*** Operative delivery (Caesarean section, Vacuum or forceps delivery and destructive delivery)

4.6.2.3 Past obstetric history of mothers associated with utilisation of postnatal care services

In this study, the use of postnatal care services was linked to the mothers' past obstetrics characteristics, including health education on maternal health care services, pregnancy status, parity, decision-makers for using maternal health care services, previous mode of delivery, and maternal and foetal outcomes.

Compared to mothers with planned births, moms with unexpected pregnancies were less likely to use postnatal care services (COR = 0.072, 95% CI: 0.038-0.137). Comparing mothers with one parity to those with two, three, four, or five, the former were less likely to use postnatal care services (COR = 0.360, 95% CI: 0.201-0.646), (COR = 0.296, 95% CI: 0.169-0.518), (COR = 0.347, 95% CI: 0.189-0.635), and (COR = 0.481, 95% CI: 0.241-0.959). Compared to mothers who made their own decisions, mothers whose decisions about the use of maternal health care services were made by others were twice as likely to use postnatal care services (COR = 2.705, 95% CI: 1.181-6.193).

In the meantime, mothers who chose to use maternal health care services on their own were more likely to use postnatal care services than mothers whose husbands chose them (COR = 0.655, 95% CI: 0.367-1.169).

Additionally, mothers who had a previous delivery via operative delivery were two times more likely to use postnatal care services than mothers who had a previous vaginal delivery (COR = 2.823, 95% CI: 1.898-4.200). Furthermore, compared to mothers with normal birth outcomes, mothers who had problems during their prior delivery were three times more likely to use postnatal care services (COR = 3.361, 95% CI: 1.717-6.581).

Table 4.35: Past obstetric history of mothers associated with utilisation of postnatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

Variable	Utilisation of postnatal care services			
	Yes n (%)	No n (%)	COR (95%CI)	p-value
Health education on maternal health care services				
Yes	88 (19.51)	363 (80.49)	1.00	
No	41 (25.00)	123 (75.00)	1.375(0.900-2.100) *	0.140
Status of pregnancy				
Wanted	108 (19.05)	459 (80.95)	**1.00**	
Unwanted	21 (43.75)	27 (56.25)	0.072(0.038-0.137) *	0.001
Parity status				
One	42 (37.50)	70 (62.50)	**1.00**	
Two	24 (17.78)	111 (82.22)	0.360(0.201-.646) *	0.001
Three	27 (15.08)	152 (84.92)	0.296(0.169-0.518*	0.001
Four	21 (17.21)	101 (82.79)	0.347(0.189-0.635) *	0.001
Five and above	15 (22.39)	52 (77.61)	0.481 (0.241-0.959) *	0.038
Decision on the maternal health care services utilisation				
My self	22 (20.56)	85 (79.44)	1.00	
Husband	43 (15.25)	239 (84.75)	0.655(0.367-1.169) *	0.152
Both	50 (26.04)	142 (73.96)	1.336(0.751-2.378)	0.324
Others**	14 (41.18)	20 (58.82)	2.705(1.181-6.193) *	0.019
Previous birth mode of delivery				
Spontaneous vaginal delivery (SVD)	58(14.61)	339(85.39)	**1.00**	
Operative delivery***	71(32.57)	147(67.43)	2.823 (1.898-4.200) *	0.001

Maternal and Foetal outcome				
Normal	112 (19.41)	465 (80.59)	**1.00**	
With complication	17 (44.74)	21 (55.26)	3.361(1.717-6.581) *	0.001
Privacy of maternal health care services assured				
Yes	118 (20.81)	449 (79.19)	1.00	
No	11 (22.92)	37 (77.08)	1.131(0.560-2.285)	0.731

Keynote: * P-value less than 0.2

** Others (Community health workers, relatives and traditional birth attendants)

*** Operative delivery (Caesarean section, Vacuum or forceps delivery and destructive delivery)

4.6.3 Multivariate analysis of socio-demographic factors associated with utilisation of maternal health care services

The findings of the multivariate analysis of the variables linked to the use of maternal health care services are shown in this section.

4.6.3.1 Socio-demographic factors associated with utilisation of antenatal care services

When sociodemographic factors such mothers' age, marital status, religion, and educational background were subjected to multiple logistic regression, substantial correlations with the use of prenatal care services were found.

According to the study's findings, mothers greater than 20 years of age had a threefold higher likelihood of using antenatal care services than mothers under the age of 20 (AOR = 11.000, 95% CI: 3.397-35.622; AOR = 18.442, 95% CI: 6.311-53.889, AOR = 16.558, 95% CI: 6.234-43.981 and AOR = 16.043, 95% CI: 5.209-49.415) respectively. In the same way, mothers who were not married had a lower likelihood of using prenatal care services than mothers who were married (AOR = 3.235, 95% CI: 1.13-8.201). Additionally, the study found that mothers who practiced Christianity had a considerably higher likelihood of utilising prenatal care services than mothers who practiced Islam (AOR = 14.399, 95% CI: 2.494-83.143). Furthermore, antenatal care services were around eight times more likely to be accessed by mothers with a secondary education or higher than by those with only a primary education (AOR = 8.159, 95% CI: 2.696-24.695).

Table 4.36: Socio-demographic factors associated with utilisation of antenatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

Variable	Utilisation of antenatal care services			
	Yes n (%)	No n (%)	AOR (95%CI)	p-value
Age of mothers				
≤20 years	45(83.33)	9(16.67)	1.00	
20-24 years	137(91.95)	12(8.05)	11.000 (3.397-35.622)	0.001
25-29 years	257 (91.13)	25 (8.87)	18.442 (6.311-53.889)	0.001
30-34 years	91 (91.00)	9 (9.00)	16.558 (6.234-43.981)	0.001
≥35 years	17 (56.67)	13(43.33)	16.043 (5.209-49.415)	0.001
Marital status of mothers				
Married	533 (89.58)	62(10.42)	1.00	
Other marital status**	14 (70.00)	6(30.00)	0.180(0.029-1.124) *	0.032
Religion of mothers				
Muslim	322 (85.19)	56 (14.81)	1.00	
Christian	225(94.94)	12(5.06)	14.399(2.494-83.143) *	0.003
Educational status of mothers				
Primary education (1-8)	379 (90.02)	42 (9.98)	1.00	
Secondary and above educational program	106 (98.15)	2 (1.85)	8.159(2.696-24.695) *	0.001
Husbands' educational status				
No education	46(82.14)	10(17.86)	1.00	
Primary (1-8)	122(78.71)	33(21.29)	0.769(0.160-3.695)	0.743
Secondary (9-12) and above	379(93.81)	25(6.19)	0.887 (0.289-2.726)	0.835
Payment status				
Paid	28(75.68)	9(24.32)	1.00	

Free	519 (89.79)	59 (10.21)	3.729(0.883-15.744)	0.073
Residence of mothers				
Urban	381(92.48)	31(7.52)	1.00	
Rural	166 (81.77)	37(18.23)	1.234(.229-6.654)	0.807
Health facility distance				
<5km	256(93.09)	19(6.91)	1.00	
5-15km	158 (90.80)	16(9.20)	1.766(0.643-4.849)	0.270
Over 15 km	133(80.12)	33(19.88)	1.034(0.309-3.458)	0.957

Keynote: * P-value less than 0.05

** Other marital status (single, widowed and divorced)

4.6.3.2 Socio-demographic factors associated with utilisation of labour and delivery care services

Sociodemographic characteristics, such as age, educational attainment, spouses' educational background, place of living, and proximity to medical facilities, were revealed to be substantially connected with the use of labour and delivery care services through the use of multi-logistic regression.

Compared to mothers under 20, women between the ages of 20 and 24 had more likelihood of using labour and delivery care services (AOR = 13.234, 95% CI: 1.508-116.138). Likewise, women who had completed secondary school or above were twice as likely to use these services as moms who had only completed primary school (AOR = 2.791, 95% CI: 0.251-16.230). AOR = 7.723, 95% CI: 2.244-26.575 and AOR = 9.429, 95% CI: 2.827-31.456, respectively, also showed that mothers whose husbands had completed primary, secondary, or higher education were seven to nine times more likely to use labour and delivery care services than mothers whose husbands had no formal education.

In addition, mothers in rural regions were less likely than those in urban areas to use labour and delivery care services (AOR = 0.692, 95% CI: 0.692-1.198) mothers who lived more than 15 kilometres from a healthcare facility were also less likely to use these services than mothers who lived within 5 kilometres (AOR = 0.658, 95% CI: 0.332-5.725).

Table 4.37: Socio-demographic factors associated with utilisation of labour and delivery care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

Variable	Labor and delivery services			
	Yes n (%)	No n (%)	AOR (95%CI)	p-value
Age of mothers				
≤20 years	53(98.15)	1(1.85)	1.00	
20-24 years	132(88.59)	17(11.41)	13.234 (1.508-116.138) *	0.020
25-29 years	242(85.82)	40(14.18)	1.939 (0.693-5.424)	0.207

30-34 years	89(89.00)	11(11.00)	1.524 (0.585-3.965)	0.388
≥35 years	24(80.00)	6(20.00)	1.976 (0.662-5.902)	0.222
Marital status of mothers				
Married	523 (87.90)	72 (12.10)	1.00	
Other marital status**	17 (85.00)	3 (15.00)	1.520(0.264-8.746)	0.639
Religion of mothers				
Muslim	320 (84.66)	58 (15.34)	1.00	
Christian	220 (92.83)	17(7.17)	1.804(0.678-4.801)	0.237
Educational status of mothers				
Primary education (1-8)	383(90.97)	38(9.03)	1.00	
Secondary and above educational program	104 (96.30)	4 (3.70)	2.791(1.251-16.230) *	0.035
Husbands' educational status				
No education	37(66.07)	19 (33.93)	1.00	
Primary (1-8)	122(78.71)	33(21.29)	7.723(2.244-26.575) *	0.001
Secondary (9-12) and above	381(94.31)	23 (5.69)	9.429(2.827-31.456)	0.001
Residence of mothers				
Urban	383 (92.96)	29 (7.04)	1.00	
Rural	157 (77.34)	46 (22.66)	0.692(0.692-.198) *	0.003
Health facility distance				
<5km	254 (92.36)	21(7.64)	1.00	
5-15km	156 (89.66)	18(10.34)	1.134(0.442-2.909)	0.793
Over 15 km	130 (78.31)	36 (21.69)	0.658 (0.332 -5.725) *	0.040

Keynote: * P-value less than 0.05, ** Other marital status (single, widowed and divorced), *** Other ethnicities (Tigre, Gurage, Walaita and Sidama)

4.6.3.3 Socio-demographic factors associated with utilisation of postnatal care services

The researcher applied multi-logistic regression, it was discovered that mothers' use of postnatal care services was substantially correlated with their age, occupation, payment status, place of residence, and distance from medical facilities. In particular, mothers between the ages of 20 and 34 and 35 and 49 were less likely than mothers under the age of 20 to use postnatal care services (AOR = 0.041, 95%CI: 0.018-0.094 and AOR = 0.278, 95%CI: 0.077-1.000). Additionally, mothers who worked as farmers or students were less likely than those who worked for the government to use postnatal care services (AOR = 0.346, 95%CI: 0.007-0.620 and AOR = 0.154, 95% CI: 2.154-0.874).

Age, occupation, payment status, domicile, and distance from medical facilities were all found to be significantly associated with mothers' use of postnatal care services using multi-logistic regression. Compared to women under 20, mothers greater than 20 were less likely to use postnatal care services (AOR = 0.052, 95% CI: 0.024-.115, AOR =0.044, 95% CI: 0.021-.093, AOR = 0.012, 95% CI: 0.004-.038 and AOR = 0.193, 95% CI: 0.072-.518). Furthermore, mothers who worked as house wise were less likely to utilise postnatal care services than mothers who worked as government or merchants (AOR = 1.696, 95% CI: 1.061-2.710).

Table 4.38: Socio-demographic factors associated with utilisation of postnatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

Variable	Utilisation of postnatal care services			
	Yes n (%)	No n (%)	AOR (95%CI)	p-value
Age of mothers				
≤20 years	43(79.63)	11(20.37)	1.00	
20-24 years	26(17.45)	123(82.55)	0.052 (0.024-.115)	0.001
25-29 years	42(51.22)	40(48.78)	0.044 (0.021-.093)	0.001
30-34 years	5(5.00)	95(95.00)	0.012 (0.004-.038)	0.001

≥35 years	13(43.33)	17(56.67)	0.193 (0.072-.518)	0.001
Husbands' educational status				
No education	34(26.35)	121(24.90)	1.00	
Primary (1-8)	88(68.22)	316(65.02)	1.709(0.588-4.965)	0.325
Secondary (9-12) and above	34(26.35)	121(24.90)	1.483(0.552-3.986)	0.435
Occupation of mothers				
Housewife	81 (19.01)	345 (80.99)	1.00	
Others occupational status (Governmental employee, merchant and student)	48 (25.40)	141(74.60)	1.696 (1.061-2.710) *	0.027
Payment status				
Paid	19(14.73)	18(3.70	1.00	
Free	110(85.27)	468(96.30)	2.436(1.086-13.960) *	0.001
Residence of mothers				
Urban	97(75.19)	315(64.81)	1.00	
Rural	32(24.81)	171(35.19)	0.143(0.035-.584) *	0.007
Health facility distance				
<5km	34(26.36)	202(41.56)	1.00	
5-15km	22(17.05)	152(31.28)	0.440(0.227-0.851) *	0.015
Over 15 km	73(56.59)	132(27.16)	3.943(0.963-16.151)	0.057

Keynote: * P-value less than 0.05

** Other marital status (single, widowed and divorced)

*** Other ethnicities (Tigre, Gurage, Walaita and Sidama)

4.6.4 Multivariate analysis of past obstetric factors associated with the utilisation of maternal health care services

The multivariate logistic regression results for prior obstetric factors associated with the use of prenatal care, labour and delivery, and postnatal care services are examined in this section.

4.6.4.1 Past obstetric history of mothers associated with utilisation of antenatal care services

Factors including parity, decision-making authority regarding maternal health care services, maternal-foetal outcomes, and receiving health education on maternal health care services were found to be linked to the utilise antenatal care services when multiple logistic regression was applied to the mothers' obstetric history.

According to the results of this study, mothers who had previously received health education on maternal health care services were more likely to utilise antenatal care services than mothers who had not (AOR] = 0.015, 95%CI: 0.015). In the same way, mothers with one parity were more likely than mothers with four or five parities to utilise antenatal care services by more than 90% (AOR = 0.098, 95% CI: 0.023-0.410, and AOR = 0.049, 95% CI: 0.011-0.229).

The study also showed that mothers who had their mothers make decisions about using maternal health care services were nine times more likely to utilise antenatal care services than mothers who did it on their own (AOR = 9.540, 95% CI: 1.391-65.435).

Lastly, compared to mothers with normal maternal and foetal outcomes, mothers who had maternal and foetal problems during their previous pregnancies were almost 94% less likely to utilise antenatal care services (AOR = 0.065, 95% CI: 0.013-0.337).

Table 4.39: Past obstetric history of mothers associated with utilisation of antenatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N=615)

Variable	Utilisation of antenatal care services			
	Yes n (%)	No n (%)	AOR (95%CI)	p-value
Health education on maternal health care services				
Yes	446 (98.89)	5(1.11)	1.00	
No	101 (61.59)	63 (38.41)	0.015 (0.005-0.048) *	0.001
Status of pregnancy				
Wanted	520(95.06)	27(4.94)	1.00	
Unwanted	47(69.12)	21(30.88)	0.776 (0.219-2.746)	0.694
Parity status				
One	101 (90.18)	11 (9.82)	1.00	
Two	129 (95.56)	6 (4.44)	0.403(0.082-1.982)	0.264
Three	171 (95.53)	8 (4.47)	0.486(0.115-2.046)	0.325
Four	109 (89.34)	13 (1066)	0.098(0.023-0.410) *	0.001
Five and above	37 (55.22)	30 (44.78)	0.049(0.011-.229) *	0.001
Decision on the maternal health care services utilisation				
My self	91 (85.05)	16 (14.95)	1.00	
Husband	243 (90.33)	26 (9.67)	1.362(0.445-4.166)	0.588
Both	165 (92.18)	14 (7.82)	2.361(0.670-8.311)	0.181

Others**	5 (33.33)	10 (66.67)	9.540(1.391-65.435) *	0.022
Maternal and Fetal outcome				
Normal	519 (94.88)	58(85.29)	1.00	
With complication	28(5.12)	10(14.71)	0.065 (0.013-0.337) *	0.001
Privacy of maternal health care services				
Yes	519 (89.95)	58 (10.05)	1.999 (.401-9.959)	0.398
No	28 (73.68)	10 (26.32)	1.00	

**Keynote: *** P-value less than 0.05

** Others (Community health workers, relatives and traditional birth attendants)

4.6.4.2 Past obstetric history of mothers associated with utilisation of labour and delivery care services

By using multiple logistic regression, it was discovered that several characteristics pertaining to mothers' obstetric histories were substantially linked to utilise labour and delivery care services. Pregnancy status, number of parities, decision-making authority regarding the utilisation of maternal health care services, mode of delivery in prior pregnancies, obtaining health education on maternal health care services during previous pregnancies, and maintaining privacy during maternal health provision were some of these factors.

This study found that mothers who had received health education about maternal health care services were more likely to utilise labour and delivery care services than mothers who had not (AOR = 0.123; 95% CI = 0.007-0.084). AOR = 0.024; 95% CI = 0.007-0.084 also showed that mothers who had unwanted pregnancies were less likely to utilise labour and delivery care services than mothers who had planned or desired births. In a similar vein, mothers who had one or more parities were more than 90% less likely than mothers who had only one parity to use labour and delivery care services during their most recent pregnancy (AOR = 0.024; 95% CI = 0.007-0.084), (AOR = 0.034 and 95% CI = 0.003-0.338), (AOR = 0.038; 95% CI = 0.003-0.298), (AOR = 0.032; 95% CI = 0.001-0.115), and (AOR = 0.011, 95% CI = 0.038-0.969), respectively.

Additionally, mothers who had their husbands or both parents make decisions about using maternal health care services were much more likely to utilise labour and delivery care services than mothers who make decisions on their own (AOR = 4.205; 95% CI = 1.678-10.541) and (AOR = 8.041; 95% CI = 2.870-22.523), respectively.

Finally, mothers who had operative delivery had significantly higher rates of using labour and delivery care services than mothers who gave birth vaginally (AOR = 4.441; 95% CI = 3.089-11.643).

Table 4.40: Past obstetric history of mothers associated with utilisation of labour and delivery care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

Variable	Utilisation of labour and delivery care services			
	Yes n (%)	No n (%)	AOR (95%CI)	p-value
Health education on maternal health care services				
Yes	429(79.44)	111(20.56)	1.00	
No	22(29.33)	53(70.67)	0.123 (0.007-0.084) *	0.001
Status of pregnancy				
Wanted	519(96.11)	48(64.00)	1.00	
Unwanted	21(3.89)	21(36.00)	0.024 (0.007-0.084) *	0.001
Parity status				
One	111(20.55)	1(1.33)	1.00	
Two	121(22.41)	14(18.67)	0.034(0.003-.338) *	0.034
Three	164(30.37)	15(20.00)	0.038(0.003-0.298) *	0.038
Four	102(18.89)	20(26.67)	0.032(0.001-0.115) *	0.032
Five and above	42(7.78)	25(33.33)	0.011(0.038-0.969) *	0.011
Decision on the maternal health care services utilisation				
My self	83(15.17)	24(35.29)	1.00	
Husband	263(48.08)	32(47.06)	4.205(1.678-10.541) *	0.002
Both	169(30.90)	10(14.71)	8.041(2.870-22.523) *	0.001
Others**	32(5.85)	2(2.94)	6.768(0.836-54.790)	0.073
Previous birth mode of delivery				
Spontaneous vaginal delivery (SVD)	328 (82.62)	69(17.38)	1.00	

Operative delivery***	212 (97.25)	6 (2.75)	4.441 (3.089-11.643) *	0.001
Privacy of maternal health care services assured				
Yes	501(88.36)	66 (11.64)	23.713 (2.287-245.851)	0.008
No	39 (81.25)	9 (18.75)	1.00	

Keynote: * P-value less than 0.05

** Others (Community health workers, relatives and traditional birth attendants)

4.6.4.3 Past obstetric history of mothers associated with utilisation of postnatal care services

A multiple logistic regression analysis revealed that utilisation of postnatal care services was significantly correlated with several factors related to the mother's prior obstetric history, including the number of parities, mode of delivery in prior pregnancies, decision-making authority regarding the utilisation of maternal health care services, pregnancy status, and maternal-fetal outcomes.

According to the study's findings, mothers who had intended pregnancies were six times more likely than those who had unwanted pregnancies to utilise postnatal care services (AOR = 6.816, 95% CI: 3.075-15.109). Compared to mothers with only one parity, mothers with five or more parities were less likely to utilise postnatal care services (AOR = 0.389, 95% CI: 0.159-0.954).

Additionally, compared to women who made decisions on their own, others whose husbands made decisions about their use of maternal health care services were less likely to use postnatal care services (AOR = 0.415, 95% CI: 0.215-0.801).

Furthermore, compared to mothers who delivered their babies vaginally, those who had operative during their prior pregnancy were more likely to utilise postnatal care services (AOR = 3.560, 95% CI: 2.056-6.164). On the other hand, mothers who had issues with

both the foetus and the mother in previous pregnancies were less likely to utilise postnatal care services than mothers who did not.

Table 4.41: Past obstetric history of mothers associated with utilisation of postnatal care services among women aged 15-49 years, West Arsi Zone, 2024 (N = 615)

	Utilisation of postnatal care services			
	Yes n (%)	**No n (%)**	**AOR (95%CI)**	**p-value**
Status of pregnancy				
Wanted	108 (19.05)	459 (80.95)	6.816(3.075-15.109)	
Unwanted	21 (43.75)	27 (56.25)	1.00	0.001
Parity status				
One	42 (37.50)	70 (62.50)	**1.00**	
Two	24 (17.78)	111 (82.22)	0.624(0.313-1.245)	0.181
Three	27 (15.08)	152 (84.92)	0.658(0.341-1.271)	0.213
Four	21 (17.21)	101 (82.79)	0.695(0.341-1.416)	0.316
Five and above	15 (22.39)	52 (77.61)	0.389 (0.159-.954)*	0.039
Decision on the maternal health care services utilisation				
My self	22 (20.56)	85 (79.44)	1.00	
Husband	43 (15.25)	239 (84.75)	0.415(0.215-.801)*	0.009
Both	50 (26.04)	142 (73.96)	1.171(0.621-2.208)	0.625
Others**	14 (41.18)	20 (58.82)	1.455(0.557-3.801)	0.444
Previous birth mode of delivery				

Spontaneous vaginal delivery (SVD)	58(14.61)	339(85.39)	0.393(0.261-.591)	0.001
Operative delivery***	71(32.57)	147(67.43)	1.00	
Maternal and Fetal outcome				
Normal	112 (19.41)	465 (80.59)	0.408 (0.167-0.996) *	
With complication	17 (44.74)	21 (55.26)	1.00	0.049

**Keynote: *** P-value less than 0.05

** Others (Community health workers, relatives and traditional birth attendants)

4.7 QUALITATIVE DATA MANAGEMENT AND ANALYSIS

The perspectives and experiences of midwives regarding the variables affected the use of maternal health care services were investigated using the inductive thematic analysis approach. This method made sure that the themes that come out during the analysis were well grounded in the information that was gathered. A bottom-up analysis of the data was made possible by the researcher's technique, which was free of any theoretical coding framework. The themes that surfaced had a strong foundation in the data.

Reading, coding, presenting, decreasing, and interpreting were some of the processes in the data analysis process. By reviewing extended notes, transcribing them, and translating Afan Oromo transcripts into English, the researcher became well acquainted with the data. Atlas TI version 8 software was used to support the qualitative data analysis procedure. Through a network perspective, this software made it possible to visualise related ideas and the connections between subject regions.

Table 4. 42:Summary of characteristics of midwives (N = 40)

Code for FGDs	Sex	Age of midwives	Type of Health facility	Academic qualification	Midwives' years of services	Roles and Responsibilities of the Midwives
P1MDg	Male	27	Hospital	BSc	3	Maternity unit worker
P2MDg	Male	25	Hospital	BSc	3	Maternity unit worker
P3FDg	Female	30	Hospital	BSc	6	Maternity unit worker
P4MDg	Male	27	Hospital	BSc	4	Maternity unit worker
P5FDg	Female	40	Hospital	BSc	8	Maternity unit worker
P6FDg	Female	35	Hospital	BSc	6	Maternity unit worker
P7MMSc	Male	42	Hospital	MSc	17	Maternal and child health unit head
P8MDg	Male	29	Hospital	BSc	5	Maternity unit worker
P9FDg	Female	26	Hospital	BSc	3	Maternity unit worker
P10MD	Male	34	Hospital	BSc	7	Maternity unit worker
P11MDg	Male	41	Hospital	BSc	18	Maternity unit worker
P12MMSc	Female	35	Hospital	MSc	8	Maternal and child health unit head
P13FDg	Female	27	Hospital	BSc	4	Maternity unit worker
P14FDg	Female	30	Hospital	BSc	5	Maternity unit worker
P15MDg	Male	27	Hospital	BSc	5	Maternity unit worker
P16MDg	Male	38	Hospital	BSc	9	Maternity unit worker

P17MDg	Male	27	Hospital	BSc	5	Maternal and child health unit head
P18FD	Female	40	Hospital	Diploma	21	Maternity unit worker
P19MMSc	Male	31	Hospital	MSc	8	Labor and delivery unit head
P20MDg	Male	31	Hospital	BSc	7	Maternity unit worker
P21FDg	Female	29	Hospital	BSc	6	Maternity unit worker
P22MDg	Male	30	Hospital	BSc	6	Maternity unit worker
P23FDg	Female	28	Hospital	BSc	5	Maternity unit worker
P24MDg	Male	28	Hospital	BSc	4	Maternity unit worker
P25FD	Female	27	Health centre	Diploma	5	Labour and delivery unit head
P26MD	Male	23	Health centre	Diploma	3	Maternity unit worker
P27MDg	Male	24	Health centre	BSc	1	Maternity unit worker
P28MDg	Male	26	Health centre	BSc	3	Maternity unit worker
P29FD	Female	28	Health centre	Diploma	6	Labour and delivery unit head
P30MDg	Male	25	Health centre	BSc	2	Maternity unit worker
P31FDg	Female	26	Health centre	BSc	3	Maternity unit worker
P32FD	Female	24	Health centre	Diploma	5	Maternity unit worker
P33MDg	Male	27	Health centre	BSc	3	Maternity unit worker
P34MDg	Male	24	Health centre	BSc	1	Maternity unit worker

P35FDg	Female	29	Health centre	BSc	4	Maternity unit worker
P36MDg	Male	28	Health centre	BSc	5	Maternity unit worker
P37MD	Male	23	Health centre	Diploma	3	Maternity unit worker
P38FDg	Female	28	Health centre	BSc	4	Labour and delivery unit head
P39FDg	Female	29	Health centre	BSc	5	Maternity unit worker
P40MDg	Male	25	Health centre	BSc	2	Maternity unit worker

Keynote: F –female, M-Male, D-Diploma, Dg-Degree and MSc-Master of Science

4.7.1 Sociodemographic characteristics of midwives

Under this topic, the sociodemographic characteristics of midwives were discussed.

4.7.1.1 Sociodemographic profile of the FGDs with midwives

The topic of sociodemographic characteristics of midwives, the study discussed the profiles of the midwives who participated in the FGDs. There was a total of 40 midwives included in the FGDs, ranging in age from 21 to 60 years old. These midwives had been working in selected governmental hospitals and health centres for at least 12 months. The participants' profiles in the FGDs included information on their age, gender, marital status, educational background, roles and responsibilities, and years of service.

4.7.1.2 Sociodemographic characteristics midwives

In the current study, over half of the midwives (55%, n = 22) fell into the age range of 25-29 years, while 15% (n = 6) were aged between 30 and 34 years. More than half, 57% (n = 23), of the midwives in the study were males, while 42% (n = 17) were females. The data also show that 77.5% (n = 31) of the midwives had a BSc in midwifery, while 15% (n = 6) had a diploma in midwifery. Additionally, 82.5% (n = 33) of the midwives worked in maternity units, including the antenatal unit, family planning unit, labour and delivery unit, and gynaecology ward. Only 10% of the midwives (n = 4) were heads of the labour and delivery units. In terms of years of service, 47.5% of the midwives had 4-6 years of service, while 30% had 1-3 years of service working in hospitals and health centres (Table 4.43).

Table 4.43:*Sociodemographic characteristics of midwives (N = 40)*

Age range	Frequency	Percentage
20-24	5	12.5
25-29	22	55
30-34	6	15
35-39	3	7.5
40-44	4	10
Sex		
Male	23	57.50
Female	17	42.50
Academic status of midwives		
Diploma in midwifery	6	15.00
BSc midwifery	31	77.50
MSc midwifery	3	7.50
Roles and responsibility of the midwives in the institution		
Maternal and child health unit head	3	7.50
Labour and delivery unit head	4	10.00
Maternity unit worker	33	82.5
Midwives' years of services		
1-3	12	30.00
4-6	19	47.50
7-9	6	15.00
>9	3	7.50

4.8 ANALYSIS OF DATA OBTAINED FROM THE MIDWIVES

Forty (40) midwives with at least a year's experience working at government hospitals and health institutions were included in the study. The data obtained from focus group discussions was analysed, and five major themes emerged from the conversations. These themes included strategies currently employed in health care facilities to increase the quality of maternal healthcare services, strategies suggested to enhance the use of maternal healthcare services, factors influencing the enhancement of the quality of maternal healthcare care, and issues mothers in the community faced about the utilisation of health care services. Each theme was further discussed with categories, subcategories, and explanations as indicated in Table 4.44.

Table 4.44: Schematic presentation of themes and categories

THEME	CATEGORY
4.1 Factors that affect improving the quality of maternal health care services utilisation in health facilities.	4.1.1 Reasons related to health worker 4.1.2 Health facility-related factors 4.1.3 Lack of medical equipment, medical supplies, and drugs 4.1.4 Delay in offering service 4.1.5 Lack of basic and life-saving services 4.1.6 Lack of health education
4.2 Problems mothers have in the community related to maternal health care services utilisation.	4.2.1 Community-related problems 4.2.2 Reasons related to mothers 4.2.3 Distance and transportation service-related problems 4.2.4 Socio-cultural factors
4.3 Reasons for non-utilisation of maternal health care services.	4.3.1 Socio-cultural factors 4.3.2 Women-related factors 4.3.3 Negative experiences of maternal health care services utilisation

	4.3.4 Transportation related factors 4.3.5 Health facility-related factors 4.3.6 Lack of respectful maternity care 4.3.7 Health care provider-related factors
4.4 Strategies currently implemented within health facilities to improve the quality and utilisation of maternal health care services	4.4.1 Supportive supervision 4.4.2 Outreach maternal health care services 4.4.3 Cultural ceremony in health facility
4.5 Strategies suggested to be put in place to improve the quality and utilisation of maternal health care service.	4.5.1 Community participation strategies 4.5.2 Maternity waiting home 4.5.3 Giving benefit packages for midwives 4.5.4 Establishment of emergency obstetrics and gynaecology triage 4.5.5 Provision of cultural ceremony 4.5.6 Provision of incentive and preparing comfortable areas for mothers 4.5.7 Strengthening health extension services 4.5.8 Developing a system for identification of pregnant mothers in the communities

4.8.1 Themes emerged during the analysis of FGDs

Five themes have emerged from the FGDs with midwives working in selected health centres and hospitals for more than 12 months or more. Factors that impact the quality and utilisation of maternal health care services, issues mothers face in the community regarding the use of maternal health care services, reasons why mothers do not use maternal health care services, strategies currently used in health care facilities to improve the quality of maternal health care services, and strategies proposed to be implemented to improve the quality of maternal health care service utilisation are all included. Each theme is discussed in the following sections.

4.8.2 Theme 4.1: Factors that affect improving the quality and utilisation of maternal health care services

The variables that affected the improvement of maternal health care services in health facilities were the subject of one of the themes. These factors included issues related to health care workers, health facility infrastructure, lack of medical equipment unavailability of essential and life-saving services, lack of medications and medical supplies, and insufficient health education initiatives. The quality of maternal health care services at health institution was influenced by each of these factors.

4.8.2.1 Category 4.1.1: Reasons related to the health care providers

The results of this investigation showed that the primary drivers of the enhancement of maternal health care services were those pertaining to health care professionals. These factors included a lack of necessary skills, knowledge, and attitude among health care providers, shortage of midwives, low interest in the midwifery profession, and availability of healthcare providers during labour and delivery, inadequate training, poor service provision, and health care workers' refusal to offer services outside working hours.

"Some health care providers lack the knowledge and skills to manage complications that may arise during labour and delivery. For instance, there was a health care provider who was unable to handle a retained placenta and the resulting bleeding. In our hospital, there was a recent maternal death related to a retained placenta. So, training is crucial for such health care providers to raise the quality of care given during childbirth." P3FDg**.**

“During one incident, the participants recalled a situation where they urgently needed an obstetrics and gynaecology specialist to attend to a mother in need. However, when they contacted the senior doctor on duty, there was no response. They then reached out to another senior doctor who informed them that he was not scheduled for duty that day. As a result, they had to transfer the mother to another hospital without the necessary

referral paperwork, relying solely on the referral letter she had obtained from the health centre." P6FDg*.*

- **Lack of necessary knowledge**

The participants in the FGDs highlighted the significance of health care workers possessing both the essential expertise and a positive demeanour towards mothers. They expressed that if health care providers display a negative attitude or neglect towards mothers, it can discourage individuals from obtaining services related to maternal health care.

The participants emphasised that mothers place greater value on a health care provider's attitude rather than their skills. Additionally, they stressed the importance of health care providers offering equal attention and care to all mothers, particularly during busy periods, to prevent any perception of negligence or unfavourable behaviour. The following statements evidenced this:

''From health centres, there was a time when mothers were unnecessarily referred from the health centre to the hospital without a start of labour, even there was a time when mothers with closed cervix were referred to the hospital as a prolonged 1st stage of labour…These mothers returned to their homes by their expense and were disappointed with our health facilities' services." P2MDg*.*

''…there is a time when mothers were admitted with abnormal labour at the health centre due to a lack of necessary knowledge to identify abnormal labour and delivery and refer the woman after she developed complications." P4MDg*.*

- **Lack of necessary skills**

During FGD, some participants mentioned that there have been cases where mothers were sent to hospitals from health centres even though they were not showing any signs of going into labour or having a closed cervix. This resulted in disappointment and dissatisfaction with the services rendered at the health institutions.

Additionally, the lack of necessary skills to manage complications during labour and delivery was furthermore recognised as a determining variable for the use of skilled birth attendance services. If a mother was satisfied with the healthcare provider's skills, she would be more likely to return for other maternal care services and recommend them to others. However, if she was dissatisfied, she would not return for other maternal health care services and would not recommend them to others. One participant in the focus group discussion expressed this sentiment with the following statement:

"Some health care providers lack skills to manage complications that may arise during labour and delivery. For example, there was a health care provider who was unable to deliver the retained placenta and manage, the bleeding occurs due to this…but, if the mother is satisfied by a health care provider's skill, she will refer services to others and return for additional services.'' P5FDg.

- **Health care providers attitude**

Health care practitioners must refrain from being careless in order to raise the standard of maternal health care services. If the medical staff in the facilities don't care about mothers and have a bad attitude, mothers won't want to use the maternal health care services. Participants in the FGDs made the following claims:

''From health care providers, mothers need a good attitude, not the good skill they have…so, if they have a bad attitude toward them, they will prefer to die than utilising services from them.'' P7MMSc**.**

''…in hospital, midwives are too busy with cases; during that time, they may never give concern and attention to mothers in labour or second stage and have complications. So, in a such situation, we should take care of all mothers within our ward as it may be looking negligence and bad attitude toward them.'' P1MDg**.**

- **Lack of midwives**

In order to improve the quality of maternal health care services, skilled birth attendants are those who have received the education and training necessary to manage uncomplicated pregnancies, deliveries, and the immediate postnatal period. They are also trained to identify, manage, and refer complications in women and new-borns. Therefore, the lack of midwives or skilled birth attendants with midwifery skills during childbirth was among the variables that affected improving the quality of maternal health care service. This is supported by statement below:

''…in our health centre, there is midwives' scarcity, due to this, there was a health care provider who was assigned night duty without midwifery skills to manage labour…this health care provider was unable to provide quality care for mother.'' P25FD**.**

- **Low interest in the midwifery profession**

The results of the current study indicated that one of the variables influencing the quality and use of maternal health care services in health facilities was a lack of enthusiasm in the midwifery profession. The study participants added that attention given by the government to healthcare providers was very low. Advantages and benefits packages were not given to health care providers making diploma qualified midwives to change their profession. The FGDs participants mentioned the following statements:

''In Ethiopia, attention given by the government to health care providers is very low. Due to this, as myself, I do not have an interest in serving as a midwife. From the media, the government talks about issues of maternal health care services…. practical on the ground, there is no attention given to these units and midwives.'' P9FDg**.**

''…Health care providers serving in maternal and child health units are even not considered as health care providers. There are no benefit packages for midwives. In labour and delivered word, I soaked myself with blood, with all this tiredness, I cannot pay even the monthly home rent, I got with this profession.'' P26MD**.**

‘’…. In our Woreda, except for degree midwives, many diploma midwives changed their profession to another social department like economics and accounting due to low interest in the midwifery profession. Even, these diploma midwives prefer to learn degree nurse, health officer, or pharmacy if they want to stay as health care providers. In the future, if this condition is not corrected many midwives will change their profession because of low payments not comparable to their tiredness.’’ P30MDg.

- **Presence of health care providers around labouring mothers**

Consistent and regular follow-up and presence of health care providers all the time when admitted to labour or postnatal care it enables the mother to receive good advice, reassurance in case of labour pain, and other necessary care from the healthcare providers. It also, enables health care providers to detect and manage complications, which may arise during their stay in the health facility. If health care providers are around the mother, they can provide service on time without delay. This creates mother’s satisfaction with the use of services related to maternal health care. Therefore, the absence of health care providers, after they admitted mothers during labour and delivery, as well as the postnatal period, were some of the factors that influenced the enhancement of maternal health care services. One of the FGD participants mentioned the following idea:

‘’One day, one of our midwifery workers was assigned during pm time until other workers were returning from lunch…. we left one labouring mother on the bed, and we informed him to follow her until we come back. When we came from our lunch, he left some elsewhere. The mother gave birth in bed, and she severely bled and soaked with blood …her family also left her alone and search for health care providers… these issues made a bad image and rumours within communities regarding our health centre and health care providers.’’ P40MDg**.**

- **Lack of training**

To provide maternal health care services of the highest quality, some of the midwives in the current study expressed dissatisfaction over the fact that some midwives in their health care facilities lacked training in basic emergency obstetric and newborn care. Additionally, midwives can provide care and management at health centres in certain instances provided they have received basic ultrasonography training in obstetrics and gynaecology. The FGD participants provided evidence for the following claims:

"From health centres; there were many mothers who referred to our hospital without giving a first loading dose of magnesium sulphate that is needed to be administered at health centre level due the lack of training on magnesium sulphate management protocol." P11MDg*.*

"…some health centres birth attendants referred mothers with the prolonged second stage of labour which can be managed at the health centre with vacuum extraction due to lack of Basic Emergency Obstetrics and Newborn Care (BEmONC) trained health professional at the health centre." P12MMSc*.*

"In our hospital, it is common to see many women waiting for ultrasound examination…most of these women came from health centres for ultrasound purpose which can be solved at health centre by trained health care providers at health centres level." P13FDg*.*

- **Inadequate service**

When using maternal health care services, moms may not return for additional maternal health care services if they believe they have received subpar care from medical professionals, which leads to their discontent with the services they received. This was corroborated by the following statements:

"*One day, a woman from this town gave birth in this health centre. After she delivered safely, we all left the delivery room except one midwife to suture the tears and discharged*

her after 6 hours… after she went to her home, she was unable to void urine and her abdomen was distended…after that, the family brought her to the health centre, and when we checked the midwife forget a gauze in her vagina when she was suturing tears." P27MDg**.**

- **Lack of emergency preparedness**

This study found that the factor influencing the quality of maternal health care services was the absence of emergency readiness in health institutions.

Health care facilities must be organised in a fashion to respond to obstetrics emergencies to raise the quality of health care services for mothers. The FGD participants evidenced this:

''Before starting the delivery of health care services, health care providers must always check their stock of emergency packs, and medical supplies necessary for maternal health care services, in cases of obstetrics emergency, which need urgent response… if not available, dispense, or ask on time for purchase.'' P16MDg**.**

4.8.2.2 Category 4.1.2: Health facility related factors

The current study found that characteristics related to health care facilities were the primary determinants of the improvement in the quality of maternal health care services. The shortcomings in health care facilities found in this study include a lack of obstetric triage, enough supplies for infection control, maternity waiting homes, food provision, water and electricity, and rooms, beds, and delivery couches.

- **Lack of rooms**

This study identified the lack of rooms for maternal health care services as other factors affected the quality and utilisation of maternal health care services. Furthermore, in a

healthcare facility, if there is a lack of room, it is impossible to keep privacy and confidentiality and admit mothers in labour. These create disappointment in women and communities toward maternal health care services offered in the facility and lead then to prefer home delivery. The following statements from FGD participants were evidenced as:

"In our hospital, there are 3 rooms; …one room for labour, one room for delivery, and one room for immediate postnatal care services…if these rooms are reserved by mothers…no labour and delivery services are provided until these mothers are discharged. Sometimes there was a time when we admitted mothers on corners, chairs, and floors on mattresses.'' P17MDg**.**

"In health centres, there are shortages of rooms, and due to this we discharge the mother after delivery within a short period because there is no room or bed for 24 hours as per WHO recommendation for the postnatal period to be within the health facility." P28MDg**.**

"In our hospital, we were forced to admit many delivering women within a single room. In such situation, it is impossible to maintain privacy and confidentiality. Therefore, women will not utilise delivery services again if we do not employ curtains, doors, screens, and separate rooms to guarantee environmental privacy and confidentiality." P22MDg**.**

- **Lack of beds and delivery couch**

This study's findings indicated that the lack of beds and delivery couches was identified as a factor that affects the quality and utilisation of maternal health care services in the health facilities. The following statements indicated this:

"Within our hospital, there is no postnatal care services provision…we have postnatal beds not more than six. Therefore, we cannot give early postnatal services for up to 24 hours. After delivery, mothers only stayed within the hospital up to 6 -8 hours during daytime to reserve beds for recently delivered mothers." P18FD**.**

"One day, we were on night duty; the whole night was cases. We admitted these cases on the beds we had…after that, we told to guards as there were no beds and have to go

to another hospital…but, one from the family of the labouring mother came and treated us to admit her unless he will not go anywhere." P23FDg*.*

"In this hospital, there is a shortage of delivery couches. We have only two delivery couches. If there are more than two or more labouring women who come to this hospital at the same time at the second stage of labour, we let her give birth on the examination bed." P19MMSc*.*

- **Lack of electricity and water supply**

The shortage of water and electricity in medical facilities is one of the factors reducing the quality and uptake of maternal health care services, according to the report. The FGD participants attested to this:

"In this hospital, there were many times, when we referred labouring mothers with complications due to lack of electrical power. There was a generator at the backup, but sometimes it is running off fuel; sometimes it is not functioning due to damage until it was got maintenance service." P20MDg*.*

"There was an interruption of water supply…due to this there was a time when services were given without washing the room and beds." P5FDg*.*

"In our health centre, it is common to see health care providers without wearing gowns, once it is contaminated with blood, there is no water to wash it on time due to lack of water." P29FD*.*

- **Absence of separate obstetric triage**

The current study identified the presence of obstetrics cases triage assorting obstetric patients in the triage unit into priority groups based on their acuity or needs. Pregnant and labouring women were seen directly at the obstetrics triage in this instance rather than going to the central triage. One of the FGD participants mentioned this statement:

"In hospitals, there is only one main triage, which serves for all cases. As my opinion, it is better if separate triage for Obstetrics cases is available." P24MDg***.***

- **Lack of infection prevention materials**

The current investigation found that the supplies needed to provide professional birth attendance services, including rubber sheets, curtains, aprons, eye goggles, boots, capes, and towels, were lacking. The following statements were brought forward by the FGD participants:

"Immediately as one mother gives birth; we should have to clean the delivery couch for the next delivery, if there is a rubber sheet on the delivery couch, you take only the rubber sheet from the couch, and after that, it is also safe for other mothers to minimize the risk of contamination with blood." P8MDg***.***

"We do not have all most personal protective materials within our health centre, except delivery gown...we do not have the cape, eye goggles, and safety boots during attendance labour and delivery." P31FDg***.***

- **Lack of maternity waiting homes**

One of the elements influencing the improvement of the quality and utilisation of maternal health care services, according to the current study's findings, is the absence of maternity waiting houses. The participant provided proof of this:

"*In areas where there is no access to roads for Ambulances' and other transportation means, the establishment of maternity waiting homes in hospitals is very important. Before labor starts women will be admitted to these maternity waiting homes. This may reduce the three delays.* ***First delay****: delays in recognising problems and choosing to take care of an obstetric issue,* ***second delay****: delay to visit a medical facility following the choice to seek care made (delays in transportation to reach appropriate care) and* ***third delay****: delays in taking appropriate care at the medical health institutions. By doing*

this we can increase women's happy with maternal health care services and utilisation." P32FD*.*

- **Lack of food provision in health care facilities**

The absence of food provision in the health care institutions for delivering women was among the factors that affected quality and utilisation of maternal health care services in health facilities. The FGD participants mentioned the following statements:

"During labour, most of the mothers did not have the appetite to eat or drink. Especially those mothers referred from rural, who did not bring money to buy food for them. Therefore, they spent the whole night without having any food in their mouth and suffering from severe hunger in addition to labour pain." P15MDg*.*

"…. After delivery, most families of delivered mothers caused conflict with the birth attendant for discharge of mothers because of lack of food in health facilities." P21FDg*.*

4.8.2.3 Category 4.1.3: Lack of medical equipment, medical supplies, and drugs

The absence of delivery couches, hoover extractors, Non-Pneumatic Anti-Shock Garment (NASG), and personal protective equipment, supplies, and medications have been identified as obstacles to enhancing the quality of maternal health care services in the medical facilities.

- **Unavailability of NASG**

The results showed that one of the factors affecting the usage of labour and delivery services was the lack of NASG. The main obstacle to stabilising women while they are being evaluated, transported, and prepared for final surgical treatment, according to the participants, is the lack of NASG at medical institutions. This was demonstrated by the following statements:

"In our health centre, we did not have NASG…It has extraordinary benefits for bleeding mothers to arrest bleeding and avoid surgical intervention." P33MDg*.*

"…sometimes at health centres, there is no ambulance, or families of labouring mothers do not have money to refer mothers…During that time, NASG can buy time for those mothers." P34MDg*.*

"In our health centre, we have one NASG. One day we used it to refer the mother to a hospital. Since the ambulance and NASG went for a referral, I understood the benefits of NASG after we were faced with a mother who came with PPH." P39FDg*.*

- **Lack of delivery couches**

The current study's findings demonstrated that when labour and delivery cases exceeded the number of couches available in a medical facility, the scarcity of couches also hindered the provision of expert birth attendance services. The participant mentioned this:

"In this hospital, there is a lack of delivery couches. We have only two delivery couches. If there are more than two or more labouring women who come to this hospital at the same time, at the second stage of labour, we let her give birth on the examination bed." P19MMSc*.*

- **Absence of vacuum extractors**

According to the study, one of the things influencing the standard and use of trained birth attendance services in medical facilities was the lack of hoover extractors. The participants mentioned that because their medical facilities lacked vacuum extractors, there was a period when they had to refer the moms to other institutions. Mothers were therefore unhappy with the level of professional birth attendance services provided in the medical institutions. This was expressed by the following statement:

"I can say all midwives in this health centre can assist labour with the vacuum extractor. Since there is no vacuum instrument in our health centre, we are referring the labouring

to a hospital that can assist here. This causes communities to lose confidence and trust in the health centre in skilled birth attendance services." P36MDg.

- **Lack of personal protective infection prevention materials**

The following statement demonstrated how the quality and use of skilled birth attendance services were impacted by the absence of personal protective equipment (PPE) to prevent infections, such as capes, aprons, eye goggles, mouth masks, and boots:

"In our health centre, we do not have mouth masks, aprons, and eye goggles... During the Covid 19 epidemic period, we did not have the problem of masks, and currently it is not available for delivery services." P37MD*.*

- **Lack of drugs and medical supplies**

The current study found that one of the elements influencing the improvement of the quality and utilisation of maternal health care services in health facilities was the absence of medications and medical supplies. This prevents mothers from returning for additional maternal health care services for themselves and from recommending them to others, according to study participants. The FGD participants mentioned this:

"If there are no medical supplies, it is sure; we cannot provide maternal health care services like delivery." P38FDg*.*

"In government health facilities, currently there was a lack of drugs and medical supplies. Even then, there was a time when anti-pain drugs were not present in health centres. The lack of gloves is still a headache for all health facilities." P35FDg*.*

"…Sometimes there was no vaccination medication within the hospital. This issue makes mothers not satisfied with services provided within hospitals and delays services. Again, this makes mothers not to return for other maternal health care services for themselves, and not recommend others." P17MDg*.*

4.8.2.4 Category 4.1.4: Delay in offering health care services

Delay in offering health care services in the health facilities was among the factors that had an impact on the quality and utilisation of maternal health care services.

- **Delays in services provision**

The FGD participants claimed that the women were delayed in medical health facilities when surgical gloves and other drugs were being bought from outside the hospital. The following notions from FGD participants corroborated this:

‘‘Within our hospital, the availability of medication and medical supplies was a major problem. For example, once we dispensed surgical gloves for labouring mothers from the pharmacy… after that we ordered them to buy them with their money. Because, from the pharmacy department, there was a warning that for one mother only one time, we can dispense medications and other medical supplies from the pharmacy. Most of the time they bought drugs from outside of the hospital." P19MMSc.

‘‘…sometimes even outside of the hospital, there are no surgical gloves. The family of labouring mothers searched all through the town for surgical gloves. Due to this, there was a time when we attended delivery with disposable gloves.’’ P20MDg*.*

- **Delay in the referral of the mother**

One of the main variables that impacted the quality and utilisation of maternal health care services, as well as the dissatisfaction of mothers who need professional birth attendance services, was the delay in referring mothers from one health facility to another during obstetric problems. The following statements were brought forward by the FGD participants: “*As everybody knows, the majority of our people are farmers and poor. Sometimes in our hospital or from the health centres to the hospital, the mother is ordered to fill the fuel for the ambulance. The ambulance consumes very much fuel when compared with other cars. So, if the mother’s family is unable to fill the fuel for the*

ambulance, she cannot be referred from health centres to hospitals or from one hospital to another hospital due to fuel problems." P22MDg**.**

"*…during the labouring mothers and other cases referrals, the family has to pay per diem for ambulance driver.*" P32FD**.**

"*During the last week there was a mother whose haemoglobin was 2. Because of her urgent blood transfusion need, we wrote a referral for her to Hawasa Hospital. Her family is unable to fill fuel for the ambulance; finally, we referred her by collecting money from all staff by rounding through the hospital. This is a single case, but, as midwives, we are doing this many times if a woman's family is unable to afford the fuel price for the ambulance. Imagine, if it is night, the chance of that mother is to die." P10MDg.*

4.8.2.5 Category 4.1.5: Lack of basic and life-saving services

The current study found that prompt care services, life-saving interventions, the use of medications and medical supplies to prevent obstetric problems, the availability and usage of ambulance services, and referral services to enhance the quality and utilisation of maternal health care services.

- **Function of drugs and medical supplies to prevent obstetric complications**

The FGD participants mentioned the presence of emergency drugs and medical supplies in every obstetrics case that can prevent complications on time without running a search for emergency medication after complications occur. The lack of emergency drugs and medical supplies is among the factors that affected the quality and utilisation of maternal health care services. The FGD participants mentioned the following verbatim statements:

"*Every skilled birth attendant must prepare drugs and supplies like surgical gloves, oxytocin, ergometrine, IV fluids, abortion emergency packs, APH emergency packs, PPH*

emergency packs, severe pre-eclampsia, and eclampsia emergency packs, and vital signs checking equipment at all delivery and postnatal periods." P1MDg.

"….in health facility it was common to see running of health care providers for the search of emergency drugs and medical supplies during the emergency period, which was wrong trend… during this time, it was not the time of searching for drugs and medical supplies, but it was the time for action to complications." P2MDg*.*

- **Lack of life-saving interventions**

One of the problems affecting the improvement of the quality and utilisation of maternal health care services in the health facilities, according to the midwives, was the absence of critical life-saving measures. This was supported by the following statements:

"...At the health centre, if there are no life-saving interventions like intravenous administration of antihypertensive drugs, intravenous and intramuscular administration of uterotonic drugs, or intravenous administration of fluid if the mother had excessive bleeding, manual removal of retained placenta, mothers sought not to utilise skilled birth attendant services…." P38FDg.

