ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

SCHOOL OF NURSING & MIDWIFERY

LATE ANTENATAL CARE BOOKING AND ASSOCIATED FACTOR AMONG PREGNANT WOMEN IN MIZAN-AMAN TOWN, SOUTH WEST ETHIOPIA, 2021: A MIXED STUDY METHOD.

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APPROVAL BY THE BOARD OF EXAMINATION

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Through my signature below, I honestly declared that this research thesis on parental role in late antenatal care booking and associated factor among pregnant women in Mizan-Aman town, south west Ethiopia, 2021: a mixed study method**.** is my own work and all the sources that I have used indicated and acknowledged by means of complete references and this work has not been submitted before for any other degree in any other institutions.

Gelila Gashawbeza (BSc) ________ ________

NAME SIGN DATE

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List of Abbreviations and Acronyms

AAU -Addis Ababa University

ANC - Antenatal Care

AOR- Adjusted Odds Ratio

CI- Confidence Interval

COR - Crude Odds Ratio

EDHS- Ethiopian Demographic and Health Survey

HBV-Hepatitis B virus

HEW-Health extension worker

HIV-Human immunodeficiency viruses

IUFD-Intrauterine fetal death

KM-Kilometer

MAHSC - Mizan Aman Health Science College

MDG -Millennium Developmental Goal

MOH - Ministry of Health

MTHC-Mizan Teferi Health Center

MTUTH- Mizan Tepi University Teaching Hospital

PI -Principal Investigator

SDG - Sustainable Developmental Goal

SNNPR -South Nations Nationalities People and Region

SPSS -Statistical Package Social Sciences

TA - Thematic Analysis

VDRL- Venereal disease research laboratory test

WHO -World Health Organization

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Abstract

Background: Antenatal care (ANC) is one of the key strategies for reducing maternal and neonatal morbidity and mortality directly by antenatal care service. World health organization recommends; the first ANC contact should be within the first trimester of gestational age. **Objective:** To determine late antenatal care booking and associated factors among pregnant women in Mizan-Aman Town, South West Ethiopia, 2021.

Method: Institutional based a convergent mixed study designed was implemented. The data collection was conducted from February, 15 to March 25, 2021 through structured questioner for quantitative study and in-depth, key informant interview by using of semi-structured questioner for qualitative study. A total of 425 pregnant women were recruited by systematic random sampling method for quantitative, 11 late ANC booker pregnant women and 9 health care provider for qualitative. The data was analysis by using logistic regression model (quantitative data) and thematic analysis was used for qualitative data with assistance QDA miner lite soft ware.

Results: From the overall participants [70.0 %, 95% CI=65.65, 74.35] of pregnant women's were late to book their first ANC booking. Living in rural [AOR= 2.38, 95% CI: 1.0, 5.68], unplanned pregnancy [AOR = 2.63, 95% CI: 1.18, 5.85], inappropriate perception of ANC starting time [AOR=4.1, 95% CI: 1.9, 8.83], pregnant women who didn't have awareness about pregnancy related danger sign [AOR= 6.76, 95% CI: 2.83, 16.1] and the pregnant women those who didn't know the service delivery through the working hour in the institution[AOR= 0.44, 95% CI: 0.19, 0.98] found to be significantly associated factors with late initiation of antenatal care. Additionally, the qualitative study identified a number of reasons were: Health care provider recommendation Unaware of being pregnant , Being busy ,Unfriendly health care provider and Card room related problem

Conclusion and recommendations: The current study showed a higher prevalence of delayed antenatal care initiation. All responsible bodes working in maternal and child health care better to create awareness for community on the family planning, benefit of early ANC booking and appropriate ANC starting time.

Key word: Antenatal Care, Late ANC booking, Mizan-Aman town, southwest Ethiopia.

CHAPTER ONE

1. INTRODUCTION

1.1. Background

Antenatal care (ANC) service provision is one of the crucial interventions to improve maternal health; ANC service provides helps care to pregnant women and adolescent girls to ensure the best health conditions for both mother and baby during pregnancy through the use of skilled health-care professionals (1). ANC is one of the key strategies for reducing maternal and neonatal morbidity and mortality by antenatal care service through preventing, detecting, alleviating, or manage pregnancy-related health problems that affect mothers and babies; such as complications of pregnancy itself, worsen preexisting conditions during pregnancy and effects of unhealthy lifestyles, but this can be achieved by early booking with in the first trimester (2).

In worldwide about 210 million women become pregnant each year. Of these 31 million have a stillbirth, 80 million have unintended pregnancies, and 47,000 women die due to unsafe abortion (3). The Global estimation of pregnant women who receive any ANC was 71%. In sub-Saharan Africa, 69 % of pregnant women have at least one ANC visit. Whereas the coverage of at least four ANC visits is lower which was 44 %. Of this, around 80 % of women in the richest quintile have access to three or more ANC visits, while only 48 % of the poorest women have the same level of access (4).

According to the 2019 EMDHS report obtained information on ANC coverage was 74% from responses of women who had a birth in the five years preceding the survey received antenatal care from a skilled provider at least once for their last pregnancy (5). Measuring the coverage of ANC alone does not provide information on the quality of care, in ANC clinics.

The 2016 World Health Organization (WHO) guidelines for antenatal care (ANC) recommended a minimum of eight ANC contacts for positive pregnancy outcomes. The first contact should be the initiated with in the first trimester referred as early antenatal care; two contacts on the second trimester (at 20 and 26 weeks of gestation) and five contacts on the third trimester (at 30, 34, 36,

38 and 40 weeks) (6). In our country the first timing of ANC booking is acceptable until 16 weeks of gestation (7).

To reduce the morbidity and mortality risks for the mother and child providing ANC service by skilled health professionals at health facilities has a significant impact. More importantly, a timely and appropriate ANC practice has life-saving potential for both mother and child (5). Furthermore, it includes nutrition and health checks, counseling, and support for women, and their families, and a higher likelihood of delivery in the presence of skilled birth attendants leading to lower maternal and fetal deaths (4,8).

Globally the rate of child mortality reduced from 90 to 43 deaths per 1,000 live births between 1990 and 2015. Reducing maternal and child mortality is one of the Sustainable Developmental Goals (SDGs) objectives. whereas this achievement is not sufficient to meet the MDG target (9). Therefore, for sustaining SDG it is crucial to know details about the associated factors for delaying to ANC booking of pregnant women. So, this study aims to know the magnitude and associated factors for the delay of the first ANC booking.

1.2. Statement of the problem

Regular contact in the recommended time of ANC booking with a health professional during pregnancy allows women to receive a maximum benefited for their health and their future children. Early ANC booking alleviates adverse outcomes of pregnancy-related complications (6). Due to the high burden and its consequences, maternal health is one of the top priorities in the national health agenda, guided by global health initiatives and support from different international communities to improve maternal health (9).

The 2018 world health statistics report showed 303,000 (43%) women died due to maternal causes; of this, nearly 99% of death has occurred in low- and middle-income countries. More than 800 women die every day from pregnancy-related complications and many more experience injuries or other debilitating outcomes due to low quality and late initiation of ANC (10). In addition, late initiation of first ANC service seem to have higher rates of poor pregnancy outcomes, such as prenatal mortality, low birth weight, and pre-term birth; those can be easily resolved in first ANC visit (11,12).

ANC service has potential to reduce maternal and child morbidity and/or mortality and to improve newborn health by preventing, detecting, alleviating, or manage pregnancy-related health problems that affect mothers and babies (5). For instance, in sub-Saharan Africa, neonatal mortality was decreased by 39% through the utilization of at least one antenatal visit (8). However, in Ethiopia late initiation of ANC booking is still a major public health issue; i.e. different studies showed more than 64 % of women did not use ANC service in the first trimester (13–15). This late initiation of ANC is a major challenge to the achievement of the MDG target. According to different studies result socio-economic, cultural, obstetrics and structural barriers are the major reasons for late ANC booking (15–18).

In order to decrease child and maternal mortality and/or morbidity and to achieve the sustainable developmental goal, it is crucial to know the prevalence and associated factors for late ANC booking in a different set of countries. In our study settings, there is no study conducted before regarding the associated factors and prevalence of late ANC booking. Therefore, this study aimed to determine late antenatal care booking and associated factors that prevent early ANC booking among pregnant women that are attendant’s in Mizan-Aman town, southwest, Ethiopia.

1.3. Significance of the study

Improving maternal and newborn health is one of the unfinished agendas of the millennium development goal and remains a high priority of sustainable development goal and this will be achieved by proper health care service during pregnancy, labour and delivery and post-natal.

Timely ante natal care visit will play an essential role for early identification of problem and opening a doorway for the continuity of care.

Knowing the determinants of late booking for ANC in different regions of Ethiopia is very crucial for informing policymakers to design effective strategies to sustain the maternal and neonatal mortality and morbidity reduction. The result of the current study will provide helpful information for the local health office, MOH, and other stakeholders to plan effective strategies for sustainable maternal and neonatal health. Furthermore, this study will be used as a baseline for further study on maternal and neonatal health.

CAPTER TWO

2. LITERATURE REVIEW

This chapter will discuss the prevalence of late ANC and the word includes the following topic: associated factors for late ante natal visit this includes sociodemographic, health care facility related factors, pregnant women related factors, socio cultural believe.

2.1. The prevalence of late antenatal care

The WHO identifies ANC as one of the most widely used strategies to improve maternal and child health and the recommendations are designed to be adaptable and flexible; based on their country context and populations' needs (19).

Most pregnant women have access to skilled antenatal care at least once, but globally only 60 % receive four antenatal care visits; whereas 87% of pregnant women access antenatal care with skilled health personnel at least once. The lowest levels of four antenatal care are observed in sub-Saharan Africa 53 % and South Asia 49 % from 2014- 2019 (2).

In sub-Saharan African country in addition to low coverage of ANC, late first ANC booking was a challenge; different authors published much literature regarding early and late booking of first antenatal care. For-instance in study conducted in Southern Benin only 24.6% (74/301) of pregnant women were utilized antenatal care services during the first trimester of the pregnancy (20). Correspondingly, another institution based cross-sectional studies were conducted in different African country reveled a higher magnitude of late first ANC booking; in Cameron, Southern Nigeria, and Zambia were found 44.0% (129/293) (21), 72.4% (260/362) (22), and 86.6% (264/305) (23), respectively. In South Africa conducted study also 51% of rural women and 28% of peri-urban women were delayed for first ANC booking (24).

Early initiation of antenatal care and regular visits based on the schedule has a tremendous effect on both maternal and fetal health. The Federal Ministry of Health of Ethiopia has implemented a set of high-impact interventions, among that ANC is one of the intervention with the aim of reducing maternal mortality; as a result of this Ethiopia had made a progress on antenatal care

coverage (ANC+4) around 72 % (25). However, the multilevel analysis of EDHS showed that delaying of pregnant women's in the first ANC booking is still a big problem which was 67.31% (26).

Furthermore, different studies conducted across Ethiopia showed the estimation of late ANC booking in different regions was more than half percent; it ranges from 59.5% to 85.67%. For instance, in the Amhara region conducted studies were revealed 59.5% (27) and 60% (28) of late for first ANC booking in Woldia and Debre Brihan, respectively. Similarly in the Tigray region conducted studies late booking of first ANC was 61.4% (29) and 85.67% (30) were revealed. In addition to that in East Wellega, Oromiya region conducted a study depicted 81.5% of late first ANC booking (31).

2.2. Factors associated with late first antenatal care

Different studies have indicated the underlying reason for the late initiation of the first ANC booking across sub-Saharan Africa including Ethiopia.

2.2.1 Sociodemographic factors

In Zambia conducted study women in the age categories 25–29 years and 40–44 years were less likely to book late compared to teenage mothers (age group 15–19 years). Compared to older women, the teenage mothers appear to be at risk of late ANC booking (23). Against to that a study conducted in our country showed 25 years and above of pregnant women were 1.62 times more likelihood to have a late initiation of ANC (32). Comparably, another study showed maternal age equal or more than 25 year old had 3.09 times likelihood to late ANC booking (31).

Different studies conducted indicate mothers who were residing in rural areas have more likely delayed on first ANC visit than urban resident (27,33,34).

Low utilization of antenatal care services during the first trimester of pregnancy is determined by the level of education. Women with no schooling or primary school level had a higher likelihood for low utilization of ANC services during the first trimester of pregnancy compared to those with secondary and above education (20). Similarly in Nigeria, study high level of respondents

and their husbands' education were have a positive influence on the gestational age at booking (22).

According to the recently held Ethiopian Mini Demographic Health Survey (26), education has a direct link to whether pregnant women receive skilled antenatal care. Women with secondary and higher education are less likely to have delayed first ANC booking than women residing in rural settings with no formal education. Another local studies support the above concept mothers who attended primary education were more likely to have late ANC follow-up initiation than those who had diploma and above (32,33,35).

The most common reasons for late first ANC booking were financial constraints and long distance to the hospital. Pregnant women who were from family size greater than 4, long distance to the hospital, and the low monthly income level could not afford the transportation cost (21). Two qualitative study were conducted in Tanzania and Cameron showed distance to the health facility was far and that transportation difficulties to reach the facility caused them to postpone initiating antenatal care early (36,37). Health care providers support the previous reason through qualitative study women's need to balance income-generating activities; travel cost to the clinic and refusal of care for coming after the daily patient limit has been reached (38).

In our country some studies also reveal; pregnant women paying for costs of maternal health services (27,39), low family monthly estimated income (31,34), women with household food insecurity as a reason (40).

2.2.2 Socio cultural belief related factors

Qualitative study were conducted in UK showed some pregnant women they were know their pregnancy early, whereas they were late to initiate their first ANC booking because of fearful of the social consequence, substance misusing women and learning disability, positive previous pregnancy out come and religion belief (41).

Another qualitative study were conducted in Tanzania reported, pregnant adolescents and unmarried younger women went to hide their pregnancies because of the exclusion from school, stigmatization, and gossip. Due to this, they delay to the recommended time of their first ANC

initiation. Some women feared to disclose their pregnancy early due to witchcraft (36); this result was supported by other study, pregnant women perceived lack of support from parents and spouses, fear of bewitchment and stigma due to cultural beliefs were identified as the reason for late initiation of ANC (37).

In our country conducted study also found similar results with the above findings; cultural and traditional beliefs; trust in traditional birth attendants; lack of decision-making power of women, previous negative experiences with health facilities were identified as a reason for late initiation of first ANC booking (39).

2.2.3 Pregnant women related factors

Different studies were identified a number of factors that related to pregnant women makes them delayed to book their first ANC visiting. In UK, one qualitative study was revealed lack of knowledge about pregnancy symptom and misinterpretation of their pregnancy as reason to delaying their first ANC booking (41).

During the first pregnancy, most pregnant women were late to initiate their first ANC booking due to the reason of lack of aware when to start first ANC visit, the number of recommended visits, and lack of familiarity with the symptom of pregnancy (36). Similarly, another qualitative study were conducted in Cameroon showed; perception of pregnancy is to be a normal health condition or to not be a serious issue that required seeking health care, previous positive pregnancy outcomes, and absence of effective community health programs (37). In addition, to that wrong knowledge of the required period for the first attendance to antenatal care service during pregnancy, adequate knowledge of the benefits of the ANC service, participation in the behavior change communication sessions were detecting as a determinant factor (20). Qualitative studies were conducted among adolescents' pregnant women was also determined poor attitudes and behaviors by the older pregnant women and health care providers towards the adolescents are a reason (42). Similarly, another study conducted on the perspective of healthcare providers depicted prior pregnancies presumed to know about stages of pregnancy and neglected to initiate early ANC (38).

Different local studies support the above-mentioned reasons for late initiation of first ANC booking; that is recognition of pregnancy by missed period, a pregnant mother who was not

advised to start antenatal-care (32), unintended pregnancy, who perceived that the right initiation time of the first antenatal care (33,34), having the previous home delivery, women who had no previous ANC follow up and women with poor knowledge about the advantage and service availability of ANC were revealed the reason for late first ANC visit (30).