"…at the community level, when we taught them to utilise facility delivery services, they said what you were talking about at a meeting and what was actually present in your facilities were different. So, how do mothers utilise facility delivery services? No drug for injection if the mother bled there; we bought fluid, gloves, and drugs from outside." P35FDg.

- **Delay in offering services on time**

The results of the present investigation showed that the delay in offering services on time was one of the factors that affected the quality and utilisation of maternal health care services in health facilities. If the services and results were not on the same day, the mother may not return for services utilisation. The statements listed below were brought up by the FGD participants:

"In our health centre, we had only one ANC clinic, which served more than 20-30 mothers per day with one health care provider…Due to this, we do not have time to take appropriate history and physical examination… Sometimes there were mothers who left without getting services timely. Therefore, many women do not complete four ANC follow-ups." P28MDg.

"In this hospital, if you send the mother to the laboratory, she would not get service timely; she would wait up to 2-4 hours to get her results. If you send an ultrasound, she would get service after one or two days. After that, some mothers even do not return to take their results." P13FDg.

- **Presence and utilisation of ambulance services**

The majority of FGD participants complained that the presence and utilisation of ambulance services were the major variables affecting improving the quality and utilisation of maternal health care services in health facilities. One of the FGD participants said that in his Woreda, an ambulance was becoming a business centre for some health care providers and ambulance drivers. The following statements were brought forward by the FGD participants:

"…In our hospital, there were ambulance insufficiencies. For one hospital it was better if two or more ambulances were available. If one ambulance was left for referral, the remaining would serve until the one that went for referral returns. For example, in our hospital, there was a maternal death secondary to uterine rupture that needed a referral for blood transfusion in our hospital while waiting for the return of the ambulance from referral." P3FDg.

"…Sometimes, there was the time when ambulance serving kabine, during security problems; even though the mother was bleeding or needed urgent referral to save her life. The main point I wanted to raise was not the ambulance never serving kabine, but primarily the ambulance should give priority to labouring mothers." P30MDg.

"Currently, the ambulance service was becoming a business centre. When they come from health centres, they transport the referred labouring mother or patient to hospitals. But, when they return from hospitals to health centres, they do not return to health centres until they cared for people up to 200 ETB per individual. This business was worked with the collaboration of drivers and health care providers." P27MDg.

- **Referral services**

The presence of referral services in health institutions was among the elements that affected the improvement of the quality and utilisation of maternal health care services. The following verbatim quote evidence this:

"As a health care provider, good quality of care was not only providing services in health facilities but also identifying and offering referral services for mothers without delaying in health facilities in case of emergency." P22MDg**.**

4.8.2.6 Category 4.1.6: Lack of health education programs

Lack of health education programs in health facilities was among the variables that affected the quality and utilisation of maternal health care services. The FGD participants reported that to improve the quality and utilisation of maternal health care services, health education should be provided in the healthcare facilities in addition to the community level by health extension workers. The following statements witnessed this:

''In hospitals, I can say confidently there were no health education provisions and programs. To enhance the quality of maternal health care services, health education programs should be available in the hospitals to create awareness of maternal health care services. At the community level, I knew health education was given by health extension workers, but that was not enough to raise awareness of maternal health care services and improve their quality'' P4MDg**.**

"…Hospitals should have programs of health education, even at the community level, especially for problems related to delivery and the postnatal period. For instance, in Ethiopia, maternal health care services like ANC, health facility delivery, postnatal care services, and others were increased. These improvements were documented because of the introduction of new processes, and there have been improved things starting from the lower level and community awareness by health education.'' P18FD.

4.8.3 Theme 4.2: Problems mothers have in the community related to maternal health care services

This theme presented factors that affected the improvement of the quality and utilisation of maternal health care services in the communities. Community-related problems, reasons related to the mothers' distance, and access to transportation were the variables that affected the quality of maternal health care services in health facilities.

4.8.3.1 Category 4.2.1: Community-related problems

The results of the current investigation indicated that community-related problems were among the factors that affected the quality and utilisation of maternal health care services. In current study, it was indicated that in the community there were low community awareness, lack of community participation, lack of health education at the community level, and bad attitude of the community towards the utilisation of maternal health care services were the factors that affected the quality of maternal health care services in the communities.

- **Low level community awareness**

Participants in the current study experienced a low level of community awareness towards maternal health care services among the factors that affect the quality and

utilisation of maternal health care services in the community. The reports from midwives indicated that there was good awareness of the utilisation of ANC, and giving birth within health facilities, but there was a very low level of awareness of the community towards the utilisation of postnatal care. The following excerpts from the midwives corroborated this:

''Currently, awareness of the community on maternal health care services utilisation was increased. Most women thought that following ANC, giving birth within a health facility was safe for them and their new-borns. After they gave birth safely in health facilities, they recommended services for others to utilise it.'' P18FD**.**

''…Their confidence in the health care providers was now becoming better after they had safe delivery for many women. But other services like utilisation of postnatal care, were very low. In our hospital, we would discharge the women after six hours. In addition to this, the community had a low level of awareness. In most areas, if there is no ambulance service, they did not want to go to the hospital.'' P1MDg**.**

''*…So, postnatal care services were ignored service not within the community but also within hospitals. In addition to this, the community had a low level of awareness of postnatal care services.''* P3FDg**.**

''*…After delivery, the intention of the family was to be discharged early. We were also doing that to reserve beds for other labouring mothers, due to a lack of beds. After they were discharged, no one gave an appointment for postnatal care, unless mothers came for any complications during the postnatal period, neonatal vaccination, and family planning service.''* P2MDg**.**

- **Attitude of the community towards the utilisation of maternal health care services**

This study showed that there were gaps in the attitude of the community towards the utilisation of maternal health care services. It was indicated that lack of confidence from some health care providers, looking at the medical health facility delivery as socially

unacceptable, and lack of a good attitude towards the utilisation of maternal health care services were variables that affected the quality of maternal health care services in the community. The following statements from FGD participants affirmed this:

"Regarding maternal health care services, there were still gaps in the attitude of the community towards the utilisation of these services within health facilities. They thought that if there were no problem, a woman could give birth safely in her home." P4MDg*.*

‘‘…. *When we asked why they did not give birth within health centres, they said we did not have confidence in some health care providers' skills.’’* P6FDg*.*

"Some societies thought that giving birth in a medical facility was considered socially unacceptable according to their culture. They said, our mothers gave birth safely to all their children without any complications... complication related to birth was a recent problem after women started to utilise health facilities for delivery.’’ P7MMSc.

- **Lack of community participation**

The current study revealed community participation as very important for the utilisation of maternal health care services, especially for delivery. For instance, the community could help the labouring mother by carrying and transporting her to the health facilities. Lack of community participation influenced the delivery of quality maternal health care services. The FGD participants mentioned these statements:

"Lack of community participation affected all maternal health care services, especially institutional delivery.’’ P8MDg.

"In Ethiopia, utilisation of maternal health care services like ANC, health facility delivery, postnatal care services, and others was improved. These improvements were documented because of community participation... Therefore, factors related to the improvement of the quality of maternal healthcare services could be improved at their roots if the focus was given by the government to community participation at the lower level.’’ P16MDg.

"At the community level, I knew health education was provided by health extension workers. That was not enough to raise awareness of maternal health care services and improve their quality. Hospitals should have programs of health education, even at the community level, especially for problems related to delivery and the postnatal period." P12MMSc.

"When the family went to the hospital or health centre for skilled birth attendants' delivery services, the community may support the woman by taking care of the other children and household assets at home.

." P29FD*.*

- **Lack of health education at the community level**

Lack of community-level health education is one obstacle to improving the quality and uptake of maternal health care services, according to the study's findings. When compared to the previous ten years, community-level health education is currently declining. The following statements were brought forward by the FGD participants:

"At the community level, there were mothers who accepted delivering a baby at home as the trend and living with complications happened after childbirth at home, making others not utilise institutional delivery services. Therefore, to solve these problems, health education in the community was very important." P23FDg.

"Currently, lack of health education at the community level was an obstacle to enhancing quality and utilisation of maternal health care services." P24MDg*.*

"…Health extension workers provided health education before. *But currently, when we look at the available problems with health education provided by health extension, it is not comparable and not enough as per problems."* P31FDg*.*

"Health education programs at the community level were very low when we compared them with the last 10 years. Therefore, health workers at the level of medical health

facilities should educate the community about the importance of ANC, health institution delivery services, and utilisation of postnatal care services utilisation.'' P10MDg**.**

4.8.3.2 Category 4.2.2: Reasons related to the mothers

In this category, midwives reported that the quality and use of maternal health care services in the health facilities were influenced by the status of mothers in the community, including their educational and economic standing as well as their experiences using these services.

- **Academic status of mothers**

The current study found that one of the elements influencing the quality of maternal health care services provided in the facilities was the mothers' academic standing in the community. The following statements were brought forward by the FGD participants:

"In communities, there were many misconceptions regarding maternal health care services. These misconceptions affected uneducated mothers, who did not utilise maternal care services because educated mothers were not affected by all these misconceptions. They did not accept all information heard from the different sources without verification.'' P15MDg**.**

''….in a community where there were educated mothers, even attended primary education, you observed that there was improved antenatal care and skilled birth services utilisation.'' P21FDg**.**

- **Economic status of mothers**

The current study identified the economic dependence of mothers on husbands as a factor affecting provision of quality maternal health care services. The FGD participants evidenced this:

‘‘Reasons related to finances: the majority of women do not have a birth preparedness plan and available funds during labour and delivery time.’’ P17MDg**.**

‘‘In our rural community, most women could not make decisions about their health conditions and where to go during labour and delivery without their husband’s permission. Even if they could make the decision, they did not have money for transportation or fees for other services.’’ P22MDg**.**

‘‘…. During antenatal care services, we provided advice on birth preparedness and complication readiness plans. During this time, most of the mothers complained that lack of money was their main challenge for this preparation unless their husbands accepted it.’’ P25FD*.*

- **Experiences of mothers with the utilisation of maternal health care services**

According to the current study, one of the elements influencing the community's ability to improve the quality of maternal health care services was the existence of experienced mothers who used these services. The FGD participants mentioned the following statements:

‘‘To increase mother’s utilisation of institutional delivery services, we should provide quality care for those mothers who came to utilise the services, for two reasons:

1. *If they experience a good quality of care, they would come again for other services. Because they experienced no complications for them and their new-borns. Therefore, they thought that, if they delivered in a health facility, their health, and their new-borns' outcome would be good.*
2. *They recommended the services for others to utilise. So, after that, they were our ambassadors in the community for all other maternal health care services.’’* P34MDg**.**

4.8.3.3 Category 4.2.3: Distance and access to transportation services

The current study revealed that distance and access to transportation services of the community to health facilities were among the variables that affected the quality and utilisation of maternal health care services provision. It was indicated that due to these factors, most mothers developed complications related to childbirth. Health care facility distance, access to transportation, and security issues were identified as the factors that affected the utilisation of maternal health care services under this category.

- **Health facility distance**

The results of this study showed that one of the factors influencing the increased quality and use of maternal health care services was the distance between medical facilities and the communities. As a result, most mothers experienced delivery-related difficulties while travelling before arriving at medical facilities. The FGD participants mentioned the following statements:

‘‘The mothers who were referred from far Woreda health centres did not arrive on time. They would reach our hospital after their labour was prolonged for more than 24 hours, develop an infection, severe bleeding, and develop convulsion and coma from severe pre-eclampsia and eclampsia. Most of the mothers died before reaching our hospital.’’ P11MDg*.*

‘‘Even the ambulances working on this road did not function for more than one month; they would look for maintenance after they served a few months.’’ P40MDg.

- **Access to transportation**

According to the current study's findings, one of the elements influencing the delivery of high-quality maternal health care services was the availability of transportation from the communities to healthcare institutions. The following statements were brought forward by the FGD participants:

‘‘… at the community level, many kebeles have no access to roads, which are very wide, and women are required to travel for more than one hour through carrying to access the roads.’’ P14FDg.

"When we asked mothers, who came from far Woredas, the reason for their delay was due to a bad road. To reach our hospital, they paid money for a car, about 10,000 birr, for one trip up to Dodola Hospital.’’ P10MDg.

- **Security issues**

It was indicated that midwives were worried about issues of security related to maternal health care services. Currently, in health centres, not only labour and delivery services but also services like ANC and postnatal care services were almost non-existent due to security reasons**.** This was mentioned by the FGD participants as follows:

"Currently, due to security issues, there is a problem with transportation. In this town, after 6:00 PM hours, it was not allowed to move for public transportation... In rural areas, except on market day, there was no public transportation at all. For delivery service, families carrying mothers’ distance more than 15 kilometres on foot to reach this health centre.’’ P26MD.

‘‘Services like ANC and postnatal care currently, almost none…women feared to go that long distance on their foot to take services. During the night-time, even families could not take labouring mothers to health facilities due to fear of their security reason. As skilled birth attendant, I could say it was the worst time we had. Therefore, maternal health care services had decreased more than at any time since I started working here as a health care provider.’’ P33MDg**.**

4.8.3.4 Category 4.2.4: Socio-cultural factors

The current study findings highlighted those socio-cultural factors, such as culture, religious beliefs, and traditional practices, as significantly influenced by the improvement of maternal healthcare services in the community.

- **Community culture**

In the current study, the FGD participants highlighted how the culture of the community significantly influenced mothers' choices and behaviours concerning maternal health care services. The FGD participants mentioned the following statements regarding the influence of culture on maternal health care:

"In some communities, culture discouraged mothers from utilising maternal health care services, such as delivery, if the cultural norms promoted home delivery. If mothers gave birth at home, there was a cultural celebration for the delivered child, but if it was a health facility, they did not do that. For these reasons, many women did not prefer to come to the medical facility for skilled delivery services, especially mothers from rural communities.'' P2MDg.

"Another reason why mothers did not utilise maternal health care services like delivery was that in some societies they thought that giving birth in a health facility was considered socially unacceptable according to old sayings. They said our mothers gave birth to all their children without any complications. These community's cultural norms might prioritise traditional birth attendants over skilled healthcare professionals''. P7MMSc.

- **Mothers' belief**

The current study shows that the cultural beliefs of mothers often override the importance of seeking professional medical assistance during childbirth, and it was among the

factors that affect the quality and utilisation of maternal health care services. The FGD participants evidenced the following statements:

‘‘Some women believe that complications related to birth were a recent problem after women started to utilise health facility delivery after their uterus and birth canal were opened and health care providers inserted their hand; if they had given birth at home, these problems might not have happened. The traditional customs and rituals associated with childbirth might affect mothers from utilising proper healthcare facilities.’’ P5FDg.

‘‘Sometimes there was a time when Traditional Birth Attendants (TBAs) referred mothers to health facilities and came with them. During this time when we advised them, they asked TBAs to do that; this showed in the community TBAs were highly respected and trusted figures. They were seen as more knowledgeable and skilled in assisting with childbirth than skilled health care providers.’’ P12MMSc*.*

- **Mothers’ religion**

The results of this study showed that one of the elements influencing the quality of maternal health care services was the mothers' religion. The FGD participants discussed religious beliefs and practices also as having an impact on mothers' decision-making process about using maternal healthcare. The FGD participant stated this:

"In some rural areas, there was a time when there was a labouring mother in the home for more than 24 hours. Her religious followers gathered and prayed for her to give birth. Due to this, most of the time, the mother came after she developed an infection and intrauterine foetal death due to delay at home. Even last year there was a maternal death in one kebele after the woman was bled severely in her home.’’ P12MMSc.

- **Traditional practices**

The study participants discussed that traditional practices in the community were among the factors that affected the improvement of the quality of maternal health care services. Moreover, they also indicated that these traditional practices hinder mothers from

utilising maternal health care services from qualified medical professionals in the health facilities. The following statements supported this:

"In our community, after delivery, porridge for the mother was prepared. The family and the neighbours brought food and coffee after delivery and celebrated at home after the mother gave birth. But if it was in a health facility, all these were not available. I thought this also might affect mothers' maternal health care services utilisation and its quality improvement." P27MDg.

"During labour and delivery time, TBAs might use herbs, massages, and other techniques to facilitate the birthing process; these practices made mothers dependent on it instead of seeking skilled birth attendants." P28MDg.

4.8.4 Theme 4.3: Reasons for non-utilisation of maternal health care services

This theme focused on reasons for the non-utilisation of maternal health care services in medical health facilities. They included socio-cultural factors, women-related factors, the experience of maternal health care services utilisation, transportation-related factors, health facility-related factors, respectful maternity care, and health care provider-related factors. The FGD participants reported that these factors affected mothers' utilisation of maternal health care services.

4.8.4.1 Category 4.3.1: Socio-cultural factors

In the current study, socio-cultural factors like inequality of males and females in the community, community beliefs and traditional practices, stigma and discrimination, as well as communication and language obstacles, have been identified as sociocultural variables that contribute to the underutilisation of maternal health care services.

Inequality of males and females in the community

The study participants discussed that in the community, if equality of males and females was not assured, it might result in non-utilisation of maternal health care services by mothers in the communities. Mothers could not make decisions independently due to their dependence on males. The participants discussed the following statements:

"In our country, there has been progress in empowering women to make choices regarding their well-being, including maternal health care services. However, in rural and uneducated communities, there was still a gap in decision-making regarding health. If inequality between males and females in the community was not guaranteed, it might result in non-utilisation of maternal health services. Women in these communities were unable to independently decide to access maternal health care services such as antenatal care, labour and delivery, and postnatal care without the interest of their husbands.'' P18FD.

"In our society, the dependence of women on their husbands for accessing maternal health care services was common for most women. In our rural community, most of the women are unable to independently decide on their preferred location for childbirth without their husbands' involvement. Furthermore, even if they could make such decisions, financial constraints prevent them from affording transportation expenses and other necessary fees associated with these services.'' P19MMSc.

- **Community beliefs and traditional practices**

The participants in the FGD mentioned that, based on their experiences as midwives, they have observed that many mothers place a great deal of importance on community beliefs and practices. These beliefs and practices influence their perception of maternal health care services and often lead them to prefer giving birth at home. This statement was supported by the following quotes:

''In my experience as a midwife, I have observed that in rural and uneducated communities, in addition to what my friends mentioned, socio-cultural elements like

community beliefs and traditional practices often influence the perception of women regarding the utilisation of maternal health care services. In some communities, even, they trusted traditional birth attendants more than us to utilise these services at home because they totally depended on traditional beliefs and cultural practices." P22MDg**.**

"In many cultural communities, it was deemed socially acceptable to give birth in one's own home. When a mother gave birth at home, there was usually a cultural celebration to honour the arrival of the newborn. However, if the birth took place in a health care facility, such celebrations were not held. Due to these reasons, many mothers from rural communities chose not to opt for healthcare facilities when it came to delivering their babies." P24MDg**.**

- **Stigma and discrimination in the community**

This study highlights that stigma and discrimination associated with pregnancy status, such as pregnancies outside of marriage or resulting from sexual violence, also impacted the delivery of maternal health care services in communities. This sentiment was supported by the following statement:

"In our community, due to stigma and discrimination, mothers with pregnancies outside of marriage, pregnancies resulting from sexual violence, and teenage pregnancies might not utilise maternal health care services like ANC and delivery unless they develop complications. Even the family hid them in the home until they gave birth during the pregnancy period." P21FDg**.**

- **Language and communication barriers**

Language and communication barriers could have made it difficult for women to communicate their needs and concerns to healthcare providers, leading to a lack of understanding and inadequate care. The study participants indicated that language and communication barriers influenced the quality and utilisation of maternal healthcare services in health institutions. The study participants mentioned the following ideas:

‘’…. As I said, health care professionals needed to be able to communicate with patients in their own language. How could you discuss a mother's health and the health of her unborn child with her while she was in labour if you didn’t speak the same language as her? The level of services might be compromised as a result.’’ P30MDg**.**

‘’Before two years, a patient with a prolonged second stage of labour who had been sent from the Worka health centre was giving birth in this hospital. Her uterine contractions grew to three to five within 30 minutes after we added oxytocin to speed up her labour, but she insisted that we still perform a vaginal examination. We attempted to communicate with her using the native tongues of Oromo and Amharic, but she was unable to do so. She kept declining to have her PV examined. We afterward called her family to give her advice. Only one member of her family could communicate in Amharic. We informed them of everything that had occurred and gave them advice to consent to the PV process. Finally, among family members who could speak Amharic, he refused to speak with women, saying, "How do I speak with my wife's mother?" In conclusion, she gave IUFD in our hospital before she left, even though we had issued a referral letter to Hawasa Hospital due to her refusal to accept assistance.’’ P33MDg**.**

4.8.4.2 Category 4.3.2: Women-related factors

Under this heading, midwives discussed women’s knowledge of obstetric danger signs and complications, women’s attitudes about danger signs, and the autonomy of women in the community, were among the factors that affected women's utilisation of maternal health care services in the health facilities.

- **Women’s knowledge of obstetric danger signs and complications**

The study participants reported that women's awareness of obstetric warning signs and complications was among the factors that affected mothers’ utilisation of maternal health care services. The FGD participants mentioned this statement:

"In our rural communities still, there was a lack of knowledge on the importance of maternal health care services. Women might not be aware about the dangers of getting pregnant and giving birth or might not know where to go for the proper care. If they had knowledge of these danger signs, they did not wait until severely bled or developed convulsions at home." P35FDg**.**

- **Women's attitudes on danger signs and complications**

Based on the results of the investigation, one of the things that determined how well maternal health care services were provided to mothers was their attitudes toward using them. A midwife who participated in the study discussed the following statement:

"Mothers' use of these maternal health care services may be influenced by their attitudes on warning signals and complications during pregnancy, labour, and delivery, as well as the postnatal period. For instance, bleeding after childbirth during the postnatal period was taken as normal by many women." P39FDg.

- **Lack of autonomy of women**

The limited independence of women can greatly affect their use of maternal healthcare services. In areas where women have little control over their own decisions, this could lead to a non-utilisation of maternal health care services. The statements made by the participants during the FGD revolved around these issues:

"…. It was clear; women who lacked autonomy might face barriers in accessing and utilising maternal health care services. They might be unable to make decisions about their own health or face resistance from family members or partners, leading to delayed or inadequate care-seeking. Poorer maternal and newborn outcomes could arise from lost opportunities for early detection and management of problems. It also hindered or postponed getting help." P36MDg**.**

"Women who lack autonomy might have limited decision-making power regarding their own health and the health of their babies. This could result in a lack of control over

important decisions such as where to seek care, when to seek care, and what interventions to accept. This could lead to suboptimal utilisation of maternal health care services and potentially adverse health outcomes.'' P37MD**.**

''Women who lack autonomy might have limited access to information and education about maternal health care. This could result in a lack of awareness about the importance of antenatal care, skilled birth attendance, and postnatal care, leading to the underutilisation of these services. It also hindered their ability to make informed decisions about their own health and the health of their babies.'' P13FDg**.**

"In the communities where women who lacked autonomy might have limited access to financial resources, transportation, and other necessary means to access maternal health care services. This further exacerbates barriers to care-seeking and could result in disparities in maternal and neonatal health outcomes.'' P14FDg.

4.8.4.3 Category 4.3.3: Negative experience of maternal health care services utilisation

Current study findings revealed that mothers' experiences with the utilisation of maternal health care services were among the elements that affected their utilisation of maternal health care services. Mothers who had negative experiences of ANC follow-up, labour and delivery, and postnatal care had low interest in the utilisation of these services.

- **ANC follow-up experience**

Under this sub-category, the study participants discussed if mothers had a negative experience with ANC follow-up and felt discouraged or disengaged from the health care system, they would not utilise the services and may not attend future appointments for other maternal health care services. FGD participants mentioned these statements:

''The lack of ANC follow-up resulted in many women choosing not to give birth in hospitals or health centres. If they had access to ANC follow-up, they would be aware of

their gestational age and the expected date of delivery (EDD), allowing them to create a birth preparedness plan and deliver their babies within health care facilities." P34MDg**.**

"…. If women had a negative experience with ANC follow-up, such as feeling ignored or not receiving adequate care, they might develop a lack of trust in the health care system. It had long-lasting effects on women's attitudes and behaviours towards maternal health care. This can lead to a reluctance to seek out other maternal health care services, as they might fear similar experiences or believe that their needs would not be met." P39FDg**.**

"During ANC follow-up, health care providers gave health education, including prenatal education and support, providing women with important information and resources for a healthy pregnancy and childbirth. If mothers have a negative experience with ANC follow-up, they might disengage from these educational and support services, missing out on valuable knowledge and guidance. They might be more likely to experience problems that go unnoticed and untreated, which could have a negative impact on the mother and child." P22MDg**.**

- **Labour and delivery services experience**

The current study findings identified that if mothers have a traumatic experience during labour and delivery, feeling unheard or disrespected by healthcare providers, and if they are involved in unnecessary or unwanted medical interventions, it could lead to a fear or mistrust of medical interventions resulting in non-utilisation of maternal health care services in health facilities. The FGD participant evidenced this:

"If mothers had a traumatic experience during labour and delivery, such as difficult or prolonged labour, complications, or feeling unheard or disrespected by health care providers, it could significantly impact their willingness to sought out future maternal healthcare services. So, these might affect the mothers not to utilise maternal health care services in medical facilities by skilled health care professionals. These negative experiences during labour and delivery, particularly if they involved unnecessary or

unwanted medical interventions, could lead to a fear or mistrust of medical interventions.'' P17MDg**.**

4.8.4.4 Category 4.3.4 Transportation-related factors

This category includes characteristics that have been linked to mothers' failure to use maternal health care services, such as the lack of ambulance services, the distance to medical facilities, the high cost of transportation, and the absence of transportation.

- **Unavailability of ambulance Services**

Under this subheading category, study participants discussed the unavailability of ambulance services during emergency times as it might result in non-utilisation of maternal health care services like labour and delivery services from skilled health care workers at health facilities which led to adverse health outcomes or even death for mothers and newborn. The FGD participants' members mentioned these statements:

''It was clear availability of ambulance services for maternal health care could have a significant effect on the health and well-being of pregnant women and their new-borns. But the opposite of this, unavailability of ambulance services during emergency time might result in non-utilisation of maternal health care services like delivery services from skilled health care professionals at health facilities.'' P20MDg**.**

''Having access to ambulance services ensures that women could receive timely and appropriate care in case of complications or emergencies during labour and delivery. Delays in receiving emergency care due to unavailability of ambulance services could lead to not only non-utilisation of maternal health care services but also cause adverse health outcomes or even death.'' P21FDg**.**

''If there was no ambulance service, you did not have the confidence to admit mothers at the health centre level, but if there was emergency transportation available, it could

help you to alleviate fears and concerns among pregnant women, encouraging them to sought maternal health care services without hesitation. Thus, this might result in more prenatal care, competent birth attendance, and postnatal care being used, which would eventually improve the health of mothers and new-borns." P23FDg**.**

"In Ethiopia, especially in rural or areas far from health facilities, there was limited availability of ambulance services for maternal health care service. This could pose a significant barrier to mothers seeking timely and appropriate care during labor and delivery, especially in cases of complications or emergencies. Therefore, I could say confidently the fear of not having access to emergency transportation could discourage mothers from seeking out maternal health care services altogether in our country." P24MDg**.**

- **Long distances to health facilities**

Current study findings revealed that long distance to health facilities was among the elements that influenced mothers not to utilise maternal health care services. Women who lived far away from health facilities might face challenges in obtaining services for maternal health care. The long distances could make it difficult for them to travel to health facilities, especially if they did not have access to reliable transportation. This could result in delayed or missed prenatal care visits, limited access to skilled birth attendance, and inadequate postnatal care. The FGD participants discussed these statements:

'In our health centre, mothers who lived far away from the health centre were not utilising maternal health care services like ANC, contraception and immunisation services except during market day because it is far from a medical institution. During this day it was common to see many mothers waiting for services." Even some of them left without getting services on the same day secondary to many mothers utilising these services only on market day only." P25FD**.**

"For labour and delivery services, as I said now, they did not come to utilise labour and delivery services unless mothers developed complications. These long distances to

health facilities could increase the potential for complications during pregnancy and delivery Therefore, mothers who were unable to access timely and appropriate care might not receive necessary interventions or treatments to manage complications, leading to poorer maternal and neonatal outcomes." P27MDg*.*

- **High transportation costs**

The current study showed that mothers who lived far away from health facilities might incur high transportation costs when seeking maternal health care services or being referred to hospitals from health centres for services like labour and delivery. This could be a significant financial burden, especially for mothers from low-income households. This cost of transportation might prevent mothers from utilising skilled delivery services or force them to prioritise other expenses over their own health. The FGD participant mentioned the following opinion:

"When we asked mothers, who came from far Woredas; the reason for their delay was due to a bad road. To reach our hospital they paid money for rent car about 10,000 birr for one trip up to Dodola Hospital. Even if they used Isuzu as transportation meant by incur this high price cost. So, how mothers could utilise labour and delivery services with this cost? Those mothers, who experienced complications during their last delivery, they rent a home near the hospital before labour started." P9FDg*.*

- **Lack of transportation**

This study findings indicated that mothers who lacked transportation might struggle to attend regular prenatal care visits. This could lead to lost chances for early diagnosis and management of pregnancy complications, as well as inadequate monitoring of maternal and fetal health and limited access to skilled birth attendance. Lack of transportation could make it difficult for mothers to reach health facilities in time for delivery. This increased the risk of poorly attended births, which could lead to maternal and neonatal complications and even death. The FGD participants mentioned the following ideas:

"…. another problem our hospital was faced with issues related to non-utilisation of maternal health care services is lack of transportation. For example, during the summer season, the road was not well functioning. Due to these mothers who could not utilise ANC services for early identification and management of pregnancy complications from areas where there was a lack of transportation." P1MDg.

"The mothers who were referred from far woredas health centres did not arrive on time. They would reach our hospital after their labour was prolonged for more than 24 hours, developed an infection, severe bled, and developed convulsion and coma from severe pre-eclampsia and eclampsia. Most of the mothers died before reaching our hospital. Even the ambulances working on this road did not function for more than one month; they would look for maintenance after they served for few months." P6FDg**.**

"….in the areas where there was lack of transportation, after childbirth, mothers might face challenges in accessing postnatal care services, such as check-ups, immunisations, and breastfeeding support." P8MDg**.**

4.8.4.5 Category 4.3.5: Health facility-related factors

Under this category, health facility-related factors like inadequate infrastructure, lack of emergency obstetric care, lack of cultural ceremony in health facilities, medical supply-related factors, and availability of water and electricity were identified as the major factors that affected mothers not utilising maternal health care services in the health facilities.

- **Inadequate infrastructure**

The current study findings revealed that inadequate infrastructure affected mothers' utilisation of maternal health care services. If there was inadequate infrastructure quality of maternal health care services was compromised. This resulted in distress and discomfort for mothers during labour and delivery, breach of privacy, and confidentiality, and increased risk of infection. The FGD participants evidenced these statements:

"In the hospital, if there was inadequate infrastructure, as midwives we had no choice other than to admit many labouring mothers in a single room without proper partitions, which compromised their privacy. This could cause distress and discomfort for mothers during labour and delivery, leading to increased stress levels and potentially hindering the progress of labour…." P10MD**.**

"In the facility where there was no adequate infrastructure; there was no separate room for labour and delivery, as a health care provider we could not take appropriate measures to ensure confidentiality, so, during care provision mothers might feel exposed and vulnerable during labour and delivery. This could lead to a breach of trust between healthcare providers and patients, as mothers might be reluctant to share personal information or discuss their concerns openly in front of other mothers." P11MDg.

"….in the facilities where there was inadequate infrastructure, such as overcrowded rooms or lack of separate areas for different stages of labour, could increase the risk of infections spreading between mothers. This not only endangered the health of the labouring mothers but also posed a threat to their newborns." P14FDg**.**

- **Medical supply-related factors**

Under this subcategory, the participants indicated that medical supply-related factors were identified as major factors that affected mothers not utilising maternal health care services in the health facilities. They discussed that insufficient medical supplies could lead to delays in necessary interventions or treatments, increasing the potential for complications during childbirth. The participants indicated the following statements:

"Under our catchment areas, within the community; mothers' were informed that services like; ANC, labour and delivery, and postnatal services were free services. However, practical mothers were paid for services to buy medication and medical supplies if not available within hospitals. They asked us; why we bought medication and medical supplies from outside. They were disappointed on midwives, as they prevented them not to using medication freely within hospitals. Therefore, medication and medical supplies

should be available adequately within health institutions to minimise the complaints that arose from mothers. Otherwise, this could prevent them from not utilising services from skilled health care providers." P26MD.

"…. if there was a shortage of blood transfusion supplies, women with APH or postpartum haemorrhage might not receive the life-saving treatment they needed in a timely manner. For example, there were many times when we referred mothers to Hawasa Referral Hospital or Shashemane Comprehensive Specialised Hospital due to lack of blood transfusion supplies or lack of equipment or equipment was not sterile for OR." P14FDg**.**

"In the health centre, there was a time when we referred mothers to the Hospital after delivery due to a lack of emergency equipment, such as resuscitation devices or neonatal intensive care units (NICUs). This could delay or limit the ability to provide immediate care to new-borns that require critical interventions, increasing the risk of adverse outcomes. This made mothers to not be confident in utilising delivery services in the health centre as these problems were the midwives." P40MDg**.**

- **Lack of emergency obstetric care**

Participants indicated that lack of emergency obstetrics care services like cesarean section or blood transfusions prevents mothers from utilising maternal health care services. Study participant mentioned the following statement:

"In our country, health facilities that provided emergency obstetric care were often located in urban areas or regional centres, which might be far away from rural or remote communities. This long-distance could result delays in seeking emergency obstetric care, raising the risk of morbidity and mortality among mothers and new-borns. Therefore, near to communities in remote areas, if emergencies obstetric like caesarean section or blood transfusion available, mothers could utilise these maternal health care services." P3FDg.

- **Lack of cultural ceremony in health facilities**

Lack of cultural ceremony in the health facilities were found to be an important factor that affected mothers as not utilising maternal health care services. This cultural ceremony played a significant role in many communities, providing a sense of identity, belonging, and connection to traditions and customs. The absence of these ceremonies in health facilities could result in a loss of cultural identity for mothers during labour and delivery, potentially impacting their emotional well-being and overall birth experience. Study participants mentioned the following statements:

*"In our communities there were many cultural ceremonies. For example, during labour and delivery time, before and after childbirth there were ceremonies which they celebrated as their religion and culture. But in health facilities, all these were not available for them. I thought these might be the reasons why many mothers did not utilise institutional delivery services."*P5FDg*.*

*"…in the communities, during labour and delivery, these cultural ceremonies often served as a source of emotional support and reassurance for mothers in labor. Without these ceremonies, mothers might experience increased anxiety and stress, leading to a more challenging labor experience and potential negative outcomes. For example, during labour the woman's husband was ordered to remove his belt, as this might ease woman's labor progress and pain."*P39FDg*.*

- **Availability of water and electricity**

The participants discussed that lack of availability of water and electricity in the health facilities affected mothers not to utilise services for maternal health care. The following statements supported the findings:

"In this health centre, no shower for mothers after delivery, even for the health care providers' water was not available to wash our hands before and after the procedure as standard. So, how a mother could use clean delivery services in health facilities where

there is no water? This makes mothers not utilise health facility delivery services.'' P38FDg**.**

As everybody knew, electric power was important for health facilities to carry out their duties. But most of our health facilities did not have stand by generators. Due to this, during nighttime, we were forced to give services with hand manual light.'' P37MD.

4.8.4.6 Category 4.3.6: Lack of respectful maternity care

Under this category, woman friendly services, labour companionship, lack of privacy and confidentiality and position during labour and delivery were identified as factors that affected mothers not to utilise services for maternal health care.

- **Woman-friendly services**

This study reported that mothers' friendly services emerged as the factors that affected mothers not utilising maternal health care services in health facilities. It indicated that mothers were more interested in health care providers' behaviour to utilise maternal health care services than their good skills. The participants verbalised this:

''During maternal health care services, even more than other health care services provision; mothers require respectful and compassionate care from healthcare providers. Unfortunately, some providers might possess good technical skills but lack respect for women. This might be preventing mothers from utilising these services again.'' P2MDg**.**

''…for instance, during the labour and delivery process, there were instances where birth attendants physically harm labouring mothers by slapping, pinching, pushing, or even beating them if they did not comply with their instructions.'' P5FDg**.**

''This mistreatment discouraged women from utilising labour and delivery services. Consequently, to enhance the quality of maternal healthcare, it was imperative for healthcare providers to treat women with empathy and dignity.'' P7MMSc**.**

- **Lack of labour companionship**

The findings of current study showed that one of the elements affected mothers' utilisation of maternal health care services was the absence of labour companionship during labour and delivery. Their family provided them with comfort during the labour and delivery phase at home, but their inability to find labour companionship in the medical facilities hindered their ability to use the competent delivery services available there. The following statements were brought forward by the FGD participants:

"During labour at home, mothers received reassurance and support from their mothers, mothers-in-law, and traditional birth attendants who helped alleviate labour pain. However, in health facilities, it was not permitted for family members to enter the labour wards with labouring mothers in our hospital due to limited space and overcrowding." P13FDg**.**

"…. This restriction might discourage mothers from choosing health facilities as their preferred birthing settings." P15MDg**.**

Lack of privacy and confidentiality

According to the current study's participants, mothers' use of trained healthcare providers' maternal health care services in medical facilities was impacted by the lack of privacy and secrecy during labour and delivery. The following concepts were brought forward by the FGD participants:

"In our hospital, we often had to accommodate multiple labouring women in a single room, making it difficult to ensure privacy and confidentiality. Women could be hesitant to utilise our delivery services again if we do not employ curtains, doors, screens, and separate rooms to guarantee environmental privacy and confidentiality." P20MDg**.**

"The lack of privacy and confidentiality could contribute to negative birth experiences for mothers. This could lead to feelings of disempowerment, trauma, and dissatisfaction with the care received. Such negative experiences might deter mothers from seeking health

care services in the future, potentially leading to delayed or inadequate care during subsequent pregnancies." P23FDg.

- **Position during labour and delivery**

In this study, position during labour and delivery emerged as the factor that affected the utilise of expert delivery services by women in medical institutions. The study participants indicated that during labour, they instructed mothers lie on their left lateral and lithotomy positions during delivery, which were comfortable for them, but uncomfortable and embarrassing for mothers. The FGD participants explained the following:

"When mothers gave birth at home, they had the freedom to assume the position they desire. Unlike in health facilities where labouring mothers were often instructed to be in a lithotomy position during the second stage of labour, which could be monotonous for most mothers." P15MDg**.**

"By giving birth at home, mothers had the flexibility to sleep in a supine position or on their lateral sides whenever they wished and proceeded with the birthing process. The position we recommended most of the time during labour and delivery was good for us but not good for mothers, it even embarrassed them." P28MDg**.**

4.8.4.7 Category 4.3.7: Health care providers-related factors

The study's findings demonstrated that issues related to health care providers were one of the reasons why mothers did not utilise maternal health care services. These factors encompassed a lack of essential skills, knowledge, and positive attitude among healthcare providers, a scarcity of midwives, a lack of interest in the midwifery profession, the availability of health care providers during labour and delivery, insufficient training, inadequate service provision, and health care workers declining to offer services outside of their regular working hours. The participants in the FGD made the following statements:

- **Lack of necessary knowledge**

The participants in the FGD highlighted the significance of health care workers possessing both the essential expertise and a positive demeanour towards mothers. They expressed that if healthcare providers displayed a negative attitude or neglect toward mothers, it might discourage them from obtaining services related to maternal health care. The participants emphasised that mothers placed greater value on a health care provider's attitude rather than their skills. Additionally, they stressed the importance of health care providers offering equal attention and care to all mothers, particularly during busy periods, to prevent any perception of negligence or unfavourable behaviour. The following statements evidenced this:

‘‘From health centres, there was a time when mothers were unnecessarily referred from the health centre to the hospital without a start of labour, even there was a time when mothers with closed cervix were referred to the hospital as a prolonged 1st stage of labor…These mothers returned to their homes by their expense and were disappointed with our health facilities’ services.’’ P4MDg**.**

"Some health care providers lacked the knowledge and skills to manage complications that may arise during labour and delivery. For instance, there was a health care provider who was unable to handle a retained placenta and then resulted in bleeding. In our hospital, there was a recent maternal death related due to a retained placenta. So, training was crucial for these medical professionals to enhance the quality of care during childbirth." P5FDg*.*

‘‘…there was a time when mothers were admitted with abnormal labour at the health centre due to a lack of necessary knowledge to identify abnormal labour and delivery and refer the woman after she developed complications.’’ P8MDg**.**

- **Lack of necessary skills**

During FGDs, some participants mentioned that there have been cases where mothers were sent to hospitals from health centres even though they were not showing any signs of going into labour or having a closed cervix. This resulted in disappointment and dissatisfaction with the assistance of the medical facilities, which led to the underutilisation of maternal health care services from qualified health professionals. Additionally, the lack of necessary skills to manage complications during labour and delivery was also found to be a determinant of the utilisation of skilled birth attendance services. If a mother was satisfied with the health care provider's skills, she would be more likely to return for other maternal care services and recommend them to others. However, if she was dissatisfied, she would not return for other maternal health care services and would not recommend them to others. One participant in the FGD expressed this sentiment with the following statement:

"Some health care providers lacked skills to manage complications that might arise during labour and delivery. For example, there was a health care provider who was unable to deliver the retained placenta and the bleeding occurred due to this…but, if the mother was satisfied by a health care provider's skill, she would return for other services and recommend services to others." P5FDg**.**

- **Health care providers attitude**

To enhance quality and utilisation of maternal health care services, health care professionals should abstain from negligence. If the medical staff at the facilities showed little concern for the mothers and had a negative attitude, mothers would not want to utilise maternal health care services. The FGD participants made the following claims:

''From health care providers, mothers needed a good attitude, not the good skill they had…so, if they had a bad attitude towards them, they would prefer to die than utilising services from them." P11MDg**.**

‘‘…in hospital, midwives were too busy with cases; during that time, they might never have given concern and attention to mothers in labour or the second stage and had complications. So, in such a situation, we should take care of all mothers within our ward, as it might be looking negligent and bad attitude toward them.’’ P16MDg**.**

- **Lack of midwives**

To improve the quality and utilisation of maternal health care services, skilled birth attendants who have received the necessary education and training are required to manage uncomplicated pregnancies, childbirth, and the immediate postnatal period. They are also required to identify, manage, and refer complications in women and new-borns. Therefore, the lack of midwives or skilled birth attendants with midwifery skills during childbirth was among the determinant that affected mothers' utilisation of maternal health care services. FGD participant mentioned the following statement:

‘‘…in our health centre, there was a midwives’ scarcity; due to that, there was a health care provider who was assigned night duty without midwifery skills to manage labour…that health care provider was unable to provide quality care for the mother.’’ P25FD**.**

- **Low interest in the midwifery profession**

The results of the current study demonstrated that one of the factors influencing the quality and utilisation of maternal health care services in health care facilities was a lack of interest in the midwifery profession. The study participants added that attention given by the government to health care providers was very low. Advantages and benefits packages were not given to health care providers. Many diploma midwives changed their profession. The FGD participants mentioned the following statements:

‘‘In Ethiopia, attention given by the government to health care providers was very low. Due to that, I, myself, did not have an interest in serving as a midwife. From the media,

the government talked about issues of maternal health care services…. practically on the ground, there was no attention given to those units and midwives.'' P9FDg.

''…Health care providers serving in maternal and child health units were not even considered as health care providers. There were no benefit packages for midwives. In the labour and delivery ward, I shored myself with blood; with all this tiredness, I could not pay even the monthly home rent I got with this profession.'' P29FD**.**

''…. In our Woreda, except for degree midwives, many diploma midwives changed their profession to another social department like economics and accounting due to low interest in the midwifery profession. Even these diploma midwives preferred to study degree in nursing, health officer, or pharmacy if they wanted to stay as health care providers. In the future, if this condition was not corrected many midwives would change their profession because of low payments not comparable to their tiredness.'' P27MDg**.**

- **Presence of health care providers around labouring mothers**

Consistent and regular follow-up and presence of health care providers all the time after the mother was admitted to labour or postnatal care services it enabled her to get services such as good advice, reassurance in case of labour pain, and other necessary care from the health care providers. It also enabled health care providers to detect and manage complications, which might arise during their stay in the health care facility. If health care providers were around the mother, they could provide services on time without delay. As a result, mothers were satisfied with the services they received for maternal health care. Thus, among the determinants influencing the utilise of maternal health care services were the absence of medical professionals for the postnatal period and after they admitted mothers during labour and delivery. One of the FGD participant mentioned the following idea:

''One day, one of our midwives' workers was assigned during pm time until other workers were returning from lunch…. We left one labouring mother on the bed, and we informed him to follow her until we came back. When we came from our lunch, he left some

elsewhere. The mother gave birth in bed, and she severely bled and was soaked with blood …her family also left her alone in the search for health care providers…These issues created a bad image and rumours within communities regarding our health centre and health care providers.'' P26MD*.*

- **Lack of training**

Some of the midwives in the current study expressed dissatisfaction with the lack of training they received in basic emergency obstetric and newborn care, which prevented them from providing high-quality maternal health care services in their medical facilities. Additionally, in certain situations, midwives with ultrasound training in obstetrics and gynaecology could provide treatment and management at health clinics. The FGD participants provided evidence for the following claims:

"From health centres; there were many mothers who were referred to our hospital without being given a first loading dose of magnesium sulphate that was needed to be administered at health centre level due the lack of training on magnesium sulphate management protocol." P4MDg*.*

"…some health centres birth attendants referred mothers with the prolonged second stage of labour, which could be managed at the health centre with vacuum extraction due to the lack of BEmONC trained health professionals at the health centre." P5FDg*.*

"In our hospital, it was common to see many women waiting for ultrasound examinations…most of those women came from health centres for ultrasound purposes which could be solved at health centres by providing short training for health care providers like midwives at the health centres level." P7MMSc*.*

- **Availability of health care provider during emergency time**

Study findings indicated that unavailability of health care professionals in the health institution during emergency time was among the factors that affected mothers' utilisation

of maternal health care services. One of the FGD participant mentioned the following statement:

"During one incident, the participants recalled a situation where they urgently needed an obstetrics and gynaecology specialist to attend to a mother in need. However, when they contacted the senior doctor on duty, there was no response. They then reached out to another senior doctor who informed them that he was not scheduled for duty that day. As a result, they had to transfer the mother to another hospital without the necessary referral paperwork, relying solely on the referral letter she had obtained from the health centre." P9FDg*.*

4.8.5 Theme 4.4: Strategies currently implemented within health facilities to improve quality and utilisation of maternal health care services

The strategies employed by health care professionals to enhance the quality and utilisation of maternal health care services were classified under this theme as outreach maternal health care services, cultural ceremonies at medical facilities, and supportive supervision.

4.8.5.1 Category 4.4.1: Supportive supervision

In the current study, participants said that supportive supervision through mentorship among health facilities could enhance the quality and utilisation of maternal health care services.

- **Mentorship**

In current study, participants discussed how mentorship has been an effective approach for enhancing the quality and utilisation of maternal health care services in their health

care facilities. They mentioned that the strategy involved connecting various health care facilities, from hospitals to health posts. By implementing the strategy, they had been able to address issues such as the lack of skills among midwives and other healthcare providers in the maternity unit, as well as problems related to delays in providing services when referring mothers from health posts to health centres or from health centres to hospitals. The following statements evidenced that:

"Our hospital was collaborating with other health centres to enhance the quality and utilisation of maternal health care services in our catchment area. We have implemented a mentorship program to address any skill gaps among midwives. Additionally, our midwives were providing support and guidance to midwives working in health centres, and we were also working on integrating health centres with health posts at the community level. This initiative had been supported by the Oromia Regional Health Bureau, which had allocated a budget for our mentorship activities." P16MDg*.*

"By using mentorship, we provided feedback for health centres for mothers they referred. After we started utilisation of the mentorship, the number of mothers referred from health centres without referral indication was reduced." P14FDg*.*

4.8.5.2 Category 4.4.2: Outreach maternal health care services

To enhance the quality, utilisation, and understanding of maternal health care services, the study's findings emphasised the significance of implementing outreach programs into place and fostering a friendly environment.

- **Providing outreach services for non-emergency obstetric**

The study identified providing outreach services for non-emergency obstetric services, like elective caesarean sections, as among the services provided at the community level

to increase community awareness of utilisation of ANC services. Study participants mentioned the following statements:

"At present, our hospital has initiated an outreach program in the health centres within our designated area. An example of that was the implementation of caesarean section equipment at the Kofale health centre. Instead of referring mothers to the hospital, our experienced gynaecologist and operating room team visited the health centre and performed caesarean sections when necessary. This approach had empowered the health centre staff to handle obstetric emergencies on their own. As a result, they had become the second health centre in the West Arsi zone to perform caesarean sections." P2MDg*.*

- **Outreach antenatal care services**

The study participants identified the provision of outreach ANC services in the community as important for the identification of congenital anomalies and medical problems during pregnancy, like pregnancy induced-hypertension, cardiac disease, and gestational Diabetes Mellitus (DM) at the community level to increase community awareness on the utilisation of ANC services. Study participant mentioned the following statement:

"Another outreach service we were providing for mothers was conducting mass pregnant women screenings in the communities. Through these screenings, we had identified numerous congenital anomalies and medical disorders that had increased awareness among both mothers and communities about the importance of utilising maternal health care services. As a result, there had been a significant rise in the utilisation of ANC services by mothers in our hospital and health centres within our catchment areas." P1MDg*.*

4.8.5.3 Category 4.4.3: Cultural ceremony in health facility

Participants in this group stated that the quality and utilise of maternal health care services were enhanced by the cultural ceremonies held in the medical facilities.

Preparation of porridge and coffee ceremony

Study participants mentioned that provision of cultural ceremony in the medical facilities enhanced the quality of maternal health care services and utilisation. That created a good time for mothers within health facilities for postnatal services in addition to skilled delivery services. The following statement from the participant supported that:

"At our health centre, we had implemented a program where we collected various types of grains and coffee from the community. After giving birth, we offered a special porridge and coffee ceremony to the mothers and their families. That had created a joyful and relaxed atmosphere, with families not feeling rushed to leave the health centre. The ceremony had brought great happiness to the mothers and their families. That allowed for more time for bonding and support during the postpartum period." P31FDg.

4.8.6 Theme 4.5: Strategies suggested to be put in place to improve the quality and utilisation of maternal health services

The following strategies were identified as potentially improving the quality and utilisation of maternal health care services under this theme: maternity waiting homes, community participation strategies, offering benefit packages to midwives, establishing emergency obstetrics and gynaecology triage, offering cultural ceremonies, offering incentive services, and investigating the reasons for home delivery for action.

4.8.6.1 Category 4.5.1: Community participation strategies

Community participation strategy through community structures like 1 to 5, gares and gottes, cultural ambulance services, and women development arms were identified as strategies that could improve the quality and utilisation of maternal health care services.

- **1 to 5, gares and gottes structures**

In this study, community structures like 1 to 5, gares, and gottes were mentioned as the best strategies to enhance quality and utilisation of maternal health care services at the community level. The FGD participants discussed the following statements:

"The discussion in 1 to 5, gares and gottes, focused on various health extension packages, particularly those related to maternal health care services. By forming and empowering these teams, it became more efficient to identify pregnant women and mothers within households and deliver the required services to them." P39FDg**.**

"One suggestion for community participation strategies was to strengthen the 1 to 5, gares, and gottes structures. By establishing and strengthening these teams, it became easier to identify pregnant women and mothers within homes and provide them with necessary services. For instance, if there were mothers within the group who utilised maternal healthcare services and had positive experiences with childbirth and safe birth outcomes, they could encourage others to do the same during their discussion in 1 to 5 team or gares." P22MDg.

- **Cultural ambulance services**

The study participants identified cultural ambulance services, or the qaresa, as the best strategy to transport labouring mother to health facilities or roads from remote areas not accessible to ambulance services or transportation. The FGD participants mentioned the following statement:

*"To increase the utilise of services related to maternal health care, community participation played a crucial role, particularly during the delivery process. For example, the community could assist labouring mothers by offering transportation to the health facility through cultural ambulance, or local known as '**Qaresa**'. During this service, communities had a team transporting mothers and those taking care of household responsibilities and looking after other children while the family was at the hospital or health centre for delivery."* P8MDg.

4.8.6.2 Category 4.5.2: Maternity waiting home

The participants revealed that the establishment of maternity waiting homes in hospitals was taken as a good strategy for improvement of quality and utilisation of maternal health care services for areas without road access or remote from hospitals.

- **Maternity waiting home**

The participants discussed the establishment of maternity waiting homes in areas that were not accessible to roads or transportation services that could enhance the quality and utilisation of maternal health care services. Moreover, they indicated that the availability of maternity waiting homes might increase mothers' utilisation of maternal health care services like skilled delivery services and postnatal care services. The following statement supported that:

"The establishment of maternity waiting houses close to hospitals was another crucial tactic in places lacking access to the road. By admitting women to these homes prior to the onset of labour, delays in getting to medical facilities might be minimised, and women may become more satisfied with maternal health care services. The midwives provided extremely careful follow-up and support from the moment the woman was admitted to the birth room, and we were promptly provided with answers for any issues that arose." P27MDg.