Two qualitative studies were conducted in our country supported the above reason, in Axum, Tigray region, unintended pregnancy, maternal knowledge, perceived timing of antenatal care (35), unplanned pregnancy, lack of knowledge on danger signs, and benefits of maternal health services revealed in Sidama zone, southern Ethiopia (39).

2.2.4 Health care facility related factors

Compassionate care for mothers is essential for early booking of ANC ; in Benin, conducted study inadequate patient-welcome appreciation in antenatal care services clinic was revealed as the reason for low utilization of ANC service (20). In addition, to that booking system user-unfriendly and overcrowded conditions in health care providing area, long waiting times and some rude service providers have identified reasons for late initiation of first ANC booking in Cameroon (37).

In Zambia, revealed different reasons, those are opening hours of health facilities which were not favorable to all adolescents and the lack of specific spaces for adolescents as well as inadequate privacy and confidentiality (42). In Tanzania, HIV status use as requirement, shortage+ of health providers and behavior of health care worker are identified as a barrier to being early ANC visit (36).

In Ethiopia, conducted studies in Alamata Hospital the appointment that the health facilities made in the previous pregnancy (29), in Tselemti district, Tigray fear of long waiting time in a health facility (19.5%) (43), and in Sidama zone, southern Ethiopia fear of going to an unfamiliar setting, lack of privacy, insufficient knowledge and skills and unprofessional behavior of health workers (39) are the barrier factor to initiate early ANC.

2.3. Conceptual framework

The conceptual frame work hypothesized that sociodemographic characteristics, socio cultural belief factor, Health care facility related factors and pregnant women related factors are directly related to late initiation of first ANC booking.

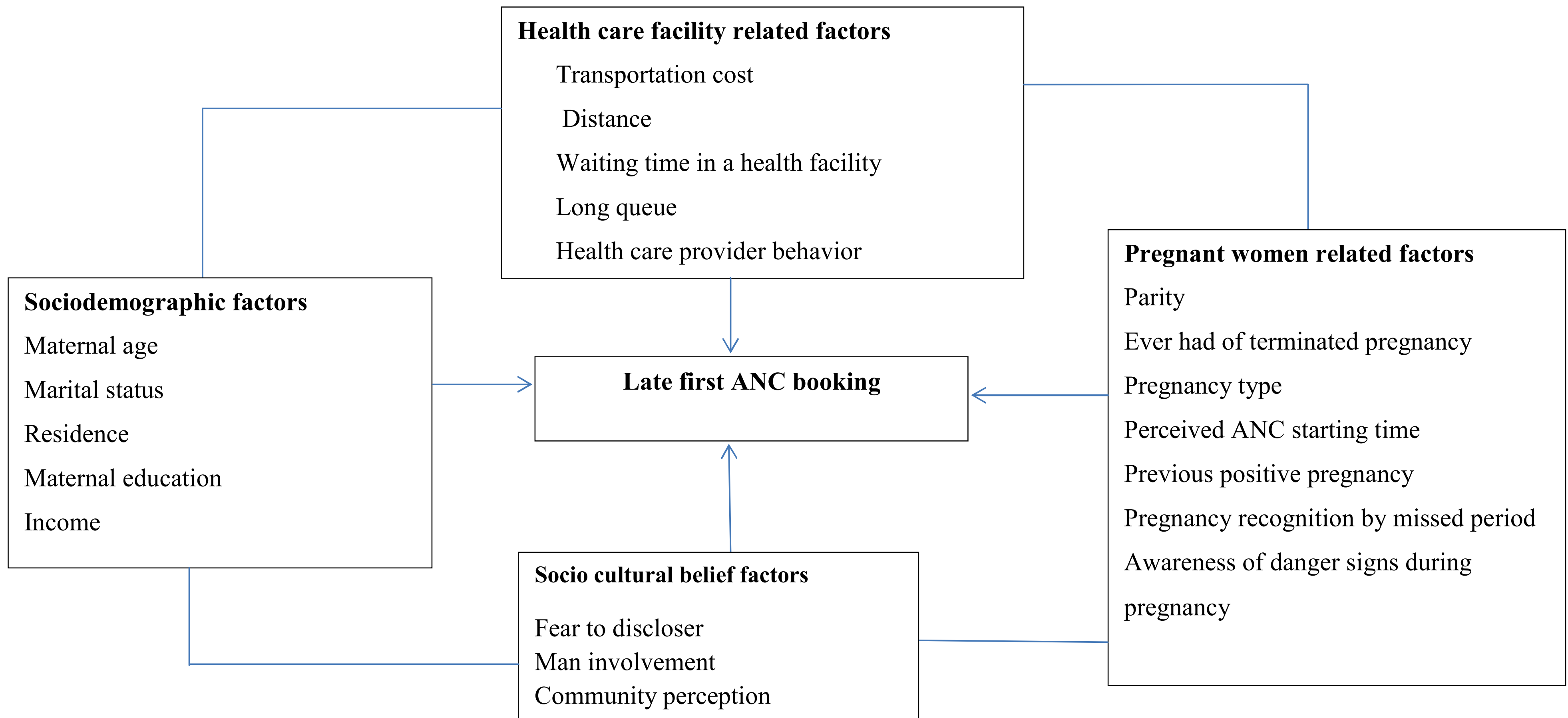

Figure 1. Conceptual framework for late first ANC booking and associated factors among pregnant women of in Mizan Aman Town 2021 (15)

CHAPTER THREE

3. OBJECTIVES

3.1. General objective

To determine late antenatal care booking and associated factors among pregnant women in Mizan-Aman Town, South West Ethiopia, 2021.

3.2. Specific objectives

- To assess late antenatal care booking among pregnant women in Mizan-Aman Town, South West Ethiopia, 2021.
- To assess factors associated with late first ANC booking among pregnant women in Mizan-Aman Town, South West Ethiopia, 2021.
- To describe the reason of late ANC booking in different perspectives in Mizan-Aman Town, South West Ethiopia, 2021.

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CHAPTER FOUR

4. METHODS AND MATERIALS

4.1. Study area

The study was conducted in Mizan-Aman town, located in Bench-Sheko Zone, South West Ethiopia. Bench-Sheko Zone is one of the Southern Nations, Nationalities, and Peoples Region (SNNPR) zones. The altitude of the town is 1,451 meters above sea level. The capital of the zone is located at a distance of 574 km southwest of Addis Ababa, the capital city of Ethiopia. Five health posts, one health center, and one teaching hospital are found in the study setting. The population of Mizan-Aman town was 57,537, of which 30,379 (52.7%) were males and 27,158 (47.2%) were females. The town has five kebeles. The economy of the town is widely based on the trade of cash crops especially coffee. (44).

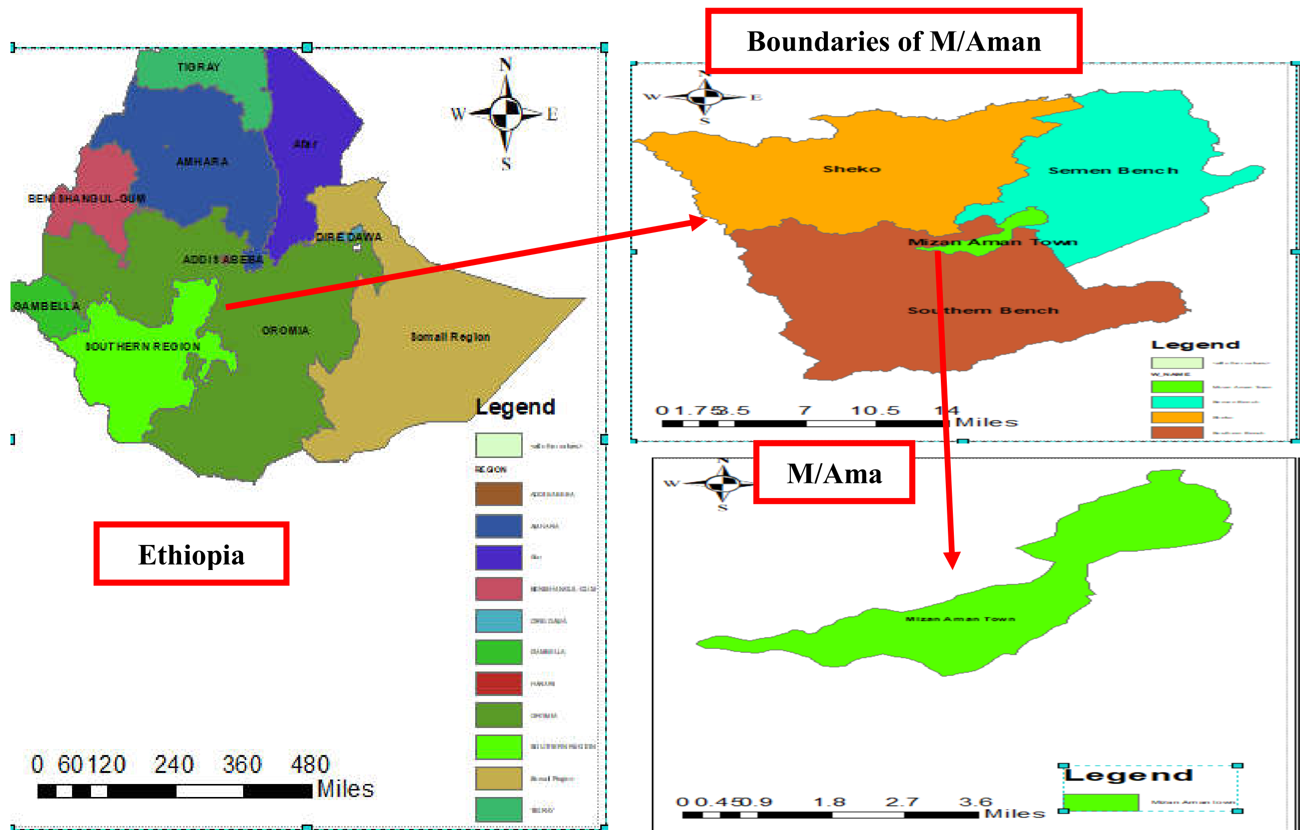

Figure 2 Map of Mizan Aman town.

4.2. Study period

The study was conducted in Mizan Aman town from February 15 to March 25/ 2021.

4.3. Study approach

This study was implemented a convergent mixed method design in which quantitative analysis had determined late first ANC booking and assessed factors for late first ANC booking. From various viewpoints, qualitatively describe an additional reason for late first ANC booking.

4.4. Quantitative methods

4.4.1. Study design

Institutional based cross-sectional study design was used to assess late antenatal care booking and associated factor among pregnant women in Mizan-Aman town, southwest Ethiopia, 2021.

4.4.2. Description of the population

4.4.2.1 Source population

All pregnant women who live in Mizan-Aman town were the source population.

4.4.2.2 Study population

All pregnant women live in Mizan-Aman town and visit health institutions for ANC service during the data collection period was include**.**

4.4.3 Eligibility criteria

4.4.3.1 Inclusion criteria

- Pregnant women who lived in the area for >6 months.
- Pregnant women visit health institution for ANC service and volunteer were included.

4.4.3.2 Exclusion criteria

- Referred pregnant women from out of town.
- Pregnant women who attended first ANC visits in other health facility were excluded.

4.4.4 Sample size determination and sampling technique

4.4.4.1 Sample size determination

All pregnant mothers met the inclusion criteria were included until the required sample saturated. The required sample size was calculated by the following formula a single population proportion.

$$n = \frac{(Z\alpha/_2)^2 \times p(1-p)}{d^2}, \quad \frac{(1.96)^2 \times 0.594\ (1-0.594)}{(0.05)^2} = 370$$

Where:

n = Sample size

P = Expected proportion of late ANC booking 59.4 % (28).

$Z\ \alpha/_2$ = 1.96 (at 95% confidence level)

d = 0.05 % marginal error

Based on the above assumptions a minimum sample size of 370 is required. To minimize errors arising from the probable occurrence of non-compliance (non-respondent rate), 10% of the sample size was added and finally, 407 study subjects were included in the study.

- For the second objective, the following statically function was used Epi InfoTM7 version 7.1 with the assumption of type one error of 0.05 and power of 80%, the calculated sample size which is the highest from the single proportion calculations was included in the study.

Table 1. List of variable to calculate sample size for association factors

Variable	OR	Power	CI	Sample size	Sample size with 10%non response	Reference
Maternal age	3.09	80%	95%	376	414	(31)
Perceived ANC starting time	3.4	80%	95%	386	425	(35)

The second objective sample size is highest compared to the first one. So the final sample size is 425 which are calculated using significantly associated odd ratio.

4.4.4.2 Sampling technique

The participants were recruited from health facilities of Mizan-Aman town, southwest Ethiopia through a systematic random sampling technique. The town has two health facilities that are providing ANC service. The expected number of pregnant mothers who visited the health institutions during the study period was calculated based on the number of clients who visit the hospital and the health center for the previous three months (three-month report of each); i.e. 1,200 and 600 for Mizan tepi university teaching hospital and Mizan teferi health center, respectively. The calculated sample size 425 was allocated proportionally for each; for Mizan tepi university teaching hospital 283 and from Mizan Teferi health center 142 pregnant women's was interviewed in 4th interval.

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Schematic presentation of the sampling frame for quantitative

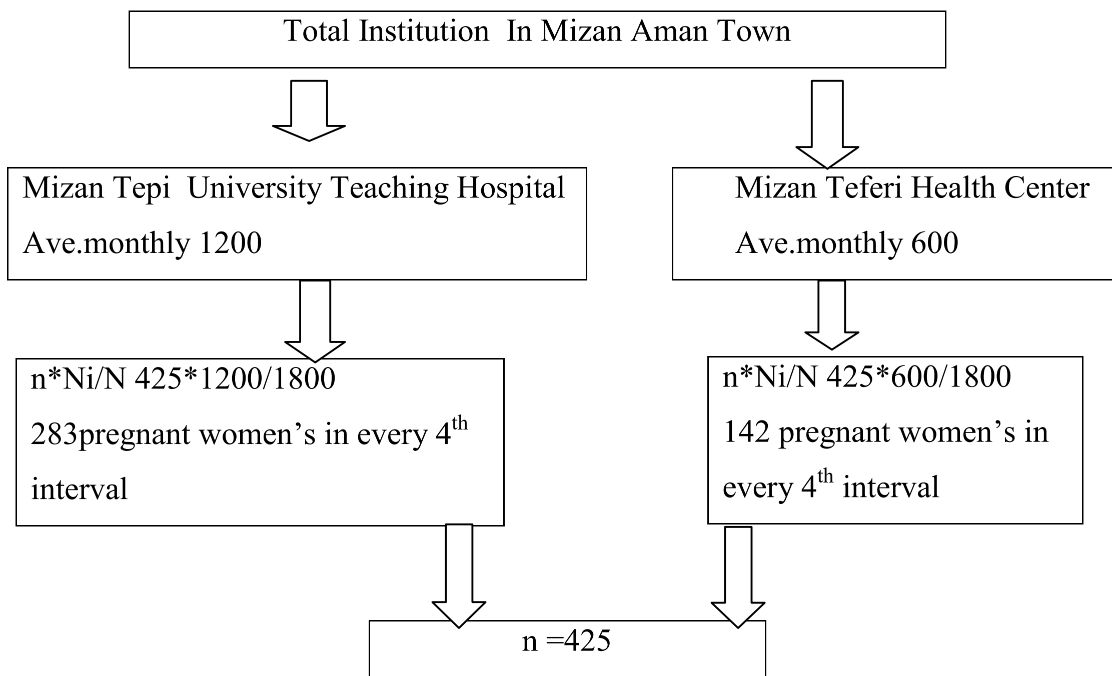

Figure 3. Schematic representation of Sampling Techniques on timing of first ANC booking and associated factors among pregnant women in Mizan-Aman town, southwest Ethiopia 2021

4.4.5 Study variables

4.4.5.1 Dependent variable

Late first ANC booking

4.4.5.2 Independent variable

Socio demographic characteristics

Maternal age

Marital status

Maternal education

Income

Residence

Health care facility related factors

Transportation cost

Long queue

Health care provider behavior

Communication of advice

Distance

Socio cultural belief factor

Fear to discloser
Man involvement
Community perception

Pregnant women related factors

Parity

Ever had of terminated pregnancy

Pregnancy type

Perceived ANC starting time

Previous positive pregnancy

Pregnancy recognition by missed period

Awareness about danger signs of pregnancy

4.4.6 Operational definition

Early booking of antenatal care*:* Refers to the women initiated of ANC through by health care provider before 16th week of gestation.