4.8.6.3 Category 4.5.3: Giving benefit packages for midwives

Provision of benefit packages for midwives from the government according to their commitment, might increase midwives' interest in their profession and provision of quality maternal health care services.

- **Giving benefit packages for midwives**

According to the current study's findings, offering midwives reward packages could be a strategy to boost their enthusiasm for their work and enhance maternal health care services.

. The midwives discussed that their current salary and duty payment did not congruent with their tiredness. The study participants discussed the following statements:

"As a solution to this problem, I suggested implementing strategies such as providing benefit packages to midwives by the government." P9FDg.

"…offering benefits, it would encourage more individuals to pursue a career as a midwife. Additionally, it was important for the government to deal with the problem of tiredness among midwives who worked long hours attending to labouring mothers. It could be physically exhausting to stand for 2-4 hours during delivery, leading to conditions like varicose veins." P13FDg**.**

- **Improvement of salary**

This study found that improvement of salary for health care professionals might increase the quality of maternal health care services. The study participants mentioned improvement of health care providers' salaries as a initiative to enhance the quality and utilisation of maternal health care services as follows:

"At present, health care providers who resided in rented homes face a challenge as the cost of housing exceeded their salary. This raised the question of how we could enhance

the quality of maternal health care services when health care providers were struggling to make ends meet. Our current salary was insufficient to cover daily expenses, and we were unable to afford our children's school fees with that income. Furthermore, it was disheartening to see individuals in other professions earning higher salaries than midwives who worked directly in health care facilities. While I understood that those individuals might deserve their benefits, it was crucial that midwives were also compensated for their hard work and fatigue." P19MMSc.

"The community could receive quality care and be satisfied with the services provided to them only if health care providers were content with their profession, received a sufficient salary, and had benefits packages that acknowledged their tiredness in healthcare facilities. If a health care provider is unhappy, they would not be able to provide good care for the community. In my opinion, the strategies implemented by the current government for healthcare providers, particularly midwives, were inadequate." P16MDg**.**

- **Improvement of night duty payment**

The findings indicated that one of the perceived barriers that influenced the quality and utilisation of maternal health care services was the lack of improvement of night duty payment. The study noted that midwives could provide quality maternal health care services if those benefits improved for them as a strategy. The FGD participant explained the following:

"Most midwives were disillusioned with their profession. As a result, it was unrealistic to expect quality care from such healthcare providers, and that posed a barrier to the delivery of high-quality maternal health care services. In health centres, even cleaners and cashiers received better benefits than midwives. For instance, only 7 hours were calculated for midwifery during a single night shift. However, midwives stayed with labouring mothers throughout the entire night." P14FDg.

- **Provision of professional risk allowance**

The study's conclusions showed that one way to raise the standard and uptake of maternal health care services is to make sure midwives are given professional risk allowance. The following was indicated by the FGD participant:

"Additionally, it was crucial for the Oromia Health Bureau to take concrete action in increasing professional risk allowances for midwives and other healthcare providers. These allowances should reflect the level of responsibility and risks involved in their profession. By recognising and compensating health care providers for the risks they face, it would not only improve their financial situation but also boost their morale and job satisfaction." P30MDg*.*

4.8.6.4 Category 4.5.4: Establishment of emergency obstetrics and gynaecology triage

Based on the current study's findings, the approach for enhancing maternal health care services in health care institutions was the implementation of emergency obstetrics and gynaecology triage. The following were mentioned by the FGD participants:

"The current setup in hospitals where there was only one main triage for all cases could be improved by establishing a separate triage specifically for obstetrics cases. This obstetrics case triage would prioritise and sort obstetric patients at the triage unit based on their level of need or acuity. By implementing this, pregnant and labouring mothers would no longer need to visit the central triage, but instead, they would be directly seen at the obstetrics and gynaecology triage unit." P9FDg.

4.8.6.5 Category 4.5.5: Provision of cultural ceremony

Under this category, the provision of cultural ceremony was identified as it could improve post-delivery experiences for women and encourage their utilisation of health care facilities and maternal health care services quality. The FGD participants mentioned the following:

"In order to improve post-delivery experiences for women and encourage their utilisation of health facilities, it could be beneficial to incorporate traditional practices such as a coffee ceremony and porridge preparation, similar to those conducted in households." P28MDg**.**

"…. By involving the community in these practices and encouraging them to contribute items like wheat, barley, and coffee used for these preparations, a sense of ownership and belonging towards the health facility could be fostered. These approaches would not only make the community feel more connected to the health facility but also encourage its utilisation by women." P35FDg.

4.8.6.6 Category 4.5.6: Provision of incentive and preparing comfortable areas for mothers

Mothers' utilisation of maternal health care services would rise if incentive services were offered to them during labour and delivery and the postpartum period, according to study participants.

Participants indicated that it could increase mothers' utilisation of maternal health care services like skilled delivery services and postnatal care if it was used as a strategy in health care facilities. The following statement corroborated that:

"In the past, there was an organisation dedicated to maternal health that provided essential items like towels and soap to mothers and newborns in hospitals and health

centres. They also constructed bathrooms within labour and delivery areas, allowing mothers to take showers after childbirth before being discharged. This initiative significantly encouraged mothers to utilise health facility delivery services. Therefore, it was crucial to implement such successful practices to enhance quality and utilisation of maternal health care services." P6FDg**.**

4.8.6.7 Category 4.5.7: Strengthening health extension services

The survey participants discussed about how the best way to rise the quality and utilisation of maternal health care services was to expand health extension programs in partnership with hospitals and health centres. The following statements were brought forward by the FGD participants:

"In order to enhance the utilisation of maternal health care services, it was essential for hospitals and health centres to work with health extension workers to identify the reasons for home deliveries. This could be achieved by developing a standardised checklist that Health Extension Workers (HEWs) could use during home visits for all deliveries within the community." P40MDg.

"…. By conducting interviews with families, the check list could provide valuable information to health centres and hospitals regarding the factors contributing to home deliveries. This knowledge could then be used to implement targeted interventions with the assistance of HEWs. Additionally, these home visits presented an opportunity for HEWs to provide postnatal services to both mothers and their new-borns, ensuring their well-being and promoting the utilisation of health care services." P36MDg**.**

4.8.6.8 Category 4.5.8: *Developing a system for identification of pregnant mothers in the communities*

The participants, midwives, reported that developing a system for the identification of pregnant mothers in the communities could be used as a strategy for the improvement of maternal healthcare services with community participation within health care facilities. This strategy might be used for identification and provision of information to mothers at community level during their pregnancy period in addition to services they got from health facilities. The FGD participants mentioned the following statements:

"One suggestion for enhancing community participation strategies was to develop and strengthen the systems used to identify pregnant women at the community level. For instance, when a mother attended antenatal care (ANC) during her pregnancy, information such as her phone address, Kebele (local administrative unit), gare, and gotte leaders could be collected. Health Extension Workers (HEWs) could then use this information to communicate with these leaders and remind them to reach out to pregnant women starting from 8 months of pregnancy." P17MDg*.*

"…. Messages could be sent to their mobile phone numbers, providing them with important information such as the contact number of the ambulance driver serving their Kebele, recognizing danger signs during pregnancy, identifying signs of true labour, and informing them about the appropriate health care facility to visit if they observe any danger signs. Additionally, the birth preparedness plan can also be shared with them through these communication channels." P33MDg.

4.9 SUMMARY

An overview and explanation of the study's findings were given in this chapter. The sociodemographic traits of the women, the availability and usage of maternal health care services, and the factors influencing their utilisation were all covered in the quantitative portion. The qualitative section concentrated on themes that surfaced from the data, such as elements that helped improve the quality of maternal healthcare, obstacles mothers faced in obtaining these services, reasons they chose not to use them, methods health facilities currently use to improve the quality of care, and recommendations for raising the standard and utilisation of maternal health care services. This chapter will be followed by a detailed discussion of the data analysis and Phase I study findings in Chapter 5.

CHAPTER 5

DISCUSSION OF THE STUDY FINDINGS

5.1 INTRODUCTION

This chapter goes into detail on the data analysis and phase I study results. The goal of this discussion is to give a thorough grasp of the findings and how they relate to Phase II implementation. Based on the outcomes of Phase I and the corpus of recent research, Phase II was designed using the conceptual framework and management method as a foundation for discussion.

5.2 DISCUSSION ON SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE WOMEN

Nearly half of the participants in this study (45.7%; n = 282) were in the 25–29 age range, which aligns with findings that indicate this as a common age for women to marry and start families (Alemayehu, Basha & Tesfaye 2020:12). The age at which many women marry and have children may be the cause of this. The majority of those surveyed (96.7%; n = 595) were married and cohabitating, reflecting societal norms that prioritize marriage before childbirth (Kebede & Tadesse 2021:25).

Regarding education, most participants (36.9%; n=227) had finished elementary school (grades 1–8). However, women of about 38.4% (n = 236) of the respondents had completed secondary education (grades 9–12). This trend aligns with recent literature indicating that educational attainment among women in Ethiopia has been improving, yet remains below global averages (World Bank 2021:15). The emphasis on basic education is crucial, as it has been shown to positively correlate with improved health outcomes for mothers and children (Beyene, Admasu & Belayneh, 2021:101). Among the interviewees, (69.3%; n = 426) were predominantly housewives, indicating a potential

reliance on their partners for financial support. A significant proportion of the participants (74.1%; n = 456) earned less than 500 Ethiopian Birr each month, highlighting economic challenges that may affect access to health care (Mekonnen, Yimer & Hailu 2023:4).

Regarding maternal health care expenses, almost all women (94.0%; n = 578) were exempt from paying for the care they received, suggesting a positive impact of government policies aimed at reducing financial barriers to maternal health care services (Teshome, Assefa & Biruk 2021:2. When participants were compared according to their residential status, the majority of the women (67%; n = 412) lived in urban areas, which is consistent with trends showing urbanization affecting access to health services (Abebe Molla & Tadesse 2022:3).

Furthermore, the study discovered that (44.7%; n = 275) of the respondents lived within 5 km of a medical facility, whereas (27.0%; n = 203) lived more than 15 miles away, indicating disparities in access to healthcare services that could affect maternal health outcomes (Zewdie, Melaku & Berhe 2023:7).

5.3 MATERNAL HEALTH CARE SERVICES

In line with the stated study objectives, the data that were examined and interpreted in the quantitative portion were thoroughly presented in this section. The research findings are also examined in light of earlier regional, local, and international studies on related topics.

5.3.1 Health education given to women on maternal health

The findings of this study provide crucial insights into the provision of health education on maternal healthcare services during pregnancy, labour, and the postpartum period among women in West Arsi Zone, Oromia Regional; state, Ethiopia. The high percentage

of women (73.3%; n = 451) who reported receiving maternal health education indicates a positive trend in the dissemination of health information, which is essential for improving maternal health outcomes (Alemayehu et al 2020:54). The role of healthcare providers in delivering this education is particularly noteworthy, with (86.0% n = 388) of respondents citing them as their primary source. This underscores the importance of trained healthcare personnel in facilitating access to accurate and relevant health information (Mekonnen et al 2021:78). However, it is concerning that (26.7% n = 164) of women did not receive any maternal health education, highlighting a gap that could adversely affect maternal health outcomes. This aligns with findings from other studies in Sub-Saharan Africa, which indicate that inadequate health education contributes to poor health-seeking behaviors and suboptimal use of maternal healthcare services (Chaka, Fekadu & Degu 2019:12). Furthermore, the fact that nearly half of the women who received education accessed it through media suggests the potential for broader outreach strategies that utilize various platforms to reach underserved populations (Tadesse et al 2021:29). Additionally, women who had received health education on Birth Preparedness and Complication Readiness (BPCR) during ANC were more likely to have given birth in front of a qualified delivery attendant (Izudi, Grace, Mccoy, Bajunirwe, & Kadengye 2019:81; Cameron, Suare & Cornwell 2019:4).

5.3.2 Status of pregnancy

While (7.8%; n = 48) of the respondents in this study stated that their pregnancy was unwanted, (92.2%; n = 567) of the respondents said that their present pregnancy was wanted. Hailemariam et al (2023:5) emphasised similar findings, showing that most research participants' current pregnancies, (78.3%; n = 635), were intended. Similarly, this study's results are the same as the study conducted in Ekiti State, Nigeria, which was (78.7%; n = 210) and had intended pregnancy (Esan et al 2022:4). The data indicating that majority of pregnancies were wanted is encouraging, as it suggests a level of family planning awareness among respondents (Fekadu et al 2022:103). However,

the number of unwanted pregnancies still reflects a significant issue that needs addressing through enhanced reproductive health education and family planning services (Yilma, Melaku & Dessalegn 2020:45).

5.3.3 Utilisation of antenatal care services during the previous pregnancy

Women who have attended at least one ANC visit are more likely to have a skilled attendant during labour, providing an opportunity to promote skilled attendance during birth (Gebremedhin et al 2023:10; Lattof et al 2020:3).

5.3.3.1 Utilisation of ANC services during the previous pregnancy

In contrast to (88.7%; n = 547) of women in this study, (11%; n = 68) did not attend ANC during their previous pregnancy. The International Classification of Functioning (ICF) (EPH and ICF Internatinal 2019:13), the 2019 Ethiopian Mini Demographic Health Survey (EMDHS) and Ethiopian Public Health Institute (EPHI), and a study conducted in rural south-central Ethiopia revealed that (76.1%) of women attended at least one ANC follow-up (Roro, Deressa & Lindtjørn 2022:6). This study's ANC coverage was significantly higher at (74%). These numbers, however, do not meet the Lancet's historical pattern report, which states that in order to meet Sustainable Development Goal (SDG) (3.1, 91%) of one ANC visit and (78%) of four ANC visits must be covered (Lancet Author Manuscript 2017:2). This study highlights how pregnant women in a particular location use ANC service in comparison to national and international norms. It shows that although the study area's ANC coverage above the national average, it is still below the international standards set by organisations such as the Lancet. In contrast to the Ethiopian Demographic Health Survey's (EDHS) nationwide reach, this increased coverage can be explained by the community's ease of access to healthcare services in the study area. The high rate of previous ANC services in this study demonstrates a

positive engagement with maternal healthcare systems. However, the low rates for specific services such as HIV testing (39% n=213) and nutritional supplementation (18.8% n=103) indicate critical areas for improvement. The Ethiopian Ministry of Health recommends HIV testing for all ANC visitors, yet the low uptake suggests barriers that may include stigma, lack of awareness, or insufficient provider training covered (Ayalew, Tesfaye & Mekonnen 2021:67). This finding aligns with research indicating that fear of discrimination can deter women from seeking necessary tests during pregnancy (Kassa, Abebe & Hailu 2022:95).

5.3.3.2 ANC services provided for women

According to a study conducted in Myanmar to examine the elements that promote and affect the utilisation of maternal health services, every pregnant woman should obtain ANC from a qualified physician. The benefits include thorough physical examinations, urine testing, tetanus toxoid shots, iron and folate supplements, blood tests for anaemia and infection screening, and deworming medications (Milkowska-Shiba et al 2020:5).

Nearly every woman has received blood pressure checks, blood sample tests, urine tests, Tetanus Toxoid (TT) vaccinations, and HIV tests, according to a study done in Ethiopia's Siyadebirena Wayu district. Of the participants, (95% n=343) had received information about iron supplements and pregnant danger indicators (Sertsewold et al 2021:7).

Most of the women in the current study (95.6%; n = 523) were vaccinated against tetanus, (87% n = 476) had blood tests, (58.3% n =319) had ultrasound examinations, and (56.7% n=310) had physical examinations. Although HIV/STD testing is advised for all ANC attendees by the Ministry of Health (Ethiopian Federal Ministry of Health 2022:13), only (39% n = 213) of respondents in this study received this service, (18.8% n = 103) received nutritional supplements, and only (4.4% n = 27) had gynaecological exams.

Comparing these results to research conducted in Southern Ethiopia, only (46.3% n=454) of the participants received a haemoglobin test at the first visit, and (40.5% n = 397) at

the fourth. Along with blood group and RH testing, all subjects had (20.6% n=202) urine tests, (77.9% n = 763) VDRL tests, (86%n = 843) HIV testing, and ultrasound examinations at 24 weeks (Berehe & Modibia 2020:5). The study finds that although most women obtained some basic ANC treatments like blood tests, ultrasound exams, and tetanus vaccine, there were gaps in the availability of other advised services such gynaecological exams, HIV/STD testing, and nutritional supplements. The quality and comprehensiveness of ANC services offered to expectant mothers in the United States might be improved, according to these findings.

5.3.3.3 Number of ANC clinic visits

As early as possible in pregnancy, at 28–32 weeks, after 36 weeks, and before the anticipated delivery date, or whenever a woman needs counsel, the World Health Organisation advises a minimum of four prenatal care visits. Only over half of all pregnant women, according to worldwide estimates, receive the necessary level of care (EPH and ICF Internatinal 2019:14). However, only (23.4% n = 128) of the women in this study received four prenatal visits. Even though the Ethiopian National ANC guideline recommended increasing the number of contacts in the third trimester to prevent the risk of complications to the mother and the foetus during this period of gestation, in this study fourth visit was low when compared with this recommendation (EFMOH 2022:11). These may be the reasons for the reduction of fourth ANC visits. The reasons include limited availability of healthcare providers, inadequate infrastructure, and shortages of essential supplies and medications, all of which can discourage women from seeking care.

Moreover, the distribution of ANC visits reveals that many women were not attending early enough in their pregnancies, with only (15.6%) visiting within the first three months. The majority (68.7%) had their first visit between four to six months, which is later than recommended guidelines (World Health Organization 2020:19).This delay can hinder

timely interventions that are crucial for monitoring both maternal and fetal health (Biruk, Hailu & Tadesse 2019:22).

5.3.3.4 Women's reasons for not attending ANC clinic visits

Numerous explanations for why women did not attend ANC services during their prior pregnancies were found in this study. The following factors were mentioned: distance from the facility (44.1%; n = 30), perceived cruelty of healthcare professionals (45.6%; n = 31), perceived needlessness of treatment (39.7%; n = 27), and lack of funds (38.2%; n = 26). According to Gamberini et al (2022:5), the main factors influencing the quality of maternal healthcare services at the facility level were found to be the absence of medications and equipment, a lack of trained personnel, unfavourable attitudes and behaviours of service providers, and poor communication with women. However, a study conducted in Northwest Ethiopia discovered that pregnant women's absence from ANC visits was primarily caused by the following factors: feeling well during pregnancy, (61.7% n=66), and not realising the importance of getting prenatal care from doctors (50.5% n=54), considering pregnancy to be a healthy condition (37.4% n=40), as well as privacy concerns (Hailemariam et al 2023:5).

5.3.3.5 Timing of the first ANC clinic visit

Known as focused prenatal care, early ANC initiation and four or more visits offer crucial evidence-based interventions that may prevent newborns and women from dying (FMOH Performance Report 2020:28). Nonetheless, most women in this study (68.7%; n = 376) started their ANC visits between 13 and 24 weeks, or 4-6 months, although (15.7% n = 86) and (15.6% n = 85) started at 7-9 months and 0-3 months, respectively. The number of pregnant women who utilised their first ANC visit at the recommended time in this study was lower than the analysis of data from the 2016 Ethiopian Demographic and

Health Survey (EDHS), which showed that one-fifth (20.4%) of mothers started their first ANC visit within the right time, and the rest (79.6%) started late (Ayele, Gada & Addisu 2024:6).

5.3.3.6 Women's preference to come again for the next ANC visit

According to the study's findings, (94.74% n = 576) of participants said they would prefer to get ANC services again during their subsequent pregnancy, whereas just (5.26% n = 32) disagreed. Dahab and Sakellariou (2020:9) conducted a systematic study of the obstacles to accessing maternity care in low-income African nations and found that some Ethiopian women were not convinced of the advantages of prenatal care. They did not see the need to go to a medical facility just because they were pregnant because they thought pregnancy was not a health issue. Despite constant urging from urban health extension specialists, this opinion remained.

5.3.3.7 Women's recommendation of ANC services to their friends

In the current study, (93.01% n = 572) of women stated that they would recommend ANC services to their friends at this hospital or health centre, suggesting that positive experiences can foster community trust in healthcare systems utilisation (Tadesse et al 2022:12). This aligns with a research conducted in Jigawa State, Nigeria which indicated that more than half of the respondents advocated for mothers to attend ANC services at least four times during pregnancy (67.7%) (Sabo, Alzoubi, Saidu & Usman 2024:4). A study conducted in Somalia highlighted the importance of receiving encouragement as the primary factor in increasing women's ANC utilisation, while negative attitudes from husbands or family members had the opposite effect. Among those encouraged to attend ANC, (46%) mentioned their husbands, (15%) their mothers-in-law, and (32%) cited

health workers as their source of information and recommendation for ANC service utilisation (Miikkulainen et al 2023:7).

5.3.3.8 Parity

In contrast to the findings of Hailemariam et al (2023:5) in their study in North West Ethiopia, where the majority of respondents (34.1%; n = 276) had five or more children, participants reported varying numbers regarding parity: (29.1% n = 179) had three children, (22.0% n = 135) had two parities, roughly (19.8% n = 122) had four children, and (10.9% n = 67) had five or more children. This distribution highlights the importance of tailored maternal health services that cater to the unique needs of women at different stages of motherhood (Kebede et al 2020:67).

5.3.4 Utilisation of labour and delivery services during the previous Pregnancy

In addition to lowering maternal and neonatal mortality rates and fostering favourable health outcomes for both, the use of labour and delivery services is critical for guaranteeing the health, safety, and well-being of both mothers and newborns. Competent birth attendants can perform life-saving procedures like caesarean sections, assisted vaginal deliveries, and postpartum haemorrhage control during this period. This According to the WHO report (2023:7), competent birth attendants are essential for ensuring safe childbirth experiences, as they are trained to manage complications that may arise during delivery. This is particularly crucial in regions where access to healthcare facilities is limited, and the risk of maternal and neonatal morbidity and mortality remains high (WHO 2021:2).

5.3.4.1 Place of delivery for the previous pregnancy

The MMR and the proportion of babies attended by qualified professionals are important indicators for raising the quality of services for maternal health care, as stated by the WHO Regional Office for Europe report. The majority of maternal deaths are preventable because problems during pregnancy and delivery can be prevented or managed by raising the bar for maternal health care (WHO Regional Office for Europe 2017:1). The results showed that (12.20% n = 75) of women gave birth at home, whereas (87.80% n = 540) of women gave birth in medical facilities. This indicates a significantly higher use of competent delivery services than the (50%) stated by the Ethiopian Public Health Institute (EPHI) and ICF in the 2019 EMDHS (EPHI & ICF 2019:13 & 14). Similarly, this finding corroborates with previous research indicating that geographic accessibility remains a significant challenge in rural Ethiopia (Biruk et al 2021:22).

5.3.4.2 Women's health facilities for delivery

Out of the 540 women who gave birth in medical centres, (86.7% n=468) did so as planned, whereas (11.7% n =72) were recommended for delivery and gave birth in a hospital or health centre. These findings exceeded those of a research conducted in Northern Ethiopia, which showed that (24.3%) of women gave delivery at home and (73.6%) of women gave birth in medical facilities (Hunegnaw, Goddard, Bekele, Haneuse, Duran, Zeleke, Mohammed, Bekele & Chan 2023:9).

5.3.4.3 Reasons for not delivering in the health facility

In this study, 75 mothers gave birth to their final child at home, (42.7% n =32) did so because of the distance to medical facilities, and (28.0% n =21) did so because of the lack of privacy in a medical facility during labour and delivery. The results of this

investigation are consistent with a qualitative investigation conducted in Ethiopia that found that health facility distance, lack of transportation, service costs, and lack of privacy in a medical facility during labour and delivery were the primary causes of home deliveries ((Yoseph et al 2023:9). Similarly, the study conducted in Gedeo Zone, Ethiopia indicated that walking hours to reach the nearest health facilities more than 30 min to was the main reasons for not delivering in the health facilities (Eritero et al 2022:5).

5.3.4.4 Difference for giving birth at home and in the health facility

Nearly all of the study participants, or (94.6% n = 582), were aware of the distinction between giving birth in a hospital and at home. About (82.6% n = 508) of respondents said they would pick a medical facility if it meant saving a child, (56.7% n =349) said they would prefer a clean delivery at a medical facility, and (8% n = 546) said they would prefer a clean delivery at a medical facility, and 8% (n = 546) said they would prefer a medical facility for safe mothers. A study in Southern Ethiopia discovered that women opted to give birth in hospitals due to the perceived risks and advantages of using competent delivery services, which supports the findings of this study (Id & Mue 2024:3).

5.3.4.5 Making decision for the place of delivery

A study conducted among Ethiopian pastoralist women found that women's limited decision-making authority had a substantial impact on the quality of maternity healthcare services (Jebena et al 2022:10). Most women in this study, (43.7% n = 269) had their husbands choose the delivery location, followed by both in (29.1% n =179) and themselves in (17.4% n = 107). This finding indicates that while (17.4% n =107) of women choose where to give birth on their own, most women are unable to make such selections. This aligns with findings from other studies indicating that women's agency in healthcare decisions is often limited by sociocultural factors (Kassa et al 2022:95).

These results illustrate the need for increased community empowerment by showing that a sizable percentage of women lack control over their birthing experience.

5.3.4.6 Mode of delivery

Most of the women who had stated their previous mode of birth during pregnancy, (64.6% n = 397), (21.8% n = 134), (13.2% n = 81), and (0.5% n =3)—had a caesarean section, an aided delivery, or a destructive delivery. The rate of caesarean sections in this study exceeded the (5–15%) WHO recommended. Research indicates that increasing the number of caesarean sections has not reduced the rates of illness and death in mothers and infants (Wagaw et al 2023:4).

5.3.4.7 Maternal and fetal condition outcome

According to this study, (6.2% n = 38) of the women had maternal and foetal problems during a prior pregnancy, whereas (93.8% n = 577) of the women had normal maternal and foetal outcomes. According to a study done in Nigeria, (97.8% n = 261) of study participants had normal foetal outcomes, which was lower than the percentage of women who experienced foetal problems (Esan et al 2022:4).

5.3.5 Utilisation of postnatal care services in previous pregnancy

In the crucial postpartum phase, postnatal care services are necessary to provide mothers and new-borns with all-encompassing support and monitoring. Postnatal care supports the mother's and the health and wellbeing of a newborn by attending to their physical, emotional, and educational requirements, which benefits the whole family.

Comprehensive postnatal care addresses not only the physical recovery of the mother but also the emotional and educational needs of both the mother and the newborn, thereby benefiting the entire family unit (Mekonnen, Teshome & Zewdie 2020:45). Research indicates that effective postnatal care can significantly reduce maternal and neonatal morbidity and mortality rates in Sub-Saharan Africa, where these rates remain alarmingly high. For instance, a study by Woldemichael, Yalew and Gebremedhin (2021:12) highlights that timely and adequate postnatal care can prevent complications such as infections, postpartum hemorrhage, and mental health issues, which are prevalent in this region.

5.3.5.1 Women's visit to the health facility two days for postnatal care services

According to this survey, most respondents, (79.0% n = 486), did not attend health facilities for services for postnatal care two days following delivery, whereas only (21.0% n = 129) of women did so for PNC services.

Compared to the 2019 EMDHS report, which found that 34% of women who gave birth sought postnatal care services at health facilities (EPHI) & ICF 2019:13 & 14), this finding indicates a lower rate. This study discovered that only 21% of women make use of postpartum care services during the first seven days following childbirth, despite the fact that postnatal care, particularly early postnatal care, is essential for managing complications and preventing most postnatal maternal and neonatal fatalities (Ibrahim, Mare & Nur 2022:2). Additionally, the study area's 21 percent utilisation of postnatal care services within the first seven days after childbirth is lower than the national coverage (34%), Addis Ababa (100%), SNNP (94%), Harari (91%), Tigray (85%), Oromia (85%), and national coverage (34%) (FMOH Performance Report 2020:31 & 33). In the same way, (36.41%) of women in Northwest Ethiopia's South Gondar Zone accessed PNC services (Fenta et al 2022:6). However, a multilevel study of the 2016 Ethiopian

Demographic and Health Survey showed that the overall use of facility-based PNC is (14.3%) among women who delivered birth in a medical institution (Ayele et al 2021:4).

5.3.5.2 Postnatal care services given to women

When the women were asked about the types of PNC services, they had during health facility visits within two days after delivery, (n = 129) women had PNC services. More than half of the women (58.9%; n = 76) indicated that they had utilised physical examination service, (76.7% n = 99) utilised breastfeeding counselling service, (23.3% n = 30) utilised child growth and weight monitoring service, (13.2% n = 13) utilised nutritional supplementation service,) (76.0% n = 98 utilised postnatal family planning counselling service, and (33.3% n = 43) utilised blood test for anaemia. The results of this investigation aligned with a study conducted out in the Wayu District of Northern Ethiopia, which found that more than three-fourths of the women had received counselling regarding when to bathe their child, exclusive breastfeeding, neonatal danger signs, vaccinations, vaginal bleeding checks, blood pressure (BP) checks, and iron supplementation (Sertsewold et al 2021:7).

5.3.5.3 Women's recommendations of postnatal health care services to others

In the current study, 91.2% n = 561) of respondents reported that they would encourage a friend/relative to go to the facility where they went for their maternal care, while (8.8% n = 54) indicated that they would not encourage a friend/relative to go to the facility where they went for their maternal care. Those mothers who had a health institution delivery and supported pregnancy for their last birth and were satisfied with labour delivery services care plan to visit health facilities for their future pregnancy and would

recommend others to utilise postnatal care services more than those who had a home delivery (Ibrahim et al 2022:1128).

5.4 FACTORS AFFECTING MATERNAL HEALTH CARE SERVICES

This section discussed issues that affect the use of medical services for mothers throughout pregnancy, labour, and delivery, and the postnatal period, such as waiting periods for services, provider conduct, privacy, and the accessibility of drugs and supplies in health institutions.

5.4.1 Waiting time

The majority of respondents in this study, (75.8% n = 466), agree that waiting times have an effect on how maternal health care services are used. In contrast, (21.1% n = 130) disagreed, and (3.1% n = 19) said they were unsure. Among participants asked to rate waiting time to gate services in the Maternal and Child Health (MCH) clinic, the majority, (75.4% n = 464), responded it was enough or convenient, while (15.1% n = 93) responded it was long, and (9.4% n = 58) responded it was too long time. Regarding women's view on these waiting times, the majority, that is, (78.7% n =484), responded that it was adequate time to get services, (10.4% n = 64) responded that it was inadequate, and (10.7% n = 67) of respondents said they were not sure. This aligns with other study in Sub-Saharan Africa, which have identified long waiting times as a significant obstacle to maternal health care services utilisation (Bishop, Odour & Nyamango 2020:34). The perception of waiting times can profoundly affect women's decisions to seek care, as prolonged waits can lead to frustration and a sense of neglect, ultimately discouraging future visits (Mekonnen et al 2019:112). Similarly, the results of this study are supported by a study conducted in Zambia that highlights the discrepancy between the number of women seeking maternal-related services and the services'

availability, which inevitably results in overcrowding in facilities and long waiting periods (Mweemba et al 2021:6).

5.4.2 Behaviour of health care provider

In the current study, above half, (62.10% n = 382) of respondents indicated that the behaviour of health care providers was good, and they were friendly, while (6.7% n = 41) of them were not good, and they delayed the provision of services for no any reason, (6.0% n=37) indicated that health care providers were arrogant, and (2.10% n = 41) were insulted. The results of this study are consistent with a study conducted among pastoralist women in Ethiopia, which discovered that the primary determinants of the quality of maternal health care services were inadequate training, unprofessional attitudes and behaviour on the part of service providers, and poor communication with women (Jebena et al 2022:12). Ensuring that healthcare providers maintain a respectful and supportive demeanor can foster a more conducive environment for care, ultimately improving maternal health care service utilisation (Tadesse et al 2022:45).

5.4.3 Maintaining the privacy of women during maternal health care services

In terms of privacy, women were asked if their usage of maternal health care services is impacted by the privacy of medical services. Of the 615 responders, (92.2% n = 567) agreed, and (7.8% n = 48) disagreed. Of the respondents, around 80% (79.5%; n = 489) were satisfied with the privacy-protecting procedures in place, whereas (20.5% n =126) were not. The absence of private spaces and safe birth sites may lower the standard of maternal health care services. Mothers may become less satisfied as a result, and they may become distrustful of trained medical personnel. The loss of trust between mothers and providers threatens the basis of access as a match between system and community factors (Mweemba et al 2021:7).This finding is consistent with previous research

indicating that privacy concerns can deter women from seeking necessary care (Biruk et al 2021:15).

5.4.4 Availability of drugs and supplies

In the current study, (88.0% n=541) women indicated that drugs were ordered for them, and (12.0% n = 74) indicated that drugs were not ordered for them. Most of them, (71.2% n = 438), were happy with the drugs and supplies that were ordered for them, whereas (28.8% n = 177) were not. These findings align with research conducted on Ethiopian pastoralist women, which revealed that the standard of maternal health care services, and mothers' satisfaction were significantly impacted by the lack of medications and equipment (Jebena et al 2022:10). Ensuring that all women have access to necessary medications and supplies is vital for promoting safe childbirth and effective maternal care (Kassa et al 2021:67).

5.5 FACTORS ASSOCIATED WITH UTILISATION OF MATERNAL HEALTH CARE SERVICES

The multivariable logistic regression results of factors related to the utilisation of maternal health care services, including prenatal care, labour and delivery, and postnatal care were discussed in this section.

5.5.1 Socio-demographic factors associated with the utilisation of maternal health care services

Sociodemographic variables related to mothers' use of antenatal care, labour and delivery, and postpartum care services were covered in this section.

5.5.1.1 Socio-demographic factors associated with the utilisation of antenatal care services

Sociodemographic factors such mothers' age, marital status, religion, and educational background show a strong correlation with the use of antenatal care services, according to the results of the multivariate logistic regression model used in this study.

The study's findings indicated that mothers between the ages of 35 and 49 years were three times more likely to use prenatal care services than mothers under the age of 20 years (AOR = 3.102, 95% CI: 0.013-0.820). The results of this study were in line with a study carried out in Northern Ethiopia which discovered that women over 30 years were 2.57 (95% CI = 1.25, 5.28) and 6.04 (95% CI: 2.34, 15.60) times more likely than women under the age of 20 years to plan to use maternal health care services for the impending pregnancy, respectively (Taye et al 2022:6).

Similarly, the likelihood of unmarried mothers using prenatal care services was lower than that of married mothers (AOR = 3.235, 95% CI = 1.13-8.201). This outcome was consistent with a study that found unmarried women (i.e., single, divorced, or widowed) were less likely than their counterparts to have accessed ANC services in a cross-sectional survey carried out in Ghana (AOR = 1.64; 95% CI = 1.02–2.64) (Okedo-alex et al 2019:5). Furthermore, married women were more likely to use prenatal care services than never married or currently single women, according to a systematic study done in sub-Saharan Africa to determine the factors influencing the use of ANC services (Okedo-alex, Akamike, Ezeanosike & Uneke 2019:7).

Additionally, this study showed that mothers who practiced Islam were much less likely than mothers who practiced Christianity to use prenatal care services (AOR = 14.399, 95% CI = 2.494-83.143). This study's findings were consistent with a thorough analysis that was carried out to determine the variables affecting the use of prenatal care services in sub-Saharan Africa. According to the review, Christian women were more likely than

non-Christian women (Muslims and practitioners of traditional African religion) to use ANC services (Okedo-alex et al 2019:5). However, this result contradicted a Nigerian study that looked at how religion affected Muslim and Christian women's use of maternity health services and found no difference between Muslim and Christian religious adherents' use of maternal health care services (Al-mujtaba et al 2016:6).

Moreover, mothers with secondary education or above were around eight times more likely than women with only a primary education to use prenatal care services (AOR = 8.159, 95% CI = 2.696-24.695). The findings of this investigation showed a strong correlation between the use of maternity healthcare services and a rise in maternal educational status, are supported by research from Southern Ethiopia, Nigeria, and Cambodia (Berehe & Modibia 2020:6 & 7; Stephen, Bond & Matheson 2019:2 & 3; Cameron et al 2019:7). According to a study done in Ethiopia, women with at least a secondary education had a 2.05-fold greater chance (AOR = 2.05; 95%CI = 1.14, 3.69) of receiving the best prenatal care than those who did not (Hailemariam et al 2023:6).

5.5.1.2 Socio-demographic factors associated with utilisation of labour and delivery care services

In the current study, the use of labour and provision of care services was significantly associated with sociodemographic factors, including age, educational status, husbands' educational background, residence, and proximity to healthcare facilities, which were found to be significantly correlated with the utilisation of labour and delivery care services.

Compared to mothers under 20, mothers between the ages of 20 and 34 had twice the likelihood of using labour and delivery care services (AOR = 2.106, 95% CI = 1.013-8.571).

The results of the current study were similar to those of an investigation conducted in Northwest Ethiopia, which found that people between the ages of 23 and 27 were roughly seven times more likely than people between the ages of 18 and 22 to use institutional

delivery services (AOR = 6.47 (95% CI = 2.74 to 15.32) (Oumer, Aragie & Worede 2022:6).

Mothers with at least a secondary education were also twice as likely to use labour and provide services in the current study as moms with only a primary education (AOR = 2.791, 95% CI = 0.251-16.230). According to a study done in Ethiopia, women who had completed secondary school or above had a threefold higher chance of giving birth at a medical facility than women who had no formal education (AOR = 3.0, 95% CI = 1.18–7.84) (Girmaye, Mamo, Ejara, Wondimu & Mossisa 2021:6). Women from families with the highest degree of education below high school were around seven times more likely to choose traditional birth attendants than women from homes with high school education and beyond, according to additional research done in Central Myanmar (Milkowska-Shibata et al 2020:5).

According to a study on the variables affecting maternal healthcare utilisation in Malawi's Mchinji District, women who completed secondary or higher education had a much higher likelihood of giving birth in a hospital (Stewart & Hall 2022:3). Milkowska-Shibata et al (2020:8) found that women from households without compulsory education were approximately three times (AOR = 3.31; 95% CI = 1.72–6.38; $p < 0.01$) more likely to give birth at home than those with compulsory education, even after adjusting for median income. Furthermore, mothers whose husbands had completed primary, secondary, or higher education were seven to nine times more likely to use labour and delivery care services than mothers whose husbands had no formal education (AOR = 7.723, 95% CI: 2.244-26.575 and AOR=9.429, 95% CI: 2.827-31.456, respectively).

However, compared to women without formal education, moms who had a spouse with 60% basic education (AOR = 0.38 (95% CI: 0.18 to 0.82) and 56% secondary education (AOR = 0.44 (95% CI: 0.21 to 0.91) were less likely to employ institutional delivery services (Oumer et al 2022:6).

Furthermore, mothers in rural areas were less likely to access labour and delivery care services than moms in urban areas (AOR = 0.692, 95% CI: 0.692-1.198). Another

Ethiopian study confirmed this finding, showing that rural inhabitants were 4.1 times more likely than their counterparts to experience delays during emergency obstetric labour and delivery treatment (AOR = 4.10, 95% CI: 2.36 to 6.25) (Ayalew et al 2021:5).

Furthermore, mothers who lived more than 15 kilometres from a hospital were less likely than mothers who resided within 5 kilometres to use labour and delivery services (AOR = 0.658, 95% CI: 0.332-5.725). According to research from Northwest Ethiopia, mothers who had to travel more than 10 kilometres to go to the medical facility were 83% less likely to use institutional delivery services than mothers who had to travel less than 3 kilometres. These results were consistent with that study's findings (Oumer et al 2022:6). Another study in Southern Ethiopia also confirmed this finding, demonstrating that women who lived in areas with health clinics (BEmONC) within two hours of their home were 2.9 times more likely to use trained birth attendants than those who lived further away (Gurara et al 2023:12). Additionally, a study carried out in Malawi's Mchinji District found that a decline in the use of competent delivery services is linked to the distance to medical facilities (Stewart & Hall 2022:8).

5.5.1.3 Socio-demographic factors associated with the utilisation of postnatal care services

By using multi-logistic regression, this study discovered a strong relationship between mothers' use of postnatal care services and their age, occupation, payment status, place of residence, and distance from medical facilities.

Mothers between the ages of 20 and 34 years and 35 and 49 years were less likely than mothers under the age of 20 to use postnatal care services (AOR = 0.041, 95% CI: 0.018-0.094 and AOR = 0.278, 95% CI: 0.077-1.000). This study's findings are corroborated by a Ghanaian study that evaluated the sociodemographic characteristics and factors influencing postpartum care utilisation among postpartum women in the Savannah region. The study found a statistically significant correlation between age and the use of

maternal health care services (Asumah et al 2023:7). Furthermore, mothers who worked as farmers or students were less likely than those who worked for the government to use postnatal care services (AOR = 0.346, 95% CI: 0.007-0.620 and AOR = 0.154, 95% CI: 2.154-0.874).

Employment was found to be a factor linked to the utilisation of facility-based PNC services in an Ethiopian study (Ayele et al 2021:4). In comparison to women who paid for these services, mothers who received free prenatal health care services at medical facilities were twice as likely to use postnatal care services (AOR = 2.436, 95% CI: 1.086-13.960). The findings of a Malawian study that showed mothers who had health insurance or who received free maternal health care were more likely to use these services than mothers who did not have health insurance or who paid for them supported this conclusion (Stewart & Hall 2022:4).

In comparison to urban residents living within 5 kilometres of health care facilities, mothers living in rural areas and those living 5–15 kilometres away from healthcare facilities were less likely to use postnatal care (AOR = 0.143, 95% CI:.035-.584 AOR = 0.440, 95% CI: 0.227-0.851), according to the current study. Comparable to the Ethiopian study, which found that moms living less than 5 km from health facilities were twice as likely to use postnatal care services as mothers living more than 5 km away (AOR = 2.4, 95% CI 1.1 to 5.2) (Sertsewold et al 2021:8). In a similar vein, a study carried out in Ethiopia revealed that mothers who resided in rural areas far from medical facilities were less likely to use facility-based PNC services than urban residents who lived close to medical facilities (Ayele et al 2021:4).

5.5.2 Past obstetric history of mothers associated with utilisation of maternal health care services

Factors related to the use of maternal health care services, including prenatal care, labour and delivery care, and postnatal care, were covered in this section.

5.5.2.1 Past obstetric history of mothers associated with utilisation of antenatal care services

Using antenatal care services was found to be significantly correlated with the mothers past obstetric history, parity, decision-making authority regarding maternal health care services, maternal-foetal outcomes, and receiving health education on maternal health care services.

Mothers who had received health education on maternal health care services were shown to be 98.5% more likely to use antenatal care services for their previous pregnancies than mothers who had not (AOR=0.015, 95% CI: 0.015). This outcome is similar to a study done in Ethiopia that found that women who were exposed to press coverage of health issues were 1.65 times (AOR = 1.65; 95% CI: 1.02, 2.65) more likely than their peers to give birth in an institution (Hailemariam et al 2023:7).

Compared to women with four or five parities, mothers with one parity had a greater likelihood of using antenatal care services by more than 90% (AOR = 0.098, 95% CI: 0.023-0.410, and AOR = 0.049, 95% CI: 0.011-0.229). The findings were similar to those of a study by Hailemariam et al (2023:7) that showed moms with a birth order of 1 were 3.46 times (AOR = 3.46; 95% CI: 1.73, 6.89) more likely to give birth in a medical institution than mothers with a birth order of ≥ 5.

The study also showed that mothers who had their mothers make decisions about using maternal health care services were nine times more likely to use antenatal care services than mothers who did it on their own (AOR = 9.540, 95% CI: 1.391-65.435). Studies carried out in Southern Ethiopia, Nigeria, and Cambodia corroborated this study's findings, which showed that mothers' autonomy played a significant role in influencing how often women used maternity care facilities (Berehe & Modibia 2020:6 & 7; Stephen et al 2019:2 & 3; Cameron et al 2019:7).

Lastly, compared to mothers with normal maternal and foetal outcomes, mothers who had maternal and foetal problems during their previous pregnancies were almost 94% less likely to use antenatal care services (AOR = 0.065, 95% CI: 0.013-0.337). Contrary to the findings of the study by Hailemariam et al (2023:7), the use of competent delivery services and antenatal care services was substantially correlated with experiencing pregnancy-related problems (AOR = 1.63; 95% CI: 1.04, 2.57).

5.5.2.2 Past obstetric history of mothers associated with utilisation of labour and delivery care services

The current study identified several factors related to a mother's obstetric history significantly influencing their utilisation of labour and delivery care services. These factors included receiving maternal health education during previous pregnancies, current pregnancy status, number of previous births, decision-making power regarding healthcare choices, previous delivery methods, and the assurance of privacy during maternal healthcare provision.

According to this study, mothers who had previously received health education about maternal healthcare services were much more likely to use labour and delivery care services than mothers who had not. There was statistical significance in this connection (AOR = 0.123; 95% CI = 0.007-0.084). The likelihood that a skilled birth attendant would be present during a delivery was higher for women who received health education on Birth Preparedness and Complication Readiness (BPCR) during ANC (Izudi et al 2019:81; Cameron et al 2019:4).

Furthermore, compared to mothers with planned or desired pregnancies, those with undesired pregnancies were 97% less likely to use labour and delivery care services (AOR = 0.024; 95% CI = 0.007-0.084). This study's findings were contrasted with those of a Malawian study that found mothers who had interpersonal violence-related

unintended or unwanted pregnancies were less likely to use labour and delivery care services than mothers who had intended or desired pregnancies (Stewart & Hall 2022:4).

In comparison to mothers with only one parity during their most recent pregnancy, mothers with one to five or more parities were about 90% less likely to use labour and delivery care services (AOR = 0.024; 95% CI = 0.007-0.084), (AOR = 0.034, 95% CI = 0.003-.338), (AOR = 00.038; 95% CI = 0.003-0.298), (AOR = 0.032, 95% CI = 0.001-0.115), and (AOR = 0.011, 95% CI = 0.038-0.969), respectively. These results were similar to those of a study carried out in Northwest Ethiopia, which found that women with fewer than two children were roughly three times more likely than moms with more than two children to use institutional delivery facilities (AOR = 2.71, 95% CI = 1.02 to 7.17) (Tarik, Nigussie, Balcha & Getu 2022:6).

Additionally, mothers who had their husbands or both parents make decisions about using maternal health care services were much more likely to use labour and delivery care services than mothers who make decisions on their own (AOR = 4.205; 95% CI = 1.678-10.541) and (AOR = 8.041; 95% CI = 2.870-22.523), respectively. Similarly, in Central Ethiopia, mothers who were able to work with their husbands to pick where to give birth were six times more likely to give birth at hospitals and health centres than mothers who were unable to do so (AOR = 5.91; 95% CI 3.79–9.22) (Mengistu 2019:8).

Lastly, mothers who had caesarean sections or assisted instrumental deliveries had significantly higher rates of using labour and delivery care services than mothers who had vaginal deliveries (AOR = 9.185; 95% CI = 8.902-2846.625) and AOR = 4.789; 95% CI = 1.350-12.685). The findings of this study were comparable to those of a study carried out in the Amhara region of Debrebrehan City, Ethiopia, which discovered that pregnant women with obstetric issues at the time of pregnancy are 4.8 times more likely to favour CS labour and delivery services than mothers without such issues (AOR = 4.8;95% CI = 1.9–10), P = 0.001) (Zewudu et al 2024:8).

5.5.2.3 Past obstetric history of mothers associated with utilisation of postnatal care services

The current study found that the use of postnatal care services was significantly correlated with various aspects of mothers past obstetric history, including pregnancy status, number of parities, decision-making authority regarding the use of maternal health care services, mode of delivery in prior pregnancies, and maternal-fetal outcomes.

women who had intended pregnancies were six times more likely to use postnatal care services than women who had unwanted pregnancies, according to the study's findings (AOR = 6.816, 95% CI: 3.075-15.109). In contrast to mothers who had unanticipated or no intention of becoming pregnant, Stewart and Hall (2022:4)found that mothers who had desired pregnancies were more likely to use postnatal care services.

Mothers with five or more parities were less likely to use postnatal care services than moms with just one parity, according to this study (AOR = 0.389, 95% CI: 0.159-0.954). According to a study done in Ethiopia, women who had eight or more people living in their home were 0.407 (AOR = 0.407; 95% CI: 0.206, 0.803) times less likely to use PNC services than women who had four or fewer (Fenta et al 2022:9).

Additionally, compared to women who made decisions on their own, moms whose husbands made decisions about their use of maternal health care services were less likely to use postnatal care services (AOR = 0.415, 95% CI: 0.215-0.801). This finding, which was corroborated by a Malawian study, demonstrated that mothers' use of maternal healthcare services might rise as their decision-making authority increases (Stewart & Hall 2022:4).

Furthermore, compared to moms who delivered their babies vaginally, those who had a caesarean section during their prior pregnancy were around three times more likely to use postnatal care services (AOR = 3.560, 95% CI: 2.056-6.164). Similar findings were found in a research by Ayele et al (2021:5), which found that women who had caesarean sections had a higher chance than their counterparts of returning to medical facilities for postpartum care (PNC) during the postnatal period (AOR = 2.53, 95% CI: 1.40–4.58).

5.6 DISCUSSION ON QUALITATIVE FINDINGS

In the previous session, the quantitative data analysis and research findings were discussed. In this session, the focus is on discussing the findings and developing strategies for implementing of Phase II in Chapter 6. The strategies for Phase II were informed by the analysis of Phase I quantitative and qualitative data, as well as the background literature, and conceptual framework.

5.6.1 Qualitative data findings discussion

The perceptions and experiences of midwives regarding the factors influencing the use of maternal health care services in the West Arsi Zone, Oromia Regional State, Ethiopia, were examined using the inductive thematic analysis approach in order to assess the quality of maternal health care services.

The findings yielded five distinct themes:

THEME 1: Factors that affect improving the quality of maternal health care services utilisation in health facilities.

THEME 2: Problems mothers have in the community related to maternal health care services utilisation.

THEME 3: Reasons for non-utilisation of maternal health care services.

THEME 4: Strategies currently implemented within health facilities to improve the quality of maternal health care services.

THEME 5: Strategies suggested to be put in place to improve the quality of maternal health services utilisation.

The results revealed five distinct themes, twenty-eight (28) categories, and eight-five (85) sub-categories, which were interpreted and discussed by drawing on relevant literature sources and aligning with the health belief model and study objectives.

5.6.2 Sociodemographic characteristics of midwives

This study involved four FGDs, two with midwives from Shashemane Referral Hospital and Malka Oda General Hospital and two with midwives from health centres in in Shashemane town and Nagelle Wareda. Each group comprised 12 participants from the hospital and 8 from the health centres, resulting in a total of 40 midwives participating in the FGDs. Of 40 midwives included in the FGDs, (55% n = 22) were in the age group of 25-29 years, whilst more than half, (57% n = 23) of the accoucheurs in the study, were males. This finding aligns with trends observed in other Sub-Saharan contexts, where the midwifery workforce is often composed of younger professionals (Mugisha et al 2020:45). The predominance of younger midwives may reflect ongoing efforts to recruit and train new health professionals to address maternal and child health challenges in Ethiopia and the region (Banteyerga 2019:112). Recent literature has highlighted the increasing participation of men in nursing and midwifery roles in various African countries, challenging gender norms and contributing to a more diverse workforce (Kumar et al 2021:78). However, this trend may also raise concerns regarding the potential impacts on maternal care, as some studies suggest that female patients may feel more comfortable receiving care from female providers (Chadwick et al 2020:102).

Educational qualifications among the midwives indicate a well-trained workforce; most midwives, (77.5% n = 31), had a BSc in midwifery educational status. This is consistent with global movements towards higher educational standards for midwives to ensure quality care and utilisation of maternal health care services (World Health Organisation 2020:15). However, the presence of a notable percentage (15%) of midwives with only a diploma raises questions about the adequacy of training for those providing critical

maternal health services. This duality in educational qualifications reflects broader systemic issues within health education in Ethiopia, where access to advanced training may be limited (Asefa et al 2021:67).

Among midwives involved in the FGDs, (82.5% n = 33) served in maternity unit worker roles and responsibilities in their institutions, and in terms of service experience, (47.5% n = 19) of the midwives had 4-6 years of service provision. leadership roles and service experiences are crucial for advocating for midwifery practices and influencing policy changes that can improve maternal health outcomes (Mekonnen et al 2019:34). However, the high percentage of newer midwives (30%) with 1–3 years of service) suggests ongoing turnover and potential challenges related to mentorship and skill retention in clinical settings (Tadesse et al 2022:89). The retention of experienced midwives is critical for maintaining quality care and ensuring that newer practitioners receive adequate training and support.

Table 5.1:Characteristics of midwives (N = 40)

Characteristics of midwives	**Frequency**	**Percentage**
Age range		
20-24	5	12.5
25-29	22	55
30-34	6	15
35-39	3	7.5
40-44	4	10
Total	**40**	**100.00**
Sex		
Male	23	57.50

Female	17	42.50
Total	**40**	**100.00**
Academic status		
Diploma midwife	6	15.00
BSc Midwife	31	77.50
MSc midwife	3	7.50
Total	**40**	**100.00**
Position held		
Maternal and child health unit head	3	7.50
Labor and delivery unit head	4	10.00
Maternity unit worker	33	82.5
Total	**40**	**100.00**
Service Years		
1-3	12	30.00
4-6	19	47.50
7-9	6	15.00
>9	3	7.50
Total	**40**	**100.00**

5.6.3 Theme 1: Factors that affect improving the quality of maternal health care services utilisation in health facilities

The primary focus of this issue was the factors that affected the improvement of maternal healthcare services in medical facilities. These included issues with medical staff, healthcare facility infrastructure, medical equipment and supply shortages, a lack of life-saving and necessary treatments, and a lack of health education programs. When taken as a whole, these factors affect the quality of maternal health care offered in hospitals.

5.6.3.1 Category 1: Reasons related to health care workers

Under this section, reasons related to health care workers such as lack of necessary knowledge and skills, health care provider attitude, lack of midwives, low interest in the midwifery profession, presence of healthcare providers around labouring mothers, lack of training, inadequate health care service and lack of emergency preparedness were discussed.

- **Lack of necessary knowledge and skills**

Participants in the current study said that the primary determinants of the improvement of maternal healthcare services were variables related to the absence of requisite knowledge and skills during the delivery of maternal healthcare services. The standard of maternal healthcare services provided at medical facilities may be impacted by healthcare professionals who are not equipped to handle potential difficulties during child birth. According to a study done in South Ethiopia's Sidama Zone to evaluate the knowledge, practices, and related factors of obstetric care providers regarding active management of the third stage of labour, maternal morbidity and mortality associated with haemorrhage are high because of the providers' lack of expertise in this area. The researchers suggested that all levels of obstetric care providers' knowledge and practice regarding the active management of the third stage of labour should be addressed

immediately, including training programs and medical facilities for their obstetric care providers to improve their understanding of managing obstetric complications (Tenaw et al 2017:2).

According to a qualitative study carried out in North West Ethiopia, one of the elements influencing the quality of maternal health care services was the women who received subpar skilled delivery services from medical professionals who lacked the obstetric knowledge and abilities to handle complications during labour and delivery. Those women who received such subpar care believed that similar things would happen to them in the future. As a result, they had no interest in utilising the expert delivery services offered by medical facilities and providers (Shiferaw & Modiba 2020:5).

Therefore, health care providers can handle any issues that may emerge during birth and delivery care services if they possess the knowledge and abilities needed to give maternal health care services like labour and delivery.

- **Health care provider attitude**

According to the FGD participants in this study, moms require a positive attitude from health care professionals rather than their skill set. They would rather die than use their maternal health care services if they have a negative attitude towards them. Participants in the survey emphasised that, despite their hectic schedules, hospital staff members must attend to moms who are in labour or the second stage and experiencing problems. A review of the literature on the factors influencing the use of maternal healthcare in Malawi's Mchinji District revealed that the primary cause of the low use of maternal healthcare was a poor perception of healthcare services towards women (Stewart & Hall 2022:6). Obstetricians' attitudes might assist mothers cope with the pain of childbirth and boost their utilisation of maternal health care services, according to a study conducted in Ethiopia's Harari regional state health facilities (Eyeberu,Debela, Getachew,Dheresa, Alemu & Dessie 2022:7). Dantas, Singh, and Lample (2020:6) state that mothers' decisions to seek care in medical facilities during childbirth were negatively impacted by the frequent theme of unprofessional or unruly healthcare personnel.

- **Lack of midwives**

One of the elements affecting the improvement of the quality of maternal health care services was the presence of skilled birth attendants who have received education and training to become proficient in midwifery abilities, or the absence of midwives during labour.

This result is consistent with another study that found that the lack of midwives in all healthcare settings was hindering their ability to perform their jobs well due to burnout and work-related stress. This made it difficult for them to take the yearly leave that all public sector employees are required to take, and it also affected their capacity to deliver high-quality maternal health care services (Adatara, Amooba, Afaya, Salia, Avane, Kuug, Maalman & Atakro 2021:4). According to the Global Call to Action reports, midwives play a critical role in ensuring the health and safety of pregnant mothers and their unborn children during pregnancy, labour, and the critical first few days and weeks following delivery.

Midwives also play a critical role in assisting women in obtaining contraception and other reproductive health care. According to WHO estimates, complete midwifery care may be able to prevent (83%) of all maternal deaths, stillbirths, and infant deaths. However, providing high-quality maternity and infant health care services is disregarded in poor countries because of a lack of midwives (International Confederation of Midwives 2020:3). According to Lancet Glob Health 2020, funding for midwives should include funding for their education, training, regulations, and working conditions in addition to their numbers. At the moment, there are not enough qualified midwives in Low- and Middle-Income Countries (LMICs), and their unequal distribution has a negative impact on the standard of maternal health care services (Nove, Friberg, Bernis, Conville, Moran, Najjemba, -Bender, Tracy & Homer 2021:7). Inadequate staffing and high employee turnover can result in service interruptions, the loss of trained workers, fatigue, and neglect, according to studies conducted in Southwest Ethiopia. Unwanted referrals, a failure to accommodate women's preferences, job unhappiness, an unequal distribution

of experienced and inexperienced staff, scheduling issues, increased workloads, and lower-quality services are all possible outcomes of this. When taken as a whole, these elements may result in less service use (Kitila et al 2023:9).

- **Low interest in the midwifery profession**

The results of the current study demonstrated that one of the elements influencing the standard of maternal healthcare services provided in medical facilities was a lack of enthusiasm in the midwifery profession. Participants in the study also mentioned how little the government paid attention to healthcare providers. Due to their fatigue, healthcare personnel were not provided with advantages and perks packages. Because of this, many midwives with diplomas switched careers. Despite their workload, midwives in rural northern Ghana were neither compensated or provided with incentives, according to a study that looked at the challenges faced by midwives in Ghana's Upper East Region. Because of this, many midwives felt undervalued, and their efforts to offer superior maternity and child health care were not given the same recognition as those of other medical specialists (Adatara et al 2021:4). According to Carvajal et al (2023:4), midwives can maintain a positive practice environment by ensuring their ability to provide care, providing favourable employment terms, cultivating an environment of respect in organisations, and strengthening team resources to increase resilience. There may be a shortage of midwives because of recruitment and retention challenges if this issue is not resolved. The quality of maternal health care services is directly correlated with midwives' working circumstances, which are tightly linked to the delivery of safe and compassionate care.

- **Presence of health care providers around labouring mothers**

Consistent and regular follow-up and the presence of health care providers all the time after the mother is admitted to labour or postnatal care services; enable her to get services necessary for her during her stay within the health facility. This means the mother can receive good advice, reassurance in case of labour pain, and other

necessary care from the healthcare providers. It also, enables healthcare providers to detect and manage complications, which may arise during their stay in the health facility. If healthcare providers are around the mother, they can provide service on time without delay. According to research done at the University of Gondar Teaching Hospital in Northwest Ethiopia, labour and delivery is a very stressful time, and most mothers would rather have someone to talk to about their worries and support them in order to have a good outcome (Gashaye et al 2019:11).

Having health workers present with women during childbirth is essential for closely monitoring progress, addressing unforeseen complications, and encouraging the future usage of competent birth attendant services and the lack of medical professionals after they admitted mothers during labour and delivery and the postpartum period were among the factors that impacted the improvement of maternal health care services in the medical buildings

Additional it is believed that women require ongoing support and encouragement until the birth of their child, which results in improvement of maternal health care service (Mordal et al 2021:4). According to a study carried out in Somalia, it was found that the families of labouring mothers were dissatisfied with the way their loved ones were neglected and as a result, they sought care from other healthcare facilities (Mohamed et al 2021:1156).

- **Lack of training**

According to the FGDs participants, the midwives working in their health facilities lacked proper training on emergency obstetric and newborn care, which resulted in poor-quality maternal healthcare services. They expressed their dissatisfaction with the fact that midwives were not trained in basic obstetrics and gynaecology ultrasound, which prevented them from providing necessary services at the health centres. Consequently, they had to refer patients to hospitals. The participants also mentioned that some birth attendants in health centres referred mothers to hospitals due to a lack of training, even for cases that could have been managed at the health centre level.

The results of this study are comparable to those of an investigation conducted in Ibadan, Nigeria, to assess the impact of supervision and training on primary health care workers' ability to treat maternal depression. The study determined that while training helped health care providers improve their knowledge, skills, and self-efficacy, a lack of training had an adverse effect on the quality of health talks that primary health workers in primary health care centres gave about maternal depression (Adefolarin, Gershim, Sola & Oye 2021:9). Mwansisya, Mbekenga, Isangula, Mwasha, Mbelwa, Lyimo, Kisaka, Mathias, Pallangyo, Edwards, Mantel, Konteh, Rutachunzibwa, Mrema, Kidanto and Temmerman (2022:13), indicated that well-trained and supported healthcare workers are essential for providing excellent reproductive health services. However, in low-income countries, there is a significant shortage of adequate training for healthcare workers in Reproductive, Maternal, and Newborn Health (RMNH), which is concerning.

- **Inadequate health care service**

The midwives who participated in the study believed that if mothers felt they did not receive adequate health care services from providers, it could lead to dissatisfaction and reluctance to seek out future maternal healthcare services. This study indicated that negligence and inadequate care during childbirth and the postpartum period would influence the quality of maternal health care services. According to WHO guidelines, Woldeamanuel (2022:13) assessed the factors influencing Ethiopia's low use of prenatal care services and discovered that a sizable portion of pregnant Ethiopian women were not provided with adequate maternal health care services by healthcare providers, which resulted in their discontent and non-utilization of these services. Based on research conducted in rural Uganda, many mothers opted to go to hospitals for labour and childbirth because they observed other mothers doing so and believed they would receive high-quality care. Although health centres were within walking distance, they were often overlooked due to perceptions of inadequacy (Dantas et al 2020:6).

- **Lack of emergency preparedness**

The quality of maternal health care services was impacted by the absence of emergency preparedness in health facilities. The study participants stated that to improve the quality of maternal healthcare services, healthcare facilities should be set up to respond to obstetric emergencies, per the Assistant Secretary for Preparedness and Response report. In low-income families, not all pregnant, postpartum, and/or breastfeeding women, as well as newborns and young children, are equally affected during emergencies, according to the Assistant Secretary for Preparedness and Response's report (2021:28), Because health services and communities are not as prepared for emergencies, low-income families are also less likely to have additional supplies and a well-stocked emergency kit. Women were nevertheless sent to a hospital with few options and insufficient supplies and equipment, such as oxygen and blood, even if they experienced difficulties during labour (Dantas et al 2020:8).

5.6.3.2 Category 2: Health facility-related factors

Lack of obstetric triage, lack of infection control supplies, lack of maternity waiting houses, lack of beds, lack of delivery couches, lack of electricity and water supply, and lack of food provision in medical facilities were all issues in this category.

- **Lack of room**

The quality of maternal health care services was impacted by a shortage of space. Furthermore, if available rooms in a medical facility are already taken, it is impossible to maintain privacy and confidentiality while admitting labouring moms. According to the study, despite WHO recommendations that mothers should remain in health facilities for 24 hours following delivery, the health centres had to release the woman within 24 hours due to a lack of rooms. Mothers were occasionally admitted to these facilities on chairs, in corners, and on mattresses on the floors. These make communities and women

unhappy with the maternal health care services gave in the institution and make them prefer home birth. Mothers also complained about the lack of privacy at the medical facilities. It might be challenging for a patient to describe her issue to a health care provider when there are other patients or healthcare professionals present. According to Mohamed et al (2021:1156), it would be challenging for a patient to convey her issue to a healthcare practitioner in a facility where other patients or healthcare providers are present. Mothers may have questions or things they would like to share with the nurse alone, but they are unable to do so because of other patients.

- **Lack of beds and delivery couches**

According to the FGD participants, the improvement in the quality of maternal healthcare services in the medical facilities was impacted by the absence of beds and delivery couches. This has an impact on the health facilities' ability to provide postnatal care and birth and delivery services. Although the government of Ethiopia currently encourages all women to deliver a baby at a medical facility, some mothers are referred from one facility to another or impoverished women are unable to pay for these services when they are sent to other locations for examination and would rather give birth at home because of a lack of basic medical supplies, delivery beds, and diagnostic tools like ultrasound exams and medications (Sendo, Chauke & Ganga-Limando 2021:6).

- **Lack of electricity and water supply**

The study reported that the lack of electric power and water supply in medical facilities affected the quality of maternal healthcare services. Study participants revealed that in facilities where there is a lack of electric power and water supply, healthcare providers have no option other than referring labouring mothers with complications. Sometimes there was a time when services were given without washing the room or beds. Investing in reliable electricity in underdeveloped nations could increase energy reliability in terms of supply hours and voltage stability. It could also have a major positive impact on the use of maternal and child health services, which are essential components of health

systems. Improvements in the majority of the vital furnishings and equipment in medical institutions are directly impacted by the availability of electricity (Chen & Chindarkar 2019:14). In the health facility, improvements in reliable electricity, power, and water supply infrastructure were seen as positive and associated with an increase in the quality of services for maternal and child health care services (Robert, Apho,Traoré & Vezina 2023:9) .

- **Absence of separate obstetric triage**

The current study identified the presence of obstetrics cases triaging obstetric patients at the triage unit into priority groups according to their needs or level of understanding. In this case, pregnant and labouring mothers were not supposed to visit the central triage; they were rather directly seen at the obstetrics triage. In underdeveloped nations, maternal mortality can be attributed to a delay in receiving proper medical attention after they arrive at health institutions. To address this issue, the obstetrics triage based on the placenta, amniotic fluid, and cord criteria within the structure of obstetric triage should be established within health facilities to identify mothers who require primary treatment like serum therapy versus those with urgent conditions. Patients can then be directed to the appropriate area, with critically ill cases being transferred to the emergency room for prompt and proper care (Moudi, Iravan, Iravan, Zareiyan, Zareiyan, Forouzan & Mirghafourv 2020:5).

- **Lack of infection prevention materials**

Based on the current study's findings, the quality of skilled birth attendance services was impacted by the absence of personal protective equipment (PPE) that prevents infections, such as capes, aprons, eye goggles, mouth masks, and boots. Insufficient personal protective equipment can put medical personnel at risk for infection, delay treatment, and result in preventable difficulties for mothers, claim Bremnes, Wiig, Abeid, and Darj (2018:3).

- **Lack of maternity waiting homes**

The results of the current study showed that the lack of maternity waiting houses was one of the factors impeding the improvement of the quality of maternal health care services. The construction of maternity waiting houses in hospitals is crucial in places without highways for ambulances and other forms of transportation, according to study participants. Ethiopia has been expanding the number of maternity waiting houses to decrease the distance between communities and medical facilities and provide access to competent care. Maternity waiting houses in pastoralist areas are at a disadvantage due to regional variations in infrastructure and services. This emphasises how important it is for communities and the government to enhance the state of the current maternity waiting homes (Tiruneh, Getu, Abdukie, Eba & Bailey 2019:9).

- **Lack of food in health care facilities**

The lack of meals available to new moms was one factor affecting the quality of maternal health care services in hospitals. Postpartum customs, coffee ceremonies, evil eye beliefs, and postpartum meal preparation all have a substantial impact on women's decisions to seek care during the postpartum period. Healthcare professionals and policymakers must take these factors into account when developing and implementing maternal healthcare services to ensure that they are culturally sensitive and responsive to the requirements of diverse groups (Yoseph et al 2023:9).

5.6.3.3 Category 3: Lack of medical equipment, medical supplies, and drugs

The absence of delivery couches, vacuum extractors, Non-Pneumatic Anti-Shock Garments (NASG), and personal protective equipment, supplies, and medications have been identified as obstacles to enhancing the quality of maternal healthcare services in the medical facilities.

- **Unavailability of NASG**

The results showed that one of the factors influencing labour and delivery service usage was the lack of NASG. The main obstacle to stabilising women while assessing, transporting, or getting ready for final surgical treatment, according to the participants, is the lack of NASG at medical institutions.

Yeshitila, Bante, Aschalew, Afework, and Gebeyehu (2021:5) claim that the lack of experience and equipment availability was the reason why NASG was not used for postpartum haemorrhage management in their medical facilities. Health Care Providers (HCPs) with a diploma or bachelor's degree, NASG training, the availability of NASG in their healthcare facility, and a positive attitude towards NASG utilisation were all significantly associated with its use, according to a study done in Ethiopia's North Shewa zone to ascertain the proportion and factors related to HCPs' use of NASG for obstetric haemorrhage management (Taye et al 2023:5).

- **Lack of delivery couches**

he current study's findings demonstrated that when labour and delivery cases exceeded the number of couches available in a health facility, the scarcity of couches also affected the ability to provide professional birth attendance services. According to a study done in the eastern region of Ethiopia, the main cause of home deliveries was a shortage of supplies, medications, and delivery couches needed for maternity care at medical institutions (Adatara et al 2021:3 & Solomon et al 2021:4).

- **Absence of vacuum extractors**

The study found that the absence of hoover extractors was one of the factors impeding the improvement of expert birth attendance services in medical facilities. According to the participants, there was a time when they had to send the mothers to other facilities because their medical facilities lacked hoover extractors. As a result, mothers are unhappy with the quality of professional birth attendance services offered in hospitals. According to Aschalew et al (2023:249), only 87.5% of health facilities had hoover

extractors, which was less than the projected level. Because of this, midwives in these health facilities had to refer people to hospitals because they couldn't help with hoover extractors during delivery. As a result, the community lost faith in the health Centre's professional birth attendance services.

- **Lack of personal protective infection prevention materials**

Based on the current study's findings, the quality of skilled birth attendance services

was impacted by the absence of personal protective equipment (PPE) that prevents infections, such as capes, aprons, eye goggles, mouth masks, and boots. Bremnes et al (2018:3) state that inadequate personal protective equipment can put medical personnel at risk for infection, delay treatment, and result in preventable consequences for mothers.

- **Lack of drugs and medical supplies**

One of the variables that impacted raising the standard of maternal health care services at medical facilities, according to the current study, was a shortage of medications and medical supplies. According to a survey conducted in Northwest Ethiopia to evaluate the facility delivery services process, over 40% of health facilities reported not having enough parenteral antibiotics, such as gentamycin and metronidazole, in the preceding three months. Additionally, at the same time, a significant number of health facilities also encountered a shortage of parenteral antihypertensive medications including methyldopa and hydralazine. This implies that a shortage of these emergency medications may lower the standard of delivery services in these health institutions, particularly for mothers experiencing obstetric problems (Tafere et al 2023:247). Participants frequently expressed concern about the inadequate maternity care equipment, supplies, and medication in health centres (Solomon et al 2021:4), as one of the reasons they choose home delivery is this lack of resources.

5.6.3.4 Category 4: Delay in offering health care service

Delays in the provision of maternal health care services and delays in referring mothers between medical facilities were shown to have an impact on the quality of maternal health care services under this section.

- **Delays in services provision**

One of the elements influencing the improvement in the quality of maternal healthcare services was the delay in providing medical care in the medical facilities. According to Kidane et al (2023:195), mothers' satisfaction with delivery services at medical facilities was impacted by delays in providing maternal health care services on time, which encouraged mothers to choose home delivery. Lack of maternity care equipment, supplies, and medications in health institutions in developing nations delays the search for maternity care or waits until the mother has the money to buy these things (Solomon et al 2021:4)

- **Delay in the referral of the mother**

Delays One of the main variables affecting the improvement of the quality of maternal healthcare services and the dissatisfaction of mothers with skilled birth attendance services was the delay in referring mothers from one health institution to another during obstetric problems. The main factor influencing the quality of maternal health care services in medical institutions was the delay in the mother's referral during problems. Inadequate transport services were the main cause of this delay in sending women to the next medical facility in the event of difficulties. Poor roads, far-off medical facilities, a lack of ambulances for transportation, or the delayed arrival of ambulances to the village where the mothers were in labour were the main causes of the problem (Shiferaw & Modiba 2020:7). The insufficient connection and referral system between woredas, hospitals, health centres, and health posts was one of the issues that impeded the use

of maternal health care and resulted in delays in sending mothers to the next medical institution during emergencies (Kitila et al 2023:7).

5.6.3.5 Category 5: Lack of basic and life-saving services

The current study found that prompt care services, life-saving measures, the use of medications and medical supplies to prevent obstetric problems, the availability and utilisation of ambulance services, and referral services to enhance the quality of maternal health care services.

- **Functioning of drugs and medical supplies to prevent obstetric complications**

Every obstetrics case should have emergency medications and medical supplies on hand, according to the FGD participants. This will help prevent issues early on and eliminate the need to look for emergency medication after they arise. One of the things preventing the quality of maternal health care services from improving was the scarcity of emergency medications and medical supplies. Solomon et al (2021:4) state that the factor influencing the quality of maternal health care services was the lack of equipment, supplies, and medications necessary for maternal care at medical institutions. Some women prefer to give birth at home, which can be partially explained by this lack of resources.

- **Lack of life-saving interventions**

Failure to deliver services on time was one of the factors impeding the improvement of maternal healthcare services at medical facilities, according to the results of the current study. According to Adatara et al (2021:4), lifesaving measures depended on having a basic supply of emergency medications and equipment. However, moms would be disappointed if these drugs were unavailable, and midwives lacked the resources necessary to offer expectant women full care. Even though they knew that these were

not the best practices, the midwives were forced to use the few resources at their disposal to come up with temporary fixes. To safeguard the mother's and the unborn child's survival, they had to act quickly.

- **Lack of offering services on time**

According to the current study's findings, one of the things preventing the quality of maternal healthcare services in medical facilities from improving was the failure to provide services on time. The mother might not return to use the services if the results and services were not provided on the same day. According to Mohammed et al (2021:1157), moms may choose not to use maternal health care services as a result of lengthy wait times in medical facilities and subpar public health facilities nearby. According to Dahab and Sakellariou (2020:10), the use of maternal health care services may be impacted by lengthy wait times and a shortage of staff in medical facilities.

- **Presence and utilisation of ambulance services**

The availability and use of ambulance services were cited by most study participants as the main variables impacting the improvement of maternal healthcare services in medical facilities, indicating their unhappiness. This conclusion was corroborated by Solomon et al (2021:3), who found that using delivery services is significantly hampered by the distance to medical facilities and the lack of adequate transportation. Additionally, the region's remoteness and hot, dry weather, which makes walking difficult, deter women from seeking professional delivery services without transportation or the availability and usage of emergency services. According to Shiferaw and Modiba (2020:7), inadequate roads, distant medical facilities, a lack of ambulances for transportation, or the delayed arrival of ambulances to labouring mothers all had an impact on the availability and use of ambulance services. Because of these, expert delivery services were not engaged. Women who had obstetric emergencies were more likely to give birth at home, according to Wirtu et al (2023:3), because of things like ambulances' unavailability and

malfunctions, as well as communication problems that made it impossible for them to use ambulance services.

- **Referral services**

One of the elements influencing the enhancement of the quality of maternal health care services was the availability of referral services in medical facilities. Although mothers and midwives agreed that a referral system was necessary, particularly at the basic healthcare level, they both referred to the current system as a "nightmare." To refer mothers with issues to a higher-level facility, it was reported that most health clinics lacked an ambulance. Mothers typically had to make arrangements for their transportation, which could include hiring an ambulance privately or using an ox cart, bicycle or motorcycle (Tolossa et al 2022:462).

5.6.3.6 Category 6: Lack of health education programs

The study's findings demonstrated that the standard of maternal health care services was impacted by a lack of health education at medical institutions and in the community.

- **Lack of health education**

Based on the results of the investigation, one of the things preventing the quality of maternal health care services from improving was the absence of health education programs in medical institutions. Health extension workers should also conduct health education at the community level and in health facilities to enhance the quality and utilisation of maternal health care services, according to a report. The results of this study, which are corroborated by Shiferaw and Modiba (2020:9), showed that the main deterrent to using expert delivery services was a lack of knowledge about their advantages. They claimed that if women were not given health information about the advantages of using professional delivery services, they would give birth at home.

5.6.4 Theme 2: Problems mothers have in the community related to maternal health care services

The factors that affected the improvement of community-based maternal health care services were covered by this theme. Transportation accessibility, community-related concerns, and factors related to the mothers' distance were the factors that affected the improvement of the quality of maternal healthcare services in health facilities.

5.6.4.1 Category 1: Community-related problems

The current study's findings demonstrated that community-related issues were one of the factors affecting the quality of maternal health care services; the community's negative attitude towards using maternal health care services, low level of engagement, poor knowledge, and lack of community-level health education were the factors that affected the quality of maternal health care services in the communities.

- **Low community awareness**

The study's findings demonstrated that a lack of community awareness of maternal health care services is one factor affecting their quality in the community. According to the study participants' conclusions, the community had very little knowledge about the use of postnatal care, although there was good knowledge about using ANC and giving birth in medical facilities. A study carried out in Kenya's Mt. Elgon Sub-County discovered a connection between maternal health care service use and awareness. Four ANC visits were more likely to be completed by mothers who knew about free maternal health services than by those who did not (Furechi 2021:5). Similarly, a study conducted in Northwest Ethiopia found that one of the main reasons why respondents did not attend ANC visits throughout pregnancy was a lack of community understanding regarding the need of prenatal care (Hailemariam et al 2023:6).

- **Attitude of the community towards the utilisation of maternal health care services**

This study showed that opinions among the community regarding the usage of maternal health care services varied. Numerous factors were found to have an impact on the quality of maternal health care services in the community, including a negative attitude towards the use of maternal health care services, a perception that the delivery of healthcare facilities is socially unacceptable, and a lack of confidence on the part of some healthcare providers. Women who received health education on ANC and skilled delivery were more likely to have a positive attitude towards these issues in the community than women who did not receive the health education intervention. As a result, the community now has greater faith in medical professionals working in healthcare facilities when it comes to using maternal healthcare services (Kassim et al 2023:8).

- **Lack of community participation**

The current study found that the usage of maternal health care services, especially after childbirth, was significantly affected by community involvement. For instance, the community could help the labouring mother by carrying and transporting her to the medical facilities. Lack of community involvement did not increase the quality of maternal health care services. Involving the community in enhancing the quality of maternity and neonatal health care services increases the coverage of ANC visits, full ANC, and institutional births. However, a lack of community involvement is the reason behind the underutilisation of maternity and neonatal care facilities (Wereta et al 2018:37).

- **Lack of health education at the community level**

The current study's findings demonstrated that a deficiency in community-level health education is one obstacle to improving the quality and uptake of maternal health care services. There is less health education provided at the community level now than there was a decade ago. According to Kitila et al (2023:7) factors influencing the usage of

maternal healthcare services included a lack of awareness-raising initiatives in the community and healthcare facilities, such as regular Women Development Army meetings and a forum for expectant mothers (2023:7).

5.6.4.2 Category 2: Reasons related to the mothers

The results of the study showed that the mothers' socioeconomic status, including their level of education and income, as well as their experiences using these services, had an impact on the quality of maternal health care services provided at the medical facilities.

- **Academic status of mothers**

The current study found that one of the factors influencing the facilities' ability to raise the quality of maternal health care services was the academic standing of mothers in the neighbourhood. According to Stewart and Hall (2022:5), mothers' usage of maternal health care services is significantly impacted by their academic status. According to (2019:8), mothers with at least a primary education are more likely than those without any formal education to use competent delivery services in medical facilities like hospitals and health centres.

- **Economic status of mothers**

The current study found that improving the quality of maternal healthcare services was impacted by women's financial dependence on their husbands. The mother's poor economic status affected her usage of maternal health care services (Stewart and Hall, 2022:5). Mothers who earn less are less likely to seek ANC services (Gebremedhin, Dawson, & Hayen, 2023:7).

- **Experiences of mothers with the utilisation of maternal health care services**

According to the current study, one of the elements influencing the increase in the quality of maternal health care services was the presence of seasoned moms who used these services in the community. Using skilled birth services was discouraged by prior deliveries wherein health facilities provided subpar skilled delivery services. Previous experiences with subpar treatment from medical institutions during deliveries have deterred the use of competent delivery services. Women who were given such subpar care began to assume that their future pregnancies would also terminate in this manner. A professional delivery service was therefore not something they were interested in (Shiferaw & Modiba 2020:5; Mohamed et al 2021:1157).

5.6.4.3 Category 3: Distance and access to transportation services

The current study found that the community's accessibility to transport services and the distance to medical facilities were two factors influencing the quality of maternal health care services offered. It was demonstrated that these factors led to birth-related issues for most mothers. It was discovered that the distance to medical facilities, accessibility to transportation, and security concerns all had effect on the usage of maternal health care services.

- **Health facility distance and access to transportation**

The study's findings demonstrated that the distance between medical facilities and communities was one factor impacting the greater quality of maternal health care services. As a result, the majority of moms experienced delivery-related difficulties while travelling before arriving at medical facilities. According to Mohammed et al (2021:1155), in the Somali Region of Ethiopia, the majority of mothers decide to give birth at home because the health facility is far away and they cannot afford to travel by foot. One pregnant mother shared her experience, and other factors that were cited as reasons

why they did not use the skilled delivery services in the health institutions were the lack of free ambulances and poor physical accessibility. Government administrative offices commonly use ambulances, which often break down and go unfixed for a long time. Factors influencing access to ambulance service utilisation were found to include doing extra duties like serving office managers and offering fieldwork knowledge, as well as financial and driver-related problems that were intolerable (Wirtu et al 2023:3; Tolossa et al 2022:467; Solomon et al 2021:3 & Shiferaw & Modiba 2020:7).

- **Security issues**

The study's findings indicated that security-related worries might influence the use of maternal health care services. ANC, labour and delivery, and postnatal care services are now not accessible in health centres because to security concerns. If access to maternal health institutions is difficult in locations where security is an issue, labouring mothers may give birth at home with traditional birth attendants or on the road. This makes providing free maternity care in many locations challenging (Mohammed et al 2021:1155).

5.6.4.4 Category 4: Socio-cultural factors

The results of the current study addressed the sociocultural elements—such as customs, religion, and culture that had a major impact on the community's efforts to improve maternal healthcare services.

- **Community culture**

The results of the current study show that women's decisions and behaviours surrounding maternal health care services are significantly influenced by community culture. Health care professionals who provide prenatal and postpartum care must have

a thorough understanding of cultural competency and birthing beliefs (Dantas et al 2020:7).

- **Mothers' belief**

Among the factors influencing the quality of maternal health care services, the current study demonstrates that women' cultural views frequently take precedence over the necessity of seeking professional medical support during labour. One of the reasons for home births was also shown to be the moms' poor early care-seeking behaviour. Mothers' refusal to seek professional delivery services unless they experienced health issues or obstetric complications was one way this was demonstrated. According to the mothers, if they had experienced health issues or obstetric concerns during labour, they would have sought professional delivery services (Shiferaw & Modiba 2020:9).

- **Mothers' religion**

The current study's findings demonstrated that the mothers' religion was one factor affecting the improvement in the quality of maternal health care services. Deepak, Jauri, and Dhunga assert that the usage of maternal health care services was influenced by religion (2018:79). The community members believe in Saint Mary because she helps women give birth safely and protects them during the process. Because their older family members prevent them from doing so, this religious view delays women's requests for competent delivery assistance (Shiferaw & Modiba 2020:7).

- **Traditional practices**

Participants in the study talked about how the community's customs were one of the things influencing the enhancement of the standard of maternal health care services. Additionally, they stated that these customs prevent mothers from taking advantage of the maternal health care services offered by qualified medical professionals at the hospitals. Traditional customs like making coffee and preparing injera were continuously carried out in a parturient mother's home until she gave birth, which caused delays for

women seeking expert delivery and frequently resulted in home delivery (Shiferaw & Modiba 2020:7). The majority of women who give birth at home are helped by their older, unskilled community members due to a number of reasons, including cultural customs and social expectations (Kitila et al 2023:7).

5.6.5 Theme 3: Reasons for non-utilisation of maternal healthcare services

The reasons why maternal healthcare services are not used in medical facilities were covered in this theme. These included sociocultural factors, women's characteristics, the experience of using maternal health care services, factors related to transportation, factors related to health facilities, factors related to respectful maternity care, and factors connected to health care providers.

5.6.5.1 Category 1: Socio-cultural factors

Inequality between men and women in the community, cultural beliefs and customs, stigma and discrimination within the community, and communication and language barriers were identified in the current study as sociocultural factors that contribute to the underutilisation of maternal health care services.

- **Inequality of males and females in the community**

The results of the study indicate that if gender equality is not ensured, mothers in the community can decide not to use maternal health care facilities. Because of their reliance on men, mothers were unable to make decisions on their own. When mothers are treated equally in the community, they can make decisions about their health on their own or in cooperation with others, which could result in a rise in the use of maternal healthcare services (Bain et al 2022:5). Similar to this, husbands in communities with male-

dominated society have complete influence over women's choices, including whether or not to seek medical attention (Mohamed et al 2021:154).

- **Community beliefs and traditional practices**

The results showed that moms give community customs and beliefs a lot of weight. They frequently prefer giving birth at home because of these attitudes and behaviours, which also affect how they view maternal health care providers. Traditional customs were one of the sociocultural barriers that kept moms from utilising professional delivery services. The moms stated that they preferred to pursue the traditional and customary practice of giving birth at home. They were therefore hesitant to give up these traditions and practices. The elderly residents of the town believe that Saint Mary helps women give birth safely and protects them during the process. Women who seek competent delivery services are delayed because of this assumption because older family members dissuade them from doing so (Shiferaw & Modiba 2020:7).

- **Stigma and discrimination in the community**

This study emphasises that the improvement of maternal healthcare services in communities was also impacted by stigma and discrimination related to pregnancy status, such as pregnancies that resulted from sexual abuse or outside of marriage. Pregnant women worry that maternity care providers may reveal their HIV serostatus to others during ANC visits and labour and delivery. Women thus decline to give birth in a medical facility, avoiding HIV testing (Shiferaw & Modiba 2020:8). In low-income African nations, stigmatisation, discrimination, and mistreatment of single mothers during childbirth at medical facilities impact access to maternal healthcare services. Most of these mothers' mistreatment and disregard during childbirth (Dahab & Sakellariou 2020:11).

- **Language and communication barriers**

Women may find it challenging to express their needs and concerns to healthcare professionals due to language and communication problems, which could result in a lack

of understanding and subpar treatment. Participants in the study said that communication and language obstacles had an impact on the standard of maternal healthcare services provided at medical facilities. According to Dantas, Singh, and Lample (2020:7), to facilitate the use of maternal health care services, health professionals who offer mothers with prenatal and birthing care must be able to communicate in the mother's native tongue and possess cultural competency and birth-related beliefs.

5.6.5.2 Category 2: Women-related factors

Women's attitudes towards danger signs, their level of autonomy in the community, and their understanding of obstetric danger signs and problems were among the characteristics that midwives discussed while discussing the factors that affected women's utilisation of maternal health care services in the health facilities.

- **Women's knowledge of obstetric danger signs and complications**

The results of the study showed that one of the variables influencing mothers' use of maternal health care services was their awareness of obstetric danger indicators and complications. Mothers' use of maternal health care services was affected by women's awareness of obstetric danger indicators and consequences. This suggested that mothers did not give birth in medical facilities if they were unaware of the risks and consequences of obstetric delivery at home (Mohamed et al 2021:1153). Gurara et al (2023:12) found that women's awareness of pregnancy danger symptoms and pregnancy planning and danger signs strongly predicted their use of ANC. The likelihood of using ANC is higher among people who are aware of the warning signs of pregnancy than among those who are not.

- **Women’s attitudes on danger signs and complications**

The study's findings revealed that mothers' views about using maternal health care services were one factor that affected how successfully those services were delivered to them. The primary cause of the poor use of maternal healthcare was mothers' perceptions of warning signs and difficulties throughout pregnancy, labour, and the postnatal period (Stewart & Hall 2022:5).

- **Lack of autonomy of women**

Women's usage of maternity healthcare services may be significantly impacted by their lack of independence. This may result in a lack of use of maternal healthcare services in places where women have limited autonomy over their choices. Compared to women who made the decision in concert with others, those who made the decision on their own to attend maternity care were more likely to want birth companionship. (Assfaw, Abuhay & Asratie 2022:6; Stewart & Hall 2022:5). Husbands and other family members, frequently parents, may make decisions regarding a woman's health care when she is unable of doing so for herself. This might be because women had to consult their husbands and families before obtaining medical care, and they were financially dependent on them. Being the primary carers for the children, they are unable to leave them to seek care since their spouses may not allow it (Mohamed et al 2021 :1152).

5.6.5.3 Category 3: Experience of maternal health care services utilisation

The current study's findings demonstrated that mothers' experience delivering maternal health care services was one of the elements influencing their utilisation of such services. Mothers were less likely to use ANC follow-up, labour and delivery services, and postnatal care if they had negative experiences with these services.

- **ANC follow-up experience**

The study's findings revealed that if mothers had a negative experience with ANC follow-up and felt discouraged or cut off from the medical system, they would not use it. Mothers may be less inclined to attend follow-up appointments for further maternal healthcare services because of this. The experience of not having ANC follow-up during pregnancy was revealed to be a contributing factor in mothers' inability to seek skilled delivery services since they were not aware of their gestational age and expected birth date. These mothers received no health education about the benefits of professional delivery services and postnatal care after giving birth (Shiferaw & Modiba 2020:8). Jebena et al (2022:10), claim that moms who had a bad experience with the death of a child or woman use the services less frequently. They became afraid to visit a health clinic for delivery or other maternal health care services as a result of the widespread rumours that were spread across the community.

- **Labour and delivery services experience**

The current study's findings revealed that employing skilled delivery services was discouraged by prior experiences with subpar skilled delivery services from medical facilities. Mothers who received such subpar care believed that the same thing may happen to them in their next pregnancies, claim Shiferaw and Modiba (2020:5). As a result, they had no desire to use professional delivery services. In a similar vein, poor service utilisation follows the death of a mother or kid. “The baby died because of the medical professional's improper cutting and removal of the child's umbilical cord. They became afraid to visit a health centre for delivery because of the widespread rumours that were spread across the neighbourhood (Jebena et al 2022:10).

5.6.5.4 Category 4: Transportation-related factors

Mothers' failure to use maternal health care services was found to be affected by several transportation-related issues, such as the lack of ambulance services, the distance to medical facilities, the high cost of transportation, and the absence of transportation.

- **Unavailability of ambulance services**

According to the study's findings, mothers and newborns may choose not to use maternal health care services, such as labour and delivery services from trained medical professionals at medical facilities, if ambulance services are unavailable during emergencies. This could have a detrimental effect on their health or even cause their deaths. Tolossa et al (2022:462) reported that mothers who gave birth at public health facilities but did not use ambulance services cited a number of reasons, including experiencing short or abrupt labour, not knowing the ambulance's phone number, finding it difficult to get onto the roads, being unaware of the limited number of ambulances available, running out of fuel, or having a broken call taker phone.

- **Long distances to health facilities**

The current study's findings revealed that one of the factors influencing mothers' decision not to use maternal health care services was the distance to medical facilities. Accessing maternal healthcare services may be difficult for women who reside far from medical facilities. They might find it challenging to travel to medical facilities due to the great distances, particularly if they lacked access to dependable transportation. This may lead to insufficient postnatal care, restricted access to trained delivery attendants, and postnatal care appointments that are ignored or delayed. Limited access to medical facilities because of distance and poor transit options is a major deterrent to using delivery services, claim Solomon et al (2021:3). In addition, women find it difficult to walk large distances due to the region's tough terrain and severe weather, which deters them from seeking professional delivery services.

- **High transportation costs**

The current study's findings demonstrated that mothers who lived far from health facilities may have to pay high transportation costs when seeking maternal health care services or when they are referred to hospitals from health centres for services like labour and delivery. This could be a significant financial burden, particularly for mothers from low-income households, and it may prevent mothers from using skilled delivery services or force them to put other expenses ahead of their health (Mohamed et al 2021:1157).

- **Lack of transportation**

The findings of this study suggest that regular prenatal care appointments may be challenging for moms without access to transportation. This could result in inadequate monitoring of the mother's and the foetus' health, restricted access to trained birth attendants, and missed opportunities for early pregnancy problem detection and treatment. Lack of transportation may make it difficult for mothers to get to medical facilities in time for delivery. This increased the risk of poorly attended births, which could lead to complications for the mother and the baby, as well as perhaps death. Lack of transportation was one of the biggest obstacles keeping mothers from receiving professional delivery services, according to Shiferaw and Modiba (2020:7). The primary causes of this were poorly maintained roads, distant medical facilities, a shortage of ambulances for transportation, and the tardiness of ambulances' arrival in the villages where labouring mothers were located.

5.6.5.5 Category 5: Health facility-related factors

This category included factors related to health facilities, such as inadequate infrastructure, emergency obstetric care, cultural ceremonies, medical supply, and the availability of electricity and water, which were found as the primary causes of mothers' non-utilisation of the institutions' maternal health care services.

- **Inadequate infrastructure**

The current study's findings demonstrated that inadequate infrastructure influenced mothers' use of maternal health care services. Maternal health care services were of worse quality if there was insufficient infrastructure. This led to a breach of privacy and confidentiality, an elevated risk of infection, and pain and discomfort for mothers during labour and delivery. The frequency of prenatal care visits is positively and strongly correlated with the existence of health facility infrastructure in hospitals, as measured by the ratio of primary health care (PHC) facilities per sub-district. Enhancing health infrastructure can boost women's likelihood of accessing healthcare services during pregnancy. By increasing the number of PHC facilities in a region, the strain on existing facilities can be alleviated, leading to improved service quality. Access to high-quality maternal healthcare services can serve as a motivator for women to seek out maternal healthcare services (Ajegbile 2023:2; Puspitasari & Bulan 2021:7).

- **Medical supply-related factors**

The participants in this subcategory, reported that the main reasons why mothers did not use the health facilities' maternal health care services were connected to medical supplies. They talked about how a lack of medical resources can cause essential procedures or treatments to be delayed, raising the possibility of difficulties during childbirth. According to Ajegbile (2023:3) women' use of maternal health care services was impacted by the lack of medications and consumables in the medical facilities. Mothers were deterred from using maternal health care services by the majority of the institutions' lack of supplies and equipment. They cited the poor equipment as the reason for their reluctance to seek services at these facilities (Ogu et al 2023:5).

- **Lack of emergency obstetric care**

According to the participants, the lack of emergency obstetric care services, including blood transfusions or caesarean sections, keeps mothers from using maternal health care services. According to Tiruneh, Asaye, Solomon, and Arega (2021:7), mothers in

low-socioeconomic rural areas are far more likely than those in metropolitan areas to experience delays during emergency obstetric care. This inequality may be caused by elements like a dearth of qualified healthcare professionals and an inconsiderate service delivery system. Similarly, low-income, illiterate women and those referred from other medical facilities are more likely to experience delays in emergency care, according to Eshetu et al (2023:6). These results highlight how critical it is to remove these obstacles to guarantee that all women, regardless of their location or background, receive prompt and efficient maternal healthcare services.

- **Lack of cultural ceremony in health facilities**

One significant factor that prevented women from using maternal health care services was the absence of traditional ceremonies in the medical facilities. In many communities, this cultural ceremony was important because it gave people a sense of identity, belonging, and connected them to traditions and customs. Mothers may lose their cultural identity during labour and delivery if these rituals are not performed in medical facilities, which could have an adverse effect on their emotional health and overall birth experience. Women in Ethiopia nowadays frequently cite the inability of contemporary healthcare facilities to accommodate their cultural needs as the main deterrent to using the services. Women were discouraged from accessing delivery care services since many traditional practices were not recognised or supported at the level of health facilities (Jebena et al 2022:11).

- **Availability of water and electricity**

The participants discussed how the lack of water and electricity in the health facilities affected mothers' inability to receive maternal health care services. Enhancing the electrical supply's duration and voltage stability has a major positive impact on key aspects of health systems, such as the utilisation of maternity and child health services, medical facilities, and health data administration (Chen & Chindarkar 2019:13).

5.6.5.6 Category 6: Respectful maternity care

The following factors were shown to influence mothers' decision not to use maternal health care services: position during labour and delivery, lack of privacy and confidentiality, labour companionship, and woman-friendly services.

- **Woman-friendly services**

The current study indicated that mother-friendly services were the features that deterred mothers from seeking maternal health care services in medical institutions. It shown that mothers were less concerned with the competent performance of medical professionals and more interested in how they acted when providing maternal health care services. To improve maternal health service satisfaction, carers must respond with dignity, compassion, and consideration, as women have the right to dignified and respectful maternity care. Maternal mortality may decline and the number of institutional deliveries may rise as a result (Gashaye et al 2019:10 &11).

- **Lack of labour companionship**

The study's findings demonstrated that the lack of labour companionship during labour and delivery was one of the factors impacting mothers' usage of maternal health care services. Their family provided them with comfort during the labour and delivery phase at home, but the absence of labour companionship in the medical facilities hindered their ability to use the competent delivery services available there. According to Arousell et al. (2019:37), companionship was helpful for supporting healthcare providers and offering both physical and psychological assistance. However, medical professionals observed several difficulties, especially in regard to the labour ward's layout.

- **Lack of privacy and confidentiality**

Participants in the current study reported that the absence of privacy and confidentiality during labour and delivery affected mothers' usage of maternal healthcare services

provided by certified healthcare providers in medical facilities. Lack of privacy and secrecy affected hospitalised women's usage of maternal health care services. Mothers often complained about the lack of confidentiality and privacy when they employed professional delivery services at medical facilities. In these settings, where moms or other medical experts may be present, it can be difficult for a woman to ask the midwife questions or voice her concerns. Lack of privacy during pelvic exams and other labour and delivery care is an important component of high-quality care that may affect women's satisfaction (Tolossa et al 2022:462; Mohamed et al. 2021:1156; Mweemba et al 2021:7).

- **Position during labour and delivery**

According to this study, mothers' use of competent delivery services in medical facilities was influenced by their posture during labour and delivery. According to the study participants, they advised moms to lie in their left lateral and lithotomy positions during labour, which made them feel comfortable but made the mothers feel awkward and ashamed. The results of the Dominican University of California study shed light on the intricate dynamics pertaining to the utilisation of lithotomy postures during childbirth. Despite potential drawbacks for the mother, like a higher chance of perineal tears, this position was found to be familiar and comfortable for them, which contributed to their sense of convenience. The study also found that midwives' use of this posture was impacted by their inability to employ other positions during birth due to a lack of training and abilities. This emphasises how crucial it is that healthcare professionals have thorough training in order to guarantee the application of evidence-based procedures that put the comfort and safety of expectant mothers first (Heskett 2022:15).

5.6.5.7 Category 7: Health care provider-related factors

The study's findings demonstrated that issues related to healthcare providers were one of the reasons why moms did not use maternal healthcare services. These factors included the following: a shortage of midwives; a lack of interest in the midwifery

profession; the availability of health care providers during labour and delivery; inadequate training; inadequate service provision; a lack of essential skills, knowledge, and positive attitude among health care providers; and the refusal of healthcare workers to provide services outside of their regular working hours.

- **Lack of necessary knowledge**

The FGD participants emphasised the importance of healthcare professionals having the necessary knowledge and a supportive attitude towards moms. They stated that moms might be discouraged from accessing maternity healthcare services if medical professionals showed a poor attitude or disregard towards them. Mothers valued a health care provider's approach more than their skills, the participants highlighted. To avoid any impression of carelessness or negative attitude, they also emphasised how crucial it is that medical professionals provide all moms the same amount of attention and care, especially during hectic times. Another problem that kept moms from using maternal health care facilities was ignorance or a lack of awareness of the results of labour. Lack of knowledge about the consequences of childbirth was another issue that prevented mothers from using maternal health care facilities. They are unaware of the dangers of giving birth at home and the advantages of giving birth in a medical facility. Some people decide to give birth at home because they are afraid of blood transfusions, which might be lethal due to severe bleeding (Mohamed et al 2021:153; Stewart & Hall 2022:5).

- **Lack of necessary skills**

During focus group discussions, some participants brought up instances in which moms were taken from health clinics to hospitals despite not exhibiting any symptoms of labour or a closed cervix. This led to an inadequate of use of maternal health care services from qualified healthcare practitioners because of disappointment and dissatisfaction with the services offered by the health facilities. The usage of expert birth attendance services was also found to be influenced by the absence of skills required to handle labour and delivery problems. A mother is more likely to refer a healthcare provider to others and

return for additional maternal care services if she is pleased with their abilities. She would not, however, suggest them to others or return for additional maternal health care treatments if she was unhappy. Mothers who had bad experiences receiving referrals from the community to medical facilities, either because they were treated disrespectfully or did not receive high-quality care, did not return to the facility or refer others to it (Jebena et al 2022:10).

- **Health care provider attitude**

Health care professionals should refrain from being careless in order to raise the standard of maternity healthcare services. If the medical staff at the facilities showed little concern for the mothers and had a negative attitude, mothers would not want to use the maternal health care services. The study carried out in Ethiopia's Harari regional state health facilities demonstrated the important influence that the attitudes of obstetrics care providers play in assisting mothers in managing the pain of childbirth and enhancing the use of maternal health care services (Eyeberu et al 2022:7). On the other hand, mothers' decisions to seek care at medical facilities during labour and delivery were found to be adversely affected by the problem of unprofessional or misbehaving healthcare personnel. According to Dantas et al (2020:6), this emphasises how crucial it is to cultivate positive attitudes among healthcare professionals to enhance maternal health outcomes and promote increased use of health care services.

- **Lack of midwives**

Competent birth attendants who have received the education and training necessary to manage straightforward pregnancies, deliveries, and the first few days after giving birth, as well as to recognise, treat, and refer women and newborns with complications to enhance the standard of maternal health care services. Thus, one of the factors influencing mothers' use of maternal health care services during childbirth was the absence of midwives or trained birth attendants with midwifery expertise. According to Ige and Cele (2022:3) a shortage of personnel forces healthcare professionals to handle several tasks at once, which can wear them out and possibly lower the standard of

treatment they offer. One or two midwives per patient would lessen fatigue, enabling them to give the best care possible, build relationships with patients, smile, and have time to offer physical assistance during birth. Nonetheless, it is impossible to give these moms high-quality treatment if there are numerous labouring mothers at once and only one midwife is available.

- **Low interest in the midwifery profession**

The results of the current study demonstrated that one of the elements influencing the standard of maternal healthcare services provided in medical facilities was a lack of enthusiasm in the midwifery profession. Participants in the study also mentioned how little the government paid attention to health care providers. Due to their fatigue, healthcare personnel were not provided with advantages and perks packages. Many diploma midwives changed careers as a result. Fair wages, incentives, pay raises, professional recognition, supportive remarks, and extra benefits are what midwives want to be motivated by. Nonetheless, the lack of call allowances for midwives may reduce interest in the field, even though their skills are distinct from those of other nursing professions that are eligible for such benefits (Ige & Cele 2022:4).

- **Presence of health care providers around labouring mothers**

The mother was able to receive the services she needed while she was in the hospital thanks to constant and frequent follow-up and the presence of medical professionals when she was hospitalised for labour or postnatal care services. As a result, the healthcare professionals were able to give the mother sound guidance, reassurance in the event of labour pain, and other essential treatment. Additionally, it made it possible for medical professionals to identify and treat any issues that might come up while they were in the hospital. Health care professionals could deliver timely care if they were nearby the mother. Mothers were satisfied with the use of maternal health care services as a result. The results of the Somalia study emphasise how crucial it is to provide women with ongoing support and encouragement during their childbirth to enhance

maternal health care services. Families of labouring moms' complaints of perceived neglect highlight the necessity of regular care and attention from medical professionals (Mohamed et al 2021:1156). One important factor influencing the use of maternal health services was found to be the lack of healthcare practitioners throughout labour, delivery, and the postnatal period (Mordal et al 2021:4). To guarantee favourable maternal health outcomes and motivate women to seek care at medical facilities, this underlined the vital role that health care providers play in offering continuous support and care.

- **Lack of training**

Some of the midwives in the current study expressed dissatisfaction with the lack of training they received in basic emergency obstetric and newborn care, which prevented them from providing high-quality maternal health care services in their health facilities. Additionally, in certain situations, midwives with ultrasonography training in basic obstetrics and gynaecology could provide treatment and management at health clinics. According to Kea et al (2018:8), most women were unhappy with the medical staff at health clinics, claiming that they were not equipped to recognise labouring mothers or properly handle referral problems when mothers were sent from the community. Mothers were sometimes even sent home without the necessary support, which resulted in situations where they had to give birth on the road without any help.

- **Availability of health care provider during emergency time**

The study's findings demonstrated that the lack of medical personnel in the hospital during emergencies was one of the elements impacting mothers' usage of maternal health care services. For patients in need to receive prompt and appropriate medical assistance, health care providers' availability during emergencies and urgent care is essential. Emergency services are essential for giving people with life-threatening illnesses or other urgent medical problems prompt care. Emergency physicians, nurses, paramedics, and other medical personnel are educated to evaluate and treat patients in an emergency situation in a timely and efficient manner (Dubai Health Authority 2022:16).