Late booking of antenatal care*:* Refers to the women initiated ANC at/after 16th weeks of gestation or more.

Perceived timing of ANC: Mothers considering the starting time of first ANC booking to be before 4 month of GA were consider having appropriate perceived timing of ANC booking and if they consider the starting time of booking after 4 month of GA were consider as in appropriate. (35)

Transportation system*:* The availability of public transportation to health facility.

Distance from health facility: Residence of pregnant women required transportation for visited public health institution.

4.4.7 Data collection

The data collection was conducted through interviews by using a structured questionnaire adapted through different literatures.((29), (35) (40)) which consist of six-part demographic information, obstetric history, history of current pregnancy, the benefit of ANC, knowing danger sign and knowledge of ANC utilization, Illness experience and perceived susceptibility to pregnancy-related health problems, Health service-related factors that affect late initiation of ANC.A structured survey questionnaire at first prepared in English and translated into Amharic. The Amharic tool was retranslated reverse in to the original one by language experts to check for its reliability. Full informed consent was obtained from all eligible participants after explaining the objectives of the study to participants in their own language. After obtained informed consent, the interview was conducted in a private room after they get the service in the health facility. For all respondents their medical chart was reviewed on the same day to collect additional information on gestational age during their first ANC visit after having consent. Three interviewers (BSc midwife) who can speak both Bench and Amharic and two supervisors (BSc HO and BSc midwifery) were employed for data collection. The interviewers were from another health facility. The Head of the MCH unit in the respective data collection sites was used as supervisors for data collectors. The responsibility of data collectors was to fill the questionnaire after obtaining consent from the study participants. The supervisors provide all items necessary for the data collection on each data collection day, checking the questionnaire for completeness and consistency, and solving problems during data collection. Any uncertainty on data collection procedure was handled by the principal investigator timely.

4.4.8 Data quality assurance

In the bear health center, the data gathering instrument was pre-tested. For the pretest, about ten percent was used. Possible changes were made based on the findings. In addition, data collectors received one-day training on how to administer the questionnaire and check for completeness. The lead investigator and supervisors have been closely monitoring the data collector on a daily basis to ensure that the data is complete. Throughout the project, data coding and data entry were double-checked. The data was cleaned up at the end of the data entry process.

4.4.9 Data analysis

Epi data manager version 4.4.2.1 was used to enter data, which was subsequently exported to the statistical Package for Social Sciences (SPSS) version 20.0 software package for statistical analysis. For categorical variables, descriptive statistics of frequencies and percentages were produced and provided in the form of figures, tables, and texts. The relation between the variables and late ANC booking was determined using bivariate and multivariate binary logistic regression models. A variable with a P-value of 0.05 was considered a strongly related outcome variable in bivariate and multivariate logistic regression. Goodness of fit was checked by Hosmer-lemshow goodness of fit statistical that showed the model reasonably fit the data (p-value 0.72)

4.5 Qualitative methods

4.5.1. Study design

Descriptive, qualitative study was employed; it aimed to gain a deeper understanding of the perceptions, opinions, and experiences of pregnant women and also the perception of health care providers regarding the reason for late antenatal care initiation during pregnancy.

4.5.2. Study participants

Data was gathered from 20 participants, 11 of whom were pregnant moms, and 9 of whom were health care practitioners. During the interview process, data saturation occurs when no new information is received. Participants were purposefully chosen based on the researcher's assessment of people that are representative of the study phenomenon. Based on the inclusion criteria, participants were recruited from Mizan-Aman town health facility in southwest Ethiopia.

Before commencing the data collection screen was conducted to assure the eligibility to in-depth interview and key informant.

4.5.3. Eligibility criteria

4.5.3.1. Inclusion criteria

- Women initiated ANC service after 16 weeks of gestation or more.
- Health care providers work in ANC unit for more than 6 months.

4.5.3.2. Exclusion criteria

- Those who are not willing to participate.

4.5.4. Data collection tools and procedure

The data collection was conducted through in-depth interviews and key informants using of semi-structured interview guide by the principal investigator, One MSc health care provider who is fluent in both local language and Amharic was used as the translator during interview process. The translator was trained about qualitative study and how to translate without introducing his/her on idea (being neutral throughout the translation process) knows the local language for those participants who cannot speak Amharic and One MSc note-taker was assist the data collection process. Before the interview, the interviewer and note-taker discussed each question to verify that the notes and the interview were in synchronizes. Face-to-face interviews were done. We can pick up on nonverbal clues from participants' actions using this strategy, which supplied a rich form of data.

The interview guide featured a set of questions with probes to help drive the interview in a conversational manner in a specific direction. The interviews were audio-recorded, allowing for the transcription to be prepared for analysis. As a supplement to the audio-recorded data, written notes were utilized to record information.

4.5.5. Trust worthiness

Credibility

To preserve data source triangulation, in-depth and key informant interviews were conducted in a confidential and comfortable setting among pregnant women and health care provider. The audio tape was transcribed in Amharic word for word before being translated into English. On the same day, data transcription and analysis were completed.

Dependability

Reviewing the audio recording and writing notes helped to confirm the manual transcription. The procedure of data collection, processing, and study findings were assessed by people who did not participate in data analysis.

Transferability

The investigator provided a lot of detail to explain the entire research procedure, from data collecting to the final report.

Conformability

To eliminate bias throughout data collection, coding, and analysis, the researcher reflected on and examined prior personal expectations and experiences to achieve conformability. The participants' own words were used instead of the researchers' opinions and biases.

4.5.6. Data analysis

Data collection and analysis were carried out concurrently. To discover new concepts and categories, data were evaluated immediately after the key informant interview and in-depth interview. After frequently listening to the tape recorder to grasp each respondent's concepts, the audio record data were transcribed verbatim in Amharic of each interview at the same time. Translate the date into English and write it down. The translated data was imported to qualitative data analysis software package QDA miner lite 1.4.1 for coding. Data were analyzed in the principle of deductively thematic analysis. To aid analysis, written notes and memos were linked.

The codes were grouped together based on their resemblance, then themes and subthemes were created, and a sample quotation was picked to report on.

4.6. Ethical consideration

Ethical clearance was obtained from the institutional review board of department of nursing and midwifery, college of health sciences, Addis Ababa University. The letter was obtained from the department of nursing and midwifery to bench shako Zone health bureau and MTUTH from Zonal health bureau to MHC. The respondents were told of the study's objective and aim, and write consent was obtained from each of them. They were also advised of their right to refuse to participate in the study or to withdraw at any moment. The information was collected anonymously and kept confidential.

4.7. Plan for dissemination

The findings of this study will be presented to the Addis Ababa University School of Nursing and Midwifery, the College of Health Science Post-Graduate Study, the Postgraduate Library, the Bench-Sheko Zone Health Office, and the MAHSC. A strong effort will be made to present findings at scientific conferences and to publish in peer-reviewed publications.

Chapter five

5.1. Quantitative Study Result

5.5.1. Sociodemographic characteristics of participants

A total of 425 pregnant women were recruited for the study at MTUTH, MHC, with 61.9 % (263) of them living in urban areas. The mean age of participants was 25.7 (± 5.5 SD). The predominant participant's age group was 20 – 35 year in 71.1 % (302). Only 20.9 % (89) of participants had college and above educational status the rest all are under. Among the participants 28.2 % (120) was house wife and around 90 % (381) of mothers were married. The predominant husband education and occupation status were accounted college and above in 37.8 % (144) and government in 37.3% (142). Nearly 84% (337) of pregnant women's estimated monthly income were greater than 1000.00 ETB. [Table 2]

Table 2. Socio-demography characteristics of participants who visit public health institution for ANC service in Mizan-Aman town, southwest Ethiopia 2021

Variables	Frequency	Percent
Residence		
Urban	263	61.9
Rural	162	38.1
Participant Age		
<20	102	24.0
20-35	302	71.1
>35	21	4.9
Maternal educational status		
No formal education	110	25.9
Primary (1-8)	114	26.8
Secondary (9-12)	112	26.4
College and above	89	20.9
Maternal occupational status		
Government employee	98	23.1
Privet employee	54	12.7
House wife	120	28.2
Students	71	16.7
Other (farmer)	82	19.3
Marital status		
Married	381	89.6

Single	24	5.6
Divorced	9	2.1
Widowed	11	2.6
Husband educational status		
No formal education	60	15.7
Primary (1-8)	66	17.3
Secondary (9-12)	111	29.1
College and above	144	37.8
Husband occupational status		
Government employee	142	37.3
Privet employee	31	8.1
Private business	86	22.6
Daily laborer	34	8.9
Other (farmer)	88	23.1
Monthly estimated income		
<400	8	2.0
400-1000	58	14.4
>1000	337	83.6

5.5.2. Obstetric history, current pregnancy history and previous pregnancy related factors

Obstetric history of study participants

From the overall 425 participants; 63.5% (270) of pregnant women's were had Multi-gravida the rest 36.5% (155) were primi-gravida. More than half of the participants were had no history of abortion 73.3% (198), history of caesarean delivery 58.8% (144) and history of last delivery problem 69.4% (170). From the total of 245 participants nearly 20 % (49) of pregnant women's have history of child died and stile birth.

Respondent's current pregnancy history and ANC of the study participants

Among the study participants 24.9% (106) of pregnant women, recognized their pregnancy by urine test .The others found out that they were pregnant by pregnancy sign 21.2 %(90), and missing of their menstrual period more than three month 20 % (85). From the total participants 43% of women had booked first ANC visit; the rest were two times and three times with 34.8% and 13.9%, respectively.

Two hundred eighty-two (66.4%) of pregnant women's pregnancy were planned and around 99 % of them were involved their husbands on the planning. from those who had unplanned pregnancy a total of 72% pregnant women wanted their pregnancy after conception. Among the total of respondents 56% (238) of pregnant women had receive advise to start ANC service, and majority of them have got the advice from community health worker 41.4% (99) and friends 22.2% (53). Almost half of the participants decided to begin ANC follow up because they thought it was the appropriate time 48.5% (206).

More than 90.0% of the participants had said ANC have importance benefit for there health 92.9% (n=395) and for fetus 90.1% (n=383). Nearly 64% (n=271) of pregnant women's had inappropriate perception of ANC starting time; in addition to that concerning on frequency of ANC visit around 73% (n=310) of participants didn't know the recommended frequency of ANC visiting in pregnancy period. (Table 3)

Only 46.0 percent (n=196) of the pregnant women in the study were aware of pregnancy-related danger signs. Among that the most frequently mentioned danger signs was vaginal bleeding in 46.4% (n=91), cessation of fetal movement in 43.6% (n=85), persistent headache 36.2% (n=71) and vomiting in 35.7% (n=70). (Fig 4)

Illness experience and perceived susceptibility to pregnancy related health problems

From the previous illness experience and perceived susceptibility, 64.3% (n=198) of participants had ANC follow up in the preceding pregnancy; even though 27.4% (n=84) of pregnant women had pregnancy related problem. Among the reported problem during pregnancy vaginal bleeding were the predominant one, occurring in 41.7% (n=35). Cessation of fetal movement in 16.7%, face and leg swelling in 14.3%, extreme fatigue in 13.1%, and persistence vomiting 10.7%, were also reported problem during pregnancy.

The majority of pregnant women (60.3 %) have had n pregnancy –related problem during their current pregnancy, whereas 35.8% (153) of participants were having a problem in their current pregnancy. Among the reported problems persistence vomiting and extreme fatigue was the predominant problem with 51% and 23%, respectively. Almost 87 % (n=355) of participant husbands having concern about pregnancy related problem. [Table 3]

Table 3. Obstetrics history, current pregnancy, and illness experience of study participant visits in public health institution for ANC service in Mizan-Aman town, southwest Ethiopia 2021.

Variables	Frequency n (%)	Variables	Frequency n (%)
Obstetrics history of the study participants			
Gravida		**History of abortion**	
Primi-gravida	155(36.5)	Yes	72 (26.7)
Multi-gravida	270 (63.5)	No	198 (73.3)
Children alive		**Problem in the last delivery**	
Yes	238(97.1)	Yes	75(30.6)
No	7 (2.9)	No	170(69.4)
Children died		**History of caesarean delivery**	
Yes	49 (20.0)	Yes	101(41.2)
No	196 (80.0)	No	144(58.8)
Still birth			
Yes	49 (20.0)		
No	196 (80.0)		
Respondent's current pregnancy history and Knowledge of respondents of ANC utilization			
Pregnancy knowing		**From whom you get advice**	
Missed period once	27(6.4)	Community health workers	99(41.4)
Missed period twice	74(17.4)	Husband	31(13.0)
Missed period three &more	85(20.0)	Mother	31(13.0)
Physiological changes	40(9.4)	Sister	18(7.5)
Other signs like nausea	90(21.2)	Friend	53(22.2)
By examination [urine test]	106(24.9)	Other(village mothers)	7(2.9)
Other(fetal movement)	3(0.7)	**Reason to decide to start follow up at this time**	
Receive antenatal care in this pregnancy		Thought it was appropriate time	206(48.5)
It is my first time	182(42.8)	Found money	39(9.2)
Two times	148(34.8)	Booking at convenience	112(26.4)
Three times	59(13.9)	Given appointment for today	24(5.6)
Four times	23(5.4)	Others(illness)	44(10.4)
Greater than four	13(3.1)	**Benefit of ANC for mother**	
Planned pregnancy		Yes	395(92.9)
Yes	282(66.4)	No	30(7.1)
No	143(33.6)	**Benefit ANC for fetus**	

Planned include husband		Yes	383(90.1)
Yes	278(98.6)	No	42(9.9)
No	4(1.4)	**Perceived ANC starting time**	
Wanted after conception		Appropriate	154(36.2)
Yes	103(72.0)	Inappropriate	271(63.8)
No	40(28.0)		
Wanted by husband(partner) after conception		**Times of ANC visit**	
Yes	89(64.5)	Yes	115(27.1)
No	49(35.5)	No	310(72.9)
Current pregnancy problem		**Awareness danger signs during pregnancy**	
Yes	116(27.3)	Yes	196(46.1)
No	309(72.7)	No	229(53.9)
Advised receive to come on ANC for the current pregnancy			
Yes	238(56.0)		
No	187(44.0)		
Illness experience and perceived susceptibility to pregnancy related health problems			
ANC follow up during the preceding pregnancy		**Experience health problem in current pregnancy**	
Yes	198 (64.3)	Yes	152 (35.8)
No	110 (35.7)	No	273 (64.2)
Health problem experience during preceding pregnancy		**Current pregnancy experienced problem**	
Yes	84 (27.4)	Persistence vomiting	78 (51.3)
No	185 (60.3)	Persistent headache	13 (8.6)
I didn't remember	38 (12.4)	Face and leg swelling	13 (8.6)
Experienced of Preceding pregnancy problem		Vaginal bleeding	7 (4.6)
Persistence vomiting	9 (10.7)	Extreme fatigue	35 (23.0)
Persistent headache	1 (1.2)	Cessation of fetal movement	4 (2.6)
Face and leg swelling	12 (14.3)	Others (abdominal pain)	2 (1.3)
Vaginal bleeding	35 (41.7)	**Husband concerned health problem**	
Extreme fatigue	11 (13.1)	Yes	355 (86.6)
Cessation of fetal movement	14 (16.7)	No	55 (13.4)
Other (abdominal pain)	2 (2.4)		