5.6.6 Theme 4: Strategies currently implemented within health facilities

The strategies employed by healthcare professionals to enhance the quality of maternal healthcare services were classified under this theme as outreach to maternity healthcare services, cultural rituals in health facilities, and supportive supervision.

5.6.6.1 Category 1: Supportive supervision

Participants in the current study discussed how mentorship among health institutions and supportive supervision could enhance the standard of maternal health care services and use. Healthcare teams can effectively collaborate to improve service delivery, raise the standard of care, and eventually improve patient health outcomes by adhering to the principles for the implementation of integrated supportive supervision, which include involving all team members in the planning process, communicating plans to all pertinent stakeholders, and clearly defining and assigning roles and responsibilities (Anoke et al 2021:430).

- **Mentorship**

Participants in this study discussed about how mentorship had improved the standard of maternal healthcare services in their medical institutions. According to them, the plan called for linking hospitals and health posts, among other healthcare services. By putting the plan into practice, they were able to deal with problems like the maternity unit's midwives' and other healthcare professionals' lack of skills and service delays that occurred when mothers were referred from health posts to health centres or from health centres to hospitals.

Mentorship programs are essential for enhancing healthcare professionals' comprehension and competence in managing obstetric issues, claim Ndwiga et al (2023:12). Mentorship offers a fantastic opportunity for continuous learning and growth

while offering services, allowing providers to stay up to date on best practices and evidence-based suggestions. By fostering a supportive mentorship environment, health care organisations can enable their staff to provide high-quality treatment and eventually improve the health outcomes for pregnant women and babies.

- **Providing outreach services for non-emergency obstetric**

According to the report, one of the community-level activities offered to raise awareness of the use of ANC services is outreach for non-emergency obstetrics, such as elective caesarean sections. Health outcomes for mothers and newborns have been significantly impacted by the implementation and improvement of complete Emergency Obstetrics and Newborn Care (CEmONC) services at health centres. A greater percentage of anticipated births have been born in CEmONC facilities because of this program, guaranteeing that more expectant mothers would have access to specialised care during childbirth. Furthermore, the requirement for emergency obstetric care has been satisfied, suggesting that individuals suffering from obstetric difficulties are receiving prompt and suitable interventions (Taye et al 2022:7).

- **Outreach antenatal care services**

To raise community awareness about the use of ANC services, the study participants determined that outreach ANC services were crucial for identifying congenital abnormalities and pregnancy-related medical issues, such as gestational diabetes mellitus, pregnancy-induced hypertension, and heart disease.

The provision of outreach ANC services, such as proactive home visits, has been shown to have a positive effect on pregnant women's utilisation of ANC services. Outreach ANC services have been linked to higher rates of pregnant women receiving any ANC, finishing four or more ANC visits, and starting ANC in the first trimester when compared to service delivery alone (Kayentao et al 2023:7). In order to enhance mother and child health outcomes, it is crucial to connect with pregnant women in their communities and offer them easily available antenatal care (ANC). Health care providers can effectively

engage pregnant women, eliminate care barriers, and encourage early and consistent use of ANC services by using proactive home visits and other outreach techniques.

5.6.6.2 Category 2: Cultural ceremony in health facility

Participants in this subcategory reported that cultural rituals held in the medical facilities improved the quality and utilisation of maternal health care services.

- **Preparation of porridge and coffee ceremony**

The presence of cultural rituals in medical facilities improved the quality of maternal health care services and utilisation, according to study participants. This made it easier for mothers to get skilled delivery services and postpartum care in hospitals. The complexities of maternal healthcare services in certain regions were clarified by the sociocultural factors discovered by Yoseph et al (2023). Postpartum customs, coffee ceremonies, evil eye beliefs, and postpartum meal preparation all have a major influence on women's choices to seek care during the postpartum period. Because of local customs and beliefs, these behaviours may discourage women from seeking care in medical facilities, which can affect access to high-quality maternal health care services. In order to improve maternal health outcomes and guarantee that women receive the care they require throughout the vulnerable postpartum period, it is imperative to comprehend and address these sociocultural issues. In order to guarantee that maternal healthcare services are culturally sensitive and responsive to the needs of various communities, healthcare practitioners and policymakers must consider these elements while creating and implementing these services (Yoseph et al 2023:9).

5.6.7 Theme 5: Strategies suggested to be put in place to improve the quality of maternal health services

This theme recognised the following strategies as potentially enhancing the quality and use of maternal health care services: maternity waiting homes, community participation strategies, offering benefit packages to midwives, establishing emergency obstetrics and gynaecology triage, offering cultural ceremonies, offering incentive services, and investigating the reasons for home delivery for action.

5.6.7.1 Category 1: Community participation strategies

Community involvement plays a crucial role in improving maternal health outcomes. In this study, a significant proportion of respondents indicated that they received maternal health education, which is often facilitated by community health workers and local (Gavi the Vaccine Alliance 2023:17). These strategies are consistent with national health extension programs in Ethiopia that aim to increase health literacy and service utilisation among women (FMOH 2022:21). The quality and utilisation of maternal health care services could be enhanced by community participation techniques through community institutions such as women's development arms, cultural ambulance services, gares and gottes, and 1 to 5.

- **1 to 5, Gares and Gottes structures**

The best ways to raise the standard of maternal health care services at the community level were identified in this study as community structures like 1 to 5, gares (structures above 1 to 5 that comprise multiple 1 to 5 groups), and gottes (structures above gare that comprise multiple gare). Mothers' knowledge and awareness of maternal health care enhanced as a result of community involvement through Pregnant Women Forums (PWFs) and Health Development Army (HDA) activities, claim Datiko et al (2019:6).

Through this community engagement, mothers gained knowledge about possible risk indicators during labour, delivery, and the postpartum phase.

- **Cultural ambulance services**

The best way to get a labouring mother from a rural location without access to ambulance services or transportation to a medical institution or a road was determined by the survey participants to be the area's cultural ambulance services. By alerting HEWs and requesting ambulance assistance, the WDTs help labouring women in the community. Additionally, they take labouring moms to ambulance pickup locations or medical institutions and back, especially when transportation services are scarce.

The WDTs oversee transporting labouring mothers to medical facilities, calling ambulances when needed, and alerting medical professionals about home births. By taking these steps, they help their community's service delivery to improve (Yoseph et al 2023:9).

5.6.7.2 Category 2: Maternity waiting home

This study suggests that the establishment of maternity waiting houses in locations that were inaccessible by road or other modes of transportation could enhance the quality of maternal health care services.

- **Maternity waiting home**

The establishment of maternity waiting houses in hospitals was seen by the participants as a clever strategy to raise the quality and uptake of maternal health care services in areas that are remote from hospitals or do not have access to the highway. Establishing maternity waiting homes in locations that were previously inaccessible by road or other methods of transportation may enhance the quality of maternal health care services. Additionally, they suggested that the presence of maternity waiting homes may lead to a

rise in the use of maternal health care services, such as postnatal care and skilled delivery services.

The study by Gurara et al (2022:18) demonstrates the advantages of setting up maternity waiting houses in medical facilities. It has been demonstrated that the availability of these facilities enhances access to maternal health services, including the use of competent birthing care services. The presence of maternity waiting houses can also reduce the incidence of maternal complications and death, according to the study. This emphasises how crucial it is to spend money on resources and infrastructure that promote maternal health care, which will ultimately benefit expectant mothers and their unborn children.

5.6.7.3 Category 3: Giving benefit packages for midwives

Provision of benefit packages for midwives from the government, according to their commitment, might increase midwives' interest in their profession and provision of quality maternal health care services.

- **Giving benefit packages for midwives**

The results of the present investigation showed that giving benefit packages to midwives could be used as a strategy to increase midwives' interest in their profession and improve maternal healthcare services. The midwives' discussed that their current salary and duty payment were not congruent with their tiredness. Providing a comprehensive benefits package that includes housing near the facility, safer and more supportive work environments, opportunities for continuing education, and allowances for midwives could enhance the quality of maternal healthcare services (Baba et al 2020:4).

- **Improvement of salary**

This study suggests that improving healthcare workers' compensation could lead to better maternal healthcare services. Research participants suggested that increasing

healthcare professionals' salaries is one way to enhance the quality of maternal healthcare services. By addressing financial concerns, such as increasing salaries, providing risk allowances, and ensuring adequate compensation for night work, midwives can significantly improve the quality of maternal health care services they provide. When midwives feel valued and fairly compensated for their work, they are more likely to be involved, motivated, and able to provide the best care possible for women and their babies. Ultimately, this could lead to better results for both patients and health care facilities (Jurmin & Jariya 2023:6).

- **Improvement of night duty payment**

The findings indicated that one of the perceived barriers that affected the quality of maternal health care services was the lack of improvement of night duty payment. The study noted that midwives could provide quality maternal health care services if those benefits improved for them as a strategy. Enhancing financial aspects such as salaries, risk allowances, and night duty payments and improving the working and living conditions of midwives can lead to an improvement in the quality of maternal health care services (Jurmin & Jariya 2023:6).

- **Provision of professional risk allowance**

The findings of the current study indicated that providing midwives with professional risk allowance is one strategy to raise the quality of maternal health care services. Baba et al (2020:8) stated that increasing the number of midwives in the field or in rural and distant locations requires addressing security concerns, enhancing living conditions in rural areas, offering risk allowances, and ensuring that midwives receive their salary.

5.6.7.4 Category 4: Establishment of emergency obstetrics and gynaecology triage

Under this section, the importance of the establishment of emergency obstetrics and gynaecology triage is identified as a strategy for improvement of the quality of maternal health care services.

- **Establishment of emergency obstetrics and gynaecology triage**

According to the results of the current study, the method for enhancing maternal health care services in healthcare institutions was the implementation of emergency obstetrics and gynaecology triage. Moudi et al (2020:5) suggested that implementing obstetric triage in health care settings can aid in recognising pregnant women or foetuses requiring urgent medical attention, enabling prompt access to diagnostic procedures by directing them appropriately and at the right time.

5.6.7.5 Category 5: Provision of cultural ceremony

The availability of cultural ceremonies in medical facilities was found to be one of the factors influencing mothers' utilisation of maternal health care services under this category.

- **Provision of cultural ceremony**

This study suggests that providing cultural ceremonies may improve the postpartum experiences of women and encourage the utilisation of healthcare facilities and maternal health care services. According to Mengistu (2019:7), certain health institutions provided cultural ceremonies that resembled those carried out by mothers giving birth at home. Therefore, if medical institutions provide such homelike rites, women will prefer to give

birth there. Additionally, health facility staff ensure that postpartum mothers are appropriately monitored until they are discharged.

5.6.7.6 Category 6: Provision of incentives and preparing comfortable areas for mothers

This section covered the greatest ways for health facilities to increase the quality and utilisation of maternal health care services, including offering incentives and creating comfortable spaces for mothers.

- **Provision of incentives and preparing comfortable areas for mothers**

Participants in the FGDs stated that if incentive services were provided to mothers during labour and delivery and the postpartum phase, they would use maternal health care services more frequently. The participants stated that mothers' use of maternal health care services, including skilled delivery services and postnatal care, might increase if it were adopted as a strategy at healthcare facilities. According to Massavon et al (2017:6), providing pregnant and postpartum women with incentive materials like baby packages and transit vouchers has increased the use of institutional delivery services. According to the United Nations Population Fund's report, Innovative Approaches for Eliminating Mother-to-Child Transmission of HIV among ANC attendants' pregnant women from Côte d'Ivoire, the Democratic Republic of the Congo, Malawi, and Uganda, offering women financial incentives to attend ANC visits (Unicef n.d.).

5.6.7.7 Category 7: Strengthening health extension services

Strengthening health extension services was considered the greatest way to raise the quality and utilisation of maternal health care services under this heading.

- **Strengthening health extension services**

Participants in the study talked about how enhancing health extension services in partnership with hospitals and health centres was shown to be a strategy that might raise the standard and use of maternal health care services. Maternal health services usage in rural communities has improved because of the successful stimulation and enhancement of community participation brought about by the establishment HEWs programs. Through the HDA and PWFs, HEWs were able to support community participation in the provision of maternal health services (Datiko et al 2019:7).

- **Developing a system for the identification of pregnant mothers in the communities**

By ensuring that expecting mothers receive the care they need during and after their pregnancy, the current study suggests that developing a system for identifying expectant mothers contributes to the sustainability of health systems. Long-term, this can lead to a better community, healthier mothers, and healthier babies.

- **Developing a system for the identification of pregnant mothers in the communities**

One strategy for improving maternal healthcare services in medical facilities with community involvement, according to the participating midwives, could be developing a way to identify expectant mothers in the community. This strategy might be used to identify and educate women at the community level in addition to the assistance that mothers got from medical facilities during their pregnancies. It may be possible to increase the uptake of PMTCT and keep women using maternal health care services by implementing community-based engagement programs that use staff members like volunteers, peer educators, community health workers (CHWs), and religious leaders to provide information and services to women and their partners (Datiko et al 2019:8; Frumence et al 2019:6).

5.7 SUMMARY

The results from both quantitative and qualitative elements have been given and addressed in this chapter. The quantitative results included the obstetric history of mothers associated with maternal health care service usage, the sociodemographic characteristics of women, and sociodemographic factors connected with maternal health care service use. The qualitative section concentrated on themes that surfaced from the data, including elements that enhance the quality of maternal health care, obstacles mothers face when trying to access services, reasons why they do not use them, tactics health facilities are currently using to enhance the quality of care, and recommendations for improving the use of maternal health care services. The goal of the conversation was to provide a thorough grasp of the findings and how they relate to Phase II execution. The integration of the study's quantitative and qualitative components will be presented in the following chapter, along with a thorough interpretation and discussion of the main conclusions.

CHAPTER 6

INTEGRATION OF QUANTITATIVE AND QUALITATIVE FINDINGS

6.1 INTRODUCTION

The study's quantitative and qualitative components are presented in this chapter, along with a thorough interpretation and discussion of the main conclusions. A convergent parallel mixed methods design, which integrates quantitative and qualitative data to offer a more thorough knowledge of the research subject, was used in this study.

Structured interview questionnaires were used for quantitative data collection, while focus group discussions (FGDs) were used for qualitative data collection. The respondents of the quantitative data were women who had given birth in five selected governmental hospitals and 25 health centres found in the West Arsi Zone in the last 12 months (from January 20, 2021, to January 20, 2022) and during data collection periods, while the participants of FGDs were midwives working in five selected governmental hospitals and 25 health centres for the last 12 months (from January 20, 2021, to January 20, 2022) and more. The quantitative results were reported in Chapter 4, sub-headings 4.1–4.6.4.3, and similarly qualitative findings were presented in Chapter 4, sub-heading 4.7-4.8.6.8. In this integration section, discussion of the main conclusions drawn from the qualitative and quantitative phases and the fresh insights that arose from both data sets are highlighted.

6.2 INTEGRATION PROCESS

The study employed a mixed-methods approach, integrating both qualitative and quantitative data concurrently and later compared with the aim of determining convergence, differences, and combination (Dawadi & Giri 2021:27; Mishra & Alok 2019:7).

Integration of the findings provides an opportunity to integrate data to provide rigour, allowing for more thorough analysis, giving outcomes legitimacy, and generating more important insights into the findings. The reasons for integration could be merging, explaining, building, or embedding (Richards, Bazeley, Borglin, Craig, Emsley, Frost, Hill, Horwood, Hutchings, Jinks, Montgomery, Moore, Clark, Tonkin-Crine, Wade, Warren, Wyke, Young & O' Cathain 2019:2). In the current study, integration was used for the purpose of explaining a more in-depth understanding of the quantitative results with the findings of the qualitative study undertaken (Richards et al 2019:5).

The purpose of this study was to evaluate maternal health care services to develop community participation strategies to improve the quality and utilisation of maternal health services in the West Arsi Zone, Oromia Regional State, Ethiopia.

The objectives of study were:

Phase I: Quantitative

- To assess the perceptions of women regarding the quality and utilisation of maternal health care services rendered in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia.
- To identify factors affecting the quality and utilisation of maternal health care services rendered in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia.

Phase I: Qualitative

- To explore the experiences of midwives on the factors affecting the improving of the quality and utilisation of maternal health care services during antenatal, labour delivery, and postnatal care services in the West Arsi Zone, Oromia Regional State, Ethiopia

Phase II: Development of strategies

- To develop community participation strategies that can be used to improve the quality and utilisation of maternal health care services in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia.

6.3 THEORETICAL FRAMEWORK

The integration of quantitative and qualitative data to enhance the quality and utilisation of maternal health care services and develop community engagement strategies was led by the Health Belief Model (HBM). This is how:

6.3.1 Integrating quantitative and qualitative data

Quantitative data (questionnaires with women): This provided status of utilisation of maternal health care services, identified gaps in services (e.g., antenatal care services, labour and delivery, and postnatal care services), and quantified factors affecting improving and quality and utilisation of maternal health care services. These data aided in evaluating the perceived vulnerability and perceived seriousness of hazards associated with poor maternal health care services and their utilisation, which are the two main pillars of the HBM.

Qualitative data (FGDs with midwives): This gave a thorough grasp of midwives' perspectives and experiences regarding the determinants that influence the quality and use of maternal health care services during pregnancy, childbirth, and the postpartum period. This sheds light on the perceived benefits of maternal health care, perceived barriers (e.g., cultural values, inadequate resources, staff shortages), and cues to action (e.g., community participation strategies, successful outreach programs). This also helped to assess the self-efficacy of midwives in promoting maternal health services within their communities and understanding midwives' lived experiences and challenges to designing effective interventions.

6.3.2 Applying the HBM to improve community participation

In this section, both qualitative and quantitative data and the HBM framework guided the design of interventions targeting the key constructs:

• **Perceived susceptibility:** Quantitative data showed poor quality and the use of services related to maternal health care due to delayed or absent care, shortage of drugs and medical supplies, shortage of health care providers, and inadequate maternal health care services; interventions could highlight these risks to communities and emphasise the vulnerability of pregnant women and newborns.

• **Perceived severity:** The severity of complications, such as maternal mortality or neonatal morbidity should be communicated effectively. Qualitative data from FGDs could help tailor the messages to resonate with community members and highlight the long-term consequences.

• **Perceived benefits:** The benefits of timely and adequate maternal health care need to be clearly articulated. Both quantitative (showing positive impacts on maternal and child health) and qualitative (highlighting positive experiences of women who received quality care) data could be used to reinforce these benefits.

• **Perceived barriers:** Qualitative data from midwives identified barriers like cost, distance, transportation, drugs and medical supplies, cultural beliefs, lack of women-centred care, and lack of trust in health care providers. Addressing these is crucial. Interventions might involve transportation subsidies, culturally sensitive communication strategies, or community-based services.

• **Cues to action:** Qualitative data could inform effective cues to action. This might involve using community leaders, role models, or successful case studies to motivate action. The timing and method of delivering these cues need to be tailored to specific contexts.

• **Self-efficacy:** The midwives' sense of self-efficacy (their belief in their ability to effectively promote and provide quality and utilisation of maternal health care services) needs to be strengthened through training, mentorship, supportive supervision, and provision of adequate resources.

6.3.3 Developing community participation strategies

The combined data inform strategies for community participation:

• **Community participation**: Engage community leaders, religious figures, and influential members to promote the importance of improvement of quality and utilisation of maternal health care services and encourage participation.

• **Peer education:** Train community members to educate and assist pregnant women and their families.

• **Community-based participatory research:** Engage the community in the planning, carrying out, and assessing of interventions.

• **Community-based services:** Establish mobile clinics or outreach programs to overcome geographic barriers.

6.4 INTEGRATED FINDINGS AND INTERPRETATION

Both the integration and interpretation of the quantitative and qualitative results were presented under this subheading.

6.4.1 Utilisation of maternal health care services

Integration and interpretation of quantitative and the qualitative findings regarding the quality and utilise of maternal health care services are discussed as follows.

6.4.1.1 Maternal health education and its sources

The maternal health education, especially through means like mass media exposure, had a substantial impact on women's intention to use maternal health care services, according to a study done in Ethiopia's rural Sehala Seyemit district (Taye et al 2022:7). In line with these findings, women with partial media exposure were more likely to use maternal health care services (AOR = 1.29, 95% CI = 1.29–1.33), and those with full media exposure demonstrated an even greater likelihood of utilisation (AOR = 1.70, 95% CI = 1.58–1.83) compared to mothers without any media exposure (Shanto, Al-Zubayer, Ahammed, Sarder, Kerama, Hashmi, Haque & Alam 2023:6). Additionally, women were more likely to give delivery in the presence of a trained birth attendant if they received health education on delivery Birth Preparedness and Complication Readiness (BPCR) during antenatal care (ANC) (Izudi, Grace, Mccoy, Bajunirwe, & Kadengye 2019:81; Cameron et al 2019:4). This evidence underlines the importance of both media exposure and focused health education in boosting women's access to and utilisation of maternal health care services.

During their prenatal, postnatal, and delivery visits, 73.3% of the respondents received maternal health education, whereas 26.7% did not, according to the quantitative findings of the current study. Qualitative findings showed that one factor influencing the quality and use of maternal health care services was the absence of health education programs in medical institutions. According to the FGD participants, health extension workers should offer health education both at the community level and at health care institutions

to enhance the quality and utilisation of maternal health care services. The following statements witnessed this:

‘‘In hospitals, I can say confidently there were no health education provisions and programs. To enhance the quality of maternal health care services, health education programs should be available in the hospitals to create awareness of maternal health care services. At the community level, I knew health education was provided by health extension workers, but that was not enough to raise awareness of maternal health care services and improve their quality.’’ P4MDg**.**

‘‘…Hospitals should have programs of health education, even at the community level, especially for problems related to delivery and the postnatal period. For instance, in Ethiopia, maternal health care services like ANC, giving birth in health facility, postpartum care services, and others were increased. These improvements were documented because of the introduction of new processes and there have been improved things starting from the lower level and community awareness by health education.’’ P18FD**.**

As a possible explanation, lack of health education significantly impacts maternal health care services by creating obstacles to awareness, access, and utilisation of necessary health care resources. Addressing these knowledge gaps is critical for increasing maternal health outcomes and ensuring that women receive the care they need throughout their pregnancy and delivery experiences.

6.4.1.2 Utilisation of antenatal care services in previous pregnancy

Prenatal care services provide a chance to promote skilled attendance at birth; women who have attended at least one ANC visit are more likely to have a skilled attendant during childbirth (Lattof et al 2020:3).

According to some literatures, at facility level, factors such as lack of equipment and drugs, shortage of qualified staff, unfavourable attitudes and behaviours of service

providers, and inefficient communication with women were recognised as the key determinants impacting the quality of maternity healthcare services highlighted in Gamberini, Angeli and Ambrosino (2022:5). However, according to the study conducted in Northwest Ethiopia, being healthy during pregnancy (61.7% n = 66), not understanding the significance of receiving prenatal care from medical professionals (50.5% n = 54), women's belief that pregnancy was not a disease (37.3% n = 40), and fear of privacy (6.5% n = 7) were the primary reasons for those who did not attend ANC visits during pregnancy (Hailemariam, Atnafu, Gezie & Tilahun 2023:5).

The study found that (11%) of women did not receive ANC services during their prior pregnancy, whereas most women (88.7%) did. Of the women who did not attend ANC, approximately 45.6% did not attend ANC services during their previous pregnancy because of unkind medical professionals, 44.1%) did so because the health facility was far away, (39.7%) thought it was unnecessary, and (38.2%) did not have enough money.

The qualitative data findings showed that one of the factors influencing the quality and use of maternal health care services in health facilities was an inability to provide services on time; if the services and results were not provided on the same day, the mother might not return to use the services. The FGDs participants mentioned the following statements:

"In our health centre, we had only one ANC clinic, which served more than 20-30 mothers per day with one health care provider…Due to this, we do not have time to take appropriate history and physical examination…Sometimes there were mothers who left without getting services timely. Therefore, many women do not complete four ANC follow-ups." P28MDg**.**

"…. If women had a negative experience with ANC follow-up, such as feeling ignored or not receiving adequate care, they might develop a lack of trust in the health care system. It had long-lasting effects on women's attitudes and behaviours towards maternal health care. This can lead to a reluctance to seek out other maternal health care services, as

they might fear similar experiences or believe that their needs would not be met.'' P39FDg*.*

The possible explanation for this could be that previous utilisation of antenatal care services creates a foundation of knowledge, trust, and behaviour that encourages women to continue engaging with maternal health care services in subsequent pregnancies. This continuity of care is important for enhancing mother and newborn outcomes.

6.4.1.3 Recommendation of antenatal care services

A study conducted in Somalia highlighted the importance of receiving encouragement as the primary factor in increasing women's ANC utilisation, while negative attitudes from husbands or family members had the opposite effect. Among those encouraged to attend ANC, (46%) mentioned their husbands, (15%) their mothers-in-law, and (32%) cited health care professionals as their source of information and recommendation for ANC service utilisation (Miikkulainen, Mohamud, Aqazouz, Suleiman, Mohamud, Mohamed & Rossi 2023:7).

Among the women who used ANC services in this study, almost all, (94.74%), preferred to come again for the next pregnancy for ANC services, while (5.26%) preferred not to come again for the next ANC services. One of the factors influencing the quality and use of maternal health care services in the community is a lack of community knowledge, according to the study's participants. In focus group discussions, the midwives indicated that there was a good awareness of the utilisation of ANC and giving delivery in a medical facility, but there was a very low level of awareness of the community towards the utilisation of postnatal care. The following excerpt from the midwife corroborated this:

''Currently, knowledge of the community on maternal health care services utilisation was increased. Most women thought that following ANC, giving birth within a health facility

was safe for them and their new-borns. After they gave birth safely in health facilities, they recommended services for others to utilise it.'' P18FD*.*

The implication of this finding is that women's recommendations for antenatal care services play an important role in improving both the quality and utilisation of maternal health care services by fostering trust, increasing awareness, creating supportive networks, and providing valuable feedback for service improvement. These dynamics contribute to good maternal health outcomes and a more engaged community around maternal health issue.

5.4.1.3 Women's place of delivery for the last pregnancy

MMR and the percentage of deliveries attended by trained professionals are significant markers for raising the quality of maternal health care services, according to the WHO Regional Office for Europe Report. Most maternal deaths are avoidable because enhancing the quality and utilisation of maternal health care can prevent or manage complications related to pregnancy and birth (WHO Regional Office for Europe 2017:1).

The study conducted in Ethiopia to assess women's reasons for place of delivery for their last pregnancy indicated that the main reasons for home delivery were health facility distance, lack of transportation, cost of services, and absence of privacy in a medical facility during child birth (Yoseph et al 2023:9).

In the current study, (87.80%) of mothers gave birth at a medical facility, while (12.20%) of them gave birth at their home. From women who gave birth in health facilities (86.7%) of them delivered in health facility by their plan, but (11.7%) of them delivered in the hospital or health centre after they were referred for delivery.

Of the women who gave birth at home, (42.7%) did so because the health facility was too far away, and (28.0%) did so because they felt insecure during labour and delivery in the medical institution. According to the FGDs conducted for this study, one of the

factors influencing the increased quality and utilise of maternal health care services was the distance between health facilities and the communities. As a result, before they arrived at medical facilities, the majority of mothers experienced problems related to child birth. The FGDs participants mentioned the following statements:

‘‘The mothers who were referred from far Woreda health centres did not arrive on time. They would reach our hospital after their labour was prolonged for more than 24 hours, develop an infection, severe bleeding, and develop convulsion and coma from severe pre-eclampsia and eclampsia. Most of the mothers died before reaching our hospital.’’ P11MDg**.**

‘‘Even the ambulances working on this road did not function for more than one month; they would look for maintenance after they served a few months.’’ P40MDg*.*

Additionally, qualitative data findings identified that if mothers have a traumatic experience during labour and delivery, feeling unheard or disrespected by health care providers, and if they were involved in unnecessary or unwanted medical interventions it could lead to a fear or mistrust of medical interventions resulting in non-utilisation of maternal health care services in health facilities. The FGD participant evidenced this:

‘‘If mothers had a traumatic experience during labour and delivery, like as difficult or prolonged labour, complications, or feeling unheard or disrespected by health care providers, it could significantly impact their willingness to seek out future maternal health care services. So, these might affect the mothers not to utilise maternal health care services in medical facilities by skilled health professionals. These negative experiences during labour and delivery, particularly if they involved unnecessary or unwanted medical interventions, could lead to a fear or mistrust of medical interventions.’’ P17MDg**.**

This implies that women's place of delivery for their last pregnancy plays a crucial role in shaping their experiences with maternal health care services. Positive experiences in health care facilities can lead to increased utilisation of these services, improved quality of care, and a shift in community norms that favour skilled attendance at birth. This cycle ultimately contributes to good mother and newborn outcomes.

6.4.1.4 Difference in giving birth at home and in health facility

The study conducted in Southern Ethiopia indicated that mothers chose to give birth in medical facilities due to perceived threats and perceived benefits of utilisation of skilled delivery services (Id & Mue 2024:3).

In the quantitative survey, nearly all respondents (94.6%) acknowledged that there is a difference between giving birth in a health institution and at home, while a minority (5.4%) disagreed. Among those who preferred to give birth in a health facility, the reasons for their choice included safety for the mother (88.8%), safety for the child (82.6%), and cleanliness of the facility (56.7%).

FGD findings showed that there were gaps in the attitude of the community towards the utilisation of maternal health care services. It was indicated that lack of confidence from some health care providers, looking at the health facility delivery as socially unacceptable, and lack of a good attitude towards the utilisation of maternal health care services were factors that affected the quality of maternal health care services in the community. The following statements from FGDs participants affirmed this:

‘‘*Regarding maternal health care services, there were still gaps in the attitude of the community towards the utilisation of these services within health facilities. They thought that if there were no problem, a woman could give birth safely in her home.’’* P4MDg*.*

‘‘…. *When we asked why they did not give birth within health centres, they said we did not have confidence in some health care providers’ skills.’’* P6FDg*.*

‘‘*Some societies thought that giving birth in a health facility was considered socially unacceptable according to their culture. They said, our mothers gave birth safely to all their children without any complications…. complication related to birth was a recent problem after women started to utilise health facilities for delivery.’’* P7MMSc*.*

From these findings, it is possible to conclude that the choice between home birth and facility delivery has profound implications for the quality and utilisation of maternal health

care services. Health facilities generally offer better access to skilled care, emergency preparedness, comprehensive postnatal support, and data collection for ongoing improvement. By addressing barriers to facility-based deliveries and promoting positive experiences within these settings, health care systems could enhance the overall quality of maternal health care services and encourage greater utilisation of maternal health care services among women.

6.4.1.5 Mode of delivery and maternal and fetal conditions outcomes

The percentage of women who had foetal complications was lower than that of a study conducted in Nigeria showed that (97. 8% n = 261) of study participants had normal foetal outcome (Esan et al 2022:4).

In the current study, from the women who had indicated their previous pregnancy mode of delivery, majority, (64.6 %) was spontaneous vaginal delivery (SVD), (21.8%) was caesarean section, (13.2%) was assisted delivery, and (0.5%) was destructive delivery. In terms of maternal and fetal conditions outcomes, (93.8%) of women indicated that they had normal maternal and fetal conditions outcome, while (6.2%) of them said that they had maternal and fetal complications during previous pregnancy. The FGDs participants indicated that the presence of experienced mothers with the utilisation of maternal health care services in the community was among the factors that affected the improved quality and utilisation of maternal health care services. The FGDs participants mentioned the following statements:

‘‘To increase mother’s utilisation of institutional delivery services, we should provide quality care for those mothers who came to utilise the services for two reasons:’’

1. *If they experience a good quality of care, they would come again for other services. Because they experienced no complications for them and their new-*

borns. Therefore, they thought that, if they gave birth in a medical facility, their health, and their new-borns' outcome would be good." P34MDg.

2. *They recommended the services for others to utilise them. So, after that, they were our ambassadors in the community for all other maternal health care services."* P34MDg.

As a possible explanation of the above results, the interplay between mode of delivery, maternal and foetal conditions, and the quality of maternal health care services is complex. Knowledge of these processes is crucial for improving health care systems, enhancing service utilisation, and ultimately ensuring better outcomes for women and their neonates. Efforts to improve access to quality care should consider the specific needs arising from different modes of delivery and maternal-foetal conditions to promote healthier pregnancies and childbirth experiences.

6.4.1.6 Health facility visits within two days for postnatal care services

In terms of utilisation of postnatal care (PNC) services after delivery within two days, (21.0%) of women visited health facility within two days for PNC services, while majority (79.0 %) of the respondents did not visit health facility within two days after delivery for postpartum care services.

Over three-two women received counselling regarding when to bathe their infant, exclusive breastfeeding, neonatal danger signs, vaccinations, vaginal bleeding checks, blood pressure (BP) checks, and iron supplementation, according to a study done in the Wayu District of Northern Ethiopia (Sertsewold, Debie & Geberu 2021:7).

In the current study, among the women who utilised PNC, more than half (58.9%) indicated that they had used physical examination services. Additionally, (76.7%) utilised breastfeeding counselling services, (23.3%) used child growth and weight monitoring services, (13.2%) utilised nutritional supplementation services, (76.0%) took advantage

of postnatal family planning counselling services, and (33.3%) underwent blood tests for anaemia.

The current study's participants reported that one factor affecting the community's utilisation and quality of maternal health care services is a low degree of community awareness regarding these services. The reports from midwives indicated that there was a good awareness of using ANC and giving birth in medical facilities, while the community's awareness of using postnatal care was quite low. The following excerpts from the midwives corroborated this:

‘‘…Their confidence in the health care providers was now becoming better after they had safe delivery for many women. But other services, like utilisation of postnatal care, were very low. In our hospital, we would discharge the women after six hours. In addition to this, the community had a low level of awareness. In most areas, if there is no ambulance service, they did not want to go to the hospital.’’ P1MDg**.**

‘‘*…So, postnatal care services were ignored not within the community, but also within hospitals. In addition to this, the community had a low level of awareness of postpartum care services.’’* P3FDg**.**

‘‘*…After delivery, the intention of the family was to be discharged early. We were also doing that to reserve beds for other labouring mothers, due to a lack of beds. After they were discharged, no one gave an appointment for postnatal care unless mothers came for any complications during the postnatal period, neonatal vaccination, and family planning service.’’*P2MDg**.**

One important element that has a detrimental effect on the quality and use of maternal health care services is the low level of community knowledge of these services. Inadequate knowledge about available services, their benefits, and how to access them hinders women from seeking timely and appropriate care. This integration indicated that postnatal care services are integral to the continuum of maternal health care. By focusing on the well-being of both mothers and their infants during this critical period, health care systems can improve outcomes, enhance service utilisation, build trust in health care

providers, and ultimately contribute to healthier families and communities. Prioritising PNC not only supports individual mothers but also strengthens the overall maternal health infrastructure.

6.4.1.7 Maternal health care services recommendation for others

Compared to mothers who gave birth at home, those who had a health facility and supported pregnancy for their last birth were more satisfied with the care plan provided by the labour delivery services, would visit health facilities for their subsequent pregnancies, and would advise others to use postnatal care services (Ibrahim, Mare & Mohammednur 2022:1128).

In the quantitative survey data, (91.2%) of women said that they will encourage a friend/relative to go to the facility where they went for their maternal care, while (8.8%) of them indicated that they will not encourage a friend/relative to go to the facility where they went for their maternal care. The qualitative findings suggested that the presence of experienced mothers with the utilisation of maternal health care services in the community was among the influenced that affected improved the quality of maternal health care services. The FGD participants mentioned the following statements:

‘‘To increase mother’s utilisation of institutional delivery services, we should provide quality care for those mothers who came to utilise the services for two reasons:

1. *If they experience a good quality of care, they would come again for other services. Because they experienced no complications for them and their new-borns. Therefore, they thought that, if they delivered in a health facility, their health and their new-borns' outcome would be good.*
2. *They recommended the services for others to utilise. So, after that, they were our ambassadors in the community for all other maternal health care services.’’* P34MDg**.**

This implies that, when women who have received positive maternal health care experiences recommend those services to others, it creates a powerful ripple effect that improves both the quality and utilisation of care within the community. These recommendations foster trust and confidence in the services, encouraging other women to seek care earlier and more readily. This increased utilisation leads to better health outcomes and helps to enhance the quality of maternal health care services offered by health care providers, as more women benefit from maternal health care services. Furthermore, positive word-of-mouth referrals can contribute to the development of community-based support networks, further improving access and utilisation of maternal health care services.

6.4.2 Factors affecting utilisation maternal health care services

This session covered the integration of factors that influence the utilise of maternal health care services.

6.4.2.1 Waiting time

The study conducted in Zambia revealed the disparity between service provision and the number of women seeking maternal-related services, which unavoidably resulted in overcrowding and long waiting periods in facilities (Mweemba et al 2021:6).

In the quantitative survey data, (75.8%) of women agreed that waiting time is affecting the quality and utilisation of maternal health care services. Similarly, the findings from qualitative data revealed that the delay in offering services on time was one of the elements that affected the quality and utilisation of maternal health care services in medical facilities. If the services and results were not on the same day, the mother might not return for services utilisation. The FGD participant mentioned the following statement:

"In this hospital, if you send the mother to the laboratory, she would not get service timely; she would wait up to 2-4 hours to get her results. If you send an ultrasound, she would get service after one or two days. After that, some mothers even do not return to take their results." P13FDg.

The long waiting times at health care facilities negatively affect both the quality and utilisation of maternal health services. Excessive delays deter women from seeking care, especially for non-emergency situations. This reduced utilisation leads to poorer health outcomes, including delayed diagnoses, complications throughout pregnancy and delivery, as well as elevated incidence of mother and newborn death. Furthermore, long waits decrease patient satisfaction and negatively impact the perceived quality of care, potentially leading women to avoid future health care visits. In short, minimising waiting times is important for improving access to and the quality of maternal health care services.

6.4.2.2 Behaviour of health care provider

The study conducted among pastoralist women in Ethiopia revealed that Insufficiently qualified personnel, unprofessional attitudes and conduct of service providers, and inadequate contact with women were the main factors influencing the quality of maternal health care services (Jebena et al 2022:12).

In the current study, (62.10 %) of women indicated that services they had were friendly, while (6.7%) of women reported that services were delayed for no reason, (6.0%) of women reported that health care providers were arrogant, and (2.1%) of women said that they were insulted. These findings are supported by qualitative findings which indicated that mothers are not interested in utilising maternal health care services, if the health care workers in the health facilities do not have any concern for them and have a negative attitude. The FGDs participants mentioned the following statements:

*‘‘From health care providers, mothers need a good attitude, not the good skill they have…so, if they have a bad attitude towards them, they will prefer to die rather than utilise services from them.’ ’P7MMSc**.***

*‘‘…in hospitals, midwives are too busy with cases; during that time, they may never give concern and attention to mothers in labour or second stage and ended with complications. So, in a such situation, we should take care of all mothers within our ward as it may be looking as negligence and bad attitude towards them.’’ P1MDg**.***

This research implies that maternal health service usage and quality are greatly impacted by the conduct of healthcare professionals. Positive behaviours, such as respectful communication, empathy, active listening, and patient-centred care, foster trust and encourage women to look for and keep using health care services.

Conversely, negative behaviours including disrespect, judgmental attitudes, a lack of empathy, or poor communication, can deter women from seeking or continuing care. This may cause delays or forgone care, resulting in poor health outcomes. Providers' adherence to clinical guidelines, their competence in providing care, and their attention to hygiene further influence the quality of services provided and a patient's experience, thus influencing subsequent utilisation. In essence, provider behaviour is a crucial determinant of both the quality of care received and the willingness of women to seek and utilise maternal health services.

6.4.2.3 Maintaining privacy of women during maternal health care services

The entire foundation of access as a fit between system and community elements is compromised when mothers and competent health care service providers can't trust one other, which could have a detrimental impact on mothers' satisfaction (Mweemba et al 2021:7).

Quantitative survey data results indicated that around eighty percent (80%) of women were satisfied with the steps taken to protect their privacy, while (20.5%) of women were dissatisfied with the measures taken to protect their private during care delivery. Participants in the focus group discussions stated that a lack of privacy and confidentiality during labour and delivery influenced mothers' use of maternal health care services provided by skilled health care practitioners at health facilities. The FGDs participants mentioned the following ideas:

‘‘In our hospital, we often had to accommodate multiple labouring women in a single room, making it difficult to ensure privacy and confidentiality. Women may be hesitant to use our delivery services again if they are not provided with curtains, doors, screens, and separate rooms to guarantee environmental privacy and confidentiality.’’ P20MDg**.**

‘‘The lack of privacy and confidentiality could contribute to negative birth experiences for mothers. This could lead to feelings of disempowerment, trauma, and dissatisfaction with the care received. Such negative experiences might deter mothers from seeking healthcare services in the future, potentially leading to delayed or inadequate care during subsequent pregnancies.’’ P23FDg.

The possible explanation for this could be that a lack of privacy during maternal health care services negatively impacts both the quality and utilisation of maternal health care services. When women feel their privacy is not respected, they are less likely to openly discuss sensitive health issues, potentially leading to incomplete or inaccurate diagnoses and treatment plans. This loss of trust may discourage women from seeking care altogether, particularly for issues related to reproductive health or sexually transmitted infections. Reduced service utilisation can result in lower health outcomes and greater increased health disparities. In essence, ensuring privacy is paramount to establishing trust and enhancing the quality and utilisation of maternal health care services.

6.4.2.4 Availability of drugs and supplies

The study conducted among pastoralist women in Ethiopia highlighted that lack of equipment and drugs are key factors impacting the quality of maternal health care services and mothers' satisfaction (Jebena et al 2022:10).

In the quantitative questionnaires' data, (71.2%) of women were pleased with the availability of drugs and supplies requested for them, whereas (28.8%) of women were dissatisfied. In addition, in the qualitative part of this study, the informants also repeatedly mentioned that lack of drugs and medical supplies were some of the factors that influenced the quality and use of maternal health care services in health institutions. The study participants reported that this makes mothers not to return for other maternal health care services for themselves, and not recommend to others. The FGDs participants mentioned these:

"If there are no medical supplies, it is sure; we cannot provide maternal health care services like delivery." P38FDg**.**

"In government health facilities, currently there was a lack of drugs and medical supplies. Even there was a time when anti-pain drugs were not present in health centres. The lack of gloves is still a headache for all health facilities." P35FDg**.**

"…Sometimes there was no vaccination medication within the hospital. This issue makes mothers not satisfied with services provided within hospitals, and delaying of services. Again, this makes mothers not to return for other maternal health care services for themselves, and not recommend others." P17MDg**.**

''Within our hospital, the availability of medication and medical supplies was major problem. For example, once we dispensed surgical gloves for labouring mothers from the pharmacy… after that we ordered them to buy them with their money. Because, from the pharmacy department, there was a warning that for one mother only one time, we

can dispense medications and other medical supplies from the pharmacy. Most of the time they bought drugs from outside of the hospital.'' P19MMSc***.***

''…sometimes even outside of the hospital, there are no surgical gloves. The family of labouring mothers searched all through the town for surgical gloves. Due to this, there was a time when we attended delivery with disposable gloves.'' P20MDg***.***

This indicates that availability of important drugs and supplies is critical for assuring both the quality and usage of maternal health care services. When necessary, medications, equipment, and supplies are readily available, health care providers can deliver timely and effective care, resulting in improved mother and neonatal health outcomes. Stockouts of critical drugs and supplies, on the other hand, jeopardise the quality and usage of maternal health care services, compelling providers to make tough decisions or postpone treatment. This can lead to complications, adverse events, and decreased patient satisfaction, negatively influencing future utilisation of services. Reliable access to essential resources is therefore a fundamental requirement for delivering high-quality maternal health services and ensuring women are willing to utilise those services.

6.4.2.5 Women's religion

A comprehensive evaluation undertaken in sub-Saharan Africa to explore predictors of prenatal care service utilisation indicated that Christian women were more likely to utilise ANC services than non-Christians (traditional African religion and Muslims) (Okedo-alex et al 2019:5). On the other hand, the study conducted in Nigeria to investigate religious impacts on the usage of maternity health services among Muslim and Christian women indicated that there was no difference between Christian and Muslim religious followers in terms of utilisation of maternal health care services (Al-mujtaba, Cornelius, Galadanci, Erekaha, Okundaye, Adeyemi & Sam-Agudu 2016:6).

The quantitative data results indicated that mothers following the Christian religion were much more likely to use antenatal care services compared to those following the Muslim faith (AOR =14.399, 95% CI: 2.494-83.143). The findings from the FGDs participants indicated that the religion of the mothers was among the factors that affected the quality and utilisation of maternal health care services. The FGDs participants discussed religious beliefs and practices as also having an impact in the decision-making process of mothers regarding maternal healthcare utilisation. The FGD participant stated this:

''In some rural areas, there was a time when there was a labouring mother in the home for more than 24 hours. Her religious followers gathered and prayed for her to give birth. Due to this, most of the time, the mother came back after she developed an infection and intrauterine fetal death due to delay at home. Even last year there was a maternal death in one kebele after the woman bled severely in her home.'' P12MMSc.

The possible explanation is that religious beliefs and practices can affect both the quality and utilisation of maternal health care services. Negative attitudes towards certain health care interventions rooted in religious beliefs can also affect utilisation and compliance with treatment recommendations. To mitigate these negative effects, health care providers should be trained to deliver culturally sensitive care, respectful of women's religious beliefs and practices. Open and honest communication between health care workers and patients is essential. This allows women to express their concerns and explore how their religious beliefs can be accommodated within their care plan. Additionally, working closely with religious leaders and community health workers to educate the community about the importance of maternal health care, debunking myths and misconceptions related to religious practices.

6.4.2.6 Academic status of mothers and husbands

Women with a secondary education or higher (AOR = 3.0, 95% CI = 1.18–7.84) were three times more likely to give birth at a medical facility than women without any formal education, according to a study done in Ethiopia (Girmaye, Mamo, Ejara, Wondimu & Mossisa 2021:6). According to another study done in Central Myanmar, women from households with one or fewer high school graduates were roughly seven times more likely to choose traditional birth attendants than women from households with high school graduates or more (Milkowska-Shibata et al 2020:5).

Findings from the quantitative data results indicated that mothers who had completed secondary school or above were almost eight times more likely than those who had only completed primary school to use antenatal care services (AOR = 8.159, 95% CI: 2.696-24.695). Likewise, mothers who had completed secondary school or above were twice as likely to use these programs as mothers who had only completed primary school (AOR = 2.791, 95% CI: 0.251-16.230). Additionally, mothers whose husbands had completed primary, secondary, or university education were seven to nine times more likely to use labour and delivery care services than mothers whose husbands had no formal education (AOR = 7.723, 95% CI: 2.244-26.575 and AOR = 9.429, 95% CI: 2.827-31.456, respectively respectively).

Similarly, FGDs participants identified the academic status of mothers in the community as among the factors that influenced the delivery of quality and utilisation of maternal health care services in the facilities. The FGDs participants mentioned the following statements:

*‘‘In communities, there were many misconceptions regarding maternal health care services. These misconceptions affected uneducated mothers not to utilise maternal care services because educated mothers were not affected by all these misconceptions…. they did not accept all information heard from the different sources without verification.’ ’*P15MDg**.**

‘‘….in a community where there were educated mothers even attended primary education, you observed that there was improved antenatal care and skilled birth services utilisation.’’ P21FDg.

This suggests that women who have had more education are more likely to be health literate meaning they are able to understand health information, access and utilise maternal health care services, and participate in decisions about their own health and their family's health care. The availability of different maternal health services, the value of preventative care, and the advantages of obtaining prompt medical assistance during pregnancy and childbirth are all frequently associated with higher education levels.

6.4.2.7 Maternal health education

The research carried out in the rural Sehala Seyemit district of Ethiopia revealed that women's willingness to use maternal health care services was greatly impacted by maternal health education, especially through channels like mass media exposure (Taye, Kebede & Wondie 2022:7). In line with these findings, women with partial media exposure were greater likelihood of using maternal health care services (AOR = 1.29, 95% CI = 1.29–1.33), and those with full media exposure demonstrated an even greater likelihood of utilisation (AOR = 1.70, 95% CI = 1.58–1.83) in contrast to mothers who have not been exposed to the media (Shanto et al 2023:6).

Furthermore, women who received education on Birth Preparedness and Complication Readiness (BPCR) at their prenatal care (ANC) appointments were more likely to give birth with a trained delivery attendant present (Izudi et al 2019:81; Cameron et al 2019:4).

Compared to women who did not receive such education during their previous pregnancies, mothers who received health education on maternal health care services were found to be more likely to use antenatal care services (AOR = 0.015, 95% CI: 0.015).

Furthermore, mothers who got free prenatal health care services at health care institutions were twice as likely to use postnatal care services compared to those who paid for these services (AOR = 2.436, 95% CI: 1.086-13.960).

In addition, this study found that moms who had previously received health education on maternal health care services were more likely to use labour and delivery care services than mothers who had not (AOR = 0.123; 95% CI = 0.007-0.084).

One of the elements influencing the quality and use of maternal health care services was the absence of health education initiatives in medical institutions. According to the FGD participants, health extension workers should offer health education both at the community level and at healthcare institutions to enhance the quality and utilisation of maternal health care services. The following statements witnessed this:

*‘‘In hospitals, I can say confidently there were no health education provisions and programs. To enhance the quality of maternal health care services, health education programs should be available in the hospitals to create awareness of maternal health care services. At the community level, I knew health education was provided by health extension workers, but that was not enough to increase awareness of maternal health care services and improve their quality.’’*P4MDg*.*

‘‘…Hospitals should have programs of health education, even at the community level, especially for problems related to delivery and the postnatal period. For instance, in Ethiopia, maternal health care services like ANC, giving birth in a health facility, postpartum care services, and others were increased. These improvements were documented because of the introduction of new processes, and there have been improved things starting from the lower level and community awareness by health education.’’ P18FD*.*

In health facilities, the quality and utilisation of maternal health care services are greatly enhanced by the availability of maternal health education. Improved knowledge stemming from education empowers women to make knowledgeable choices regarding their reproductive health, which will result in better health-seeking behaviours and

increased utilisation of prenatal, labour and delivery, and postpartum care. Women who receive an education are better able to identify any complications and seek prompt medical attention. Moreover, education improves communication between patients and health care providers, resulting in more effective and patient-centred care. Maternal health education also influences the attitudes and practices surrounding pregnancy, childbirth, and postpartum care, contributing to raised health outcomes and reduced maternal and newborn mortality and morbidity. In short, investment in comprehensive maternal health education programs directly translates to better quality of care and increased utilisation of health facilities.

6.4.2.8 Distance and access to transportation

The studies conducted in Northwest Ethiopia indicated that mothers those who had to travel more than 10 km to reach the medical facility were (83%) less likely to seek institutional delivery services than those who had to travel less than 3 km (Oumer, Aragie & Worede 2022:6). This finding was corroborated by another study carried out in Southern Ethiopia, which revealed that women who lived in areas with health centres within two hours of their home were 2.9 times more likely to use trained birth attendants than those who lived further away (Gurara, Draulans, Geertruyden & Jacquemyn 2023:12).

Mothers living in rural areas were less likely than those living in urban areas to use labour and delivery care services, according to the current study (AOR = 0.692, 95% CI: 0.692-1.198). Furthermore, mothers who lived more than 15 km from health care facilities were less likely to use these services than mothers who lived 5–15 km from health care facilities (AOR = 0.658, 95% CI: 0.332–5.725); mothers who lived in rural areas and those who lived 5–15 km from health care facilities were also less likely to use postnatal care than urban residents who lived within 5 km from health care facilities (AOR = 0.143,

95% CI:.035-.584) and (AOR = 0.143, 95% CI:.035-.584 AOR = 0.440, 95% CI: 0.227-0.851), respectively.

The results of the present study showed that among the factors influencing the delivery of high-quality maternal health care services and their use were the distance between medical facilities and the availability of transportation from the communities to these facilities. The FGDs participants mentioned the following statements:

‘‘The mothers who were referred from far Woreda health centres did not arrive on time. They would reach our hospital after their labour was prolonged for more than 24 hours, developing an infection, severe bleeding, convulsion and coma from severe pre-eclampsia and eclampsia. Most of the mothers died before reaching our hospital.’’ P11MDg*.*

‘‘Even the ambulances working on this road did not function for more than one month; they would look for maintenance after they served a few months.’’ P40MDg*.*

‘‘… at the community level, many kebeles have no access to roads, very wide and women are required to travel for more than one hour through carrying labouring mother to access the roads.’’ P14FDg*.*

‘‘When we asked mothers, who came from far Woredas; the reason for their delay was due to a bad road. To reach our hospital they paid money for a car about 10,000 Birr for one trip up to Dodola Hospital.’’ P10MDg*.*

This implies that women living in rural or isolated communities may have restricted access to health facilities due to long distances. This can delay or prevent them from receiving timely prenatal, delivery, and postnatal care. Therefore, addressing the challenges posed by distance and transportation access is crucial for enhancing the quality and utilisation of maternal health care services. Strategies that enhance accessibility, reduce travel burdens, and ensure timely care can significantly increase the quality and use of services related to maternal health, which eventually results in increased health outcomes for both mothers and their new-borns.

6.4.2.9 Occupational status of women

A study conducted in Ethiopia showed being employed was identified as a contributing element to the utilisation of PNC services that are situated in facilities (Ayele et al 2021:4).

In current study, mothers in farming or student occupations had a lower likelihood of using postnatal care services than government employees (AOR = 0.346, 95% CI: 0.007-0.620 and AOR = 0.154, 95% CI: 2.154-0.874). Quality maternal health services, such as expert birth attendance, postnatal care, and prenatal check-ups, are more likely to be affordable for women with steady jobs and higher incomes. Women's access to and use of maternal health care services are significantly influenced by their employment status. Policies aimed at improving women's employment opportunities, enhancing workplace support for maternal health, and addressing barriers related to time and economic constraints can significantly improve maternal health outcomes. Ensuring equitable access to quality care for women across different occupational statuses is essential for promoting overall maternal and child health.

6.4.2.10 Parity

Mothers with a birth order of 1 were 3.46 times (AOR = 3.46; 95% CI: 1.73, 6.89) more likely to give birth at a medical facility than mothers with a birth order of ≥ 5, according to a study by Hailemariam et al (2023:7)

The present study found that mothers with one parity were more likely than mothers with four or five parities to use antenatal care services by more than 90% (AOR = 0.098, 95% CI: 0.023-0.410, and AOR = 0.049, 95% CI: 0.011-0.229).

Likewise, mothers who had children aged one to five or older were more than 90% less likely to use labour and delivery care services than mothers who had only one child during their previous pregnancy (AOR = 0.024; 95% CI = 0.007-0.084), (AOR = 0.034;

95% CI = 0.003-.338), (AOR = 00.038; 95% CI = 0.003-0.298), (AOR = 0.032(; 95% CI = 0.001-0.115), and (AOR = 0.011, 95% CI = 0.038-0.969), respectively. Compared with mothers with only one parity, mothers with five or more children were less likely to use postnatal care services (AOR = 0.389, 95% CI: 0.159-0.954).

The quality and use of maternal health care services are influenced by several factors, including parity. While experienced mothers may benefit from their knowledge and support, they also confront difficulties regarding time management, money, and potential biases in care. Women of all parity levels can benefit from improved maternal health outcomes when these determinants are addressed through focused treatments and supporting policies. Promoting overall maternal health care services requires that all women, regardless of their reproductive history, receive thorough and considerate care.

6.4.2.11 Mode of delivery, and maternal and fetal conditions outcomes

Using skilled delivery services and antenatal care services was significantly linked to having pregnancy-related complications, according to a study by Hailemariam et al (2023:7) (AOR = 1.63; 95% CI = 1.04, 2.57).

According to the current study, mothers with normal maternal and foetal outcomes were almost 94% more likely to use prenatal care services than mothers who had maternal and foetal difficulties during their previous pregnancies (AOR = 0.065, 95% CI: 0.013-0.337). Comparing mothers who had caesarean sections or assisted instrumental deliveries to those who had vaginal deliveries, the former were significantly more likely to use labour and delivery care services (AOR = 4.789; 95% CI = 1.350-12.685) and the latter (AOR = 9.185; 95% CI = 8.902-2846.625).

The use of postnatal care services was also roughly three times higher among mothers who had a caesarean section in their previous pregnancy than among mothers who had a vaginal delivery (AOR = 3.560, 95% CI = 2.056-6.164), while postnatal care services

were less common among mothers who had maternal and foetal complications in their previous pregnancies than among those who did not.

If mothers had a negative experience with ANC follow-up and felt discouraged or disengaged from the healthcare system, they would not utilise the services and may not attend future appointments for other maternal health care services. FGD participant mentioned these statements:

"…. If women had a negative experience with ANC follow-up, such as feeling ignored or not receiving adequate care, they might develop a lack of trust in the health care system. It had long-lasting effects on women's attitudes and behaviours towards maternal health care. This can lead to a reluctance to seek out other maternal health care services, as they might fear similar experiences or believe that their needs would not be met." P39FDg**.**

During maternal health care services utilisation, if mothers perceived that they had received inadequate health care services from health care providers, and this, in turn, caused dissatisfaction for them with the service received, they may not return for other maternal health care services. The following statement supported this:

"*One day, a woman from this town gave birth in this health centre. After she delivered safely, we all left the delivery room except one midwife to suture the tears and discharged her after 6 hours… After she went to her home, she was unable to void urine, and her abdomen was distended…after that, the family brought her to the health centre, and when we checked, the midwife forgot a gauze in her vagina when she was suturing tears."* P27MDg**.**

This suggests that the quality and use of maternal health care services are significantly influenced by the mode of delivery as well as the conditions of the mother and foetus. To improve maternal and foetal health outcomes, health care providers can better tailor their services to meet the unique needs of women by understanding these factors. Promoting maternal health requires that all women have access to high-quality care, regardless of their delivery method or health conditions.

6.4.2.12 Status of pregnancy

According to a Malawian study, moms who had interpersonal violence-related unintended or unwanted pregnancies were less likely than mothers who had planned or desired births to use labour and delivery care facilities (Stewart & Hall 2022:4).

The results of this study showed that mothers who had desired pregnancies were six times more likely to use postnatal care services than mothers who had unwanted pregnancies (AOR = 6.816, 95% CI = 3.075-15.109), and mothers who had unwanted pregnancies were less likely to use labour and delivery care services [AOR = 0.024; 95% CI = 0.007-0.084].

6.4.2.13 Decision making power of women

Mothers who collaborated with their husbands to choose the delivery location were six times more likely to give birth in hospitals and health centres than mothers who were unable to do so (AOR = 5.91; 95% CI = 3.79–9.22), according to a study done in Central Ethiopia (Mengistu 2019:8).

This study found that mothers whose decisions regarding maternal health care utilisation were made by others had significantly different probabilities of using various services compared to those making independent decisions. The likelihood of using prenatal care was nine times higher for mothers whose decisions were determined by others (AOR = 9.540, 95% CI = 1.391-65.435). The likelihood of using labour and delivery services was also considerably higher for those whose husbands (AOR = 4.205; 95% CI = 1.678-10.541) or partners (AOR = 8.041; 95% CI = 2.870-22.523) made the decisions.

In contrast to mothers who made their own decisions, mothers whose husbands made the decisions were less likely to use postnatal care services (AOR = 0.415, 95% CI = 0.215-0.801).

The FGD participants reported that women's usage of maternal healthcare services can be significantly impacted by their lack of independence. Maternal healthcare services may not be used in places where women have little autonomy over their choices. The statements made by the participants during the FGDs revolved around these issues:

"…. It was clear; women who lacked autonomy might face obstacles to using and gaining access to maternal health care services. They might be unable to make decisions about their own health or face resistance from family members or partners, leading to delayed or inadequate care-seeking. This could result in lost chances for early problem identification and treatment, which worsens outcomes for both mothers and newborns. It was also a delayed or inadequate care-seeking." P36MDg**.**

"Lack of autonomy may impair a woman's ability to make decisions for her own and her unborn child's health. This could result in a lack of control over important decisions such as where to seek care, when to seek care, and what interventions to accept. This could lead to suboptimal use of maternal health care services and possibly harmful health consequences." P37MD**.**

"Women who lack autonomy might possess restricted access to information and education about maternal health care. This could result in a lack of awareness about the significance of skilled birth attendance, postnatal care, and antenatal care, which results in their underutilisation. Additionally, it made it more difficult for them to make wise choices both their own and their children's health." P13FDg**.**

"In the communities where women who lacked autonomy might have restricted availability of financial resources, transportation, and other necessary means to access maternal health care services. This further exacerbates barriers to care-seeking and could result in disparities in maternal and neonatal health outcomes." P14FDg.

The study participants discussed that in the community, if equality of males and females was not assured, it might result in non-utilisation of maternal health care services by mothers in the communities. Mothers could not make decisions independently due to their dependence on males. The participants discussed the following statements:

‘‘In our country, there has been progress in empowering women to make choices regarding their health, especially services related to maternal health care. However, in rural and uneducated communities, there was still a gap in decision-making regarding health. If inequality between males and females in the community was not guaranteed, it might result in non-utilisation of maternal health services. Without their husbands' consent, women in these communities could not choose on their own to seek out maternal health care services like prenatal care, labour and delivery, and postnatal care.’’ P18FD*.*

‘‘In our society, the dependence of women on their husbands for most women, obtaining maternity health care services was common. In our rural community, most women are unable to independently decide on their preferred location for childbirth without their husbands' involvement. Furthermore, even if they could make such decisions, financial constraints prevent them from affording transportation expenses and other necessary fees associated with these services.’’ P19MMSc*.*

The decision-making power of women is a critical element in improving the quality and utilisation of maternal health care services. The following are some ways that this effect enhanced the quality and utilise of services related to maternal health care

1. Autonomy in health choices: Women with greater decision-making power are more inclined to look for and use services related to maternal health. They can make informed choices about when to seek care, which health care providers to consult, and what treatments to pursue. This independence guarantees that women can put their own and their children's health first.

2. Access to resources: Women who have a say in household decisions often have better access to financial resources, transportation, and time to seek care. When

women can negotiate for these resources, they are more likely to attend prenatal check-ups, deliver in healthcare facilities, and access postnatal care.

3. Awareness and education: Women who participate in decision-making are often more informed about health issues, including maternal health. They are more likely to participate in health education initiatives, comprehend the value of prenatal care, and identify warning indications of pregnancy and delivery complications.

4. Support from partners and families: When women have decision-making power, they can advocate for their health needs within their families. This may encourage supportive partners and family members to accompany them to health care facilities, thus reducing barriers to accessing care.

5. Community engagement: Empowered women are often more involved in community initiatives that promote maternal health. They can advocate for better health care services, participate in health education campaigns, and influence community norms regarding maternal health.

6. Quality of care: Women who are involved in decision-making may also demand higher quality care from health care providers. They are more likely to voice concerns about their treatment and seek second opinions if necessary, leading to improved standards of care.

7. Reducing cultural barriers: In many societies, traditional gender roles may limit women's autonomy to make health-related decisions. Empowering women can help challenge these norms, leading to broader societal changes that prioritise women's health and well-being.

8. Improved health outcomes: According to studies, maternal health outcomes, including reduced rates of maternal death and morbidity, are frequently better when women have decision-making authority. This is partially because emergency obstetric care and the use of trained delivery attendants have grown.

6.5 SUMMARY

The integrated results from the study's quantitative and qualitative phases are presented in this chapter. The results obtained from women through the quantitative survey were combined with the qualitative insights gathered from focus group discussions with midwives. The narratives were quoted, and the findings were discussed in relation to existing literature. Furthermore, the Health Belief Model (HBM) supported the integration of these quantitative and qualitative data. The upcoming chapter will address community engagement strategies aimed at improving the quality and utilisation of maternal health services in the West Arsi Zone, Oromia Regional State, Ethiopia.

CHAPTER 7

COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH SERVICES

7.1 INTRODUCTION

This chapter describes methods for increasing community involvement in order to raise the quality of maternal health care services in Ethiopia. Based on the study's findings, relevant data from the literature review, the study's theoretical framework, and the researcher's viewpoints, these strategies were developed. Within the context of the modified Health Belief Model (HBM), the themes found in the study were arranged. Strategies and activities for each subject were suggested based on the researcher's observations and pertinent literature. In order to improve the quality and utilisation of maternal health services in the West Arsi Zone of Oromia Regional State, Ethiopia, the study set out to evaluate maternal health care services and develop community participation strategies.

To recap, the purpose of the study was:

- The purpose of this study was to evaluate maternal health care services to develop community participation strategies to improve the quality and utilisation of maternal health services in the West Arsi Zone, Oromia Regional State, Ethiopia.

To recap, the objectives of the research study were:

- To assess the perceptions of women regarding the quality and utilisation of maternal health care services rendered in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia.

- To identify factors affecting the quality and utilisation of maternal health care services rendered in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia.
- To explore the experiences of midwives on the factors affecting the improving of the quality and utilisation of maternal health care services during antenatal, labour delivery, and postnatal care services in the West Arsi Zone, Oromia Regional State, Ethiopia
- To develop community participation strategies that can be used to improve the quality and utilisation of maternal health care services in hospitals and health centres in the West Arsi Zone, Oromia Regional State, Ethiopia.

The study consisted of two interdependent **phases** that focused on the compilation of evidence in preparation for and development of strategies.

- **Phase I** was the collection, analysis, and interpretation of empirical data for the study.
- The purpose of this phase was to evaluate maternal health care services to develop community participation strategies to answer objectives number one, two and three (1,2 & 3).
- **Phase II** was the development of community participation strategies. The development process of these strategies was based on the empirical data collected and analysed during Phase **I.**

The assessment of maternal health care services offered in hospitals and health centres (objectives 1 and 2) and the experiences of midwives about what improves the quality and utilisation of maternal health care during the prenatal, labour, delivery, and postnatal periods (objective 3) in the West Arsi Zone of the Oromia Regional State in Ethiopia are in line with Phase 1 of the study, which was described in Chapter 4 of this study. These findings are based on the phases and objectives mentioned above.

Strategies for community participation aimed at enhancing the quality and utilisation of maternal health care services in hospitals and health centres (objective 4) within the West Arsi Zone of the Oromia Regional State, Ethiopia, were presented in Chapter 7, corresponding to Phase II. Consequently, the researcher is confident that all objectives of the study have been successfully met.

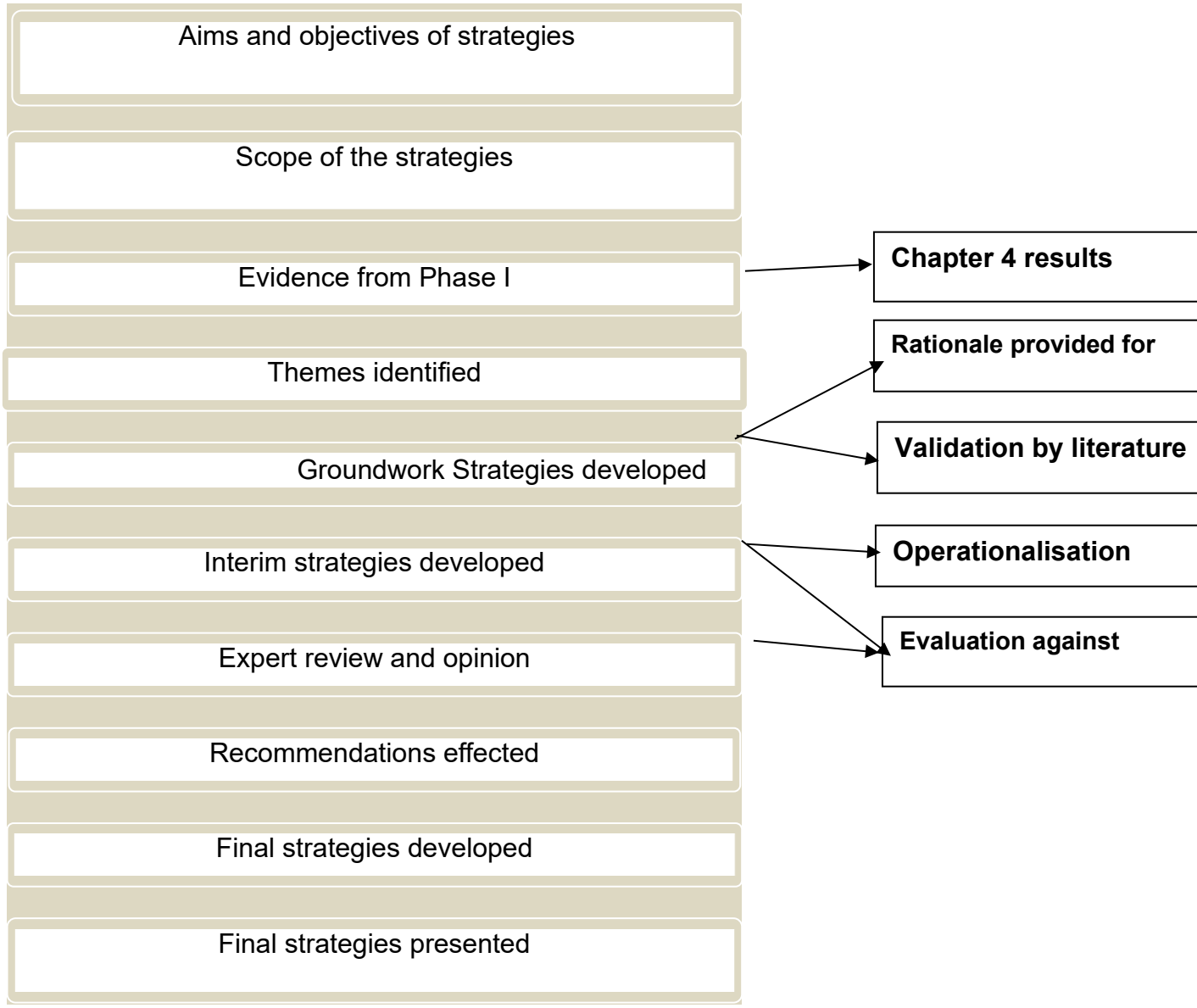


Figure 7.1: Methodology for development of strategies

7.2 STRATEGIES DEVELOPMENT

This section covered the development of strategies, the range of proposed strategies, their intended purposes, a SWOT analysis, and the objectives associated with these strategies.

7.2.1 Process of strategies development

This section covered the development of strategies, the range of proposed strategies, their intended purposes, a SWOT analysis, and the objectives. A strategy is thought of as an action plan meant to help achieve the intended outcomes. The development of the strategies was prompted by the poor quality of maternal health care services in Ethiopia and the imperative to tackle challenges and improve the quality of maternal health care services by utilising community participation strategies. The strategies were developed based on the study's findings in Chapter 4 and a thorough review of relevant literature associated with these strategies.

The HBM is a widely used theoretical framework in public health research that can be applied to develop strategies for maternal health care services. The HBM focuses on individual beliefs and perceptions about health-related behaviours and the factors that influence these beliefs. Here is a general methodology for developing strategies for community participation in improving the quality and utilisation of maternal health care services using the HBM, which involves a systematic approach that considers the beliefs, attitudes, and perceptions of community members towards maternal health care. The following steps indicated the methodology for developing community participation strategies (Hakim 2022:6936; Kapur 2019:3 & 4; WHO 2003:10; Paul 1987:12 & 13):

1. **Identify the target community:** Identify the specific community or communities where maternal health services need improvement. Consider factors such as geographic location, demographics, cultural norms, and existing health infrastructure.

2. ***Conduct a needs assessment:*** To understand the current status of maternal health services in the target community. Identify gaps, challenges, and opportunities for improvement.
3. ***Review literature on community participation and the HBM***: Review existing literature on community participation in health programs and interventions that have used the HBM as a theoretical framework. Identify successful strategies and best practices.
4. ***Identify key constructs of the HBM:*** Determine which key constructs of the HBM are relevant to community participation in improving maternal health care services. These may include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy.
5. ***Engage community stakeholders***: Engage with community members, local leaders, health care workers, and other stakeholders to understand their beliefs, attitudes, and perceptions towards maternal health care services. Conduct focus group discussions and surveys to gather insights.
6. **Develop community participation strategies**: Based on the findings from the needs assessment and stakeholder engagement, develop strategies that leverage the key constructs of the HBM to promote community participation in improving maternal health care services. For example:
    - Enhance perceived benefits: Highlight the benefits of accessing quality maternal health care services, such as improved maternal outcomes.
    - Address perceived barriers: Identify and address barriers that prevent community members from accessing or utilising maternal health services.
    - Use cues to action: Implement strategies to prompt community members to take action, such as organising community health education sessions or outreach programs.
    - Build self-efficacy: Empower community members to take an active role in improving maternal health care services through training, capacity-building activities, and involvement in decision-making processes.
7. ***Implement and evaluate strategies:*** Implement the developed community participation strategies in collaboration with local partners and stakeholders. Monitor and evaluate the

impact of the strategies on maternal health care service utilisation, quality of care, and health outcomes.

8. ***Refine and scale up successful strategies:*** Based on evaluation results, refine successful strategies and scale them up to reach a larger population. Share lessons learnt and best practices with other communities or organisations working on similar initiative (Kapur 2019:5).

7.2.2 The range of the proposed strategies

The proposed strategies are to be applied in communities, primary health care units, district health offices, zonal health departments, regional health bureaus, and the Federal Ministry of Health to improve community participation strategies for improving the quality of maternal health care services. They were designed to support planning, implementing, monitoring, and evaluating quality maternal health care services.

The target groups for the proposed strategies are pregnant women, labour and delivery women, postnatal women, families and caregivers, community members, health workers, health managers, and health policymakers.

7.2.3 Purpose of the proposed strategies

The purpose of the strategies is to give guidance-based evidence on how community participation strategies improve the quality of maternal health care services in Ethiopia.

7.2.4 Strengths, Weakness, Opportunities and Threats (SWOT) analysis

SWOT analysis is an analysis method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in an organisation and the most commonly used strategic planning tool to access any organisation's internal and external factors

(Kumar & Praveena 2023:745). The SWOT analysis provided a concise summary of research findings that were previously discussed in Chapter 4's quantitative and qualitative parts (Table 7.1).

Strengths

In this study results, internal factors that could strengthen the improvement of community participation to improve the quality of maternal health care services were identified. The quantitative phase results showed that, in terms of service costs to maternal health care services, almost all women were not paid for services given for them, which improves community participation and utilisation of maternal health care services.

Weaknesses

In the current study, weaknesses were internal barriers of the selected hospitals and health centres that affected community participation in the utilisation of maternal health care services. The quantitative phase results identified that health care workers' attitudes, lack of privacy in health facilities during labour and delivery, availability of drugs and supplies, and waiting time to get services were identified as internal barriers to non-utilisation of maternal health care services in the health facilities.

In the qualitative phase, the participants emphasised the lack of necessary skills, knowledge, and attitude among health care workers; a shortage of midwives; lack of training; lack of electricity and water supply; inadequate infrastructure; lack of respectful maternity care; lack of labour companionship; lack of privacy and confidentiality; position during labour and delivery; lack of obstetric triage; unavailability of maternity waiting homes; lack of medical equipment, medical supplies, and drugs; delays in service provision and referral; lack of health education programs; and lack of cultural ceremonies in health facilities.

Opportunities

Opportunities were defined in this study as outside variables that were present in a chosen group of hospitals and health centres and were likely to encourage community

involvement in raising the standard of maternal health care in the West Arsi Zone. The findings indicated that the external support from the Ethiopian Ministry of Health and non-governmental organisations boosted the efforts to improve the quality of maternal health care services through initiatives such as Basic Emergency Obstetrics and Newborn Care (BEmONC) training and resource allocation for maternal health care services mentorship. Study participants noted that the experiences of mothers with the utilisation of maternal health care services, collaboration of hospitals with health centres to improve the quality of maternal health care services in their catchment area, implementation of a mentorship program to address any skill gaps among midwives, provision of outreach services for non-emergency obstetrics, and preparation of porridge and coffee in the health facilities were identified as opportunities to increase community participation to improve the quality of maternal health care services.

Threats

Threats were barriers external to the selected hospitals and health centres that prevented them from increasing community participation to improve the quality of maternal health care services. The low-level community awareness, attitude of the community towards the utilisation of maternal health care services, lack of community participation, distance and access to transportation services, security issues, low interest in the midwifery profession, and lack of health education at the community level were identified as threats to increasing community participation to improve the quality and utilisation of maternal health care services.

Table 7.1 Summary of SWOT analysis

Strengths	Weaknesses	Opportunities	Threats
✓ Free maternal health care services	✓ Lack of necessary skills, knowledge, and attitudes among healthcare providers ✓ Unavailability of medical equipment, medical supplies, and drugs ✓ Shortage of midwives ✓ Lack of training ✓ Lack of electricity and water supply ✓ Inadequate infrastructure ✓ Lack of respectful maternity care, ✓ Lack of labour companionship	✓ Availability of government and non-governmental support of maternal health care services ✓ Collaboration of hospitals with health centres ✓ Availability of mentorship program ✓ Provision of outreach services for non-emergency obstetrics ✓ Preparation of porridge and coffee in the health facilities	✓ Low-level of community awareness ✓ Attitude of the community towards the utilisation of maternal health care services ✓ Lack of community participation ✓ Distance and access to transportation services ✓ Security issues ✓ Low interest in the midwifery profession ✓ Lack of health education at the community level

	✓ Lack of privacy and confidentiality ✓ Lack of obstetric triage ✓ Unavailability of maternity waiting homes ✓ Delays in service provision and referral ✓ Lack of health education programs, and cultural ceremonies in health facilities.		

7.2.5 Objective of the proposed strategies

The objective is to identify strategies that can boost community involvement in order to improve the quality and utilisation of maternal health care services, as well as to address the challenges associated with accessing and delivering these services.

7.3 GROUNDWORK STRATEGIES

The themes identified for developing the strategy included factors related to healthcare workers, factors concerning women, availability of essential equipment and medical

supplies, issues related to distance and transportation services, aspects associated with health facilities, and community-related factors.

Figure 7.2 indicates the framework of themes for blueprint strategies development.

The groundwork strategies were developed from the identified themes. Themes 1 to 6 were tabulated, and the categories from each theme were identified and presented with each strategy and rationale provided for the strategy.



Figure 7.2: Framework of themes for strategies development

7.3.1 Strategies towards health care workers

Health care professionals may be better able to comprehend the advantages of community involvement and how it might enhance the standard and utilisation of maternal health care services if they are taught the value of community involvement in primary health care services. However, the lack of knowledge among medical staff regarding the participation process, their poor communication and interpersonal skills, and the system's employment of inappropriate participants (Gholipour, Shokri, Yarahmadi, Tabrizi, Iezadi, Naghibi & Bidarpoor 2023:6). The present investigation revealed that the primary determinants of the enhancement of maternal health care services were those associated with health care professionals. Inadequate training, poor service delivery, a shortage of midwives, a lack of skills, knowledge, and attitude among health care providers, a lack of midwives, low interest in the midwifery profession, and the refusal of health care workers to provide services outside of regular business hours were some of these factors.

Health care professionals should get training on the value of community involvement as well as the communication and engagement of medical professionals with individuals in order to enhance the quality of maternal health care services. Community health education tools and resources, community meetings, collaborating with community organisations, employing community health workers, community advisory boards, conducting community needs assessments, and providing culturally competent care are some of the ways that this education can be delivered through workshops, training programs, and online resources.

Table 7.2 Strategies targeting health care workers

Strategy	Rationale and Operationalisation
Giving training for health Workers*:*	
✓ Educate health care workers about the importance of community participation. Health care providers need to understand the benefits of community participation and how it can improve the quality of maternal health care services. This education can be provided through workshops, training programmes, and online resources.	To increase health care workers' understanding of the importance of community participation in the improvement of the quality of maternal health care services.
	To improve health care workers' skills in how to conduct and facilitate community participation by providing workshops, training programmes, and online resources on their responsibilities and expectations.
Community health education tools and resources:	
✓ Develop tools and resources to support health care providers in engaging with the community. Health care providers need to have the tools and resources they need to effectively engage with the community. This includes resources on how to build relationships with community members, conduct community assessments, and develop and implement community-based programmes.	To provide quality and adequate maternal health care services.
	To help health care workers during community health education engagement.
	To help on how to build relationships with community members, how to conduct community assessments, and how to develop and implement community-based programmes.
Community meetings*:*	
✓ Create opportunities for health care workers to interact with community members. Health care workers need to have opportunities to interact with community members in a meaningful way. This can be done through community meetings, health fairs, and other events.	To increase health care workers' opportunities to interact with community members in a meaningful way.

Supporting health care workers: ✓ Support health care workers who are working to improve community participation. Health care workers who are working to improve community participation should be recognized and supported. This can be done through financial support, technical assistance, and mentorship. ***Partner with community organisations:*** ✓ Develop the mechanisms through which health care workers can form partners with community organizations to reach pregnant women and new mothers who may not be accessing care. ***Hire community health care workers:*** ✓ Hire community health care workers: Could provide basic health care services and education to pregnant women and new mothers. Could also help to build relationships between health care providers and community members. ***Community advisory boards:*** ✓ Develop community advisory boards or community member groups who are providing input on the planning and delivery of health care services. ***Conduct community needs assessments:*** ✓ Design community needs assessment mechanisms that can help to identify the health care needs of the community.	To identify community members' perceptions regarding maternal health care services. To establish a system through which health care workers who are working to improve community participation should be recognized and supported. To identify the mechanisms through which financial support, technical assistance, and mentorship through which health care workers who are working to improve community participation could be utilised. To provide health education, support, and resources to pregnant women and new mothers with the collaboration of community organizations. To improve the quality and utilisation of basic health care such as maternal health care services and providing education to pregnant women and new mothers. To build relationships between health care workers and community members.

Provide culturally competent care: ✓ Design the mechanisms through which health care workers provide culturally competent care and are aware of the cultural beliefs and practices of their community.	To ensure that health care services are responsive to the needs of the community. Could be used to develop and implement programmes that are tailored to the needs of the community. It will help to ensure that maternal health care services are provided in a respectful and culturally sensitive way.

7.3.1.1 Giving training for health workers

According to the FGD participants, the midwives working in their healthcare institutions received insufficient training on emergency obstetric and neonatal care, which resulted in subpar maternal health care services. They complained that the midwives' lack of basic training in obstetrics and gynaecology ultrasonography prevented them from providing necessary services at the health centres. Consequently, they were forced to suggest hospitals to their patients. The participants also described how some health centre delivery attendants transferred mothers to hospitals for care that might have been provided on-site due to a lack of training.

In low-income families, the effects of catastrophes are not evenly felt by pregnant, postpartum, and/or breastfeeding women, infants, and small children, according to the U.S. Department of Health and Human Services (HHS) Maternal-Child Health (2021:28). Health care professionals' knowledge and abilities in maternal health care services and community involvement can be enhanced with training (Adefolarin et al 2021:7). Better care for expectant mothers and new mothers may result from this. It can assist health care professionals in learning new techniques and approaches to interact with the

community and in realising how crucial community involvement is to raise the standard of maternal health care services. This may result in a stronger dedication to community involvement and more fruitful collaborations with residents. Better health outcomes for expectant and postpartum women as well as more successful community engagement initiatives may result from this (Gholipour et al 2023:6).

The study discovered that even in medical facilities, staff members lacked the necessary expertise to deliver high-quality maternal health care services, including emergency obstetric and neonatal care.
Similar to this, training for healthcare professionals showed overall statistically significant improvements in exposure to certain reproductive health treatments, which have a cumulatively favourable effect on the intention to continue providing such services in the future (Mwansisya et al 2022:8).

The training group had significantly higher percentages of promoting the use of maternal health care services, such as ANC care services, institutional delivery, and postnatal care services, such as breastfeeding for more than four months, initiating breastfeeding within 24 hours of delivery, and providing nutritional counselling for women, than the financial group, according to a study done in rural western China to compare strategies promoting the use of maternal health care services among financially supported pregnant women for seeking antenatal care services and clinical training provided to health care workers (Shen, Li, Liu, Xiao & Yan 2019:5). Health care providers were therefore able to acquire a variety of skills in reproductive health and maternity and child health care services that are essential for their service delivery through training and on-site mentorship programs.

7.3.1.2 Community health education tools and resources

Health care professionals can enhance community involvement to raise the standard of maternal health care services in a number of ways with the use of community health

education tools and resources ((Ballard, Bonds, Burey, Foth, Fiori, Holeman, Johnson, Malaba, Palazuelos & Raghavan 2018:10), including:

- ✓ **By providing information and education to community members.** Community health education tools and resources could help health care workers educate community members about the importance of maternal health care, the benefits of community participation, and how to access maternal health care services. This information and education can help to increase awareness of the importance of maternal health care and to promote healthy behaviours.

- ✓ **By building relationships between health care workers and community members.**

  Community health education tools and resources could help health care workers build relationships with community members by providing opportunities for interaction and dialogue. This could help to build trust and rapport between health care workers and community members, which could lead to increased participation in maternal health care programs and services.
- ✓ **By empowering community members to take control of their health**. Community health education tools and resources could help health care workers empower community members to take control of their own health by providing them with the knowledge and skills they need to make informed decisions about their health care. This could lead to increased participation in maternal health care programs and services and better health outcomes for pregnant women and new mothers.

Therefore, health care professionals could enhance community involvement and raise the standard of maternal health care services by utilising community health education techniques and resources. Better health outcomes for expectant mothers, new mothers, and the community may result from this.

7.3.1.3 *Community meetings*

The current study found that measures that could enhance the quality and utilisation of maternal health care services included community meetings or community participation techniques through community structures such as women's development arms, gares and gottes, and 1 to 5. Health professionals may have more opportunity to engage meaningfully with community members because of these community meetings on maternal health care services. Finding out how the community views maternal health care services might be beneficial.

Stronger community participation through Pregnant Women Forums (PWFs) meetings and Health Development Arm (HDA) leaders' meetings was found to contribute to increased awareness of maternal health services, improved attitudes of community members regarding the use and improvement of the quality of maternal health care services, according to a study conducted in the rural southern part of Ethiopia to assess community participation and maternal health care service utilisation (Datiko, Bunte, Birrie, Kea, Steege, Taegtmeyer, Kumar & Kok 2019:6-8). Similarly, community meetings have the following advantages to enhance community engagement and the quality of maternal health care services, per the study by Ndambo, Munyaneza, Aron, Makungwa, Nhlema, and Connolly (2022:6 & 7).

- ***Foster community engagement:*** Community meetings provide a platform for residents to voice their concerns, share experiences, and collaborate on local health issues. This engagement empowers communities to take ownership of their health, increasing their motivation to participate in maternal health initiatives. Engaging and empowering communities is crucial for enhancing the quality of maternal and child health (MCH) care. When communities are involved in decision-making and service utilisation related to MCH, it helps ensure that services meet their specific needs and preferences (Birhane, Assefa, Mesfin Belay, Nibret, Aytene, Liyeh, Gelaw & Tirune 2024:12).

- ***Identify needs and priorities***: Meetings facilitate a collective understanding of the specific maternal health needs of the community. Participants can identify barriers to care, gaps in services, and opportunities for improvement. This information helps healthcare providers tailor services to better meet community needs.
- ***Strengthen trust and respect:*** By engaging with community members, health care providers demonstrate respect for their perspectives and concerns. Building trust is crucial for promoting health-seeking behaviours and ensuring women feel comfortable accessing maternal health care services.
- ***Promote communication and collaboration:*** Meetings create a channel for communication between health care providers and community members. This fosters ongoing dialogue, allowing for quick identification and resolution of issues, as well as dissemination of important health information.
- ***Enhance health education and promotion:*** Community meetings provide an opportunity to educate residents on critical maternal health topics, such as prenatal care, nutrition, and birth planning. This empowers women and families with the knowledge they need to make informed choices about their health.
- ***Support local initiatives and programs:*** Community meetings can mobilise support for local maternal health initiatives, such as birthing centres, breastfeeding support groups, and community-based prenatal classes. This promotes a sense of collective responsibility for improving maternal health outcomes.

7.3.1.4 *Supporting care health workers*

The quality of maternal health care services can be greatly improved in several ways by assisting medical professionals who are trying to increase community involvement. Maintaining positive relationships with community leaders, members, and organisations is crucial for promoting the retention, motivation, performance, and accountability of CHWs (Hodgins, Kok, Musoke, Lewin, Crigler, LeBan & Perry 2021:1). The results of the current study demonstrated that one of the elements influencing the standard of maternal

health care services provided in medical facilities was a lack of enthusiasm in the midwifery profession. Participants in the study also mentioned how little the government paid attention to healthcare professionals. Despite their workload, midwives in rural northern Ghana were not paid or given incentives, according to a study done in the Upper East Region of Ghana to examine the difficulties faced by midwives working in rural communities. As a result, many midwives felt underappreciated and their efforts to provide high-quality maternal and child health services were not acknowledged as being on par with those of other medical professionals (Adatara et al 2021:4).

Of particular important things needed for supporting midwives and community health workers are ensuring adequate funding for supervision, commodity and supply chain costs, as well as for ongoing training needs and career development programmes to maintain a motivated workforce with minimal community health workers attrition (Masis, Gichaga, Zerayacob, Lu & Perry 2021:11).

7.3.1.5 *Partner with community organisations*

If health workers develop partnerships with community organisations it can help them to reach and engage with women who may be facing barriers to utilising maternal health care services (Hodgins et al 2021:8) through the following ways:

- ***Community outreach and engagement:*** Community organisations have deep roots in the communities they serve and can help health care providers reach and engage with women who may be facing barriers to care. They can assist with outreach activities, such as community health fairs, educational workshops, and home visits.
- ***Culturally sensitive care:*** Community organisations can provide health workers with insights into the cultural beliefs, values, and practices of the community they serve. This knowledge helps providers deliver culturally sensitive care that is respectful and responsive to the unique needs of diverse populations.

- **Social *support and resources:*** Community organisations often provide social support and resources to women and families, such as housing assistance, food banks, and transportation services. By partnering with these organisations, healthcare providers can connect women with the resources they need to improve their overall health and well-being, which can positively impact maternal health outcomes.

- ***Health education and promotion***: Community organisations can assist health workers with health education and promotion efforts. They can help develop and disseminate educational materials, conduct workshops, and provide peer support to promote healthy behaviours and empower women to make informed choices about their health.

7.3.1.6 *Hire community health workers*

One of the factors influencing the improvement of the quality of maternal health care services was the presence of skilled birth attendants who have received education and training to become proficient in midwifery abilities, or the absence of midwives during labour.

Pregnant women and postpartum mothers can receive basic health care services and education from community health workers. They can also support the development of connections between community members and health care professionals. The experience from Somalia during the COVID-19 outbreak demonstrates that community health workers can be useful for targeted surveillance in communities living in rural and remote areas with limited coverage of health services and facility-based surveillance systems in nations with severe shortages of health workforce and weak disease surveillance and response systems (WHO 2022:8).

7.3.1.7 *Community advisory boards*

Establishment of community advisory boards or member organisations that offer feedback on the development and provision of health care services to guarantee that medical services are receptive to the demands of the community. Community Advisory Boards (CABs) and health professionals can collaborate to increase community involvement and raise the standard of maternal health care services (Ontario HIV Treatment Network 2022:4).

7.3.1.8 *Conduct community needs assessments*

The design of community needs assessment tools that can assist in determining the health care needs of the community. It can be applied to the development and execution of community-specific programs. To increase community involvement in and improve the quality and utilisation of maternal healthcare services, health care providers can carry out needs assessments (Heany, Lauren & LaPine 2018:6).

7.3.1.9 *Provide culturally competent care*

Mothers require a positive attitude from health care professionals, not only high abilities, according to the FGD participants in this study. If they feel negatively about them, they would rather die than use their maternal health care services. Despite their busy schedules, the survey participants emphasised that hospital staff members must attend to women who are in labour or the second stage and experiencing problems.

Health professionals must understand their community's cultural customs and values. These can guarantee that maternal health care services are delivered in a courteous and culturally aware manner. Every woman and her family should get culturally competent

care and emotional support that is attentive to their needs, per the 2016 WHO Standards for Improving the Quality of Maternal and Newborn Care in Health Facilities (WHO 2016:3).

To increase community involvement and improve the quality and utilisation of maternal healthcare services, health care providers can offer culturally competent care. Therefore, health professionals can improve communication and understanding, build rapport and trust with women, and raise the possibility that women would use and benefit from maternal health care services by offering culturally competent care.

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7.3.2 Strategies targeting women

A study conducted by Shanto et al (2023: 5&6)found that the strongest positive factors associated with the quality and use of maternal health care services were a woman's age at first birth, her academic and economic status, her empowerment and decision-making abilities, and her experiences using these services. Strategies that can address the factors influencing women's age at first birth, their academic and economic status, their empowerment and decision-making abilities, and their experiences using maternal health care services are crucial for improving the quality of maternal health care services.

Table 7.3 Strategies targeting women

Strategy	**Rationale and Operationalisation**
Improve women's age at first birth: ✓ Developing a mechanism to delay the first birth allows for better physical development, reducing the risks of complications during pregnancy and childbirth.	To empower women by improving access to education, employment, and reproductive health information empowers women to make informed decisions about their reproductive choices, including when to have their first child.

Improve women's academic status: ✓ Develop mechanisms that can improve women's academic status, leading to increased participation in maternal health care services and ultimately improving the quality of care provided. ✓ Improving access to effective family planning methods allows women to plan their pregnancies and space them appropriately. ***Improve women's economic status:*** ✓ Develop mechanisms to improve women's economic empowerment. ✓ Establish a system through which women's financial barriers are addressed to improve the quality of maternal health services. **Improve women's empowerment and decision-making:** ✓ Develop the mechanisms through which women's empowerment and decision-making capacity are addressed to improve the quality of maternal health care services. **Improve women's knowledge and attitudes of obstetric danger signs and complications:** ✓ Develop the mechanisms to improve women's knowledge of obstetric danger signs and complications.	To address challenging societal norms that pressure women to marry and have children young, promoting a cultural shift towards later marriage and parenthood. To address economic disparities and poverty, as these factors often contribute to early marriage and childbearing. To empower women to make more informed decisions about their healthcare, including seeking preventative care, choosing a skilled birth attendant, and accessing family planning services. To develop women's economic stability, that can strengthen women's ability to negotiate with healthcare providers and advocate for their needs. To help women reduce their dependence on male partners, giving them greater control over their health choices. To raise women's awareness about danger signs to improve early detection of problems and reduce delays in deciding to seek obstetric care To improve women's experiences of maternal health care services utilisation

improve women's experiences of utilisation of maternal health care services: ✓ Establish the mechanisms through which women's experiences of maternal health care service utilisation increased**.**	

7.3.2.1 Women's age at the first birth

The age at first birth was linked to the use of maternal health care services, according to the current study. Delaying childbearing enables women to finish their education and launch their jobs, enhancing their general well-being and financial independence as well as their use of maternal healthcare services (Sumankuuro, Mahama, Crockett, Wang & Young 2019:4). Therefore, improving women's age at first birth can have a significant impact on maternal health and community participation in health care services. Addressing the underlying factors that influence a woman's age at first birth can also empower women and create a more equitable society.

7.3.2.2 Academic status of women

Increases in maternal educational attainment were found to be substantially correlated with the use of maternity healthcare services in research carried out in Southern Ethiopia, Nigeria, Cambodia, and Nepal (Berehe & Modibia 2020:6 & 7; Stephen et al 2019:2 & 3; Cameron et al 2019:7; Khatri & Karkee 2018:40). Enhancing women's educational standing is an essential investment in their health and welfare. It can greatly increase the quality and utilisation of maternal healthcare services, which will ultimately result in better health outcomes for mothers and children. It can also provide them with financial

resources, information, and skills. Consequently, raising women's academic standing is a potent strategy for raising the quality and uptake of maternal health care services.

7.3.2.3 Economic status of women

Sumankuuro et al (2019:5), assert that enhancing maternal health care service utilisation and attaining better maternal health outcomes require investments in women's economic empowerment. They contend that we can build a more just and equitable society where all women have access to the health care, they require by removing financial obstacles and giving women the freedom to make their own health decisions. According to Stewart and Hall (2022:5), the mother's poor economic level also had an impact on how she used maternal health care services. Therefore, raising women's economic standing is a key strategy for raising the standard and uptake of maternal health care services.

7.3.2.4 Empowerment and decision-making power of women

Giving women more authority over their health care choices empowers them, which improves treatment quality, increases service use, and eventually improves maternal health outcomes. As a result, funding women's empowerment is essential to enhancing and expanding the use of maternal health care services by women.

Studies carried out in Southern Ethiopia, Nigeria, Cambodia, and Nepal revealed that women's decision-making and empowerment abilities were crucial in influencing whether or not they used maternity care facilities (Berehe & Modibia 2020:6 & 7; Stephen et al 2019:2 & 3; Cameron et al 2019:7; Khatri & Karkee 2018:40).

7.3.2.5 Experiences of mothers with the utilisation of maternal health care services

According to the results of the current study, one of the factors influencing the increase in the quality of maternal health care services was the presence of experienced women who used these services in the community. Women who had bad experiences with maternal healthcare services frequently assumed that they would receive the same subpar treatment throughout subsequent pregnancies. In later pregnancies, this misconception deterred them from obtaining professional delivery services (Mohamed et al 2021:1157; Shiferaw & Modiba 2020:5). The current study indicated that about forty-eight (48%) percentage (n = 263) of mothers' decisions regarding the utilisation of maternal healthcare services were made by their husbands. The present study found that around 48% of mothers (n = 263) had their husbands make decisions about their use of maternal healthcare services.

Therefore, to boost use and encourage favourable health outcomes, it is imperative to engage in enhancing mothers' experiences with maternal health care services. It can enable women to take an active role in their own health care journeys by cultivating trust, empathy, and respectful care, which will result in a more supportive and equitable health care system for everyone.

7.3.2.6 Women's knowledge of obstetric danger signs and complications

Women's utilisation of maternal health care services was influenced by mothers' awareness of obstetric danger indicators and consequences. This suggested that mothers would not give birth in medical facilities if they were unaware of obstetrics and the warning signs and problems of home delivery (Mohamed et al 2021:1153). Gurara et al (2023:12), found that women's awareness of pregnancy danger symptoms and pregnancy planning and danger signs strongly predicted their use of ANC. The likelihood

of using ANC is higher among people who are aware of the warning signs of pregnancy than among those who are not.

7.3.3 Strategies targeting the health facility

The absence of obstetric triage, infection prevention materials, maternity waiting homes, sufficient rooms and beds, delivery couches, as well as reliable electricity and water supply, along with a lack of women-centred care services such as food and cultural ceremonies in healthcare facilities, highlights significant infrastructure deficiencies (Ogu, Ebenso, Mirzoev, Uguru, Etiaba, Uzochukwu, Ezumah & Onwujekwe 2023:5; Shanto et al 2023:6). Improving the infrastructure of health care facilities is crucial for delivering safe, effective, and compassionate maternal health care. Addressing these shortcomings is vital for reducing maternal and newborn mortality rates, improving health outcomes, and achieving health equity for all women.

Table 7.4 Strategies targeting health facility

Strategy	Rationale and Operationalisation
Improve availability of rooms, beds and delivery couches: ✓ Ensure the availability of a sufficient number of rooms, beds, and delivery couches for maternal health care services through purchase and ask support from partners or the health system.	To have adequate space and decrease overcrowding, improve privacy and confidentiality, and improve the ability to provide proper care, maternal health care services respecting women's socio-cultural and dignity.
Improve electricity and water supply: ✓ Ensure that health facilities have continuous electricity and water	To improve health facilities' access to continuous electricity and water supply by working with the concerned bodies.

supply by working with the concerned bodies. **Improve availability of infection prevention materials:** ✓ Design the mechanisms that promote access and utilisation of infection prevention materials for maternal healthcare, ensuring a safe and hygienic environment. **Establish separate obstetrics and gynaecology triage:** ✓ Establish separate obstetric triage in health facilities to prioritise women who need urgent lifesaving interventions.	To enhance access and utilisation of infection prevention materials for maternal healthcare, ensuring a safe and hygienic environment To provide the best quality of maternal health care services and life-saving interventions without delay in health facilities.

7.3.3.1 Improve availability of rooms, beds and delivery couches

The quality of maternal health care services in medical facilities may be impacted by a shortage of rooms, beds, and delivery couches. Lack of space in the medical institution makes it impossible to maintain privacy and confidentiality and admit labouring women if all the available rooms are already taken. According to the study, despite WHO recommendations that women should remain in health facilities for 24 hours following delivery, the health centres had to release the woman within 24 hours due to a lack of rooms and beds. Mothers were occasionally placed on mattresses on the floors, in chairs, and in corners of these establishments. These made communities and women dissatisfied with the facility's maternal health care services and made them prefer home birth.

Mothers also complained about the lack of privacy at the medical facilities. Although the government of Ethiopia currently encourages all women to give birth at a health facility,

some women are referred from one facility to another or impoverished women are unable to pay for these services when they are referred to other locations for examination and would rather give birth at home because of a lack of basic medical supplies, delivery beds, and diagnostic facilities like ultrasound exams and medications (Sendo et al 2021:6). In a similar vein, Mohamed et al (2021:1156) found that it would be challenging for a patient to convey her issue to a healthcare practitioner in a facility where other patients or healthcare providers are present.

7.3.3.2 Improving electricity and water supply

Improvements to the health facility's infrastructure for dependable power, water, and electrical supplies were seen favourable and linked to higher-quality maternity and pediatrics healthcare services (Robert, Apho, Traoré & Vezina 2023:9). Therefore, investing in reliable electricity might increase electricity's dependability in terms of supply hours and voltage stability, and water supply could significantly improve the use of maternal and child health services, among other essential health system components.

Therefore, especially in underprivileged communities, boosting the water and electricity supplies can greatly improve the quality of maternal health care services. The quality of maternal health care services can be improved, and communities can be empowered to take charge of their own health outcomes, by including community engagement into the plan for enhancing the water and electricity supply. This all-encompassing strategy guarantees that advancements are egalitarian, long-lasting, and sensitive to the requirements of families and women.

7.3.3.3 Improve availability of infection prevention materials

The quality of professional birth attendance services was found to be impacted by the absence of personal protective equipment (PPE) such as boots, aprons, eye goggles, mouth masks, and capes. Bremnes, Wiig et al (2018:3) note that inadequate personal protective equipment can put medical personnel at risk for infection, delay treatment, and result in preventable consequences for mothers.

Therefore, this approach seeks to greatly enhance the quality of maternal healthcare services by emphasising infection prevention resources that involve the community. Better health outcomes for mothers and their newborns are eventually the result of community members' active participation, which also raises awareness and creates a sense of ownership over maternal health efforts.

7.3.3.4 Establish separate obstetrics and gynaecology triage

By assigning obstetric patients to priority categories based on their needs or comprehension level, the current study discovered the existence of obstetric case triage. In this instance, expectant and labouring moms were seen directly at the obstetrics triage rather than at the central triage. According to Moudi et al.'s study (2020:5), having a distinct obstetric triage department can enable women in an emergency situation be sent to the right place, with seriously ill patients being sent to the emergency room for timely and appropriate care.

Thus, when paired with strong community involvement, a distinct obstetric triage system can significantly enhance the quality of maternal healthcare. Healthcare practitioners can guarantee that the system is responsive to the needs of women and families, which will eventually improve maternal health outcomes, by incorporating community people at all stages of the process, from planning to implementation and evaluation.

7.3.4 Strategies targeting to improve women-centred care in the health facility

The results of this study showed that the lack of maternity waiting homes, the presence of medical professionals near labouring women, the absence of food supplies in medical facilities, and the absence of cultural rituals in medical facilities were some of the things that prevented maternal health care services from improving. Maternity waiting homes in hospitals are crucial in places without roads for ambulances and other forms of transportation. These elements must be considered by legislators and health care professionals when developing and executing maternal health care programs to guarantee that they are responsive to the requirements of various populations and culturally sensitive (Yoseph et al 2023:9).

Table 7.5 Strategies targeting improvement of women-centred care in the health facility

Strategy	Rationale and Operationalisation
Women-centred maternal health care in the health facility: ✓ Prioritize understanding and address the unique needs, preferences, and experiences of women seeking maternal healthcare. Provide food services for labouring women and their families. ✓ Establish the practice of cultural ceremonies in health facilities. Foster a healthcare environment that is respectful, inclusive, and	To address the cultural needs of women and their families, which are often practiced during home delivery. To give food services to pregnant women to make them and their families feel at home. To ensure every woman is offered the option to experience labour and childbirth with the companion of her choice.

culturally sensitive, ensuring women feel valued and heard. ✓ Enhance the physical environment of healthcare facilities to create a welcoming, clean, and safe experience for women, including the establishment of maternity waiting homes, private consultation spaces, comfortable waiting areas, and child-friendly areas. Ensure the presence of healthcare providers around labouring mothers. ✓ Ensure women receive clear, concise, and understandable information about their health, treatment options, and available services in their preferred language. Train healthcare providers in active listening, empathetic communication, and respectful dialogue, ensuring women feel heard and understood. ✓ Ensure every woman is offered the option to experience labour and childbirth with the companion of her choice. Assure privacy and confidentiality. Use the position women prefer during labour and delivery. ✓ Develop and implement patient-centred education programmes that empower women with	To assure women's privacy and confidentiality. To practice position women preferred during labour and delivery.

knowledge about their health, pregnancy, and postpartum care.	

7.3.4.1 Women-centred maternal health care in the health facility

Tiruneh et al (2019:9) revealed that establishment of maternity waiting homes is a successful strategy for enhancing the use of maternal health services and reducing the disparity in maternal health care utilization between urban and rural areas. Therefore, setting up maternity waiting homes can enhance access to skilled care by bridging the gap in maternal health service usage between urban and rural populations.

According to a study done at the University of Gondar Teaching Hospital in Northwest Ethiopia, most mothers would rather have someone to talk to about their worries and support them in order to have a good delivery because the process is quite stressful (Gashaye et al 2019:11).

One significant factor that prevented women from using maternal health care services was the absence of traditional ceremonies in the medical facilities. In many communities, this cultural ceremony was important because it gave people a sense of identity, belonging, and connected them to traditions and customs. Women in Ethiopia nowadays frequently cite the inability of contemporary healthcare facilities to accommodate their cultural needs as the main deterrent to using the services. Women were discouraged from accessing delivery care services since many traditional practices were not recognised or supported at the level of health facilities (Jebena et al 2022:11).