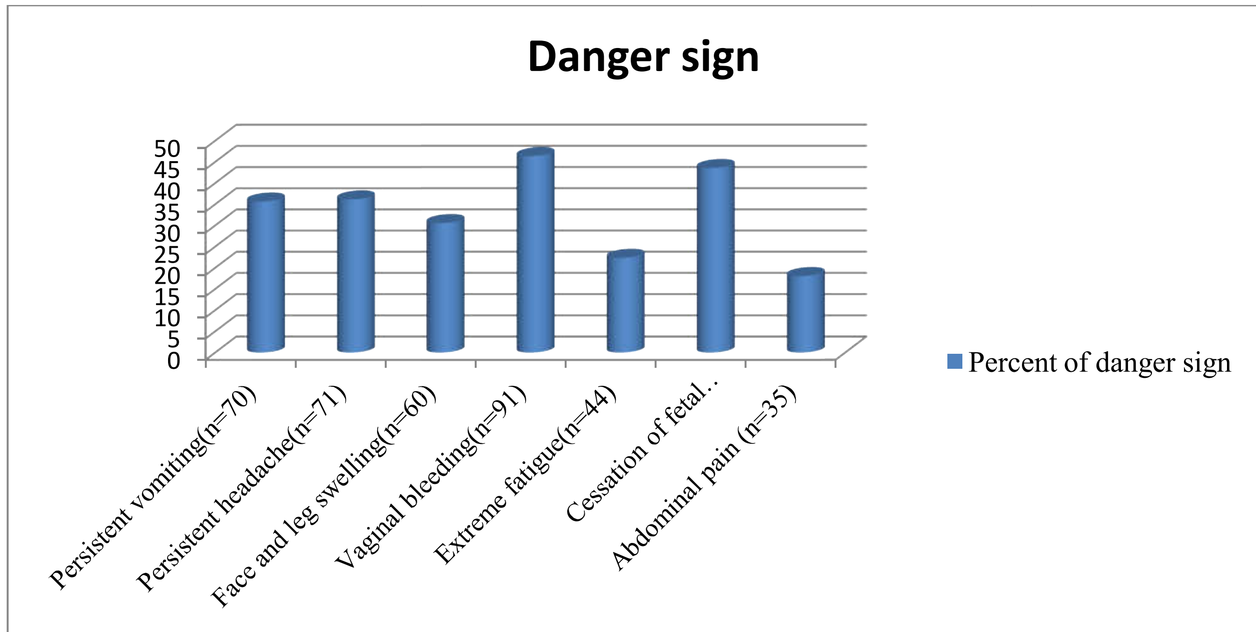

Figure 4. Danger sign mention by pregnant women in Mizan-Aman town, south west, Ethiopia 2021

5.5.3. Timing of ANC attendance and Reasons for late ANC booking service

Nearly [70.0 %, 95% CI=65.65, 74.35] (n=297) of pregnant women were late in scheduling their first ANC appointment. (Fig 5); among those majority of pregnant mother were late due to Perceived that it is the appropriate time (22.9%), being state of good health (23.2%) and perceived spent long waiting time in health institution (17.8%). Too busy to attend ANC (14.1%), ANC clinic too far from the ANC clinic (11.1%), perception of institutional lockdown due to Covid-19 pandemic (7.4%), among others unplanned pregnancy (7.1%), appointed after 4 month (4%) were majority of participant mentioned as reasons. (Fig 6)

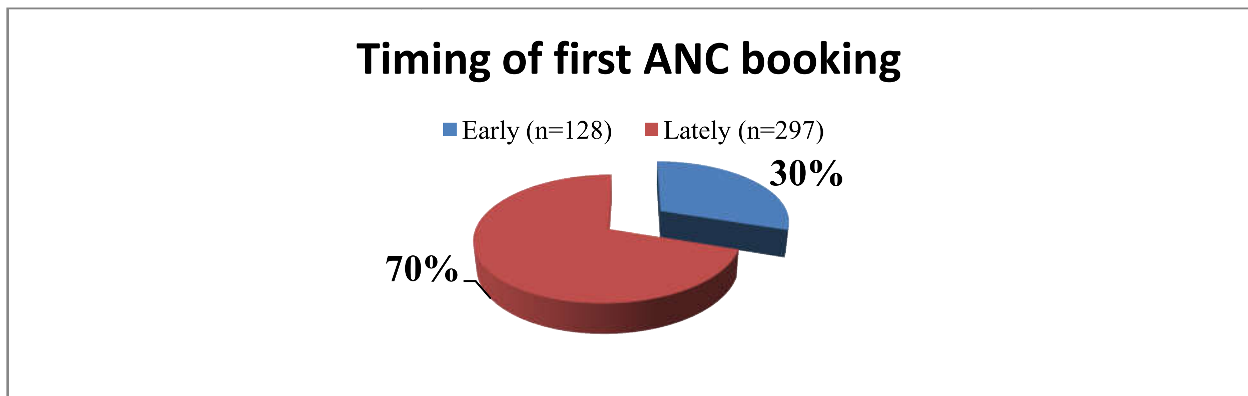

Figure 5. Timing of first Antenatal care booking among pregnant women in Mizan-Aman town, southwest, Ethiopia, 2021.

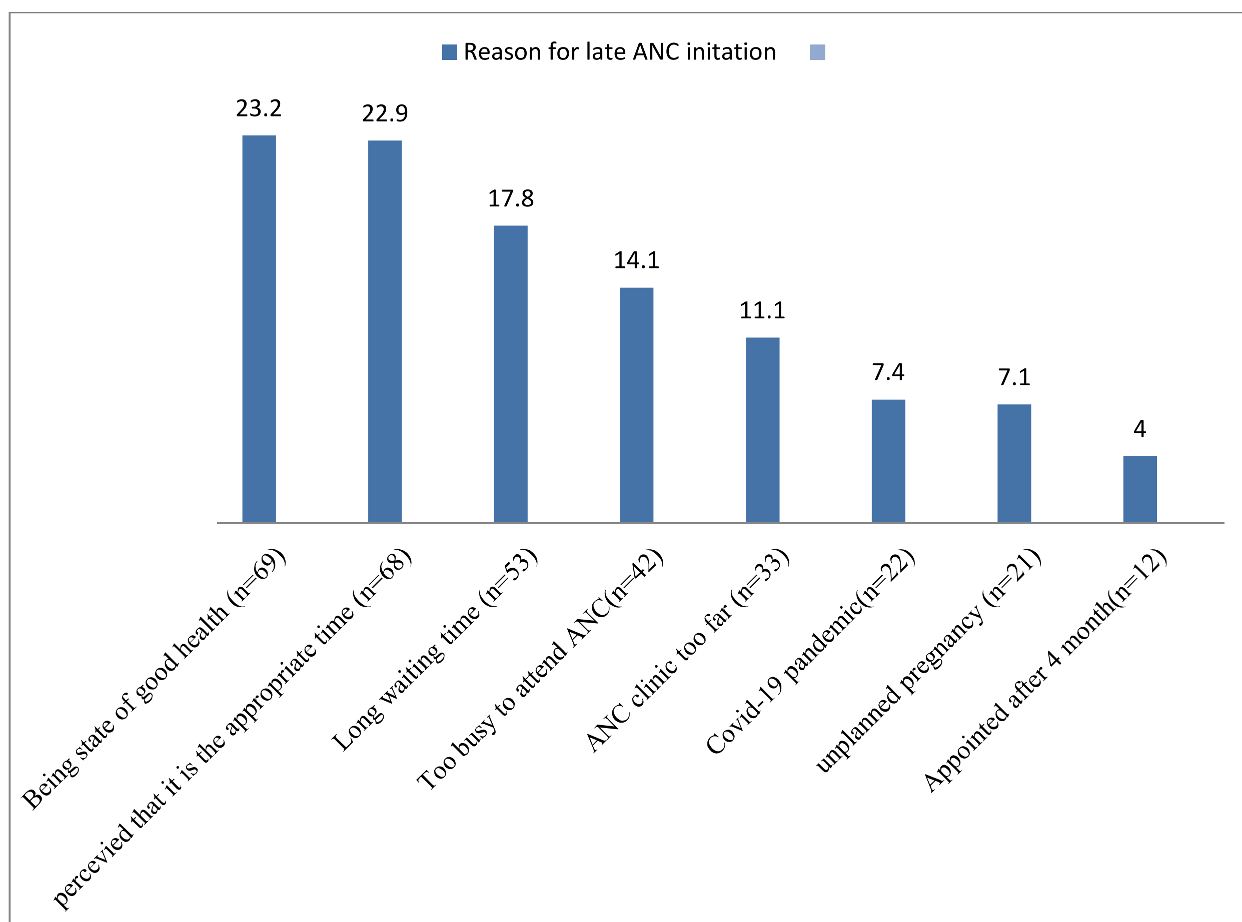

Figure 6 Reasons for late ANC attendance mentioned by the pregnant women in Mizan-Aman town, southwest, Ethiopia, 2021.

5.5.4. Health service related factors

Above half of the participants 55.5% (236) were respond; ANC service was delivered throughout work hour in health institution; 44.5% (189) was disagree with full time service. Majority of the participants 45% (n=192) spent greater than 4 hours to receive ANC service, the rest spent less than three hours. From the total 92% (391) of them was comfortable ANC service they received. About staff approach 47% (200) of participant's rate as satisfied, others have rated as medium 37.6%, as highly satisfied 8.9%, and not satisfied 27%. Majority of the participants have also rated laboratory service as medium 47.5% (202). Waiting time and privacy were also rated as medium by 38.6% (164) and 34.4% (146) of participants respectively.

Most of the participants 80% (n=339) did plan to return the health institution; but 13.6% did not want return to institution and 6.6% of were not Sure. A total of 49% (210) of the participants were rated the distance of institution from their home as average, others 32% (135) rated as very close and 19% (80) as too far. Nearly 69 % (292) of respondents have paid for transport to reach health institution for ANC service. Furthermore, 26 % (42) of participants have paid for different services; i.e. 64% for ultrasound, 26% for laboratory and 9.5% for drug service [Table 4].

Table 4. Health service related factors in Mizan-Aman town, southwest, Ethiopia, 2021

Variables	Frequency n (%)	Variables	Frequency (%)
Service delivery through the working hours		**Describe the money paid**	
Yes	236 (55.5)	Less expensive	1 (2.4)
No	189 (44.5)	Moderate expensive	34 (81.0)
Institution distance from your home		Expensive	7 (16.7)
Very close	135 (31.8)	**Staff approach**	
Average	210 (49.4)	Highly satisfied	38 (8.9)
Too far	80 (18.8)	Satisfied	200 (47.1)
Transport cost		Medium	160 (37.6)
Yes	292 (68.7)	Not satisfied	24 (5.6)
No	133 (31.3)	Highly not satisfied	3 (0.7)
Spent maximum waiting time		**Laboratory service**	
< 2 hours	102 (24.0)	Highly satisfied	27 (6.4)
2-3 hours	131 (30.8)	Satisfied	156 (36.7)
>4 hours	192 (45.2)	Medium	202 (47.5)
Did you comfortable in ANC service		Not satisfied	28 (6.6)
Yes	391 (92.0)	Highly not satisfied	12 (2.8)
No	34 (8.0)	**Waiting time**	
Did you return to this facility to ANC service		Highly satisfied	12 (2.8)
Yes	339 (79.8)	Satisfied	61 (14.4)
No	58 (13.6)	Medium	164 (38.6)
I don't know	28 (6.6)	Not satisfied	134 (31.5)
Payment for service		Highly not satisfied	54 (12.7)
Yes	42 (9.9)	**Privacy**	
No	383 (90.1)	Highly satisfied	15 (3.5)
Paid for what service		Satisfied	95 (22.4)
Laboratory	11 (26.2)	Medium	146 (34.4)
Ultrasound	27 (64.3)	Not satisfied	122 (28.7)
Drug	4 (9.5)	Highly not satisfied	47 (11.1)

5.5.5. Factors associated with late initiation of ANC

Logistics regression tool was used to assess the association between outcome variable and predictor's variables. In bivariate analysis twelve variables were significantly associated with late ANC booking *P.value* < 0.05 was used as a cutting value for candidate variables to multivariate analysis. However among the candidate variables only five variables (i.e. residence, planned pregnancy, ANC starting time after conception, Awareness danger sign during pregnancy, and service delivery through the working hour) were significantly associated with late initiation of first ANC booking in multivariate analysis [Table 5].

Pregnant women who were living in rural settings had 2.38 times likelihood to be late for their first ANC booking as compared to the urban residence pregnant women [AOR= 2.38, 95% CI: 1.0, 5.68]. Pregnant mothers who did not plan for pregnancy had 2.63 times likelihood to be late for their first ANC booking compared to mothers who were planned [AOR = 2.63, 95% CI: 1.18, 5.85].The pregnant mothers those who didn't know the time to begin first ANC booking had 4 times likelihood than the mothers those who did know the appropriate ANC booking time [AOR=4.1, 95% CI: 1.9, 8.83]. The odds of late initiation of ANC booking was 6.76 time higher among pregnant women they didn't know the pregnancy related danger sign as compared to those who know the sign [AOR= 6.76, 95% CI: 2.83, 16.1]. The pregnant women those who didn't know the service delivery through the working hour in the institution had less likelihood to be late for initiation of ANC as compared to the mother those who know the delivered service through time [AOR= 0.44, 95% CI: 0.19, 0.98].

In multivariate analysis maternal education and occupation were had no made significant association, whereas women who didn't have formal education 31.3% (93/110) and have primary education 27.6% (82/114) are predominantly late for their first ANC booking. Similarly house wife mother 27.6% (82/120) was predominantly late to booker their first ANC visit.