Additionally, community involvement in maternal health care services can be greatly enhanced by establishing the practice of cultural ceremonies in health facilities, providing food, implementing women-centred care through maternity waiting homes, and having medical professionals present constantly after the mother is admitted to labour or postnatal care services. It can improve access to high-quality care, encourage improved health outcomes, and enable communities to actively participate in maternal health

efforts by establishing supportive environments that put women's needs first. This approach not only takes care of urgent medical requirements but also encourages community involvement and support.

7.3.5 Strategies targeting delaying in offering health care service

Table 7.6 Strategies targeting delaying in offering healthcare services

Strategy	Rationale and Operationalisation
Delay in offering maternal healthcare service: ✓ Design the mechanisms that can address the three delays in accessing maternal health care (decision to seek care, reaching a health care facility, and receiving appropriate care) by leveraging community participation to create a system that empowers women and communities to act promptly and effectively. ✓ Partner with community leaders, traditional healers, and religious figures to identify pregnant women in need, encourage early and regular antenatal care, and facilitate referrals to higher-level facilities. ✓ Establish designated community-based referral points, equipped with basic medical supplies, where women can seek assistance and receive guidance on accessing healthcare. ✓ Collaborate with local transportation services, motorcycles, or	✓ To develop the mechanisms that can address the three delays in accessing maternal health care by involving community participation to create a system that empowers women and communities to act promptly and effectively. To establish the mechanisms through which health care workers adhered to timely providing health care services and timely referring women in need of referral services.

community-owned vehicles to facilitate transportation for women needing referrals. ✓ Explore sustainable financing models, such as community contributions, insurance schemes, or government grants, to ensure ongoing operational costs to avoid delaying the referral of the mother. ✓ Explore establishing community-owned ambulances staffed by trained locals to ensure rapid transport for pregnant women in need of urgent care. ✓ Conduct community meetings, workshops, and outreach programmes to educate community members about: o Recognizing warning signs of pregnancy complications. o Understanding the importance of prompt referral to a higher-level facility when complications arise. o The benefits of skilled birth attendants and emergency obstetric care. ✓ Train local volunteers as community health workers or first responders, equipping them with the skills to: o Recognize warning signs of complications. o Communicate effectively with health care providers. o Assist with transportation arrangements. o Provide basic care until the patient reaches a higher-level facility.	

7.3.5.1 Delay in offering maternal health care service

Most participants in this study concur that waiting times have an impact on the use of maternal health care services. When maternal health care services were delayed, mothers were more likely to prefer home delivery, and their satisfaction with delivery services in medical institutions was significantly influenced (Kidane, Getachew, Mesfi, Eyeberu, & Dheresa, 2023:195). Delays in sending women to the next medical facility during emergencies were one of the issues that prevented them from using maternal health services (Kitila et al 2023:7). Therefore, by enabling communities to play a critical role in early need identification, timely referral, and guaranteeing rapid access to care, this strategy aims to reduce delays in receiving maternal health care services.

7.3.6 Strategies targeting distance and access to transportation services

The results of this study showed that one of the factors influencing the higher quality of maternal health care services was the distance between medical facilities and the communities. As a result, most mothers experienced delivery-related difficulties while travelling before arriving at medical facilities. Mohammed et al (2021:1155) found that in the Somali Region of Ethiopia, the majority of mothers select to give birth at home due to the long distances from the health facility because they are unable to walk there or afford the transportation costs. One pregnant mother described her experience with poor physical accessibility and a lack of a free ambulance, which were listed as the determinants for non-utilisation of skilled delivery services in the health institutions.

Table 7.7 Strategies targeting creation of interventions that enhance transportation services and physical accessibility

Strategy	Rationale and Operationalisation
Presence and utilisation of ambulance services: Establish the mechanisms through which ambulance transportation services are available on time. Design mechanisms for ambulance services is controlled.	To guarantee that women are transported and timely arrive at the medical facilities and utilise skilled birth attendance services.
High transportation costs and lack of transportation*:* Establish mechanisms through maternal health care services can get affordable transportation services Mobile Health Clinics. Road construction and maintenance. Community Engagement and Involvement.	To establish community-run transport services that provide affordable or subsidized rides to health facilities for pregnant women and new mothers. To create a program offering transportation vouchers or stipends for low-income families to help cover travel costs associated with maternal health services.
Long distance from health facilities: Establish the mechanisms through which community members are involved in planning the schedule and routes for mobile health clinics. Develop community-led transport solutions. Utilise telehealth platforms to provide remote consultations with healthcare providers. Home visits for new mothers.	To improve the quality of maternal health care services for communities located long distances from health facilities through community participation. To establish peer support groups where women can share experiences and encourage one another to access health services.

7.3.6.1 Presence and utilisation of ambulance services

The results of the current study indicate that the primary factors influencing the improvement of the quality of maternal health care services in medical facilities were the availability and use of ambulance services. Women who had obstetric emergencies were more likely to give birth at home, according to Wirtu et al (2023:3), because of things like ambulances' unavailability and malfunctions, as well as communication problems that made it impossible for them to use ambulance services. Therefore, improving maternal health care, particularly in underserved communities, requires the design of mechanisms like purchasing more ambulances, educating, and engaging the community, and putting in place GPS tracking and mobile apps for real-time tracking of ambulance locations and estimated arrival times.

Hence, communities can also greatly increase the availability of ambulance services by putting these techniques into practice, which will increase community involvement in maternal health care programs. In addition to meeting urgent transportation needs, this all-encompassing strategy promotes cooperation, education, and proactive participation in enhancing maternal health outcomes.

7.3.6.2 High transportation costs and lack of transportation

High transportation costs and lack of available free ambulance services related to the referrals during the emergency period were the barriers that most of the labouring mothers stated as the delays between appointment time and referral time (Mohamed et al 2021:1157). A systematic review conducted by Banke-Thomas et al (2021:571) to analyse the cost of utilising maternal health services in low- and middle-income countries shows that the cost of transportation was a major barrier to maternal health service utilisation for many women in low- and middle-income countries (LMICs).

Most labouring women cited the lack of free ambulance services and high transportation expenses as the main reasons for the delays between referral and appointment times during the emergency phase (Mohamed et al 2021:1157). The cost of transportation was a significant deterrent to many women in low- and middle-income countries (LMICs) from using maternal health services, according to a systematic review by Banke-Thomas et al (2021:571) that examined the cost of doing so.

Thus, transportation solutions can greatly improve the quality and utilisation of maternal health care services for communities located far from health facilities, and by putting strategies that emphasise community participation into practice, the high-cost barrier to the use of maternal healthcare services can be improved through training to ensure they meet the needs of the population.

7.3.6.3 Long distance from health facilities

According to Mohammed et al (2021:1155) in the Somali Region of Ethiopia, the majority of mothers decide to give birth at home because the health facility is far away and they cannot afford to travel by foot. One pregnant mother shared her experience, and other factors such as limited physical accessibility and a lack of free ambulances were identified as reasons why they did not use the skilled delivery services offered by the hospital. In a similar way, Solomon et al (2021:3) state that a major obstacle to using delivery services is the inability to access health facilities due to distance and poor transportation options.

Therefore, by putting community participation strategies into practice, health care providers and community organisations can improve access to maternal health care services, address the issues of distance and transportation, and empower women to take part in improving their own and their families' health. Some of these strategies include creating community-led transportation solutions, using telehealth platforms to consult with healthcare providers remotely, and visiting new mothers at home.

7.3.7 Strategies targeting medical equipment, medical supplies, and drugs

According to Ogu et al (2023:5), mothers were deterred from using maternal health care services by the majority of the facilities' lack of equipment and supplies. Solomon et al (2021:4) reported that participants frequently expressed concern about the inadequate maternity care equipment, supplies, and medication in health centres.

Table 7. 8 Strategies targeting medical equipment, medical supplies and drugs

Strategy	Rationale and Operationalisation
Avail medical equipment, medical supplies and drugs: Equip health facilities with functional Non-Pneumatic Anti-Shock Garments (NASG), delivery couches, vacuum extractors, personal protective equipment, and drugs.	To ensure that health facilities are equipped with medical equipment, medical supplies, and drugs to provide quality maternity care.

7.3.7.1 Available medical equipment, medical supplies, and drugs

The current study found that the absence of vacuum extractors, non-pneumatic anti-shock garments (NASG), and personal protective equipment, supplies, and medications were obstacles to enhancing the standard of maternal healthcare services in the medical facilities. Health facilities should therefore have a working NASG, hoover extractors, enough delivery couches and an ongoing supply of medications and personal protective equipment that prevent infections.

Therefore, strategies such as community surveys and assessments to identify specific equipment and supplies that are lacking or inadequate, prioritising essential items based

on evidence of the impact and feasibility of procurement and distribution, forming partnerships with government agencies, non-governmental organisations, and private sector suppliers to procure quality equipment and supplies, and creating effective distribution channels to ensure timely and equitable access to communities are all necessary to ensure the quality and utilisation of maternal health care services.

7.3.8 Strategies relating to community

The results of the current study showed that one of the factors influencing the quality and utilisation of maternal health care services was community-related issues, such as the community having a negative attitude towards using maternal health care services, poor community awareness, low community engagement, and a lack of community-level health education.

Table 7.9 Strategies targeting community

Strategy	Rationale and Operationalisation
Improve community awareness and attitude ✓ Develop interventions for social behavioural change communication (SBCC), offer health education, engage in advocacy, and mobilise the community. **Improve community participation:** ✓ Develop the mechanisms to empower communities to take ownership of their health, increasing their motivation to	To improve the community's awareness and attitude on the importance of maternal health care services. To empower communities to manage and allocate resources for maternal health services. To establish community-led monitoring groups to track maternal health outcomes and identify areas for improvement. To train and empower CHWs to provide basic maternal health services, such as prenatal check-ups, health education, and referral to facilities.

participate in maternal health initiatives. ✓ Engaging and empowering communities for improving the quality of maternal and child health (MCH) care	
Improve the provision of health education at the community level: Develop strategies that can enhance health education at the grassroots level, leading to improved participation in maternal health care services and ultimately better health outcomes for mothers and infants.	To improve health education at the community level to enhance community participation in maternal healthcare services.
Improve security: ✓ Establish community-based patrols, composed of trained volunteers, to monitor healthcare facilities and surrounding areas, deterring potential threats, and ensuring a safe environment.	To enhance the safety and security of pregnant women and healthcare providers, promoting a conducive environment for accessing and delivering quality maternal healthcare services.
Outreach non-emergency obstetrics services: ✓ Design the system to provide outreach services for non-emergency obstetrics cases.	To expand access to essential non-emergency obstetric care for pregnant women, particularly those in remote areas, by involving community participation and building local capacity.

7.3.8.1 Improve the community's awareness, beliefs, and attitude regarding the utilisation of maternal health services

Women's perceptions are influenced by community understanding, attitudes, and beliefs about the use of maternal health care services, which frequently result in their preference for giving birth at home. Traditional customs were among the sociocultural issues that hindered women from utilising expert delivery services. The moms stated that giving birth

at home was a traditional and customary practice that they favoured. They were hesitant to give up these traditions and practices as a result (Shiferaw & Modiba 2020:7).

Therefore, involving communities in the process of change can improve the implementation of methods that seek to address negative views, beliefs, and practices that impede the use of maternal health services.

7.3.8.2 Improve community participation

According to the current study, measures for community participation through community institutions such as the Women's Development Arm, Gares and Gottes, and Cultural Ambulance Services were found to be effective in improving the quality and utilisation of maternal health care services. According to Datiko et al (2019:6), community involvement through PWFs and HAD initiatives enhanced mothers' knowledge and awareness of maternal health services. Mothers learnt about potential risk indications during labour, delivery, and the postpartum period through this community engagement. Therefore, the goal of this strategy is to empower communities to take an active role in raising the quality of maternal health care services by encouraging a sense of accountability and ownership.

7.3.8.3 Improve health education provision at the community level

The results of the current study showed that one barrier to raising the standard and uptake of maternal health care services is a lack of health education at the community level. When compared to the previous ten years, the amount of health education available at the community level has decreased. Lack of awareness-raising programs in healthcare facilities and the community, such a forum for pregnant women and regular WDA meetings, were variables impacting the utilisation of maternal healthcare services,

according to Kitila et al (2023:7). Therefore, by utilising community ownership and engagement, this model seeks to improve health education delivery at the community level, guaranteeing that women and families with the information and abilities necessary to make knowledgeable decisions regarding their maternal health.

7.3.8.4 Improve security

In addition to birth and delivery services, health centres already offer ANC treatments. For security concerns, postnatal care services are nearly non-existent. Labouring moms may give birth on the way or use traditional birth attendants at home if they have trouble obtaining maternal health facilities in areas where security is an issue (Mohammed et al 2021:1155). To provide a favourable environment for obtaining and providing high-quality maternal healthcare services, this plan seeks to improve the safety and security of expectant mothers as well as healthcare professionals.

7.3.8.5 Providing outreach services for non-emergency obstetrics

It has been demonstrated that offering outreach ANC services, such proactive home visits, improves pregnant women's use of ANC services. Pregnant women who get outreach ANC services are more likely to receive any ANC, complete four or more ANC visits, and begin ANC in the first trimester than those who receive service delivery alone (Kayentao, Ghosh, Guindo, Whidden, Treleaven, Chiu, Lassala, Traoré, Beckerman, Diakité, Tembely, Idriss, Berthé, Liu and Johnson 2023:7) . Health outcomes for mothers and newborns have been significantly impacted by the implementation and expansion of Comprehensive Emergency Obstetrics and Newborn Care (CEmONC) services in health facilities (Taye, Kebede & Wondie 2022:7). Therefore, by utilising community involvement and developing local capacity, this approach aims to increase pregnant

women's access to necessary non-emergency obstetric care, especially for those living in rural locations.

7.4 INTERIM STRATEGIES

The purpose of the interim plans was to determine which issues were most crucial for the analysis and input of health professionals to produce the final strategies. To the greatest extent feasible, the interim strategies were to be operationalised. Before presenting the strategies to the experts for approval, it is important to keep in mind that the researcher's work was required to arrive at the strategies as mentioned. When designing the interim strategies, the following guidelines were adhered to:

- ✓ **Clarity and presentation:** Every strategy is clear, straightforward, and easy to comprehend.
- ✓ **Specificity:** The strategy should be particular and concentrated on boosting community involvement to raise the quality of maternal health care services.
- ✓ **Reliability**: The approach might be applied by other medical facilities and healthcare professionals in comparable situations, according to the evidence that prompted its development.
- ✓ **Clinical flexibility or adaptability:** Exceptions were noted because the health facilities were set up and capacitated differently.
- ✓ **Effectiveness:** In order to improve the quality of maternal health care services, the plan was able to meet the demands and overcome the obstacles in order to increase community participation.
- ✓ **Validity:** Based on proof from accurately studied and interpreted data, as detailed in this study's Chapter 4.
    - **Relevance:** The approach proved suitable for raising the quality of services related to maternal health care.

- **Applicability:** The breadth of the strategies in this study included a precise definition of the target users.
- **Acceptability:** Ambitious yet realistic, in keeping with current maternal health initiatives.
- **Achievability:** The target group could carry out the actions outlined in this study.

- **Utilisation review:** The operationalisation of the strategies included indications of how adherence could be tracked.

Eight (8) temporary strategies were made. For every identified method, operationalisation was done using the data from the preliminary plans. The next part provides a description of the interim strategies. These strategies were submitted to qualified medical experts for review and approval.

Strategy 1: Develop and equip health care workers with important knowledge, attitudes, and skills on how to conduct and facilitate community participation to provide quality and adequate maternal health care services

- ✓ Educate health care providers about the importance of community participation. Healthcare providers need to understand the benefits of community participation and how it can improve the quality of maternal healthcare services. This education can be provided through workshops, training programs, and online resources.
- ✓ Develop tools and resources to support healthcare providers in engaging with the community. Health care providers need to have the tools and resources they need to effectively engage with the community. This includes resources on how to build relationships with community members, conduct community assessments, and develop and implement community-based programs.
- ✓ Create opportunities for health care providers to interact with community members. Healthcare providers need to have opportunities to interact with

community members in a meaningful way. This can be done through community meetings, health fairs, and other events.

- ✓ Support health care providers who are working to improve community participation. Health care providers who are working to improve community participation should be recognised and supported. This can be done through financial support, technical assistance, and mentorship.
- ✓ Develop the mechanisms through which health care workers can form partnership with community organisations to reach pregnant women and new mothers who may not be accessing care.
- ✓ Hire community health workers: Can provide basic health care services and education to pregnant women and new mothers. Can also help to build relationships between health care providers and community members.
- ✓ Develop community advisory boards or community member groups who are providing input on the planning and delivery of health care services.
- ✓ Design community needs assessment mechanisms that can help to identify the health care needs of the community.
- ✓ Design the mechanisms through which healthcare providers provide culturally competent care and are aware of the cultural beliefs and practices of their community.

Strategy 2: Develop and implement strategies to improve women's age at first birth, academic status, economic status, empowerment, and decision-making, improve women's knowledge and attitudes of obstetric danger signs and complications, and experience of women with the utilisation of maternal health care services

- ✓ Developing a mechanism to delay the first birth allows for better physical development, reducing the risks of complications during pregnancy and childbirth.

- ✓ Develop mechanisms that can improve women's academic status, leading to increased participation in maternal health care services and ultimately improving the quality of care provided.
- ✓ Improving access to effective family planning methods allows women to plan their pregnancies and space them appropriately.
- ✓ Develop mechanisms to improve women's economic empowerment.
- ✓ Establish a system through which women's financial barriers are addressed to improve the quality of maternal health services.
- ✓ Develop the mechanisms through which women's empowerment and decision-making capacity are addressed to improve the quality of maternal health care services.
- ✓ Develop the mechanisms to improve women's knowledge of obstetric danger signs and complications
- ✓ Establish the mechanisms through which women's experiences of maternal health care service utilisation increased**.**

Strategy 3: Improve the availability of rooms, beds, delivery couches, electricity and water supply, and infection prevention materials, and establish separate obstetrics and gynaecology triage in the health facilities

- ✓ Ensure the availability of sufficient rooms, beds, and delivery Couches for maternal health care services through purchase and ask for support from partners or the health system.
- ✓ Ensure the availability of sufficient rooms, beds, and delivery couches for maternal health care services through purchase and ask for support from partners or the health system.
- ✓ Ensure that health facilities have continuous electricity and water supply by working with the concerned bodies.

- ✓ Design the mechanisms that promote access and utilisation of infection prevention materials for maternal healthcare, ensuring a safe and hygienic environment.
- ✓ Establish separate obstetric triage in health facilities to prioritise women who need urgent lifesaving interventions.
- ✓ Establish separate obstetrics and gynaecology triage in health facilities to prioritise women who need urgent lifesaving interventions.

Strategy 4: Improve the provision of women-centred care in health facilities

- ✓ Prioritise understanding and addressing the unique needs, preferences, and experiences of women seeking maternal health care. Provide food services for labouring women and their families.
- ✓ Establish the practice of cultural ceremonies in health facilities. Foster a health care environment that is respectful, inclusive, and culturally sensitive, ensuring women feel valued and heard.
- ✓ Enhance the physical environment of health care facilities to create a welcoming, clean, and safe experience for women, including the establishment of maternity waiting homes, private consultation spaces, comfortable waiting areas, and child-friendly areas. Ensure the presence of health care providers around labouring mothers.
- ✓ Ensure women receive clear, concise, and understandable information about their health, treatment options, and available services in their preferred language. Train health care providers in active listening, empathetic communication, and respectful dialogue, ensuring women feel heard and understood.
- ✓ Ensure every woman is offered the option to experience labour and childbirth with the companion of her choice. Assure privacy and confidentiality. Use the preferred position by women during labour and delivery.

- ✓ Develop and implement patient-centred education programs that empower women with knowledge about their health, pregnancy, and postpartum care.

Strategy 5: Improve delayance in offering health care services

- ✓ Design the mechanisms that can address the three delays in accessing maternal healthcare (decision to seek care, reaching a healthcare facility, and receiving appropriate care) by leveraging community participation to create a system that empowers women and communities to act promptly and effectively.
- ✓ Partner with community leaders, traditional healers, and religious figures to identify pregnant women in need, encourage early and regular antenatal care, and facilitate referrals to higher-level facilities.
- ✓ Establish designated community-based referral points, equipped with basic medical supplies, where women can seek assistance and receive guidance on accessing health care.
- ✓ Collaborate with local transportation services, motorcycles, or community-owned vehicles to facilitate transportation for women needing referrals.
- ✓ Explore sustainable financing models, such as community contributions, insurance schemes, or government grants to ensure ongoing operational costs to avoid delaying in the referral of the mother.
- ✓ Explore establishing community-owned ambulances staffed by trained locals to ensure rapid transport for pregnant women in need of urgent care.
- ✓ Conduct community meetings, workshops, and outreach programs to educate community members about:
    - Recognising warning signs of pregnancy complications.
    - Understanding the importance of prompt referral to a higher-level facility when complications arise.
    - The benefits of skilled birth attendants and emergency obstetric care.
- ✓ Train local volunteers as community health workers or first responders, equipping them with the skills to:
    - Recognize warning signs of complications.

- Communicate effectively with healthcare providers.
- Assist with transportation arrangements.
- Provide basic care until the patient reaches a higher-level facility.

Strategy 6: Create interventions that enhance transportation services and physical accessibility

- ✓ Work with communities to improve roads, pathways, and infrastructure leading to health care facilities, particularly in remote areas. This could involve initiatives like:
- Community-driven Road maintenance and repair.
- Construction of bridges and pathways.
- Improving lighting around health care facilities.

- ✓ Involve community members, including women, local leaders, and health care providers, in the needs assessment and mapping process, ensuring their perspectives and priorities are reflected.
- ✓ Explore establishing community-owned and managed transportation services, such as ambulances, motorcycles, or vehicles, staffed by trained locals to provide timely and reliable transportation for pregnant women.
- ✓ Develop dedicated transportation routes for pregnant women, ensuring that routes connect remote areas to healthcare facilities efficiently.
- ✓ Explore mechanisms for providing financial assistance to pregnant women and families to cover transportation costs, ensuring that financial constraints do not hinder access to healthcare.
- ✓ Establish a community-based referral system where local volunteers can assist with transportation arrangements for women needing to reach health care facilities.

Strategy 7: Ensure availability of medical equipment, medical supplies, and drugs

- ✓ Equip health facilities with functional Non-Pneumatic Anti-Shock Garments (NASGs), delivery couches, vacuum extractors, personal protective equipment, and drugs.

- ✓ Develop the mechanisms through which the supply chain management system in the health facilities is ensured.

Strategy 8: Develop health promotion and health education strategies to improve the communities' awareness and attitude regarding the utilisation of maternal health services

- ✓ Develop interventions for social behavioural change communication (SBCC), offer health education, engage in advocacy, and mobilise the community.
- ✓ Develop the mechanisms to empower communities to take ownership of their health, increasing their motivation to participate in maternal health initiatives.
- ✓ Engaging and empowering communities for improving the quality of maternal and child health (MCH) care.
- ✓ Develop strategies that can enhance health education at the grassroots level, leading to improved participation in maternal health care services and ultimately better health outcomes for mothers and infants.
- ✓ Establish community-based patrols, composed of trained volunteers, to monitor healthcare facilities and surrounding areas, deterring potential threats and ensuring a safe environment.
- ✓ Design the system to provide outreach services for non-emergency obstetrics cases.

These limitations may be overcome, where applicable and how they could be eliminated as follow:

To improve generalisability, researchers can conduct multi-site studies across different regions, including diverse healthcare settings and populations. This could involve collaborating with other institutions or health centres in various geographic areas to gather a broader range of data.

Future studies could employ a stratified sampling approach that ensures representation from different regions and healthcare contexts. Researchers could also conduct meta-

analyses or systematic reviews that combine findings from multiple studies to assess the applicability of results across various settings.

To enhance representativeness, researchers can use purposive sampling techniques to ensure a diverse range of participants based on demographics, experiences, and backgrounds. Additionally, conducting multiple FGDs in different locations can help capture a wider array of perspectives. Therefore, by implementing these strategies, researchers can not only overcome the limitations identified in this study but also strengthen the overall quality and applicability of future research in maternal health services.

7.5 VALIDATION OF THE STRATEGIES

The strategies were validated to ensure that their quality was both acceptable and achievable. The intermediate strategies discussed in section 7.3 were sent to a committee of medical specialists for external validation and review. Subject-matter specialists were purposefully included in the validation group. The respondents who assisted in validating the strategies included one coordinator of maternal and child health projects from the Oromia Regional Health Bureau, four experienced and competent project managers of maternal and child health, one from a university, and two maternal health specialists from the hospitals that took part in Phase I, step 1 of the study. The strategies were emailed to these experts for a third-party examination.

Table 7.10 describes the biographical details of the expert evaluators. They received the study's abstract, which included the topic, problem statement, study aims, importance, and methods. The strategies' validity was enhanced via the strategy validation procedure. Eight skilled and informed medical professionals were asked to assess the strategies and assign a rating using the given criteria.

Table 7.10 Expert evaluators' information

No	Qualification	Occupation	Professional experience
1	MSc in Maternity Nursing	gynaecology ward head and vice matron	14
2	MPH	Maternal and child health program coordinator	9+
3	MPH in Epidemiology	Oromia Regional Health Bureau MCH project coordinator	15+
4	MPH	Maternal and newborn health technical officer	10+
5	BSC Midwife	MCH Head	18+
6	MPH	West Arsi District RMNCH technical officer	8+
7	MPH	Shashemane town MCH coordinator	15+
8	MSc, Assistant Professor of Maternity Nursing	Health Science College dean	15+

On a Likert scale, there were four possible responses: **strongly disagree, disagree, agree, and highly agree.**

The evaluators were required to use the key to assess, grade, and indicate whether each technique matched the adopted criteria set to achieve each strategy. To express their opinions on each technique, the assessors were asked to provide written comments and feedback, if necessary. The key to the scale was as follows:

Key to evaluation:

1: Strongly disagree; 2: Disagree; 3: Agree; 4: Strongly agree

Before strategies were finalised, the health care professionals evaluated the intermediate strategies using the criteria and scoring that are displayed in Table 7.11.

Table 7.11 Standards for assessing the interim strategies

Criteria/Score	Strongly disagree	Disagree	Agree	Strongly agree
Clarity and presentation Strategy is precise, simple and easily understandable.				
Specificity Specific and focused on increasing community participation to improve quality of maternal health care services.				
Reliability Based on the evidence that led to the development, the strategy can be used consistently by other health facilities and health workers in similar circumstances.				
Clinical Flexibility Exceptions are identified, as in the case of capacitated and set up of health facilities.				
Effectiveness The strategy is able to meet the needs and overcome the challenges of community participation to improve quality of maternal health care services.				
Validity Based on evidence from correctly analysed and interpreted data as described in chapter four of this study.				
Relevance Strategy is appropriate for increasing community participation				

to improve quality of maternal health care services.				
Applicability The target users are clearly defined, as described in the scope of the strategies.				
Acceptability Realistic and ambitious, in line with the existing national strategies.				
Achievability Can be done by the target group as described in this study.				
Utilisation review Indication of ways in which adherence may be monitored is explained as operationalisation of the strategies.				

Every external assessor provided feedback. Although there was considerable variation across the assessors' evaluations of the tactics, they were generally similar. The combined score for all methods was 44. The researcher concluded that this approach may be utilised to boost the utilisation of professional birth attendance services because a score of 33 or higher indicated a 75% approval level. None of the strategies scored lower than 33. Following the scoring, the evaluators gave thorough comments on the areas they believed required improvement. Table 7.12 shows the average scores for each technique as well as the scores assigned to each method by each of the eight individual assessors.

Table 7.12 An explanation of the validation group's scores

Strategy/evaluator Total score	Evaluator 1	Evaluator 2	Evaluator 3	Evaluator 4	Evaluator 5	Evaluator 6	Evaluator 7	Evaluator 8	Mean score
Strategy 1	44	42	44	44	43	40	42	43	42.8
Strategy 2	40	40	44	39	42	43	40	44	41.5
Strategy 3	38	44	42	42	44	40	41	42	41.6
Strategy 4	39	44	44	44	39	43	44	42	42.4
Strategy 5	42	38	42	43	44	42	39	40	41.4
Strategy 6	44	40	42	41	38	44	42	44	41.9
Strategy 7	44	44	44	42	42	43	44	41	43.0
Strategy 8	40	44	42	44	39	40	43	39	41.4

The assessors provided their opinions and observations about strategies 3, 7, and 8. The following comments were made about the strategies mentioned:

Strategy 3

The evaluators commented on the effectiveness of the strategy. They recommended that community engagement strategies, such as incorporating the community in the building of medical facilities in under-infrastructure areas, are crucial. To create incentive programs and staff motivation that are founded on continuous performance reviews for community participation to improve maternal health care services, they also acknowledged the importance of having a strong and committed leadership team.

Strategy 7

Regarding the feasibility of strategy 7, the assessors believed that in the absence of specific guidelines, it might be difficult to determine the community's unique needs for maternal health services, spot gaps in medical equipment and supplies, and engage local healthcare professionals in identifying the necessary supplies and equipment for

efficient maternal care. To keep track of goods and avoid stockouts, use efficient inventory management techniques.

Strategy 8

The assessors pointed out that considering the perspectives and experiences of community leaders, religious leaders, and community health professionals such as extension workers might help fully appreciate the significance of strategy 8 to improve the quality and utilisation of maternal health care service.

7.6 FINAL STRATEGIES

After the interim strategies were validated and modified, the following final strategies were developed:

Strategy 1: Develop and equip health workers with important knowledge, attitudes, and skills on how to conduct and facilitate community participation to provide quality and adequate maternal health care services.

Strategy 2: Develop and implement strategies to improve women's age at first birth, academic status, economic status, empowerment, and decision-making, improve women's knowledge and attitudes of obstetric danger signs and complications, and experience of women with the utilisation of maternal health care services.

Strategy 3: Improve the availability of rooms, beds, delivery couches, electricity and water supply, and infection prevention materials, and establish separate obstetrics and gynaecology triage in the health facilities.

Strategy 4: Improve the provision of women-centred care in health facilities.

Strategy 5: Improve delayance in offering healthcare services.

Strategy 6: Create interventions that enhance transportation services and physical accessibility.

Strategy 7: Ensure availability of medical equipment, medical supplies, and drugs.

Strategy 8: Develop health promotion and health education strategies to improve the community's awareness and attitude regarding the utilisation of maternal health services.

7.7 SUMMARY

The implementation of Phase II, which entailed developing community engagement programs to improve the quality and utilisation of maternal health care services, was thoroughly explained in the chapter. A draft plan to improve maternal health care services and boost community involvement was developed for each topic that was classed as a concern area. Eight (8) interim methods were developed after the eight preliminary strategies were validated by skilled and experienced medical professionals. The final strategies were developed following the approval and validation of the interim plans. The next Chapter discusses the research's conclusion, suggestions, and ultimate tactics.

CHAPTER 8

CONCLUSION AND RECOMMENDATIONS OF THE STUDY

8.1 INTRODUCTION

The purpose of this study was to evaluate maternal health care services in order to develop community participation strategies to improve the quality and utilisation of maternal health services in the West Arsi Zone, Oromia Regional State, Ethiopia. The study included women who had recently given birth, midwives, and technical experts to gain a comprehensive understanding of their perceptions and experiences. This study used convergent parallel mixed methods, a form of mixed methods designs in which the researcher converges or merges quantitative and qualitative data to provide a comprehensive analysis of the research problem. The findings were analysed, presented, and described in Chapter 4. While Chapter 7 described the development of strategies to increase community participation in order to improve the quality and utilisation of maternal health care services in Ethiopia, Chapter 6 covered the integration of quantitative and qualitative findings.

The research design and methodology used in the study, a summary and interpretation of the research findings, a conclusion and suggestions, the study's contributions, limitations, and closing remarks are all presented in this last chapter. The chapter concludes by identifying the study's shortcomings and the conclusions drawn from it.

8.2 RESEARCH DESIGN AND METHODS

Convergent parallel mixed methods, a type of mixed methods design in which the researcher combines quantitative and qualitative data to provide a thorough understanding of the research problem, was employed in this study (Creswell 2022:2).

This design usually involves the researcher collecting data simultaneously using both quantitative and qualitative research methods, then incorporating the data into the interpretation of the overall findings. Additionally, a researcher gathers and examines both quantitative and qualitative data, then compares the results to determine if they support or contradict one another(Creswell 2022:66).

To prepare for and establish strategies, the study was divided into two interdependent phases that concentrated on gathering evidence. The study's first phase involved gathering, analysing, and interpreting empirical data. The development of strategies for community participation was phase II. Data collection was the main focus of the interdependent phases to develop and construct strategies.

Two hospitals and two health centres were used for the qualitative study technique, while five hospitals and twenty-five health centres were employed for the quantitative approach in the West Arsi Zone of the Oromia Regional State, Ethiopia. The legitimacy, validity, and reliability of the study were assured.

By making sure the research questionnaires addressed all necessary variables of maternal health care services, the face and content validity of the current study were examined. Similarly, to ensure reliability, the questionnaire was organised logically, with clear, concise, and unambiguous instructions; questions that were superfluous, repetitive, or inappropriate were avoided; and data collectors received effective training to reduce errors that could result from misinterpreting the instrument's purpose and content and from incorrect recording.

8.2.1 Phase I

The population for this study was all women between the ages of 15 and 49 years old and all midwives between the ages of 21 and 60 years old who have been working in governmental hospitals and health centres found in the West Arsi Zone for the last 12 months or more.

The women were surveyed using structured questionnaires to gather data. Data from the midwives were gathered by FGDs using semi-structured open-ended non-directive guides that were adopted and modified from other related qualitative studies. The researcher interviewed the women in a private room after they were discharged from the postnatal unit, family planning unit, and immunisation unit. The interviews focused on sociodemographic factors and the patterns of maternal health care service utilisation in hospitals and health centres.

The researcher used SPSS version 25 to analyse the quantitative data. The sample population's maternal health care consumption patterns were described using standard descriptive statistics in reference to the sociodemographic traits of the respondents. The Chi-square test and logistic regression models were used in the bivariate analysis because all of the answer variables were categorical. To determine the factors that contribute to higher-quality maternal health care services, the chi-square test was employed. A p-value of 0.05 was used as the findings' significance level.

Confounder adjustments were made in accordance with the results of a multiple logistic regression analysis. To determine the significant predictors (effects of covariates) on the use of maternal health care services at hospitals and health centres, multivariate logistic regression models were employed.

Atlas TI version 8 software was used to analyse the qualitative data. Reading, coding, presenting, reducing, and interpreting the data utilising an inductive thematic analysis technique were the fundamental procedures for the qualitative data analysis in this study. Content analysis, narrative analysis, and framework analysis were among the qualitative data analysis techniques that were applied.

8.2.2 Phase II

The researcher developed community participation strategies to enhance the quality of maternal health care service utilisation at hospitals and health centres in the West Arsi

Zone of the Oromia Regional State, Ethiopia, based on the results shown in Chapter 4 and the findings discussed in Chapter 5 (Phase I). Evaluations and suggestions from eight maternal health specialists confirmed the strategies that were developed.

8.3 SUMMARY AND INTERPRETATION OF THE RESEARCH FINDINGS

The quantitative and qualitative results from Chapters 4 and 5 are compiled in this section.

8.3.1 Phase I

Quantitative results showed that (88.7% n = 547) of women had seen an ANC during their prior pregnancy, 87.80% (n = 540) gave birth in a medical facility, and (21.0% n = 129) of women sought Postnatal Care (PNC) services at a medical facility within two days. Factors influencing the quality of maternal health care services included waiting times, professional conduct, privacy, and the availability of medications and supplies at medical facilities.

The use of antenatal care services is significantly correlated with sociodemographic factors, including mothers' age, marital status, religion, and educational background, according to the multivariate logistic regression model.

The study also showed that sociodemographic characteristics, such as age, educational attainment, husbands' educational background, place of residence, and proximity to medical facilities, were significantly correlated with the use of labour and delivery care services.

Similarly, by utilising multi-logistic regression, it was found that age, occupational status, payment status, residence, and distance from healthcare facilities were significantly linked to the utilisation of postnatal care services by mothers.

Additionally, the use of antenatal care services was found to be significantly correlated with the mothers' prior obstetric history, parity, decision-making authority regarding maternal health care services, maternal-foetal outcomes, and receiving health education on maternal health care services.

Additionally, the current study found that a mother's use of labour and delivery care services was highly influenced by several characteristics connected to her obstetric history. These included the number of prior births, the present pregnancy state, the ability to make healthcare decisions, the prior delivery methods, the assurance of privacy during maternal healthcare provision, and the receipt of maternal health education during prior pregnancies.

Finally, it was discovered that the use of postnatal care services was significantly correlated with various aspects of the mother's past obstetric history, including the mode of delivery in prior pregnancies, the number of parities, the decision-making authority regarding the use of maternal health care services, and maternal-foetal outcomes.

The use of antenatal care services is significantly correlated with sociodemographic factors, including mothers' age, marital status, religion, and educational background, according to the multivariate logistic regression model.

The study also showed that sociodemographic characteristics, such as age, educational attainment, husbands' educational background, place of residence, and proximity to medical facilities, were significantly correlated with the use of labour and delivery care services.

Similarly, using multi-logistic regression, it was discovered that mothers' use of postnatal care services was substantially correlated with their age, occupation, payment status, place of residence, and distance from medical facilities.

Other factors that were found to be significantly associated with the use of antenatal care services included the mothers' prior obstetric history, parity, decision-making authority regarding maternal health care services, maternal-foetal outcomes, and receiving health education on maternal health care services.

Five main themes, twenty-eight (28) categories, and eighty-five (85) subcategories were identified from the qualitative study data. These were evaluated and analysed using pertinent literature sources and in accordance with the study's goals and the health belief model. This study included four focus group discussions (FGDs): two with midwives from Malka Oda General Hospital and Shashemane Referral Hospital, and two with midwives from health centres in Nagelle Wareda and Shashemane town. A total of 40 midwives participated in the FGDs, with 12 participants from the hospital and 8 from the health centres in each group.

The following is a summary of the five themes found in the qualitative section:

Theme 1: The factors that influenced the enhancement of maternal health care services in medical institutions were the main emphasis of this theme. These included problems with medical personnel, the infrastructure of health care facilities, the lack of medical supplies and equipment, the lack of essential and life-saving services, and insufficient health education initiatives. Together, these elements have an impact on the standard of maternal health care provided at medical facilities.

Theme 2: This theme covered the factors that influenced the enhancement of community-based maternal health care services. The elements that impacted the improvement of the quality of maternal health care services in health facilities were transportation accessibility, community-related issues, and factors relating to the mothers' distance.

Theme 3: The reasons why maternal health care services at medical facilities are not used were covered in this theme. These included sociocultural factors, women's characteristics, the experience of using maternal health care services, factors related to transportation, factors related to health facilities, factors related to respectful maternity care, and factors connected to health care providers.

Theme 4: The strategies employed by healthcare professionals to enhance the quality of maternal healthcare services were classified under this theme as outreach to maternity healthcare services, cultural rituals in health facilities, and supportive supervision.

Theme 5: The following strategies were identified as potentially improving the quality and utilisation of maternal health care services under this theme: maternity waiting homes, community participation strategies, offering benefit packages to midwives, establishing emergency obstetrics and gynaecology triage, offering cultural ceremonies, offering incentive services, and investigating the reasons for home delivery for action.

8.3.2 Phase II

During phase II, the researcher presented the endorsement strategy after consulting with the supervisors. The following are the given community participation initiatives that were designed to enhance the quality and utilisation of maternal health care services in the West Arsi Zone, Oromia Regional State, Ethiopia:

Strategy 1: Develop and equip health workers with important knowledge, attitudes, and skills on how to conduct and facilitate community participation to provide quality and adequate maternal health care services.

Strategy 2: Develop and implement strategies to improve women's age at first birth, academic status, economic status, empowerment and decision-making, improve women's knowledge and attitudes of obstetric danger signs and complications, and experience of women with the utilisation of maternal health care services.

Strategy 3: Improve the availability of rooms, beds, delivery couches, electricity and water supply, and infection prevention materials, and establish separate obstetrics and gynaecology triage in the health facilities.

Strategy 4: Improve the provision of women-centred care in health facilities.

Strategy 5: Improve delayance in offering health care services.

Strategy 6: Create interventions that enhance transportation services and physical accessibility.

Strategy 7: Ensure availability of medical equipment, medical supplies, and drugs.

Strategy 8: Develop health promotion and health education strategies to improve the community's awareness and attitude regarding the utilisation of maternal health services.

8.4 CONCLUSIONS AND RECOMMENDATIONS

The study's conclusions led to the following suggestions being made:

8.4.1 Recommendations for health centres, hospitals, and West Arsi Zonal Health Office

Informing health care professionals about the value of community involvement in primary care services may help them comprehend the advantages of community involvement and how it can raise the standard of maternal health care services. The present investigation revealed that the primary determinants of the enhancement of maternal health care services were those associated with healthcare professionals.

Inadequate training, poor service delivery, a shortage of midwives, a lack of skills, knowledge, and attitude among health care providers, a lack of midwives, low interest in the midwifery profession, and the refusal of health care workers to provide services outside of regular business hours were some of these factors.

Consequently, this education can be given through workshops, training courses, and online resources by using tools and resources for community health education, community meetings, partnerships with community organisations, hiring community health workers, conducting community needs assessments, supporting health care providers who are trying to increase community participation, and providing care that is culturally competent.

- Provide women-centred care in the health facilities. The results of this study showed that the lack of maternity waiting homes, the presence of medical professionals near labouring women, the absence of food supplies in medical facilities, and the absence of cultural rituals in medical facilities were some of the things that prevented maternal healthcare services from improving. Maternity waiting homes in hospitals are crucial in places without roads for ambulances and other forms of transportation.
- Health care providers and policymakers must consider these factors when designing and implementing maternal health care services to ensure that they are culturally sensitive and responsive to the needs of diverse communities. Ensure every woman is offered the option to experience labour and childbirth with the companion of her choice. Assure privacy and confidentiality and use the position women prefer during labour and delivery.
- Improve the delayance in offering maternal health care services. The majority of participants in this study agree that waiting times have an impact on the use of maternal health care services. When maternal health care services were delayed, mothers were less satisfied with the delivery services at medical facilities and were more inclined to choose home delivery. Delays in sending women to the next medical facility during emergencies were one of the issues impeding the use of maternal health services. Therefore, empowering communities to play a critical role in early need identification, timely referral, and guaranteeing rapid access to care will help reduce delays in obtaining maternal healthcare services.
- Make sure that medications, medical supplies, and equipment are available. The current study found that the absence of vacuum extractors, non-pneumatic anti-shock garments (NASG), and personal protective equipment, supplies, and medications were obstacles to enhancing the standard of maternal healthcare services in the medical facilities. Therefore, methods such as community surveys and assessments to identify specific equipment and supplies that are lacking or inadequate, prioritising essential items based on evidence of the impact and feasibility of procurement and distribution, forming partnerships with government

agencies, non-governmental organisations, and private sector suppliers to procure quality equipment and supplies, and creating effective distribution channels to ensure timely and equitable access to communities are all necessary to ensure the quality and utilisation of maternal health care services.

- Enhance community-level health education and health promotion initiatives. The results of the current study showed that one of the elements influencing the quality of maternal health care services was community-related issues. According to the findings of this study, the community had a negative attitude towards using maternal health care services, poor community knowledge, low community engagement, and a lack of community-level health education. Women's perceptions are influenced by community understanding, attitudes, and beliefs about the use of maternal health care services, which frequently result in their preference for giving birth at home. Participating in the process of change might therefore enhance the implementation of measures that seek to address unfavourable attitudes, convictions, and behaviours that impede the use of maternal health services.

8.4.2 Recommendations for governments and policy makers

- Empowerment of women in the community. The current study found that the strongest positive factors associated with the quality and use of maternal health care services were a woman's age at first birth, her educational experience, her economic standing, her empowerment and decision-making ability, and her experiences using these services. Strategies that can address the factors influencing women's age at first birth, their academic and economic status, their empowerment and decision-making abilities, and their experiences using maternal health care services are crucial for improving the quality of maternal health care services.
- Improve health facility infrastructure. The results showed that the quality of maternal health care services was impacted by inadequate infrastructure, which included a lack of obstetric triage, a lack of infection prevention materials, a lack of maternity

waiting homes, a lack of rooms, beds, delivery couches, a lack of electricity and water supply, and a lack of women-centred care services like food and cultural ceremonies in medical facilities. Thus, enhancing the infrastructure of healthcare facilities is essential to delivering maternal healthcare that is secure, efficient, and considerate. Reducing mother and infant mortality, enhancing health outcomes, and attaining health equity for all women via community engagement all depend on addressing these issues.

- Improve access to health facilities and transportation services. Findings from this study showed that one of the elements influencing the higher quality of maternal health care services was the distance between communities and health facilities. As a result, before they arrived at medical facilities, most moms experienced problems linked to labour. To improve maternal health care, particularly in underserved communities, it is imperative to design mechanisms that increase the availability of ambulance services. These mechanisms include investing in more ambulances, educating and engaging the community, and implementing GPS tracking and mobile apps that allow for real-time tracking of ambulance locations and estimated arrival times.

8.4.3 Recommendations for communities

The following are suggestions for communities derived from a study that aimed to enhance community involvement to raise the quality and utilisation of maternal health care services:

- Establish a committee composed of community members, health care providers, and local leaders to identify local maternal health needs and priorities, develop and implement culturally appropriate community-based programs, advocate for improved maternal healthcare resources and services, monitor the effectiveness of implemented strategies, and ensure community accountability.
- Facilitate open communication between health care providers and community members.

- Ensure that community participation strategies are driven by local needs and priorities. By taking these steps, communities can play a crucial role in improving the quality and accessibility of maternal healthcare services and ultimately contributing to healthier mothers and babies.

8.4.4 Recommendations for further research

- Future research project: Implementing Community Participation Strategies for Improved Maternal Health Care in the West Arsi Zone, Oromia, Ethiopia.
- Evaluate the knowledge, attitude and skills of midwives working in maternal health care services unity in the West Arsi Zone Oromia, Ethiopia.
- Determine barriers that affect the availability of medical equipment, medical supplies, and drugs in the West Arsi zone Oromia, Ethiopia.
- In-depth interviews with community members: To explore their experiences, perceptions, and barriers to accessing maternal healthcare services.
- Focus groups with diverse community stakeholders: To gather insights from health care providers, community leaders, traditional birth attendants, and women's groups on how to improve community engagement and address local needs.
- Ethnographic studies: Immerse researchers in the community to observe and understand cultural practices, beliefs, and social structures related to maternal health.
- Case studies: To analyse successful community participation initiatives in other settings to identify best practices and lessons learned.
- Longitudinal studies: To track changes in maternal health outcomes over time in communities implementing community participation strategies.

8.4.5 Recommendations for education and training in nursing

The following are suggestions for nursing education and training derived from a study that aimed to enhance community participation strategies to improve the quality and utilisation of maternal health care services:

- The following are suggestions for nursing education and training derived from a study that aimed to enhance community participation strategies to improve the quality and utilisation of maternal health care services:
- Incorporate community health Education into nursing curriculum: This should include training on community engagement strategies, communication skills, and cultural competency to better understand and address local needs.
- Training on maternal health issues: Provide specialized training programs for nursing students and practicing nurses that cover maternal health challenges specific to the West Arsi Zone, including common complications, antenatal care, postnatal care, and family planning. This training should be evidence-based and tailored to local contexts.
- Promote interdisciplinary learning: Encourage collaboration between nursing students and students from other health disciplines (e.g., public health, social work) to foster a holistic understanding of maternal health services. Interdisciplinary workshops and case studies can help build teamwork skills necessary for effective community-based health initiatives.
- Enhance practical training opportunities: Increase the availability of clinical placements in community settings, such as health posts and community health centers. This hands-on experience is vital for understanding the dynamics of maternal health service delivery and the role of community participation.
- Capacity building for community health workers (CHWs): Develop training programs for CHWs that focus on maternal health education, advocacy, and mobilization strategies. Empowering CHWs can enhance their ability to engage communities effectively and improve service utilization.

- Utilise technology for education: Leverage e-learning platforms to provide ongoing education and training for nurses and community health workers. Online resources can offer flexible access to updated information on maternal health practices, policies, and community engagement strategies.
- Continuous Professional Development (CPD): Establish CPD programs specifically focused on maternal health topics. These programs should encourage nurses to stay updated on best practices, new research findings, and innovative community participation strategies.

8.4.6 Recommendations for dissemination of study findings

The researcher will share the final approved version of the thesis with the following stakeholders:

- The West Arsi Zone Health Office maternal health department.
- Five hospitals and twenty-five health centres participated in the study.
- Reproductive health NGOs based in the West Arsi Zone.
- The Oromia Regional Health Bureau.
- The researcher intends to extract articles from the final approved thesis and publish them in accredited, peer-reviewed journals.
- The study findings will also be presented at stakeholder meetings and conferences.
- The insights gained from this study will hopefully alert the Ethiopian government to the barriers hindering the achievement of its goal to improve community participation in maternal health care and facilitate the implementation of the proposed strategy.

8.4.7 Implementation of the proposed strategies

The study's ultimate objective, as stated in Chapter 7, was to develop community participation strategies to improve the quality and utilisation of maternal health care services. These strategy recommendations were developed based on the study's identified problem areas. To solve the problems and difficulties brought up by the study, it is highly advised that the suggested solutions be put into practice.

8.5 CONTRIBUTION OF THE STUDY

The strength of the study lies in the development of community participation strategies aimed at improving the quality of maternal health care services in the West Arsi Zone of the Oromia Regional State, Ethiopia. The proposed strategy is designed to improve the quality of maternal health care services in this region. It is based on the current determinants affecting the improvement of maternal health care quality. The thematic analysis of insights from midwives and postpartum peripartum women enriched the data presented. They provided clearer demonstrations of the challenges facing existing strategies and the shortcomings of maternal care experienced in daily practice. Below, the strengths of the study are discussed in relation to its contributions at the levels of quality of care, methodology, and policy.

8.5.1 The strengths of the study in relation to its contribution to improving quality of care

The findings demonstrated indications of inadequate quality of care within the health systems. These included a lack of necessary skills, knowledge, and attitude among healthcare providers; a shortage of midwives; low interest in the midwifery profession; limited availability of healthcare providers during labour and delivery; inadequate training;

poor service provision; healthcare workers' refusal to offer services outside working hours; a lack of women-centred care in the health facilities; delays in offering maternal health care services; poor health facility infrastructure; and limited access to health facilities and transportation services. Additionally, the study highlighted the unavailability of medical equipment, medical supplies, and drugs. The researcher suggests that to improve the quality of maternal health care services, these problems need to be addressed urgently.

8.5.2 The strengths of the study in relation to its contribution at the level of methodology

Methodologically, the study employed a convergent parallel mixed methods approach, a type of mixed methods design that merges quantitative and qualitative data to provide a comprehensive analysis of the research problem. This study was guided by the Health Belief Model (HBM) as a conceptual framework. Phase 1 involved the collection, analysis, and interpretation of empirical data to identify determinants of improving the quality of maternal care services. This phase utilised both quantitative and qualitative methods simultaneously. Phase 2 focused on developing community participation strategies. The respondents, through their real-world experiences of maternal care, provided valuable insights and informed the development of relevant interventions.

The researcher believes that the elaborate methodology facilitated access to diverse subgroups within the population, enriching the data collected. The qualitative data provided valuable insights that helped explain the quantitative findings, as intended by the study design. Finally, the validation of the strategy by a team of experts suggests that it is highly feasible for implementation in the study area.

8.5.3 The strengths of the study in relation to its contribution at the level of policy

The present strategy provided interventions targeting all major determinants of improving the quality of maternal health care services, based on the HBM framework. These community participation strategies can serve as a guide for policymakers to design interventions that are more focused, and needs-based, and ultimately improve the quality and utilisation of maternal healthcare services.

The researcher makes a case for improving current maternal health care services and policies after outlining their weaknesses and providing concrete solutions. The study concludes that using the recommended method will significantly improve quality and utilisation of maternity health care services rendered in the study area.

8.6 LIMITATIONS OF THE STUDY

The study has the following limitations:

- The findings may not be generalizable to all health care settings or populations outside the specific hospitals and health centres studied. The unique context of the West Arsi Zone may limit the applicability of results to other regions.
- Participants in FGDs may not represent the broader population of maternal health service users. Those who choose to participate might have different experiences or opinions compared to those who do not.
- Participants may provide socially desirable responses, especially in qualitative discussions, which can skew the results. This is particularly relevant in sensitive topics like maternal health.
- Integrating qualitative and quantitative data can be challenging and may lead to difficulties in drawing coherent conclusions if the two types of data do not align

These limitations may be overcome, where applicable and how they could be eliminated as follows:

- To improve generalisability, researchers can conduct multi-site studies across different regions, including diverse healthcare settings and populations. This could involve collaborating with other institutions or health centres in various geographic areas to gather a broader range of data.
- Future studies could employ a stratified sampling approach that ensures representation from different regions and healthcare contexts. Researchers could also conduct meta-analyses or systematic reviews that combine findings from multiple studies to assess the applicability of results across various settings.
- To enhance representativeness, researchers can use purposive sampling techniques to ensure a diverse range of participants based on demographics, experiences, and backgrounds. Additionally, conducting multiple FGDs in different locations can help capture a wider array of perspectives. Therefore, by implementing these strategies, researchers can not only overcome the limitations identified in this study but also strengthen the overall quality and applicability of future research in maternal health services.

8.7 CONCLUDING REMARKS

The purpose of this study was to evaluate maternal health care services in order to develop community participation strategies to improve the quality and utilisation of maternal health services in the West Arsi Zone, Oromia Regional State, Ethiopia. The study identified factors that encompassed issues related to health care workers, health facility infrastructure, shortage of medical equipment and supplies, absence of basic and life-saving services, inadequate health education programs, community-related problems, reasons related to the mothers' distance and access to transportation, women-related factors, the experience of maternal health care services utilisation, and respectful

maternity care as factors that affected the quality and utilisation of maternal health care services.

The study identified factors influencing the quality of maternal health care services, encompassing issues related to:

- Health care workers: Lack of necessary skills, knowledge, and attitudes; shortages of midwives; low interest in the midwifery profession; limited availability during labour and delivery; inadequate training; refusal to offer services outside working hours; lack of woman-centred care.
- Health facility infrastructure: Poor infrastructure, limited access to facilities and transportation, and unavailability of medical equipment, supplies, and drugs.
- Services: Absence of basic and life-saving services and inadequate health education programs.
- Community-related problems: Distance to facilities, access to transportation.
- Women-related factors: Mothers' experiences with maternal health care services utilisation and respectful maternity care. These factors were found to significantly impact the quality of maternal health care services.

Current maternal interventions for improvement of quality of care were acknowledged, and their gaps were identified to strengthen the proposed strategy. The researcher developed a strategy based on the findings of the quantitative and qualitative results. This strategy addresses both health facility systems and community-level failures through a Health Belief Model (HBM) framework. This final chapter, Chapter 6, presented and outlined the study findings, limitations, and recommendations for health facility management, policymakers, and future research. The researcher believes that the study objectives have been met.

In conclusion, to address the persistent problem of poor quality of maternal health care services, the researcher calls for increased focus on the identified determinants that affect the quality and utilisation of maternal health care services. Policymakers are urged to implement strategies to address these factors. The study highlights the urgent need

for quality improvement initiatives within health facility systems, alongside community empowerment efforts. Finally, a call is made to stakeholders, including the Ethiopian Government Ministry of Health, NGOs, and health care providers, to implement the proposed strategies in the study area.

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ANNEXURES

ANNEXURE A: ETHICAL CLEARANCE FROM UNISA

UNISA university of south africa

COLLEGE OF HUMAN SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

30 October 2024

NHREC Registration # :
Rec-240816-052
CREC Reference # :
67144497_CREC_CHS_2024

Dear Mr Aman Urgessa Edaso

Decision:
Ethics Approval from 30 October 2024 to 29 October 2025

Researcher(s): Name: Mr. A. U. Edaso
Contact details: 67144497@mylife.unisa.ac.za
Supervisor(s): Name: Prof. D. S. K. Habedi
Contact details: habeddsk@unisa.ac.za
Co-Supervisor(s): Name: Prof. T. G. Lumadi
Contact details: lumadtg@unisa.ac.za

Title: COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH SERVICES IN WEST ARSI ZONE, OROMIA REGIONAL STATE, ETHIOPIA
Degree Purpose: PhD

Thank you for the application for research ethics clearance by the Unisa College of Human Science Ethics Committee. Ethics approval is granted for one year.

The ***medium-risk application*** *was reviewed by* the College of Human Sciences Research Ethics Committee in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the College Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.

Open Rubric

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No fieldwork activities may continue after the expiry date **(29 October 2025)**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

*The reference number **67144497_CREC_CHS_2024** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,

Signature:

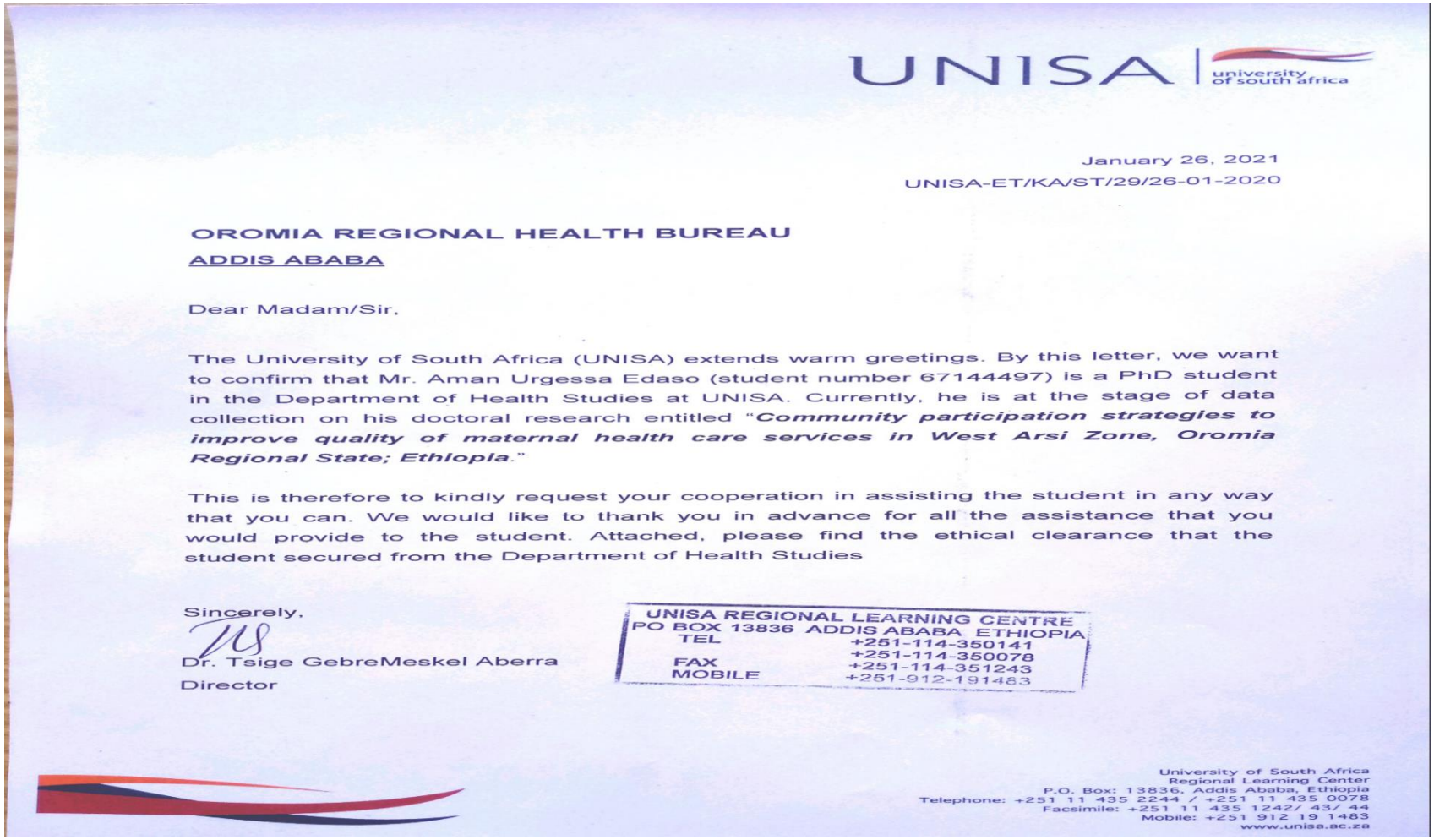
Prof. KB Khan
CHS Research Ethics Committee Chairperson
Email: khankb@unisa.ac.za
Tel: (012) 429 8210

Signature: PP

Prof ZZ Nkosi
Exécutive Dean: CHS
E-mail: nkosizz@unisa.ac.za
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ANNEXURE B: LETTER OF SUPPORT FROM UNISA REGIONAL LEARNING CENTER TO CONDUCT THE STUDY



UNISA | university of south africa

January 26, 2021
UNISA-ET/KA/ST/29/26-01-2020

OROMIA REGIONAL HEALTH BUREAU
ADDIS ABABA

Dear Madam/Sir,

The University of South Africa (UNISA) extends warm greetings. By this letter, we want to confirm that Mr. Aman Urgessa Edaso (student number 67144497) is a PhD student in the Department of Health Studies at UNISA. Currently, he is at the stage of data collection on his doctoral research entitled "***Community participation strategies to improve quality of maternal health care services in West Arsi Zone, Oromia Regional State; Ethiopia***."

This is therefore to kindly request your cooperation in assisting the student in any way that you can. We would like to thank you in advance for all the assistance that you would provide to the student. Attached, please find the ethical clearance that the student secured from the Department of Health Studies

Sincerely,

Dr. Tsige GebreMeskel Aberra
Director

UNISA REGIONAL LEARNING CENTRE
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ANNEXURE C: LETTER OF PERMISSION REQUEST TO OROMIA REGIONAL HEALTH BUREAU

Date: _____

To OROMIA Regional Health Bureau

ADDIS ABABA, Ethiopia

Subject: Request for permission to conduct research in West Arsi Zone

I am a Doctorate student (Doctor of philosophy in Nursing) at the University of South Africa (UNISA). The proposed research will look at factors affecting quality of maternal health care services in West Arsi zone, Oromia region with a view of coming up with Community participation strategy to improve quality of maternal health care service.

The study proposal was duly reviewed and approved by UNISA, and subsequently reviewed and approved by the Oromia Regional health bureau review committee.

Please find attached letter of ethical clearance from both institutions.

Thus, I am kindly requesting you to grant me permission to conduct this proposed research in West Arsi zone, Oromia Region.

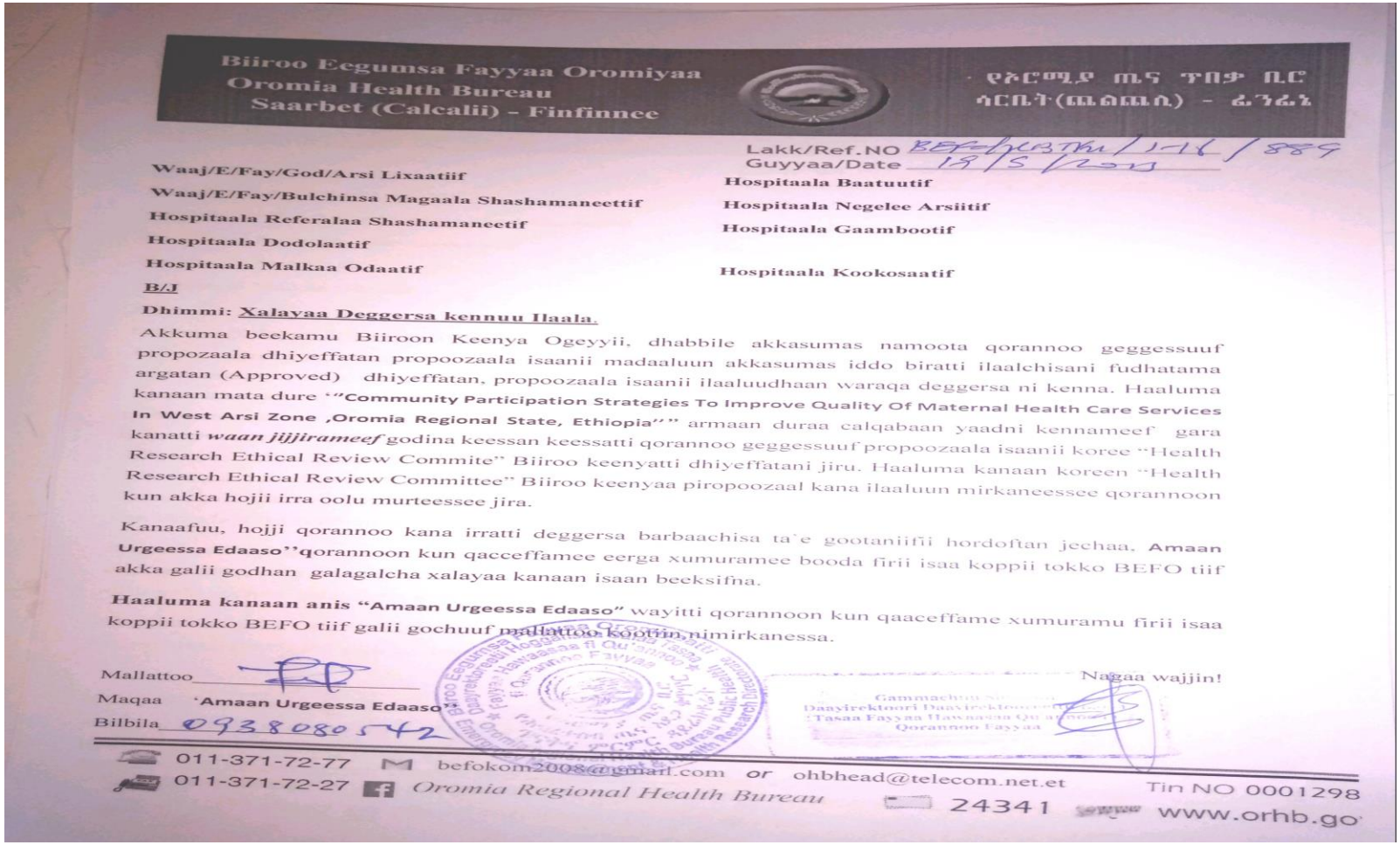
With Regards,



Aman Urgessa Edaso (BSc, MSc), PhD in Nursing (candidate)

+251938080542 and email address: 67144497@mylife.unisa.ac.za

ANNEXURE D: LETTER OF PERMISSION FROM REGIONAL HEALTH BUREAU TO CONDUCT THE STUDY



Biiroo Eegumsa Fayyaa Oromiyaa
Oromia Health Bureau
Saarbet (Calcalii) - Finfinnee

የኦሮሚያ ጤና ጥበቃ ቢሮ
ሳርቤት (ጨልጨሉ) - ፊንፊኔ

Lakk/Ref.NO BEFO/HRD/TM/1-16/889
Guyyaa/Date 18/5/2013

Waaj/E/Fay/God/Arsi Lixaatiif
Waaj/E/Fay/Bulchinsa Magaala Shashamaneettif
Hospitaala Referalaa Shashamaneetif
Hospitaala Dodolaatif
Hospitaala Malkaa Odaatif
B/J

Hospitaala Baatuutif
Hospitaala Negelee Arsiitif
Hospitaala Gaambootif
Hospitaala Kookosaatif

Dhimmi: Xalayaa Deggersa kennuu Ilaala.

Akkuma beekamu Biiroon Keenya Ogeyyii, dhabbile akkasumas namoota qorannoo geggessuuf propozaala dhiyeffatan propoozaala isaanii madaaluun akkasumas iddo biratti ilaalchisani fudhatama argatan (Approved) dhiyeffatan, propoozaala isaanii ilaaluudhaan waraqa deggersa ni kenna. Haaluma kanaan mata dure ''**"Community Participation Strategies To Improve Quality Of Maternal Health Care Services In West Arsi Zone ,Oromia Regional State, Ethiopia"**'' armaan duraa calqabaan yaadni kennameef gara kanatti ***waan jijjiramеef*** godina keessan keessatti qorannoo geggessuuf propoozaala isaanii koree "Health Research Ethical Review Commite" Biiroo keenyatti dhiyeffatani jiru. Haaluma kanaan koreen "Health Research Ethical Review Committee" Biiroo keenyaa piropoozaal kana ilaaluun mirkaneessee qorannoon kun akka hojii irra oolu murteessee jira.

Kanaafuu, hojji qorannoo kana irratti deggersa barbaachisa ta`e gootaniifii hordoftan jechaa, **Amaan Urgeessa Edaaso''qorannoon** kun qacceffamee eerga xumuramee booda firii isaa koppii tokko BEFO tiif akka galii godhan galagalcha xalayaa kanaan isaan beeksifna.

Haaluma kanaan anis "Amaan Urgeessa Edaaso" wayitti qorannoon kun qaaceffame xumuramu firii isaa koppii tokko BEFO tiif galii gochuuf mallattoo kootiin nimirkanessa.

Mallattoo
Maqaa **'Amaan Urgeessa Edaaso''**
Bilbila 0938080542

Nagaa wajjin!

Gammachuu Sa...
Daayirektoori Daasireektoreetii
Tasaa Fayyaa Hawaasaa Qu...
Qorannoo Fayyaa

011-371-72-77 befokom2008@gmail.com or ohbhead@telecom.net.et Tin NO 0001298
011-371-72-27 Oromia Regional Health Bureau 24341 www.orhb.go

ANNEXURE E: ENGLISH VERSION SEMI-STRUCTURED QUESTIONNAIRE

Title of the project: COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY OF MATERNAL HEALTH CARE SERVICES IN WEST ARSI ZONE OROMIA REGIONAL STATE, ETHIOPIA

Name of the Researcher: Aman Urgessa Edaso (67144497)

Study Supervisor: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Chair of HSREC: Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Date----------

Instruction: - Circle the responses for questions with alternatives and write for open-ended questions on the space provided.

Part One: Socio-Demographic Characteristic

S.no		Response	Skip
101	How old are you?	----------	
102	What is your current marital status?	1. Single 2. Married 3. Divorced 4. Widowed	
103	What is your ethnicity?	1. Oromo 2. Amhara 3. Sidama 4. Gurage 5. Wolaita	

		6. Others (specify)_____	
104	What is your religion?	1. Muslim 2. Orthodox 3. Protestant 4. Adventist 5. Others(specify)_____	
105	Have you ever participated in a Basic Education Program or any other program that involves learning to read or write?	1. Yes 2. No……	2-->107
106	If you said yes for the question 105 above, what is your educational status?	1. Primary (1-8) 2. Secondary (9-12) 3. Technical/vocational (college) 4. Higher (University)	
107	What is the highest grade your husband completed?	1. No education 2. Primary (1-8) 3. Secondary (9-12) 4. Technical/vocational(college) 5. Higher (University)	
108	What is your occupation?	1. Governmental employee 2. Merchant 3. Farmer 4. Housewife 5. Student 6. Others (specify)_____	
109	For the above question, if you are employed or have monthly income,	_____ETB	

	what is your average monthly income (Birr)?		
1010	What was your payment status for services given for you?	1. Paid 2. Free----------	2-->1012
1011	If you paid, can you rate the amount you have paid?	1. Very Expensive 2. Moderate 3. Fair 4. Exorbitant	
1012	What is your residence?	1. Urban 2. Rural	
1013	How far is the nearest health facility from your home?	1. <5km 2. 5-15km 3. Over 15 km	

Part two: Questions on maternal health care services

S.no	Questions	Response	skip
201	Did you have any health education on maternal Health care services?	1. Yes 2. No----------	2-->203
202	If yes in above, by whom did you get health education?	1. My Parents 2. Traditional Birth Attendant 3. Health Provider 4. Media	

203	What was the status of your pregnancy?	1. Wanted 2. Unwanted	
204	With regard to your previous pregnancy, did you attend Antenatal care clinics?	1. Yes 2. No----------	2-->207
205	If yes, Utilisation of maternal health services, which services were provided for you?	1. Physical examination 2. Tetanus vaccine 3. Blood tests 4. Nutritional supplements 5. Other 6. Ultrasound examination 7. Gynaecological examination 8. HIV/STD 9. Others	
206	If yes, how many visits have you made so far?	1. One 2. Two (2) 3. Three (3) 4. Four	
207	What was your reason for not attending ANC?	1. Lack of money 2. The facility is far 3. Perceived as unnecessary 4. Health providers are cruel 5. Lack of transportation 6. Others	
208	At which month of the pregnancy did you start antenatal care?	1. 0 – 3 months (0-12 Weeks) 2. 4 – 6 months (13-24 Weeks) 3. 7 – 9 months (25-36weeks) 4. I don't Know	
209	In case you become pregnant again, would you prefer to come for ANC	1. Yes 2. No	

	services in this hospital or Health centre?		
2010	If yes, how many ANC visits are you supposed to make?	1. One 2. Two 3. Three 4. Four	
2011	Would you refer a friend to come for ANC services in this hospital or health centre?	1. Yes 2. No	
2012	What is your current parity?	1. One 2. Two 3. Three 4. Four 5. Five and above	
2013	Where did you deliver during the previous pregnancy?	1. Health facility 2. Home----------	2016
2014	If health facility, how did you come to hospital or health centre for delivery?	1. Planned delivery 2. Referral for delivery	
2015	What is the reason for not delivering at a health care facility?	1. No privacy 2. Health providers are cruel 3. The facility is far 4. Prefer home delivery 5. Lack of money 6. Lack of transportation 7. Others (specify)……	

2016	Do you think there is a difference in giving birth at home and in health facility?	1. Yes 2. No----------	2019
2017	If yes, why is health facility preferred?	1. Clean 2. Safe (save the mother) 3. Save the child. 4. Able to pay for myself. 5. Able to be paid for (Voucher).	
2018	Who decide where you should give birth and by whom?	1. Myself 2. My husband 3. Both of us 4. Community health worker 5. My relatives 6. Others(specify)----------	
2019	What was the mode of delivery for your previous birth?	1. Spontaneous vaginal Delivery (SVD) 2. Assisted delivery 3. Caesarean section (CS) 4. Experienced spontaneous abortion 5. Destructive delivery	
2020	How was your condition and your fetal condition outcome?	1. Normal 2. With complication	
2021	Did you visit any health facility within two days after your last delivery for postnatal care?	1. Yes 2. No----------	
2022	If yes, which post -natal service have you received following services within postnatal check-up	1. Physical examination 2. Breastfeeding counselling 3. Child growth and weight monitoring 4. Newborn illness counselling 5. Nutritional supplements 6. New parents counselling 7. Family planning counselling	

		8. Postpartum depression counselling 9. Blood test for anaemia	
2023	Generally, would you encourage a friend/relative to go to the facility where you went for your maternal care?	1. Yes 2. No	

Part Three: Questions about factors associated with maternal health care services.

S.no	Questions	Response	
301	In your opinion, do you think that the waiting time has influence on utilisation of ANC service?	1. Yes 2. No 3. I don't know	
302	In your opinion, how can you rate waiting time in MCH clinic in this hospital or Health centre?	1. Enough / Convenient 2. Long 3. Too long	
303	What are your views on these hours?	1. They are adequate 2. They are inadequate 3. I am not sure	
304	How would you describe the way you were handled by health service providers during your maternal health care services?	1. They were friendly 2. They were somehow/ partly friendly 3. They were arrogant 4. I was insulted 5. The service was delayed for no reason	
305	Do you think, privacy of health services influences utilisation of maternal health care services?	1. Yes 2. No	
306	Were you satisfied with the privacy of the services that you received during your maternal health care services	1. Yes 2. No	

307	Were drugs and supplies ordered for you during your maternal health care services follow up?	1. Yes 2. No	
308	How much are you satisfied with the availability of drugs and supplies?	1. Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5. Very dissatisfied	

Contact information:

Name of principal investigator: Aman Urgessa Edaso

Madda Walabu University Shashemane Campus

Cell phone: +251938080542

Email: 67144497@mylife.unisa.ac.za

Shashemanne

Thank you for your participation!!

ANNEXURE F: AFAN OROMO VERSION SEMI-STRUCTURED QUESTIONNAIRE

Mata duree pirojektichaa: Tooftaalee hirmaannaa hawaasaa qulqullina tajaajilaaf kunuunsa fayyaa haadholii fooyyessuuf Godina Arsi Lixaa, naannoo Oromiyaa, Itiyopiyaa

Maqaa qorataa: Aman Urgessa Edaso (67144497)

Maqaa supervaazeraa: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Dursaa qorannichaa (Chair of HSREC): Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Guyyaa----------

Qajeelfama : - Deebii gaaffilee filannoodhaan naannessanii bakka kenname irratti gaaffilee banaa ta'aniif barreessaa.

Kutaa Tokko: Amala hawaasaaf-demoogiraafii .

TL	Gaaffilee	Deebii	Irra darbi
101	Umriin kee meeqa?	_____	
102	Haalli gaa'ilaa amma keessa jirtu maali?	1. Hin herumne 2. Heerume 3. Wal hiikne 4. Abbaa mana narraa du'e	
103	Sabummaan kee maali?	1. Oromoo	

		2. Amhaaraa 3. Sidaamaa 4. Gurage 5. Waalaayta 6. kan biroo (ibsi)_____	
104	Amantiin kee maali?	1. Muslima 2. Ortodoksii 3. Pirootestaantii 4. Adveentistii 5. Kanneen biroo(Specify)_____	
105	Sagantaa barnoota bu'uuraa ykn sagantaa biraa dubbisuu ykn barreessuu barachuu of keessaa qabu irratti hirmaattee beektaa?	1. Eeyyee 2.\tLakkii.....	2-->107
106	Gaaffii 105 armaan oliitiif eeyyee yoo jette, haala barnootaa kee maali?	1. Sdarkaa 1ffaa (1-8) 2. Sadarkaa lammaffaa (9-12) 3. Teeknikaa/Ogummaa (Kolleejjii)	

		4. Ol'aanaa (Yuunivarsiitii)	
107	Sadarkaan barnoota abbaan manaa keetii hangam?	1. Barnoota hin qabu 2. jalqabaa (1-8) 3. Lammaffaa (9-12) 4. Teeknikaa/Ogummaa(Kolleejjii) 5. Ol'aanaa (Yuunivarsiitii)	
108	Hojiin kee maali?	1. Hojjetaa Mootummaa 2. Daldalaa 3. Qonnaan bulaa 4. Haadha manaa 5. Barataa 6. kan biro yoo tahe (ibsi)_____	
109	Gaaffii armaan oliitiif yoo qacaramte ykn galii ji'aa qabaatte, galiin ji'aa (birr) ji'a giddu galeessaan maali?	_____ETB	
1010	Haalli kaffaltii kee tajaajila siif kenname maal ture?	1.kafaltiin	

		2. Bilisaan	2-->1012
1011	Yoo kaffaltan maallaqa kaffaltan haala kamiin dandeessu?	1. Baayyee qaala'aa 2. giddu galeessa 3. Gaariidha 4. Garmalee dabale	
1012	Iddoon jireenyaa kee eessa?	1. Magaala 2. Baadiyyaa	
1013	Manni yaalla mana keessan irraa hangam fagaata?	1. 5km gadi 2.5km-15km 3. 5km oli	

Kutaa Lammaffaa: Gaaffiiwwan Tajaajila Eegumsa Fayyaa Haadholii ilaallatan.

TL	Gaaffilee	Deebii	Irra darbi
201	Tajaajila eegumsa fayyaa haadholii irratti barnoota fayyaa qabdaa?	1. Eeyyee 2. Lakki----------	2-->203
202	Yoo eeyyee jette armaan olitti, barnoota fayyaa eenyuun irraa argatte?	1. Warra koo 2. Deessistuu aadaa	

		3. ogeessaa fayyaa 4. Miidiyaa	
203	Haalli ulfa keetii akkam ture?	1. Barbaadee ulfaa’e 2. Kan hin barbaadamne ture	

204	Ulfa kee isa duraa ilaalchisee, hordoffii kunuunsa dahumsa duraa irratti hirmaatteetta?	1. Eeyyee 2. Lakki----------	2-->207
205	Yoo eeyyee ta’e, itti fayyadama Tajaajila Fayyaa Haadholii, tajaajiloota kamtu siif kenname?	1. Qorannoon qaamaa 2. Talaallii Teetanus 3. Qorannoon dhiigaa 4. Dabalata soorataa 5. Kan biraa 6. Qormaata Ultraasaawundii 7. Qormaata Haadholii 8. HIV/STD 9. kan biro yoo jiraate ibsi	
206	Yoo eeyyee ta'e, hanga ammaatti daawwannaa meeqa goote?	1. One 2. Two (2) 3. Three (3)	

		4. Four	
207	Hordoffi tajjila dura (ANC) irratti akka hin hirmaanneef sababni kee maal ture?	1. Maallaqa dhabuu 2. Dhaabbatichi fagoodha 3. Akka hin barbaachifnetti kan fudhatamu 4. Dhaabbileen fayyaa gara jabeessa 5. Hanqina geejjibaa 6. kan biro yoo jiraate ibsi	
208	Ji'a ulfaa kamitti kunuunsa dahumsa duraa jalqabde?	1. 0 – 3 ji'a (torban 0-12) 2. 4 – ji'a 6 (torban 13-24) 3. 7 – ji'a 9 (25-36torban) 4. Ani hin beeku	
209	Yoo ammas ulfoofte, tajaajila kunuunsa dahumsa dura (ANC) hospitaala ykn buufata fayyaa kana keessatti dhufuu filattaa?	1. Eeyyee 2. Lakki	

2010	Yoo eeyyee ta'e, daawwannaa ANC meeqa gochuu qabda?	1. Tokko 2. Lama 3. Sadii 4. Afur	
2011	Hospitaala ykn buufata fayyaa kana keessatti tajaajila kunuunsa dahumsa dura (ANC) akka dhuftu hiriyyaa kee ni eertaaf?	1. Eeyyee 2. Lakki	
2012	Hang ammaatti meeqa deesse?	1. Tokko 2. Lama 3. Sadii 4. Afur 5. shan fi isaa ol	
2013	Yeroo ulfaa kee is darbe eessatti deesse?	1. Dhaabbata Fayyaa 2. Mannatti----------	2-->2016

2014	Yoo dhaabbata fayyaatti ta'e, akkamitti gara hospitaalaa ykn bakka fayyaa geessuutti dhuftan?	1. Mana yaalatti dahuufi karorfadhe 2. Dahuumsaaf ergameeti	
2015	Sababni dhaabbata eegumsa fayyaa keessatti hin deeneef maali?	1. Iccitii hin qabu 2. Dhaabbileen fayyaa gara jabeessa 3. Dhaabbatichi fagoodha 4. Manatti dahu filadhe 5. Hanqina maallaqaa 6. Hanqina geejjibaa 7. Kan biro yoo jiraate ibsi	
2016	Mana keessattis ta'e bakka fayyaa keessatti garaagarummaa qaba jettanii yaaddu?	1. Eeyyee 2. Lakki----------	2-->2019
2017	Yoo eeyyee ta'e, mana yaalatti fayyadamu maaliif filata?	1. Qulqulleessuu . 2. Nageenya (Haadha baraari) . 3. Mucaa baraaruu. 4. Ofii kootiif kaffaltii kaffaluu danda'a. 5. (Voucher) kaffalamuu danda'a.	

2018	Eenyuutu eessatti akka dahuu qabduu murteessa?	1. ofii koo . 2. Abbaa manaa koo . 3. Lamaan keenya . 4. Hojjetaa Fayyaa Hawaasaa . 5. Fira koo . 6. Kanneen biroo(specify)----------	
2019	Haalli dahumsaa dhaloota kee duraanii maal ture?	1. Gara qaama saalatiin (SVD) . 2. Karaa meeshaatiin 3. Kara baqaqsanii yaaluutiin (cs) . 4. Ulfa baasuu ofumaan mudate . 5. Erga du'een bood kukutanii baasu .	
2020	Haalli kee fi kan daa'ima kee dahuumsaan booda akkam ture?	1. Nagaa ture 2. Rakkoo qaba ture	
2021	Yeroo dhumaaf kunuunsa dahumsa boodaa erga gootanii booda guyyaa lama keessatti bakka fayyaa kamiyyuu daawwattaniittu?	1. Eeyyee 2. Lakkii…….	2-->2019
2022	Yoo eeyyee ta'e, tajaajila armaan gadii keessaa kamtu siif daa'ima	1. Qormaata Qaamaa . 2. Gorsa harma hoosisuu .	

	keettii dahumsa boodaa kenname? .	3. Guddinaa fi Hordoffii Ulfaatina Daa'immanii . 4. Gorsa dhukkuba reefuu dhalatee . 5. Dabalata soorataa . 6. Gorsa Warra Haaraa . 7. Gorsa karoora maatii . 8. Gorsa dhiphina sammuu dahumsa boodaa . 9. Qorannoon dhiigaa hir'ina dhiigaa .	
2023	Walumaagalatti, hiriyyaa/firooma kee gara dhaabbata kunuunsa haadha kanatti dhufanii akka fayyadaman ni jajjabeessitaa?	1. Eeyyee 2. Lakki	

Kutaa Sadii: Gaaffii waa'ee wantoota tajaajila eegumsa fayyaa haadholii wajjin walqabatan.

TL	Gaaffilee	Deebii	Irra darbi
301	Akka yaada keessaniitti yeroon eegaa itti fayyadama tajaajila ANC irratti dhiibbaa qaba jettanii yaaddu?	1. Eeyyee . 2. Lakki . 3. Ani hin beeku .	

302	Akka yaada keessaniitti, yeroo eegaa MCH Clinic Hospitaala ykn Giddugala Fayyaa kana keessatti akkamitti madaaluu dandeessu?	**1**. gahaa / mijataa . 2. Dheeraa 3. Baayyee yeroo dheeraadhaa.	
303	Sa'aatii kana irratti ilaalchi keessan maali?	**1.** Gahaadha 2. Gahaa miti 3. Ani hin beeku	
304	Yeroo tajaajila eegumsa fayyaa haadholii keessanitti tajaajila fayyaatiin itti argatan haala qabiinsa ogeeyyii fayyaa akkamitti ibsitu?	1. Michuu turan . 2. Isaan akkaataa tokkoon/ gartokkoon michuu turan 3.Isaanof tuulummaa turan . 4. Aarsaan na mudate 5. Tajaajilli sababa malee harkifate	
305	Akka yaaddu, iccitii tajaajila fayyaa itti fayyadama tajaajila kunuunsa fayyaa haadholii irratti dhiibbaa qaba?	1. Eeyyee 2. Lakki	

306	Tajaajila eegumsa fayyaa haadholii isinniif kennametti itti quuftanii ?.	1. Eeyyee 2. Lakki	
307	Yeroo tajaajilli eegumsa fayyaa haadholii keessanii qorichaafi dhiyeessiin isiniif ajajamee?	1. Eeyyee 2. Lakki	
308	Qorichootni fi dhiyeessiin jiraachuu isaatiin hangam ittii quuftan?	1. Baayyee itti quufe. 2. Itti quufe . 3. Giddugaleessa . 4. quufa kan hin qabne .5. Baayyee kan hin quufne .	

Odeeffannoo quunnamtii:

Maqaa qorataa ijoo: Aman Urgessa Edaso .

Yuunivarsiitii Madda Walabu mooraa Shashemane .

Bilbila harkaa: +251938080542

Imeelii: 67144497@myLife.usaa.ac.za

Shashemanne .

Hirmaannaa keessaniif galatoomaa!!

ANNEXURE G: FOCUSED GROUP DISCUSSION GUIDE FOR MIDWIVES

Title of the project: COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH SERVICES IN WEST ARSI ZONE OROMIA REGIONAL STATE, ETHIOPIA

Name of the Researcher: Aman Urgessa Edaso (67144497)

Study Supervisor: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Chair of HSREC: Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Date----------

I. Midwives' demographic intake sheet form for Focus Group Discussion. This form should be filled before the FGD.

characteristics of midwives									
Code for FGDs									
Sex of midwives									
Age of midwives									
Type of health facility									
Academic qualification									
Midwives' years of services									
Roles and responsibilities of the midwives									

II. FGDs Check List

Name of District: _____

Name of Hospital: _____

Name of FGD facilitator: _____

Date of FGD: _____
Code of FGD_____

1. What are the major factors that affect improving quality of maternal health care services utilisation in your Hospital or Health centre? (Probe on these factors?)
2. What kind of problems do mothers have related to maternal health care service utilisation in your community? (Probe on transport, financial, socio-cultural etc.)
3. Why maternal health care services are not utilised by women? (Probe for the reasons related with health facility, health care provider, exploration reasons for not Attending ANC, home delivery and not utilised PNC)
4. What do you think about the maternal health care services being provided in health facilities? (Probe on availability of basic and life-saving services, accessibility of facility for services for the maternal health care services, time, cleanliness of facility, care provider skill, attitude and knowledge)
5. What intervention strategies you are currently implementing to improve maternal health care services utilisation? (Probe on strategies for health care provider, health system, community targeting, improving health facility infrastructure, essential equipment and supplies and improving physical accessibility and transportation----)
6. What are community participation strategies do you suggest to be put in place to improve quality of maternal health services utilisation service?

Thank you for your participation!!!

ANNEXURE H: INFORMATION LEAFLET FOR WOMEN

Title of the project: COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH CARE SERVICES IN WEST ARSI ZONE OROMIA REGIONAL STATE, ETHIOPIA

Name of the Researcher: Aman Urgessa Edaso (67144497)

Study Supervisor: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Chair of HSREC: Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Date----------

INFORMATION LEAFLET FORM

Dear respondent: my name is **Aman Urgessa** and I am currently registered for a doctoral degree in the Department of Health Studies at the University of South Africa (UNISA). As part of the requirements for this degree, I am expected to undertake research in the field of my studies. I am collecting data for his research which focuses on the maternal health care services in order to develop community participation strategies to improve quality and utilisation of maternal health services. Your Hospital /Health centre is selected for the study purpose. We would appreciate your assistance in completing this questionnaire. The information you will provide may not have direct benefit to you now but is extremely important to inform policy makers and program designers for stimulating discussion about formulation of appropriate measures to ensure quality in maternal health care services in West Arsi Zone.

The National Research and Ethics Committee of the Ministry of Science and Technology approved to be granted approval to conduct study in West Arsi Zone Hospitals and Health centres.

The proposed study does not involve any intrusive procedures; therefore, you will not be exposed to either physical or psychological harm if you decide to participate in the research project. Your name will not be documented on the questionnaire and the information you give will be kept strictly confidential and will not be shared to anyone without your consent. You are free not to accept to participate in the study and you are free to withdraw from the study at any time without any consequences.

The interview will last in less than 30 minutes. You have the right not to answer any question(s) that you are not comfortable about.

Do you have any question which you wish me to clarify? If at any time you have any question or questions to ask contact:

Contact information:

Investigator: Aman Urgessa Edaso

Cell phone: +251938080542

Madda Walabu University Shashemane Campus

Email: 67144497@mylife.unisa.ac.za

Shashemane

Are you willing to participate in the study? Yes No

ANNEXURE I: INFORMATION LEAFLET FOR WOMEN (AFAN OROMO)

Mata duree pirojektichaa: Tooftaalee hirmaannaa hawaasaa qulqullinaa fi itti fayyadama tajaajila kunuunsa fayyaa haadholii Godina Arsi Lixaa, naannoo Oromia, Ethiopia

Maqaa qorataa: Aman Urgessa Edaso (67144497)

Suppervaayizara Qo'annoo: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Dura taa'aa HSREC: Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Guyyaa----------

UNKA BARREEFFAMA ODEEFFANNOO

Kabajamaa deebii Kennuu: Maqaan koo **Aman Urgessa** jedhama, yeroo ammaa Yunivarsiitii Afrikaa Kibbaa (UNISA) keessatti Kutaa Qorannoo Fayyaatiin digrii doktorummaaf galmaa'eera. Akka qaama ulaagaalee digirii kanaatti, damee barnoota koo irratti qorannoo gochuun narraa eegama. Ani qorannoo isaaf daataa walitti qabaa jira kan tajaajila eegumsa fayyaa haadholii irratti xiyyeeffatu tooftaalee hirmaannaa hawaasaa qulqullinaa fi itti fayyadama tajaajila fayyaa haadholii fooyyessuuf. Giddu-galli Hospitaala /Health keessanii kaayyoo qorannichaaf filatameera. Gaaffii kana xumuruuf gargaarsa isin gootan ni dinqisiifanna. Odeeffannoon ati kennitu amma faayidaa kallattiin siif qabaachuu dhiisuu danda'a garuu qaamolee imaammata baasan fi dizaayinarota saganticha irratti marii waa'ee tarkaanfiiwwan mijatoo ta'an zoonii West Arsi keessatti qulqullina tajaajila kunuunsa fayyaa haadholii mirkaneessuuf marii kakaasuuf beeksisuudhaaf garmalee barbaachisaa dha.

Koreen Qorannoo fi Naamusaa Biyyaalessaa Ministeera Saayinsii fi Teeknooloojii Hospitaalotaa fi Giddugala Fayyaa Zoonii ARSI West keessatti akka gaggeeffamu hayyamni akka kennamuuf raggaasiseera.

Qorannoon yaadame kun hojimaata seenu kamiyyuu hin hirmaachisu; Kanaafuu, pirojektii qorannoo irratti hirmaachuuf yoo murteessite miidhaa qaamaa ykn sammuuf hin saaxilamtu. Maqaan kee gaaffilee irratti hin galmaa'u odeeffannoon ati kennitu immoo iccitii cimsee kan eegamuu fi hayyama kee malee nama kamiifuu hin qoodamu. Qorannicha irratti hirmaachuu akka hin fudhanne bilisa waan ta'eef yeroo barbaaddetti bu'aa tokko malee qo'annoo keessaa ba'uuf bilisa ta'a.

Gaaffii fi deebii kun daqiiqaa 30 hin guunne keessatti kan turu ta'a. Gaaffii (gaaffii(wwan) itti hin mijanne kamiyyuu deebisuuf mirga qabda.

Gaaffii akkan qulqulleessuuf hawwitan qabduu? Yoo yeroo kamiyyuu gaaffii ykn gaaffii gaafachuu qabdu quunnamtii:

Odeeffannoo quunnamtii:

Qorataa: Aman Urgessa Edaso .

Bilbila harkaa: +251938080542

Yuunivarsiitii Madda Walabu mooraa Shashemane .

Imeelii: 67144497@myLife.usaa.ac.za

Shashemane.

ANNEXURE J: INFORMATION LEAFLET FOR MIDWIVES

Title of the project: COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH CARE SERVICES IN WEST ARSI ZONE OROMIA REGIONAL STATE, ETHIOPIA

Name of the Researcher: Aman Urgessa Edaso (67144497)

Study Supervisor: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Chair of HSREC: Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Date----------

INFORMATION LEAFLET FORM

Dear respondents: my name is **Aman Urgessa** and I am currently registered for a doctoral degree in the Department of Health Studies at the University of South Africa (UNISA). As part of the requirements for this degree, I am expected to undertake research in the field of my studies. I am collecting data for his research which focuses on the maternal health care services in order to develop community participation strategies to improve quality and utilisation of maternal health services. Your Hospital/Health centre is selected for this study purpose. We would appreciate your assistance in participating in FGDs. The information you will provide may not have direct benefit to you now but is extremely important to inform policy makers and program designers for stimulating discussion about formulation of appropriate measures to ensure quality in maternal health care services in West Arsi Zone.

The National Research and Ethics Committee of the Ministry of Science and Technology have to approve to conduct study in West Arsi Zone Hospitals and Health centres.

The proposed study does not involve any intrusive procedures; therefore, you will not be exposed to either physical or psychological harm if you decide to participate in the research project. Your name will not be documented on the questionnaire and the information you give will be kept strictly confidential and will not be shared to anyone without your consent. You are free not to accept to participate in the study and you are free to withdraw from the study at any time without any consequences.

The interview will last in less than 30 minutes. You have the right not to answer any question(s) that you are not comfortable about.

Do you have any question which you wish me to clarify? If at any time you have any question or questions to ask contact:

Contact information:

Investigator: Aman Urgessa Edaso

Cell phone: +251938080542

Madda Walabu University Shashemanne Campus

Email: 67144497@mylife.unisa.ac.za

Shashemanne

Are you willing to participate in the study? Yes No

ANNEXURE K: INFORMED CONSENT FORM FOR WOMEN

Title of the project: COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH CARE SERVICES IN WEST ARSI ZONE OROMIA REGIONAL STATE, ETHIOPIA

Name of the Researcher: Aman Urgessa Edaso (67144497)

Study Supervisor: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Chair of HSREC: Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Date----------

Consent form

I understood all the above provided information and I entered the study after complete understanding of the objective, confidentiality, risks and benefits of the study and my participation is also completely voluntarily.

Signature of participant_____

Date_____

Data collector signature_____

Date_____

Contact information:

Investigator: Aman Urgessa Edaso

Cell phone: +251938080542

Madda Walabu University Shashemane Campus

Email: 67144497@mylife.unisa.ac.za

Shashemane

ANNEXURE L: INFORMED CONSENT FORM FOR MIDWIVES

Title of the project: COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH CARE SERVICES IN WEST ARSI ZONE OROMIA REGIONAL STATE, ETHIOPIA

Name of the Researcher: Aman Urgessa Edaso (67144497)

Study Supervisor: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Chair of HSREC: Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Date----------

Consent form

I understood all the above provided information and I participated on the study after complete understanding of the objective, confidentiality, risks and benefits of the study and my participation is also completely voluntarily.

Signature of participant_____

Date_____

Data collector signature_____

Date_____

Contact information:

Investigator: Aman Urgessa Edaso

Cell phone: +251938080542

Madda Walabu University Shashemane Campus

Email: 67144497@mylife.unisa.ac.za

Shashemane

ANNEXURE M: ASSENT FORM FOR A YOUTH (MINOR LESS THAN 18 YEARS)

Title of the project: COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY OF MATERNAL HEALTH CARE SERVICES IN WEST ARSI ZONE OROMIA REGIONAL STATE, ETHIOPIA

Name of the Researcher: Aman Urgessa Edaso (67144497)

Study Supervisor: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Chair of HSREC: Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Date----------

ASSRENT FORM

I understood all the above provided information and I agreed her participation on the study after complete understanding of the objective, confidentiality, risks and benefits of the study and I witnessed her participation is also completely my voluntarily .

Signature of parental or guardian _____

Date_____

Data collector signature_____

Date_____

Contact information:

Investigator: Aman Urgessa Edaso

Cell phone: +251938080542

Madda Walabu University Shashemane Campus

Email: 67144497@mylife.unisa.ac.za

Shashemane

ANNEXURE N: CONFIDETIAL AGREEMENT FORM FOR WOMEN

Title of the project: COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH CARE SERVICES IN WEST ARSI ZONE OROMIA REGIONAL STATE, ETHIOPIA

Name of the Researcher: Aman Urgessa Edaso (67144497)

Study Supervisor: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Chair of HSREC: Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Date----------

CONFIDETIAL AGREEMENT FORM: You have the right to insist that your name will not be recorder anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research. Your answers will be given a code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

Your name will not be documented on the questionnaire and the information you give will be kept strictly confidential and will not be shared to anyone without your consent

Are you agree to participate yes No

Signature of study Participant _____

Date_____

Data collector signature_____

Date_____

Contact information:

Investigator: Aman Urgessa Edaso

Cell phone: +251938080542

Madda Walabu University Shashemane Campus

Email: 67144497@mylife.unisa.ac.za

Shashemane

ANNEXURE O: CONFIDETIAL AGREEMENT FORM FOR MIDWIVES

Title of the project: COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH CARE SERVICES IN WEST ARSI ZONE OROMIA REGIONAL STATE, ETHIOPIA

Name of the Researcher: Aman Urgessa Edaso (67144497)

Study Supervisor: Prof DSK Habedi 0124296180 (habeddsk@unisa.ac.za)

Chair of HSREC: Prof JM Mathibe-Neke 0124296443 (mathijm@unisa.ac.za)

Date----------

CONFIDETIAL AGREEMENT FORM:

You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research. Your discussion with the group will be given a code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. In FDGs every effort will be made by the researcher to ensure that you will not be connected to the information that you share during the focus group, I cannot guarantee that other participants in the focus group will treat information confidentially. I shall, however, encourage all participants to do so. For this reason I advise you not to disclose personally sensitive information in the focus group.

Are you agree to participate yes No

Signature of FGDs Participant_____

Date_____

FGDs facilitator signature_____

Date_____

Contact information:

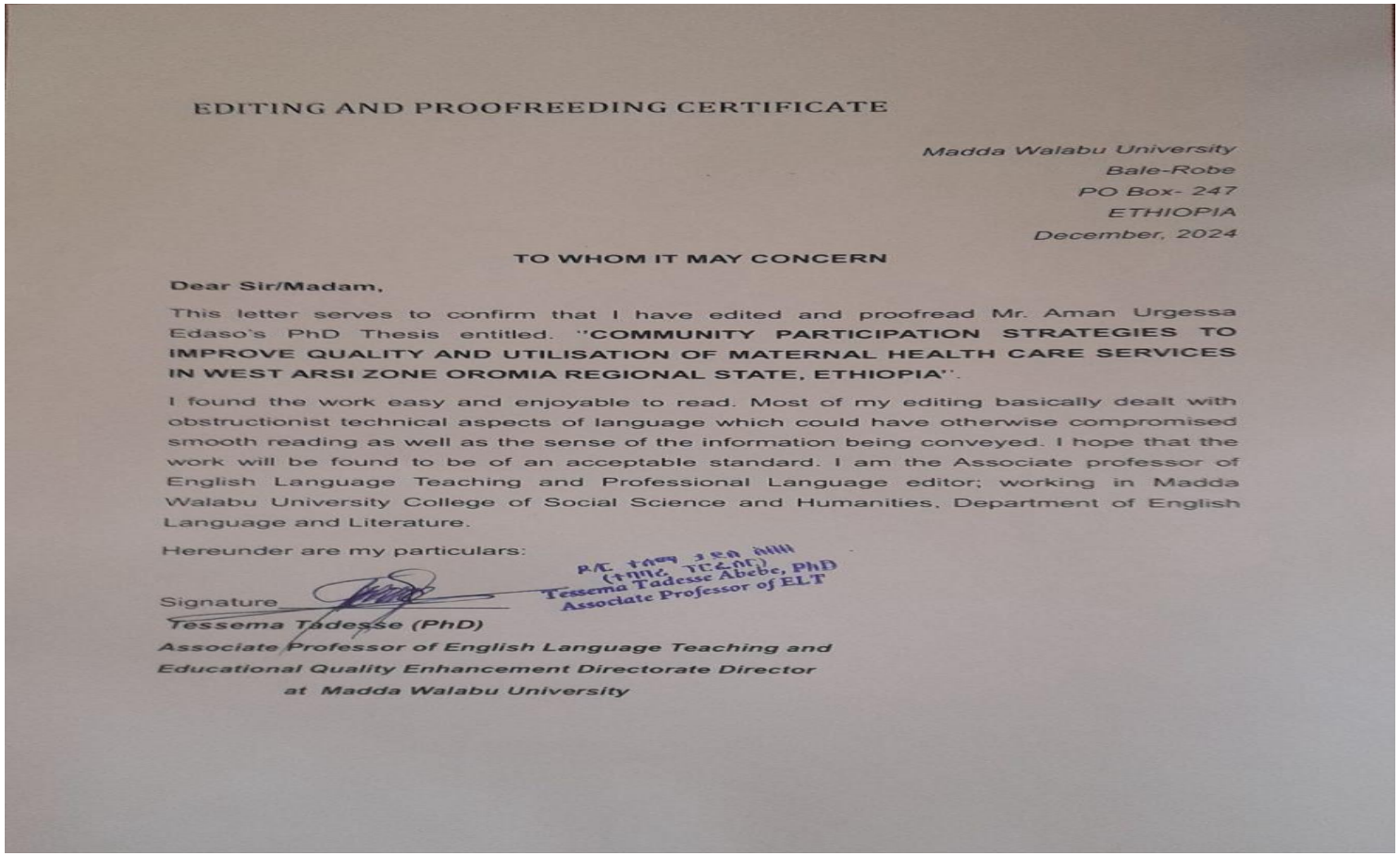
Investigator: Aman Urgessa Edaso

Cell phone: +251938080542

Madda Walabu University Shashemanne Campus

Email: 67144497@mylife.unisa.ac.za , Shashemanne

ANNEXURE P: EDITOR'S DECLARATION



EDITING AND PROOFREEDING CERTIFICATE

Madda Walabu University
Bale-Robe
PO Box- 247
ETHIOPIA
December, 2024

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

This letter serves to confirm that I have edited and proofread Mr. Aman Urgessa Edaso's PhD Thesis entitled. "**COMMUNITY PARTICIPATION STRATEGIES TO IMPROVE QUALITY AND UTILISATION OF MATERNAL HEALTH CARE SERVICES IN WEST ARSI ZONE OROMIA REGIONAL STATE, ETHIOPIA**".

I found the work easy and enjoyable to read. Most of my editing basically dealt with obstructionist technical aspects of language which could have otherwise compromised smooth reading as well as the sense of the information being conveyed. I hope that the work will be found to be of an acceptable standard. I am the Associate professor of English Language Teaching and Professional Language editor; working in Madda Walabu University College of Social Science and Humanities, Department of English Language and Literature.

Hereunder are my particulars:

Signature

Tessema Tadesse Abebe, PhD
Associate Professor of ELT

Tessema Tadesse (PhD)
Associate Professor of English Language Teaching and Educational Quality Enhancement Directorate Director at Madda Walabu University

ANNEXURE Q: TURNITIN ORIGINALITY REPORT

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