Table 5. Factors associated with late initiation of ANC in Mizan Aman town, southwest, Ethiopia, 2021

Variables	Timing of ANC initiation		COR (95 %, CI)	AOR (95 %, CI)	*P. Value*
	Late n%	Early n%			
Residence					
Urban	163(54.9)	100(78.1)	1	1	
Rural	134(45.1)	28 (21.9)	2.93 (1.82, 4.73)	2.38 (1.0, 5.68)	0.049*
Maternal educational status					
No formal education	93(31.3)	17(13.3)	6.12 (3.15, 11.9)	0.37 (0.069, 2.02)	0.255
Primary (1-8)	82(27.6)	32(25.0)	2.87 (1.6, 5.13)	0.3 (0.077, 1.21)	0.092
Secondary (9-12)	80(26.9)	32(25.0)	2.8 (1.56, 5.01)	1.05 (0.35, 3.15)	0.926
College and above	42(14.1)	47(36.7)	1	1	
Maternal occupational status					
Government employee	46 (15.5)	52(40.6)	1	1	
Privet employee	44(14.8)	10(7.8)	4.97 (2.25, 10.99)	1.37 (0.41, 4.6)	0.602
House wife	82(27.6)	38(29.7)	2.43 (1.4, 4.23)	1.18 (0.359, 3.88)	0.785
Students	55(18.5)	16(12.5)	3.88 (1.96, 7.7)	0.406 (0.093, 1.77)	0.231
Daily laborer & Other	70(23.6)	12(9.4)	6.6 (3.17, 13.7)	1.18 (0.266, 5.27)	0.824
Husband educational status					
No formal education	49 (19.2)	11 (8.7)	4.09 (1.97, 8.51)	0.469 (0.097, 2.27)	0.348
Primary (1-8)	51(20.0)	15 (11.9)	3.12 (1.61, 6.06)	1.02 (0.277, 3.8)	0.973
Secondary (9-12)	80 (31.4)	31 (24.6)	2.37 (1.4, 4.02)	0.89 (0.319, 2.49)	0.829
College and above	75 (29.4)	69 (54.8)	1	1	
Husband occupational status					
Government employee	71 (27.8)	71 (56.3)	1	1	
Privet employee	24 (9.4)	7 (5.6)	3.4 (1.38, 8.46)	0.93 (0.23, 3.71)	0.922
Private business	63 (24.7)	23 (18.3)	2.73 (1.53, 4.9)	1.23 (0.44, 3.44)	0.69
Daily laborer	27 (10.6)	7 (5.6)	3.86 (1.58, 9.43)	1.28 (0.29, 5.88)	0.75
Other (farmer)	70 (27.5)	18 (14.3)	3.89 (2.1, 7.18)	1.82 (0.54, 6.17)	0.33
Planned pregnancy					
Yes	174(58.6)	108(84.4)	1	1	

No	123(41.4)	20(15.6)	3.81 (2.24, 6.48)	2.63 (1.18, 5.85)	0.018*
Receive advised to come ANC in current pregnancy					
Yes	179(60.3)	59(46.1)	1	1	
No	118(39.7)	69(53.9)	0.56 (0.37, 0.85)	1.12 (0.56, 2.24)	0.74
Perceived ANC starting time					
Appropriate	67(22.6)	87(68.0)	1	1	
Inappropriate	230 (77.4)	41 (32.0)	7.28 (4.59, 11.54)	4.1 (1.9, 8.83)	0.00*
Number of ANC visit > 4 time					
Yes	57 (19.2)	58 (45.3)	1	1	
No	240 (80.8)	70 (54.7)	3.49 (2.22, 5.48)	1.2 (0.58, 2.45)	0.62
Awareness of danger signs during pregnancy					
Yes	101(34.0)	95(74.2)	1	1	
No	196(66.0)	33(25.8)	5.59 (3.51, 8.88)	6.76 (2.83, 16.1)	0.00*
ANC follow up during the preceding pregnancy					
Yes	125 (58.7)	73 (76.8)	1	1	
No	88 (41.3)	22 (23.2)	2.33 (1.35, 4.04)	0.93 (0.41, 2.1)	0.87
Service delivery through the working hours					
Yes	150 (50.5)	86 (67.2)	1	1	
No	147 (49.5)	42 (32.8)	2.0 (1.3, 3.09)	0.44 (0.19, 0.98)	0.046*

**P.value<0.05, CI: confi69dence interval, AOR: Adjusted odd ratio, COR: Crud odd ratio*

5.2. Qualitative Study Results

5.2.1. Participant characteristics of qualitative study

In total, 20 people were recruited for the qualitative research, 11 of whom were pregnant women and 9 of whom were health care providers. Nine of the pregnant women were between the ages of 20 and 35, while the other two were over 35. The majority of mothers (5) had completed college or had a higher educational level; the rest had completed secondary (3), primary (2), or were illiterate (1). Five of them worked for the government, while the other five were housewives. All of the mothers are married, with the exception of one. Nine of the women were multigravida, while two were primigravida. Whereas, among health care providers, two are male and seven are female; four are health extension staff, one is a nurse, and four are midwives. (3) Midwives with a bachelor's degree, (1) nurse with a bachelor's degree, and (1) diploma. Job experience ranged from 6 months to 16 years for the participants.

5.2.2. Emerged Themes

After coding interview results, factors that led study participants were categorized into five main themes and sub-themes under the corresponding main themes, as shown in table 6.

Table 6. Overview of themes and subthemes

Themes	Sub-themes	Cods
Socio- economic factors	1. Economy	• Dependent on husband income • poor socio-economic condition
	2. Lack of support from partner and spouse	• Partner or spouse Busy time with work • They only came when they were ill
Socio-cultural belief related factors	1. Cultural beliefs	• Fear of gossip • Witchcraft
	2. Community perception	• Early ANC initiation is useless • Starting time of ANC is after 4 month
Pregnant women related factor	1. Late recognition of pregnancy	• Unplanned pregnancy • Irregularity of menses • Belief that pregnancy will not

		occur while we are breastfeeding
	2. Pregnancy Symptoms Knowledge	• Aware the signs of pregnancy • Unaware of the signs of pregnancy
	3. Busy time	• Burden in their home • Unable to get leave from work
	4. Perceiving of pregnancy as a normal health condition	• Being in good health
	5. Information source	• Using Family ,Friends , village Mother • Expected from Health extension worker
	6. Lack of awareness the ideal booking time	• Previous experience • Unaware of the start time • Health care provider knowledge gap
	7. Covid-19	• Fear to visit institution • Perceived Service is closed due to Covid-19 pandemic
Health care facility related factor	1. Long queues at ANC clinic	• Long lines • No appointments system • Lack of health professional • Overburden in the institution
	2. Distance	• Clinics too far from their home • Inaccessible transportation
	3. Health care provider problem	• Unfriendly health care provider • Time management • Failure to provide sufficient information
	4. Record (card) room	• Medical card lost • Late Job start time • Mistreatment
Experience of health care provider	1. Un-booked women come in health institution at term and for delivery	• Risk for health care • Risk for the mother and the baby

Theme 1: **Socio-demographic related factors**

We identified two codes under this theme. These are economy and lack of support from partner and spouse

Sub – theme 1: Economy

Mothers/health care provider participants have listed being dependent on husband's income and living in poor socio-economic status as their reason not to book ANC follow up early. Due to these listed problems, pregnant women start their ANC booking late.

When women especially pregnant women become dependent on husband's income, they can't decide alone what is good and appropriate for them as well as for their fetus. They should have to wait agreement, support and get money from their husband to do whatever things even seeking healthcare services. This waiting of husband's support by idea and money made participants not to book their ANC follow up early. A 35-years-old gravida five stated: "*I want to come here when I have pregnancy symptoms, but I can't because, in my previous experience, I had to pay for the laboratory investigation, so I decided to wait until I could find some money.*" (Participant 4)

The mother has a lot of responsibilities, and they are reliant on their husband's income, According to the 30-year-old midwife. "*In our nation, mothers have a lot of responsibilities in their families; they don't have their own income and depend on their husband's, and they are waiting for a convenient time to book ANC." (HCP, 4)*

Another 26-years-old health extension worker also mention mothers, particularly live in remote area have so many responsibility *"They are in a precarious socioeconomic situation. They lived in rural areas with limited infrastructure and relied on energy-intensive agricultural production to sustain their families." (HCP, 6)*

Sub-theme 2: Lack of support from partner and spouse

All participants received social support from their husbands, friends, relatives, neighbors, and husband's family during their pregnancy. Just five of the participants' partners showed up for the ANC follow-up and others said they only came while they were sick. By saying; "*I came by myself, but he offered to accompany me if I became ill."(Participant 3, G7, 36 year)*

Three respondents stated that their partner or spouse was unable to accompany them due to work obligations. A 29-years-old gravida two describes the reason that she couldn't come early by saying. *"I have no one by my side to support me my husband spent most of his time in the filled work and my parents are not near me." (Participant 6)*

Theme 2: Socio-cultural belief related factor

Under this theme, we discovered two sub-theme cultural beliefs, community perception.

Sub-theme 1: Cultural beliefs

According to the responses of pregnant women in the current research, gossip and witchcraft were the factors preventing them from scheduling their first ANC appointment on time. Attendance of ANC services will require disclosure of the pregnancy and therefore it postponed until disclosure is inevitable. According to a gravida one of 23-year-old responses; "I put off my ANC appointment because I was afraid of gossip and the possibility of witchcraft if I revealed my pregnancy too soon.*" (Participant 7)*

Sub-theme 2: Community perception

A community member was one of the reasons for late initiation of the first ANC booking. Participant describes the first ANC booking is useless and that ANC follow-up starting time is after 4 month. Some participants, especially those in their first pregnancy, seek ANC booking when to start from community members (friends and mothers in the village). 23-years-old gravida one, says: *"I was pregnant at the same time as my friend, and I advised her to begin ANC follow-up; she agreed, but said she would go at four months because we had not received anything from the ANC clinic at the time." (Participant 7)*

A 20-year-old gravida one said that after knowing of her pregnancy, she told the village mother, who advised her to begin ANC service. She stated this by saying; *"According to the mothers in my village, ANC follow-up begins after four months. As a result, I started antenatal care when I was five months pregnant." (Participant 5)*

Theme 3: Pregnant women related factors

Under this theme, we found seven sub-themes. That are late recognition of pregnancy, pregnancy Symptoms Knowledge, busy time, perceiving of pregnancy as a normal health condition, Information source, lack of knowledge the ideal booking time and Covid-19 pandemic.

Sub-theme 1: Late recognition of pregnancy

Study participant has listed unplanned pregnancies, menstrual irregularities and pregnancy would not occur while we were breastfeeding. Among the pregnant women, half of them were said the current pregnancy was unplanned. The new pregnancy was said to be unplanned by 21-years-old gravida two. When she was getting pregnant, she used family planning methods. The non-adherence of family planning was suggested as a justification. As a result of the sudden pregnancy, she was late for ANC appointment. The woman stated: *"This baby came as a total shock to me because I was used to piles and wasn't prepared for it. I was surprised when they told me I was pregnant, but it had already been five months." (Participant 2)*

A 37-years-old gravida seven claimed that her monthly menstruation is unreliable due to an unexplained explanation. She stated this as follows; *"There are a lot of kids. I don't want this pregnancy to happen, but what will I do if it does?" (Participant 3)*

From the perspective of the healthcare providers, majority of pregnant women were late due to unplanned pregnancy. According to participant age 30 midwives, due to unplanned pregnancy. Since these women assume they are not pregnant, the timing of their first ANC visit is affected. *"When we ask them about the occurrence of pregnancy, they inform us they were pregnant when they used family planning (Depo, implanol, and pills); but, I'm not sure if this is due to a lack of awareness about the use of family planning or a lack of knowledge about the use of mothers." (HCP, 5)*

According to a 27-year-old midwife, some mothers claim that pregnancy would not occur while they were breastfeeding. "*They claimed that pregnancy would not occur although breast-feeding; while this is true, it is standard to use this form, and I don't believe they were aware of this, so they arrived late because they didn't know when they were pregnant, particularly the mothers who didn't show any pregnancy symptoms." (HCP, 2)*

Sub-theme 2: Pregnancy Symptoms Knowledge

The majority of mothers who have previously had children are aware of the signs of pregnancies, while premi-gravida women were unaware of the signs of pregnancy. A 22-year-old gravida five, told as she didn't realize she was pregnant until a urine test. By saying; *"I had a long period of discomfort and nausea, which I mistook for a stomach ache; I didn't realism it was a pregnancy until it was confirmed by a urine test. "(Participant 5)*

Another 21-years gravida two added by saying;*"I have no idea what a pregnancy sign is; even though I smelled like coffee at the moment, I didn't suspect my pregnancy." (Participant 2)*

Sub- theme 3: Busy time

As mentioned by most participants, burdened in their homes and unable to get leave from work under this sub-theme. In our country, mothers bear a lot of the burden at home, particularly if they work outside the home. They were too preoccupied with this and other events to arrange their first ANC appointment. A 26-year-old gravida two said the following: *"I work for the government, and when I get home from work, I devote time to my child's care." (Participant 6)*

According to another participant, she wanted to come for an ANC follow-up when she figured out she was pregnant via a urine test at her home, but she couldn't get time off work by saying; *"I wanted to go to the health facility for maternal services, but I couldn't because I had a lot of work to do, and I hadn't been able to get leave at work." (Participant 1)*

Health care provider also supports the above reason. In our nation, mothers have a domestic obligation. This was mentioned by a 30-year-old midwife woman. *"Mothers, particularly those who live in rural areas, bear a greater burden in the community than men because they care for their children and meet all of their husband's needs. This responsibility is overburdened when the mother works outside the home and earns a living." (HCP, 5)*

Sub-theme 4: Perceiving of pregnancy as a normal health condition

Some mothers viewed pregnancy as a natural health condition that did not require medical assistance until a concern arose. As a result, they just go to the hospital when they have a

medical problem. A 24-years-old gravida three said; *"I decided to go after four months because I was healthy after I got pregnant." (Participant 8)*

A 36-years-old gravida seven clarified that she had come today because she was sick, as mentioned by saying; *"I used to be in good health, and I had so many responsibilities that coming here would be a waste of time, but now I'm tired, and I'm not working properly, so I've decided to come here. Even now, they have nothing to do with me except telling me my gestational week." (Participant 3)*

Some Pregnant women would not seek ANC treatment at the health facility until a medical condition arose during the pregnancy. A midwife of 25-years reiterated this by saying; *"Since they interpret pregnancy as a natural physiological condition, most mothers who come for ANC follow-up when they are sick, in my experience, do not perceive pregnancy as requiring health care attention, which causes them to be late."(HCP, 1)*

Sub-theme 5: Information source

All were asked on a basis of information about ANC services. The majority of them have not received any information to visit health institutions, whereas two of them were from their husband. ANC information was heard by a 26-year-old gravida two said; *"My husband told me that I should to go the ANC follow, he gets this information from the media.'' (Participant 1)*

ANC starting time was not communicated to a 26-year-old woman with her second child. She arrived today by previous follow-up starting time. *"Nobody tells me to come to a health institution for ANC services. "(Participant 9)*

Pregnant mothers, according to health care professionals employed in maternal and child health clinics, perceived they get the information from health extension workers. Information about the benefits of early ANC booking and when to begin follow-up expected from health extension staff. This was mentioned by a 30-year-old midwife woman. *"Providing of information about the benefit of ANC is more expected from health extension workers because this is the main task of them, and the community also accepts their recommendation. In addition to that to creating knowledge on ANC require a continuous support and follow-up." (HCP, 5)*

Sub-theme 6: Lack of knowledge the ideal booking time

We found three codes; they used their previous ANC booking experience, unaware of the starting period, and a knowledge gap among health care providers. Many of the pregnant women didn't know the appropriate time of the booking. A 32-year-old gravida five says: *"I had no idea when to begin ANC follow-up because I had no prior experience with it, despite having a history of pregnancy; in the previous three pregnancies, I was delivered safely at home." (Participant 4)*

A 22-year-old participant added that she had no idea when the ANC booking would begin, saying: *'' I didn't know when to initiate the ANC follow-up because it was my first pregnancy." (Participant 5)*

A 28-year-old gravida 4 pregnant woman mentioned she visit today because of her prior experience and said: *"After four months with my previous pregnancy, I began my first ANC appointment, which is why I'm here today. I wasn't aware that I was running late at the time and no one had told me." (Participant 11)*

Key informants also support the above reasons; lack of knowledge about the optimal time to start ANC is an important contribution for being late for their ANC booking.

A 27-year-old midwife man mentioned this by saying; *"The majority of the mothers arrived at 30 weeks, particularly from outlying areas. I believe that the explanation for the lateness is due to misinformation and a lack of awareness about ANC follow-up; not only pregnant women, but also their family members, have been given incorrect details about ANC services, saying things like "what do you get from them at 3 and 4 months, you'll go at 9 months."" (HCP, 2)*

Another midwife mentioned that they went to a health facility based on their previous experience and were unaware that the start time had changed. *"I think the main issue is they didn't have knowledge when to start the ANC follow up's. They are starting by their previous experience; in previous time they start after four month so they use as a trained and start after 4 month for the first time." (HCP, 4)*

We advise them to start at/after four months of pregnancy and if they don't know the month of their pregnancy. This was mentioned by a 26-year-old health extension worker. *"After we found*

out they are pregnant we send them to health institution because we couldn't give ANC follow-up service. Only we do distinguish the pregnant mother and give counsel to begin at / after four month; if they do not know there month we suggest to go when they feel fetal movement but they can go before that when they have a problem." (HCP, 6)

Before four months, the health organization did not have follow-up. Using the example of a 28-year-old health extension worker*; "We advise them to start ANC follow up as soon as when they know their pregnancy; whereas the health center send them back by giving advice to return after 4 month because they said it is not visible now." (HCP, 8)*

Sub-theme 7: Covid-19 pandemic

Under this sub- theme. There are two cods perceived the institution is closed due to covid-19 and the other thing is very fearful to come to a health institution. Covid -19 pandemic is a worldwide health issue, globally it had an impact on the health system directly or indirectly. The impact of this pandemic had an influence also in our country's health system. A 36-year-old gravida seven, assume the institution is closed due to Covid-19 by saying; *"I heard from the mothers in my village that the ANC service is not being provided due to the Covid-19 pandemic; however, I am sick and have decided to come to this institution." (Participant 3)*

There are a large number of clients seeking ANC services, and the waiting area is extremely crowded, so they are hesitant to visit the hospital because there may be contagious patients in the waiting area. A 26-years-old gravida two sated this by saying; *"When I found out I was pregnant, there were a lot of Covid-19 patients, so I couldn't come at that time because there were a lot of clients in the ANC clinic area, which could increase the transmission, so I decided to wait; but now I'm almost 6 months and I've decided to see my baby via ultrasound." (Participant 9)*

In the perspective of health care providers, there are a mother who is not comfortable coming to the health institution. Some mothers are reluctant to visit the hospital because the facility often treats Covid-19 patients, and they are afraid that if they go, the virus will spread to them. This was reported by a 28-year-old health extension worker participant by saying; *"Because of the covid-19 pandemic, mothers are reluctant to visit a health facility because there could be a*

variety of clients from various areas who have come for service and are at risk of being contaminated." (HCP, 7)

Theme 4: Health care facility related factors

Sub-theme 1: Distance

We discovered two codes for this sub-theme; Clinics too far from their home and inaccessible transportation. The long distance between the health institution and the pregnant mother's home was cited by pregnant mothers as a reason for the late start of the first ANC booking. Since no transportation system exists in that region to assist women in getting to and from the health facility, they were late for their ANC visits. A 37-year-old gravida seven believe that the health centers locations are inconvenient for her to reach for ANC services as follows: *"My house is a long way from the hospital. Since there is no public transportation in this area, I must travel a long distance to get here; as a result, I decided to extend the time for the first ANC visit. But now I'm feeling ill, which is why I've come to see you today." (Participant 3)*

Distance was also cited by six health care providers as a factor in late ANC bookings. The physiological condition of pregnant women is a barrier to walking for several hours to reach the health institution, and those who live in rural areas are described as the reason for late early ANC booking. Health extension worker mentioned this by saying; "*It is extremely difficult for them since they live in a rural area where the village's demographics fluctuate and there is no transportation system that forces the mother to wake up on foot, which is extremely difficult for them. And when we visit them in their homes, it is difficult to get in touch with them." (HCP, 9)*

Sub-theme 2: Long queues at ANC clinics

Long lines, overburdened health facilities, a shortage of medical personnel, and no appointment system are among the issues. Three respondents said there are long queues in the ANC service area. In the health institution, there is no appointment system, due to this pregnant mother are wait long time even until the whole day for getting the service, whereas after waiting they may not receive the service. This makes them disappointed to come in another time may get late them. A 28-years-old gravida four participants specified as follows; *"I arrived at 2 p.m. today to begin ANC service, but there were long lines and no appointment system in the institution, so as*

you can see, I finished the service about 11 p.m. and had no way to get home, so I had to take bergo to stay the night." (Participant 11)

Health care providers supported the above reason; Overburdened health facilities with a shortage of health staff are also an obstacle to providing successful ANC services, according to health care providers. A 28-year-old health extension worker mentioned this by saying: *"The facility was very much uncomfortable for waiting long queues; ANC clinic and waiting room was* overcrowding *by clients and due to that the mother feel discomfort to stay long time to get the service." (HCP, 8, HEW ", 28 years)*

Sub-theme 3: Health care provider problem

As mentioned by most participants, Unfriendly health care's provider, time management, and failure to provide sufficient information about their condition and their baby. The quality of ANC clinic's services depended on healthcare worker's friendly care. They explained that the ANC services care provider didn't give appropriate information about their condition and also their baby too. A 28-years-old gravida four stated this by declared: *"I have child death history two times at the same four day and I have no good memoirs in this hospital, because they didn't give attention to neonates and they didn't explain the reason about my child deaths. Loss of children two times it's very hard for mother, I don't want to see my 3rd child death. So it's better to improve the service delivery and health care provider behavior." (Participant 11)*

The health-care provider did not do their work, according to a 26-year-old gravida saying; *"I was losing two children in the hospital after some while they deliver, but during labour they assist me by instrument and when they give me my children there head are not normal. The health care providers were not explaining the reason of death; they didn't care for you unless you have social in that hospital. we all are human being and should be give equal services without discrimination like by ethnicity, clam and so on."(Participant 10)*

Participants stated that health care providers employed in health centers did not begin their work during working hours. A 24-years-old gravida three declared; *"I went to an ANC facility at a health centre during my first pregnancy, but they didn't have enough care, started work late, and*

mistreated me. As a result, I decided not to go, and it is taking me a long time to begin the follow-up. (Participant 8)

According to a health extension worker, health care workers in health institutions are not compassionate, respectful, or caring. When mothers visit a health facility, they are not treated with love, they lose faith in the way they are treated, and they are not given the right details about the benefits of ANC booking as suggested and said;*"During home visits, many mothers expressed dissatisfaction with the ANC services provided by health institutions. They did not provide appropriate counseling to mothers who lost their child during pregnancy or childbirth, and they also did not provide service in a queue, giving preference to the social and mistreating the mothers.''(HCP, 8, HEW ", 28 years)*

Sub-theme 4: Record (card) room

We identified three codes under this sub-theme. These are medical card lost, late job start time, and mistreatment. The card room folder management has complaints from 5 participants .there folder management is back words they didn't find their folder when they came for the next time, according to a 21-year-old gravida two by saying: **"***When I arrived today, the runner informed me that he couldn't locate my card and that it may not be returned, so I asked the health care provider to check the ANC room, but they said they couldn't find it. They encourage us to register as a new client after a full day of waiting; imagine my entire document was lost. (Participant 2)*

A pregnant mother was mistreated by the card room service provider, according to a 23-year-old gravida one by saying *"There is a problem with the card room service provider in that they mistreat the pregnant woman. This is fine for me, but it is very difficult for another pregnant mother who has travelled a long way. Because of them, I don't want to come here." (Participant 7)*

Theme 5: Health care provider experience on late presentation

This is the final and supplementary theme. Un-booked women come in health institution.

Sub-theme 1: Un-booked women come in health institution at term and for delivery

There are women who come to the hospital to give birth without having made an ANC appointment. When un-booked and undiagnosed women present for delivery, health care

providers are at risk, particularly when they arrive at the second stage, there is no time for a laboratory investigation. A 25-years-old midwife said; "*In one night nearly 9 o'clock while I following a pregnant women other pregnant mother was came with ambulance and they call me to see her and I want to see her the cervix is fully dilated her baby is bradycardia immediate I take her to second stage but there is no time to wear apron because she push very hardly so I have to be fast after delivery the baby she develop post partum hemorrhage it take so many hours to stop the bleeding to save the life of the mother finally thanks to GOD she is stable . But when I see my close am socked with her blood I ask her if she had ANC follow up either of here or health centre then she said "no I didn't" so I have to be assure the status of HIV,HBV, and HCV finally result came she is HIV,HBV positive you have no idea how I shock after I see it is almost in the morning so I go ask the medical director the availability of immunoglobulin for me and he say "it is not available in this institution and also I don't think you found in Mizan Aman town you have to go Jimma.". " (HCP, 1)*

Another 27-years-old midwife has stated as ANC touch helps mothers and babies by preventing, predicting, alleviating, or managing pregnancy-related health issues. We lost the mother and baby due to a pregnancy-related complication by saying; "*Some pregnant women experience eclampsia after developing preeclampsia. However, we can avoid this, but most mothers do not receive ANC follow-up and arrive after the problem has worsened. This is a tough situation for them because they are in danger of losing both their child and their lives*". *(HCP, 2)*

CHAPTER SIX

6. Discussions

The main goal of this research was to find out how many pregnant women in MTUTH and MHC received late first antenatal services and what factors were correlated with it. This study discovered a high percentage of late ANC bookers [70.0 %, 95% CI=65.65, 74.35] Socio-demography, obstetrics history, history of current pregnancy, and health service, illness experience and perceived susceptibility to a pregnancy-related problem with late ANC initiation was also assessed; among that residence, planned pregnancy, perceived ANC starting time, awareness of danger sign during pregnancy and service delivery through the working hour was significantly associated with late ANC booking.

The World Health Organization recommends that pregnant mothers, especially those in developed countries, begin antenatal care within the first four months of pregnancy; however, our study found that 70% of pregnant women (279) were late in starting antenatal care; this finding was in line with a study conducted in African countries; in Southern Benin around 75.4 % (20) and in southern Nigeria 72.4% (22). In Ethiopia also, one multilevel analysis of EDHS showed similar findings with 67.31% of pregnant mothers was delayed to attend first ANC booking (26).

The finding of this study is higher as compared to a study conducted in, Cameron 44.0% (21), South Africa rural women 51% and peri-urban women 28% (24). Correspondingly, in Ethiopia Amhara region of Woldia 59.5% (27), Debre Brihan 60% (28) and in Tigray region 61.4% (29) conducted studies found lower magnitude. This discrepancy may be due to participant socio-demographic characteristics, infrastructure, perceived ANC timing differences, and research time differences (e.g., our study was conducted during the Covid-19 pandemic, so pregnant mothers might be hesitant to visit a health facility for ANC services and arrive late).

Our study finding is low as compared to a study conducted in, Zambia 86.6% (23), in Tigray 85.67% (30) and East Wellega 81.5% (31). This distinction may be due to participant socio-demographic features, facilities, and pregnancy classification; in our research, women who were

late at or after 16 weeks of gestational age visited a health institution for their first ANC service were categorized as late bookers, which may reduce the number of late bookers.

In our study rural resident mothers have more likelihood [AOR= 2.38, 95% CI: 1.0, 5.68] to be delayed for their first antenatal care booking; likewise, different studies were conducted in Woldia, Debre Markos, and Ambo (27,33,34) identified residence as a significant variable for being late ANC booking; these may be related to mothers who were residing in a rural areas may lack access to information, have a long distance to a health facility, and have a misunderstanding about when to start ANC.

Similarly, pregnant women living in rural areas were late to schedule their first ANC appointment in a qualitative study. Pregnant women living in rural areas with low economic conditions have an effect on ANC services because they cannot afford to contract for transportation costs to meet the health institution and service charge costs, causing their first ANC appointment to be delayed. This finding was similar with a study conducted in Tanzania (36) and Cameron (37) and South Africa (38).

Pregnant mothers who did not a plan for pregnancy have a greater probability [AOR = 2.63, 95% CI: 1.18, 5.85] to delay their first ANC booking. This finding was coordinated with a study conducted in Ethiopia, Debre Markos, Ambo and Sidama zone (33,34,39), respectively. This may be due to women failing to recognize their pregnancy early, a lack of awareness about pregnancy symptoms, especially among primigravida mothers, women failing to disclose their pregnancy due to fear of the community, and even if they do recognize their pregnancy early, they may be late to book due to carelessness.

Both pregnant women and health care providers described unplanned pregnancy as a reason for too late initiation of their first ANC booking in the qualitative findings. Correspondingly two qualitative studies were conducted in our country, in Axum (35) and Sidama zone (39) support these findings. This may be due to a failure of family planning; people assume that pregnancy would not occur while breastfeeding, menstrual irregularities, and the fear of stigmatization among single women who are afraid to reveal their pregnancy.

Pregnant women who didn’t know the appropriate time to begin ANC follow up have a higher likely hood [AOR=4.1, 95% CI: 1.9, 8.83] being late for their first ANC booking. Likewise,

another study was conducted in southern Benin (20) and Tanzania (36) fund similar findings. This may be related to poor information about the benefit of early ANC initiation and the health care provider's recommendation to come ANC clinic after 16 weeks of gestational age or when they feel fetal movement if she didn't know the exact gestational age.

A qualitative study also revealed that a lack of knowledge about the ideal booking time is a factor. Some pregnant mothers were perceived the ideal time after four months; this is directly related from the previous experience. Furthermore, in the key informant found some health care providers were advised the pregnant women inappropriate way i.e. to start at/after four months of their pregnancy and some of the others were recommending while they fell the fetal movement; if they don't know the month of their pregnancy.

This study was also revealed pregnant mothers those who didn't have awareness about danger signs during pregnancy had a greater likelihood [AOR= 6.76, 95% CI: 2.83, 16.1] to being late to start their first ANC booking. This finding was similar with a study conducted in Sidama zone, Ethiopia (39) and Tanzania (36). This may be the fact that the health care providers are didn't advice appropriately about pregnancy danger signs during pregnancy, previous positive pregnancy outcome may late to initiate their first ANC booking.

Women who know service delivery through the working hours in the health institutions have 2 times the likelihood [AOR= 0.44, 95% CI: 0.19, 0.98] to be late for ANC than those who didn't know. This might be related to inconveniences created by; user-unfriendly, booking system, and overcrowded conditions in health care providing area, long waiting times and health profession personnel behavior.

Cultural believe is one of the reasons identified with qualitative study, pregnant woman where late there first ANC booking is due to fear of gossip and witchcraft. This is related to ANC attendance require disclosure of pregnancy. This result was supported by different studies were conducted in the UK (41), Tanzania (36), Cameron (37) and sidamo, Ethiopia.

Pregnant women factors have also had an impact on ANC service initiation. In our qualitative study lack of knowledge on pregnancy symptoms, perceiving pregnancy as normal physiology, lack of awareness of the ideal time of ANC booking, fear to come to ANC clinic due to Covid-19 pandemic, and had a busy time are reasons the lead women late to first ANC booking. This

finding is comparable with a study conducted in the United Kingdom (41), Tanzania (36), Cameron (37). Likewise in Ethiopia conducted studies confirm the above reason as a barrier to early initiation of first ANC visiting (35,39).

In this study the qualitative results showed health care related problems had an impact on ANC initiation time. Long queues at ANC clinic, health care provider skill gap and behavior, card room service were identified as a season for late initiation of first ANC visit. this finding was similar to a study conducted in Ethiopia, Sidamo (39) and Tselemt district, Tigray (43).

7. Strengthening and limitation of the study

7.1 Strength of the study

- In this study quantitative and qualitative method was implemented; to dig out reach data in different perspective.
- We used ultrasound scan documents to assess the gestation age of all the women.
- Furthermore, the sample size in this study was relatively large, which allowed for reliable results about the timing and reason for antenatal care.

7.2 Limitation of the study

- Even though husband education and occupation was including in analysis husband was not included in the study.
- Cross sectional study design was implemented in this study, the time of occurrence of the cause and effect might not be known

8. Conclusion and Recommendation

8.1. Conclusion

In the current study, the Mizan-Aman town had a greater rate of delayed ANC beginning. The reasons that prevent pregnant women from starting at the suggested time are; rural residence, having unplanned pregnancy, lack of awareness about pregnancy danger sign, who didn't know the time to begin first ANC booking and perceiving service delivery throughout working hours. Additionally, the qualitative study identified a number of reasons were: lack of awareness on the important of ANC and appropriate time of ANC ,health care provider recommendation, unaware of being pregnant ,being busy ,unfriendly health care provider, fear of Covid-19 pandemic and card room related problem.

8.2. Recommendation

Based on the above findings, the following recommendations are given for different stake holders:

To policy makers

- To reduce maternal mortality and morbidity, health planners and policy makers needs to develop a guideline for ANC starting time clearly.
- To improve the perceived time of early ANC booking by community mobilization and health education should be considered with policy makers.

To health facilities

- Updated on-the-job training for health care personnel is essential in order to accomplish prompt ANC booking
- Pregnant women should receive education/information not only from health extension workers, but also from regular antenatal care and the media.
- To reduce unintended pregnancies, public awareness of contraception usage should be raised.
- The hospital card room card keeping system is old, and many pregnant women's cards are frequently misplaced; therefore, a digital system should be adopted.
- The most significant issue identified was a lack of space, which compromised customer privacy and procedures such as physical examinations. It requires more infrastructures.

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APPENDIX - I

Information sheet and consent form

ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES, SCHOOL OF NURSING & MIDWIFERY

1. English version

Topic: Late antenatal care booking and associated factor among pregnant women in Mizan-Aman town, south west Ethiopia, 2021: a mixed study method.

Investigator

Gelila Gashawbeza (BSC.)

Introduction My name is Gelila Gashawbeza I am postgraduate student on maternity and reproductive health nursing at Addis Ababa University, collage of health science and school of nursing and midwifery. Currently I am conducting a research on late antenatal care booking and associated factor among pregnant women in Mizan-Aman town.

Purpose of the research

Questionnaires prepared to study late antenatal care booking and associated factors of late ANC booking of pregnant women in Mizan-Aman town, south west Ethiopia.

Study procedure

You are kindly invited to take part in our research because we believe you can provide the necessary information for the research. Participation into the study is on voluntary basis. If you are willing to participate in our project, you need to understand and sign the consent form. Then, you will be asked to give your response by the data collectors. All the responses given by the participants and the results obtained will be kept anonymous and confidential. No one outside the research team will have access to your responses.

The risks and benefits

The research will be carried out with no risk for the subjects. We would fully respect the individual, the culture and the society.

Confidentiality

Your name will not be written on any of the questionnaires forms. No individual response will be reported to anybody that is; your responses are completely confidential. You do not have to answer any questions that you do not want to response .It is true that the success of this study will depend on your response. Therefore, we thank you in advance and greatly appreciate your helping.

Contacts

If you have any question, suggestion comments or anything that is not clear; please contact me;

Phone number: +251-910836944

Email: gelilagashu @gmail.com.

Finally, we would like to say thank you for taking time to hear the information given and willing to participate the study. If you are clear with the information provided and agree to participate, please sign the next page on the consent form.

Consent form

Late antenatal care booking and associated factor among pregnant women in Mizan-Aman town, south west Ethiopia, 2021: a mixed study method**.**

1. English version

I, the undersigned individual, am oriented about the objectives of the study. I have informed that all of my information will be kept confidential and used solely for this study. In addition, I have been well informed that my name will not be asked and unique identification is not required. If I want to withdraw from the study anytime along the process, I will not be obliged to continue or give reasons for doing so. However, my agreement to participate in this study is with the assumption that, the information I provide will help greatly to the determined late initiation of ANC and related factors.

Signature; ________________________________ Date; ____________

APPENDIX - II

English version questionnaire for qualitative study

ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES, SCHOOL OF NURSING & MIDWIFERY

Questionnaire No [ ]

Date: ____________________

Health institution: __________________

Interviewer: ___________ sign______________

Supervisor ___________ sign ___________

The questionnaire has five parts; some of the questions have their own set of Instructions please follow the instructions strictly

Part One: Socio-demographic variables

NO	Questions	Response	Skip
101	Residential area	1.Urban ______ 2.Rural ______	
102	Age	______Years.	
103	Educational status	1. Illiterate (cannot read and write) 2. Read and write 3. Primary (1-8) 4. Secondary (9-12) 5. College and above	
104	Occupation	1. House wife 2. Government employee 3. Private employee 4. Student 5. Daily laborer 6. Others(specify)___________	
105	Marital status	1. Married 2. Single 3. Divorced 4. Widowed	If the answer is 2-4 skip

			to108
106	What is your husbands' educational status?	1. Illiterate (cannot read and write) 2. Read and write 3. Primary (1-8) 4. Secondary (9-12) 5. College and above	
107	What is your husband's occupational status?	1. Government employee 2. Private employee 3. Private business 4. Student 5. Daily laborer 6. Others (specify)________	
108	Average family income per month (Ethiopian Birr)	Monthly income________ Eth birr	
Part Two: Obstetric information			
201	How many times have you been including know pregnant?	1. ______	If this is the first pregnancy skip to301
202	Para[Number of live births] you have	1. Number of children alive______ 2. Number of children died_____ 3. Number of still birth______	
203	Ever had abortion	1.Yes 2.No	
204	Did you ever have Problems in last delivery?	1. Yes 2.No	
205	Have you history of previous caesarean delivery?	1. Yes 2.No	
Part three: History of current ANC			

301	How do you know your pregnancy?	1. Missed period once 2. Missed period twice 3. Missed period three and more 4. Physiological changes 5. Other signs like nausea 6. By examination [urine test] 7. Other[specify]___________	
302	How many times did you receive antenatal care during this pregnancy?	1.It is my first time 2.Two times 3.Three times 4.Four times 5.Greater than four	
303	Is your current pregnancy is planned?	1. Yes 2. No	If no skip 305
304	If this pregnancy is planned, did the plan include your husband?	1. Yes 2.No	
305	If this pregnancy is not planned, was it wanted by you after conception?	1. Yes 2.No	
306	If this pregnancy is not planned was it wanted by your husband after conception?	1. Yes 2.No	
307	Do you have problem in the current pregnancy?	1. Yes 2. No	
308	Before your first attendance of the ANC, was there any one who advised you to come?	1. Yes 2No	If no skip 310
309	If yes for Q 308 , to above question, from whom you get advice?	1.Community health workers 2.Husband 3.Mother 4.Sister 5.Friend	

		5.Other[specify]	
310	In the present pregnancy, when did you start the follow up?	1. After ______months of amenorrhea 2. I don't know the exact months	
311	Why you decide to start [begin] the follow up at this time?	1. Thought it was appropriate time 2. I get money 3. Booking at convenience time 4. Given appointment for today 5. Others[specify]____________	
312	Initiation of ANC visits at/ after 16th weeks of pregnancy	1. Yes 2.No	Review of medical card
313	What are the reasons for not attending ANC before 16th weeks of pregnancy?	1. Perceived that it is the appropriate time 2. Being in a state of good health 3. Too busy to attend ANC clinic 4. ANC clinic too far from my home 5.Perceived long waiting time 6. Husbands' disapproval 7.Unfriendly health workers attitude from previous experience 8. Early ANC attendance is useless 9. Others(specify)_______	
Part four :Question Knowledge of respondents of ANC utilization			
401	Do you think ANC is benefit for	1.yes 2.No	

	the mother?		
402	Do you think ANC is important for your fetus?	1.yes 2.No	
403	When do you think it is appropriate time to begin the ANC after amenorrhea?	______ weeks	
404	Do you think a women need to go for ANC > 4 time?	1.yes 2.No	
405	Do you know danger signs during pregnancy?	1Yes 2. No	If No skip to 406
406	If yes to Q 406, can you mention some of them?	1. Persistent vomiting 2 Persistent headaches 3.Face and leg swelling 4.Vaginal bleeding 5.Extreme fatigue 6.Cessation of fetal Movement 7. Others (specify)_____	
Part five: Illness experience and perceived susceptibility to pregnancy related health problems			
501	Did you have ANC follow up during the preceding pregnancy?	1. Yes 2. No	If no skip 502
502	Did you experience a health problem during the preceding pregnancy?	1. Yes 2. No 3. I don't remember	If the response 2& 3 skip to 504

503	If your response is Yes to Q 502 mention the health problems you experienced.	1. Persistent vomiting 2 Persistent headaches 3.Face and leg swelling 4.Vaginal bleeding 5.Extreme fatigue 6.Cessation of fetal movement 7. Others (specify)____	
504	Did you experience a health problem during this pregnancy before your first ANC visit?	1. Yes 2. No	If No skip to 506
505	If your response is Yes to Q504 mention the health problems you experienced.	1. Persistent vomiting 2 Persistent headaches 3.Face and leg swelling 4.Vaginal bleeding 5.Extreme fatigue 6.Cessation of fetal movement 7. Others (specify)____	
506	Do you think that your husband or partner is concerned about the health problem that associates with pregnancy?	1.Yes 2..No	
Part six: Health service related factors			
601	Do you think ANC service is available throughout the working hours in this health facility	1. Yes 2 No 3.. I don't know	
602	How do you feel about the distance from your home to this health institution?	1. Very close 2. Average 3. Too far	
603	Transportation cost that you paid for coming & back to this health service	1. No pay for transportation 2. If pay, Specify in ETB:	

		___________	
604	What is the maximum waiting time you spend to complete checkup?	1. < 2 hrs(short) 2. 2-3 hrs(fair) 3. >4hrs(long)	
605	Did you comfortable in the service given by health professional during ANC examination?	1. Yes 2 No	
606	Would you return to this facility for ANC service	1.Yes 2.No 3.I do not know	
607	Is there any payment you were asked for checkup?	1. Yes 2. No	If No skip to 609
608	If yes for Q 607, for what services you paid?	1. For consultation [card and Examination] 2. For laboratory 3. For ultrasound 4. For drugs 5.Others[specify]___________	
609	How do you describe the money you paid for service?	1. No problem 2. Moderate problem 3. Major problem	
610	Rate the following items of service in terms of your satisfaction	1. Staff approach: 1. Highly satisfied 2. Satisfied 3. Medium 4. Not satisfied 5. Highly not satisfied	
		2.laboratory: 1. Highly satisfied 2. Satisfied 3. Medium 4. Not satisfied	

			5. Highly not satisfied	
		3.Waiting time	1. Highly satisfied 2. Satisfied 3. Medium 4. Not satisfied 5. Highly not satisfied	
		4. Privacy	1. Highly satisfied 2. Satisfied 3. Medium 4. Not satisfied 5. Highly not satisfied	

This is all want I want to ask you. Thank for spending your time and valuable information you gave us. Do u have any question that I can I address for u.

____

____

____

English version questionnaire for qualitative

Section 1: individual interview scenario for pregnant mother

After we get their permission we turn on the recorder and begin our conversation initial by thanking the interviewee.

Interview number: ________ Participant unique number________

Interviewer name: ________ Code: ________ Date of interview**:** ________

1. First we will discuss about you and your current pregnancy
   - How old are you?
   - your job/your source of income?
   - What is your educational status
   - What is your marital status?
   - How many pregnancies did you have until now?
   - How many living children did you have know

2. How do you feel when you first knew that you were a pregnant?

Probe: What kind of emotion did you have?

What kind of symptoms did you have that made you realize you were pregnant?

Did you discuss it with your family?

From where have you heard about ANC service?

3. When you knew you were pregnant how long did it take to be seen by health provider?
4. What stopped you from starting ANC after you found out you were pregnant?
5. Did you go and see health provider if you have no any problems? Why?
6. Who do you have for social support?

Probes: Family members, spouse, neighbors, friends, church members?

Can you get any of them to help you go to your prenatal care appointment?

7. Have you had any trouble being seen at the hospital/ health center?

Conclusion

I finished my questions I am very happy with our stay you can say if you have anything to add before I turn off the recorder.

Thank you very much for your time!!

Section 2:- key informant for health care provider

After we get their permission we turn on the recorder and begin our conversation initial by thanking the interviewee.

Interview number: ________

Participant unique number________

Interviewer name: ________

Code: ________

Date of interview**:** ________

1. Please tell me about yourself? Age_________ Your experience_________ Profession**:** _________
2. What is antenatal care and why is it important?
3. Have you been taken training of ANC?
4. Describe your experience with for late antenatal care service?
5. Please can u explain the reasons that some women fail to book early in pregnancy? Probe What is your response to the reason for late presentation for ANC?
6. What advices are suggested from maternal and child health program on the timing of booking for ANC? How?
7. From where they get advice to permit early booking of ANC?

Conclusion

I finished my questions I am very happy with our stay you can say if you have anything to add before I turn off the recorder.

Thank you very much for your time!!

አዲስ አበባ ዩኒቨርስቲ የጤና ሳይንስ ኮሌጅ
የነርሲንግና የሚድዊፈሪ ትምህርት ክፍል

የመረጃና የፈቃደኝነት ማረጋገጫ

የአማርኛ፡ትርጉም

የምርምር፡ ነፍሰጡር እናቶች ለምን ዘግይተው ቅድመ ወሊድ ክትትል ይጀምራለ በሚል ርዕስ ላይ ጥናት በመስራት ላይ እንገኛለን፡፡

የዋና፡አጥኚዉ፡ስም ገሊላ: ጋሸዉበዛ

መግቢያ

ይህ፡የመረጃ፡ወረቀት፡እና፡የስምምነት፡ቅጽ፡የተዘጋጀው፡ዋና፡ዓላማው፡በአሁን: ጊዜ :እናቶች/ነፍሰጡር: ለምን የቅድመ :ወሊድ :አገልግሉትን: ዘግይተው: ይጀምራሉ :የሚል ምክንያት :ለመልየት :ጥናት :እያደረግን: ነው፡፡፡፡ዋና፡አጥኚዋ፡በአዲስ፡አበባ፡ዩኒቨርስቲ፡በነርሲንግ፡ትምህርት፡ቤት፡ውስጥ፡የማስተርስ፡ተማሪ፡ናት፡፡

ዓላማው

የዚህም: ጥናት :ዋናው :ዓላማ :ነፍሰጡር: እናቶች: ለምን: የቅድመ: ወሊድ: አገልግሎትን ዘግይተው: ይጀምራሉ :የሚልውን: ምክንያቱን :መለየት :ሲሆን፣ ለእናቶችና: ለሕፃናቶች :የሚደረገውን እንክብካቤ: ለማሻሻል :ይረዳል :ተብሎ :ይታመናል፡፡ ስለዚህ በዚህ ጥናት እንዱሳተፉ እንጋብዘታለን፡፡

ሂደት

ለምርምር፡ሂደቱ፡አስፈላጊውን፡መረጃ፡መስጠት፡ይችላሉ፡የሚል፡እምነት፡ስላለን፡በምርምራችን፡ውስጥ፡ ንዲሳተፉ፡በአክብሮት፡ተጋብዘዋል።በጥናቱ፡ውስጥ፡መሳተፍ፡በፈቃደኝነት፡ላይ፡የተመሠረተ፡ነው።በመጠይቁ፡ ውስጥ፡ለመሳተፍ፡ፈቃደኛ፡ከሆኑ፡የስምምነት፡ቅጹን፡በመረዳት፡እና፡መፈረም፡ያስፈልግዎታል፡፡ከዚያ ምላሽዎን፡ለሚሰበስቡት፡ሰብሳቢዎች፡እንዲሰጡ፡ይጠየቃሉ።በተሳታፊዎች፡የተሰጠው፡ምላሾች፡እና፡ የተገኙት፡ውጤቶች፡ሁሉ፡በሚስጥር፡ይያዛሉ፡፡ከአጥኝዎች፡ውጭ፡ማንም፡የእርሶን፡ማንነት፡ማወቅ;አይችልም፡ ፡

ስጋት፡ወይም፡ምቾት፡የሚነሳ፡ነገር፡-በዚህ፡ጥናት፡ውስጥ፡በሚሳተፍበት፡ወቅት፡ምንም፡ዓይነት፡ችግር፡ አያጋጥምዎትም፡ነገር፡ግን፡ትንሽ፡ጊዜዎን፡ሊወስድ፡ይችላል፡እና፡ይህ፡ደግሞ፡ምቾት፡ላይኖረው፡ይችላል።

ምስጢራዊነት፡እና፡ማንነትን፡መደበቅ፡-ከዚህ፡ምርምር፡ፕሮጀክት፡የምንሰበስበው፡መረጃ፡በሚስጥር፡ ይጠበቃል።ከጥናቱ፡የሚሰበሰበው፡መረጃዎ፡በፋይሉ፡ውስጥ፡ይከማቻል፣እና፡ስም፡አይኖረውም፣ከዋና፡ መርማሪው፡በስተቀር፡ለማንም፡አይገለጥም።

የመቃወም፡ወይም፡የማስወገድ፡መብት፡-በዚህ፡ጥናት፡ውስጥ፡ላለመሳተፍ፡ሙሉ፡መብት፡አለዎት፡ (ለመሳተፍ፡ካልፈለጉ፡የተወሰኑ፡ወይም፡ሁሉንም፡ጥያቄዎች፡ላለመመለስ፡መምረጥ፡ይችላሉ)እና፡ይሄ፡ እርስዎን፡አይጎዳዎትም።እንዲሁም፡የዚህ፡ሆስፒታል፡ተገልጋይ፡እንደመሆኖ፡ምንም፡አይነት፡መብቶችን፡ ሳያጡ፡ከዚህ፡ጥናት፡የመገለል፡ሙሉ፡መብት፡አልዎት።

ለበለጠ፡መረጃ፡-ማንኛውም፡ጥያቄ፡ካለዎት፡በሚከተለው፡አድራሻ፡ዋና፡አጥኚዉን፡ማነጋገር፡ይችላሉ::

ስም ገሊላ ጋሸዉበዛ

ስልክ:+251-910836944

ኢሜል: gelilagashu @gmail.com.

በዚህ፡ጥናት፡ውስጥ፡ለመሳተፍ፡ከተስማሙ፡እውነተኛነትዎ፡አደንቃለሁ።ይህ፡የስምምነት፡ቅጽ፡ለእርስዎ፡ ከተነበበልዎት፡በኋላ።ለመሳተፍ፡ፈቃደኛ፡መሆንዎን፡ለማሳየት፡ከዚህ፡በታች፡ፊርማዎን፡ያኑሩ(ስምዎን፡መጻፍ፡ አያስፈልግም)።

ስለተሳተፍእናመሰግናለን።

የስምምነት ማረጋገጫ

ይህ ስምምነት የተዘጋጀው በሚዛን አማን ከተማ ነፍሰጡር እናቶች ለምን ዘግይተው ቅድመ ወሊድ ክትትል ይጀምራለ በሚል ርዕስ ላይ ለሚደረግ ጥናት የተዘጋጀ የስምምነት መግለጫ ቅፅ ነው።

ማብራሪያ

እኔ ስሜ ሳይጠቀስ በመለያ ኮድ ብቻ የምለየዉ የምርምሩ ተሳታፊ ስለምርምሩ በቂ ገለጻ ክተደረገልኝ በሃላ የምስጠው መረጃ በሚስጥር እንደሚጠበቅ ተገልፆልኛል። ከሁሉም በላይ በጥናቱ ላይ መሳተፍ በፍቃደኝነት ላይ የተመሠረተ መሆኑና ለመሳተፍ ፍቃደኛ ከመሆኔ በፊት እንዳስብበት በቂ ጊዜ ተሰጥቶኛል ። ከጥናቱም መውጣት ብፈልግ ምንም ምክኒያት ሳላቀርብ ከጥናቱ መውጣት እንደምችል ተነግሮኛል። ስለዚህ በጥናቱ ለመሳተፍ የወሰንኩት ስለሁኔታው በሚገባ ከተረዳሁ በኋላ በጥናቱ ሂደት ውስጥ በፍቃደኝነት ለመሳተፍ ተስማምቻለሁ ።

ፊርማ ______________________________ ቀን ______________

የቃለ መጠይቁ አማረኛ ትርጉም

አዲስ አበባ ዩኒቨርሲቲ የህክምና ሳይንስ የነርሲንግና ፤ ሚድዋይፈሪትምህርት ኮሊጅ

የመጠይቁ መለያ ቁጥር [ ] ቀን: ____________________

ጤና ተቋሙ: __________________

ቃለመጠይቁን ያደረገው: ____________ ፊርማ : _____________

የሱፐርቫይዘር ስም.____________ ፊርማ:____________

መጠይቁ 6 ክፍሎች አሉት፤ የተወሰኑት የራሳቸው ትእዛዝ አላቸው እባኮ ይከትሉት

ክፍል አንድ: ማህበራዊና ዲሞግራፊያዊ ሁኔታዎች

ተ.ቁ	ጥያቄዎች	መልስ	እለፊ/ፍ
101	የመኖሪያ አካባቢ የት ነው?	1. ከተማ 2. ገጠር	
102	እድሜሽ ስንት ነው?	______ ዓመት	
103	የትምህርት ሁኔታሽ?	1. ያልተማረ /ማንበብና መፃፍ የማይችል 2. ማንበብና መፃፍ ብቻ የሚችል 3. ዓንደኛ ደረጃ /1-8 ክፍል/ 4. ሁለተኛ ደረጃና /9-12 ክፍል 5. ዲፕሎማ እ ና ከዚያ በላይ	
104	አሁን ምን ዓይነት ስራ ነው የሚሰሩት?	1. የቤት እመቤት 2. የመንግስት ሰራተኛ 3. የግል ተቀጣሪ 4. ተማሪ 5.የቀን ሰራተኛ 6. ሌላ ካለ/ይገለፅ______	
105	የጋብቻ ሁኔታሽ እንዴት ነው?	1. ያገባች 2. ያላገባች 3. የፈታች 4. በሞት የተለየ	መልሰ አይደለም ከሆነ ወደ 108 ጥያቄ እለፍ
106	የባለቤትሽ የትምህርት ደረጃ ?	1. ያልተማረ /ማንበብና መፃፍ የማይችል/ 2. ያልተማረ /ማንበብና መፃፍ የሚችል/ 3. እንደኛ ደረጃ /1-8 ክፍል	

		4. ሁለተኛ ደረጃና /9-12 ክፍል 5. ዲፕሎማ እ ና ከዚያ በላይ	
107	የባለቤትሽ የስራ ሁኔታ?	1. የመንግስት ስራተኛ 2. የግል ተቀጥሮ የሚስራ 3. የራሱን የሚስራ 4. ተማሪ 5. የቀን ስራተኛ 6. ሌላ ካለ/ይገለፅ______	
108	የቤተሰብሽ ወርሃዊ ገቢ ምን ያህል ነው?	በወር_________ የኢት.ብር	
ክፍል ሁለት: የእናትየዋ የወሊድ ሁኔታ			
201	የአሁኑን ፅንስ በመጨመር እስከ አሁን ስንት ጊዜ አርግዘሻል?	1 _______	መልሰ አንድ ከሆነ ወደ 301 ጥያቄ እለፍ
202	ስንት ልጆች አሉሽ?	1. በሕይወት ያለ ብዛት________ 2. ከተወለደ በኋሊ የሞቱ ብዛት_____ 3. ሞተው የተወለደ ብዛት_______	
203	ከዚህ በፊት ውርጃ አጋጥሞሽ ያውቃል?	1. አዎ 2. የለም	
204	በወሊድ ላይ ችግር አጋጥሞሻል (የሚቀርበው ወልደት)?	1. አዎ 2. የለም	
205	ከዚህ በፊት በቀዶ ጥገና ሕክምና ወልደሽ ታውቂያለሽ?	1. አዎ 2. የለም	
ክፍል ሶስት ፤ የአሁን እርግዝና መረጃዎች			
301	ማርገዝዎን በምን ነበር ያወቁሸዉ?	1. የወር አበባዬ መምጣት ከነበረበት በአንድ ወር በመዘግየቱ 2. የወር አበባዬ መምጣት ከነበረበት በሁለት ወራት በመዘግየቱ 3. የወር አበባዬ መምጣት ከነበረበት በሶስት ወራት እናት ከዚያ በላይ በመዘግየቱ 4. የሰውነት ለውጥ በራሴ ላይ ስላየሁኝ 5. ማቅለሽለሽ እና የመሳሰሉት ምልክቶች በማየቴ 6. የሽንት ምርመራ በማድረግ	

		7. ሌላ ካለ/ይገለፅ_______	
302	በዚህኛው እርግዝና የቅድመ ወሊድ አገሌግሎት ለስንት ያህል ጊዜ አግኝተሻል?	1. ይህ የመጀመሪያዬ ነው 2. ለሁለትኛ ጊዜ 3. ለሶስተኛ ጊዜ 4. ለአራተኛ ጊዜ 5. ከአራት ጊዜ በላይ	
303	ይህ እርግዝናሽ የታቀደ እርግዝና ነበር?	1. አዎ 2. አይደለም	መልሰ አይደለም ከሆነ ወደ 305 ጥያቄ እለፍ
304	ይህ እርግዝና የታቀደ ከሆነ እቅዱ ባለቤትሽን አካተሻል?	1. አዎ 2. አይደለም	
305	ይህ እርግዝናሽ ያለ እቅድ ከሆነ ከተረገዘ በኋላ ትፈልጊዉ ነበር?	1. አዎ 2. አይደለም	
306	ይህ እርግዝናሽ ያለዕቅድ ከሆነ ከተረገዘ በኋላ በባለቤትሽ ይፈለግ ነበር?	1. አዎ 2. አይደለም	
307	በዚህኛው እርግዝና ላይ ችግር አጋጥሞሻል?	1. አዎን 2. የለም	
308	ቅድመ ወሊድ አገልግሎት ሳይጀምሩ በፊት ወደዚህ እንዲመጡ የመከረሽ ሰው ነበር?	1. አዎን 2. የለም	መልሰ አንድ ከሆነ ወደ 310 ጥያቄ እለፍ
309	ዓዎ ከሆነ የቅድመ ወሊድ /ነፍሰ ጡር/ ምርመራ አገልግሎት አስፈላጊነት ተመክረሽ ከሆነ ምክሩን የሰጠሽ ማነው?	1. የህብረተሰብ ጤና ሰራተኛ 2. ባለቤትሽ 3. እናትሽ 4.እህትሽ 5. ጓደኛሽ 6. ሌላ ካለ/ይገለፅ__________	
310	በዚህኛው እርግዝና የቅድመ ወሊድ አገሌግልት መቸ ነበር የጀመርሽዉ?	1. የወር አበባዬ ከቀረ ከ_______ወር በኋሊ 2. ጊዜውን በእርግጠኝነት አላውቅም	
311	በዚህ ጊዜ ምርመራ አድርጎ ክትትልን ለመጀመር ለምን ነበር የወሰንሽዉ?	1. ትክክለኛ ጊዜው እንደሆነ ስለመሰለኝ 2. ገንዘብ ስላገኘው	

		3. ምቹ ጊዜ ስላልሆነልኝ 4. ቀጠሮ ዛሬ ስለተሰጠኝ 5. ሌላ ካለ/ይገለፅ________________	
312	የቅድመ ወሊድ የእናቶች ክትትልን የጀመርሽው ከ16ኛው ሳምንት በኋላ ነው ?	1. አዎን 2. አይደለም	መልሰ አይደለም ከሆነ ወደ ጥያቄ 401 ይለፉ
313	ለጥያቂ ቁጥር 406 መልሰ አዎን ከሆነ ዘግይተው ከ16ኛው ሳምንት በኋላ የመጣሽበት ምክንያት ምንድነው ?	1. ተገበው ጊዜው መሆኑን ስለተረዳው 2. የጤና ዕክል ስላላጋጠመኝ 3. ክትትል ለማድረግ ወደ ጤና ተቐም ለሙኄድ ጊዜ ስላጣሁ 4. ጤና ተቐሙ ከቤቴ ርቀት ስላለው 5.. አገልግሎቱን ለማግኘት ብዙ ሰዓት ያስጠብቀኛል ብየ ስለማስብ 6. ባለቤቴ ስለማይስማማ/ስለሚቃወመኝ 7. ባለሞያዎችን ስለማልወዳቸው 8. ቅድመ ወሊድ ክትትል ጥቅም ስለሌለው 9. ሌላ ካለ/ይገለፅ________________	
ክፍል አራት፤ ቅድመ ወሊድ ክትትል እውቀትን የሚመለከት			
401	ቅድመ ወሊድ ምርመራ ለጤንነትሽ አስፈሊጊ ነው?	1. አዎን 2. አይደለም	
402	የቅድመ ወሊድ ምርመራው በማህፀን ላለው ልጅ አስፈሊጊነ ነው?	1. አዎን 2. አይደለም	
403	የወር አበባዋ ከቆመ ከስንት ጊዜ በኋሊ የነፍስ-ጡር ክትትሌ ብትጀምር ጥሩ ነዉ ይሊለ?	__________ሳምንት	

404	ነፍሰጡር እናት የቅድመ ወሊድ አገልግሎት.ከአራት ጊዜ በላይ ብታገኝ ጥሩ ነው ብለሽ ትገምቻለሽ?	1.አዎን 2. አይደለም	
405	በእርግዝና ወቅት የሚከሰቱ የአደጋ ምልክቶችን ያውቃሉ ?	3. አዎን 4. አላውቅም	መልሰ አላውቅም ከሆነ ወደ ጥያቂ ቁጥር 501 ይለፉ
406	ለጥያቄ ቁጥር 408 መልሰ አዎን ከሆነ እባክሽ የተወሰኑትን ግለጭልኝ ?	1. ተከታታይ የሆነ ትውከት 2. ተከታታይ ራስምታት 3. የፊትና የእግር ማበጥ 4. የማህጸን በር መድማት 5. ከፍተኛ የሆነ ድካም 6. የሽሎ እንቅስቃሴ መቀነስ 7. ከአንድ በላይ እርግዝና 8. ሌላካለ/ይገለፅ___________________	
ክፍል አምስት፤ ከእርግዝና ጋር በተገናኘ ያጋጠማቸው ህመምና ግንዛቤ			
501	የቅድመ ወሊድ/የነፍሰ ጡር ምርመራ ተከታትለሽ ታዉቂያለሽ ከዚህ በፍት ?	1. አዎን 2.አላውቅም	መልሰ ከሆነ አላውቅምወደ 502 ጥያቄ እለፍ
502	በእርግዝናዎ ወቅት ያጋጠሞት ችግር አለ?	1.አዎን 2. የለም 3. አላስታውስም	መልሰ 2 እና 3 ከሆነ ወደ ጥያቄ ቁጥር 504ይለፉ
503	ለጥያቄ ቁጥር 502 መልሰ አዎን ከሆነ እባኮ ያጋጠመሽን ችግር ግለጭልኝ?	1. ተከታታይ የሆነ ትውከት 2. ተከታታይ ራስምታት 3. የፊትና የእግር ማበጥ 4. የማህጽን በር መድማት 5. ከፍተኛ የሆነ ድካም 6. የሽሎ እንቅስቃሴ መቀነስ 7. ሌላ ካለ/ይገለፅ_______________	

504	በዚሕኛው እርግዝና የመጀመሪያ ክትትል ከማድረግሽ በፊት ያጋጠመሽ ችግር አለ?	1. አለ 2. የለም	መልሶ የለም ከሆነ ወደ ጥያቄ ቁጥር 506 ይለፉ
505	ለጥያቄ ቁጥር 504 መልሶ አዎን ከሆነ እባኮ ያጋጠሞትን ችግር ይግለጹልኝ?	1. ተከታታይ የሆነ ትውከት 2. ተከታታይ ራስምታት 3. የፊትና የእግር ማበጥ 4. የማህጽን በር መድማት 5. ከፍተኛ የሆነ ድካም 6. የጽንሱ እንቅስቃሴ መቀነስ 7. ሌላ ካለ/ይገለፅ______:	
506	ከእርግዝና ጋር በተገናኘ የሚከስቱ ችግሮች ባለቤትሽ ያሳስበዋል?	1.አዎን 2.አያሳስበውም	
ክፍል 6፤ አጠቃላይ ጤና አገልግሎትን በተመለከተ			
601	በዚህ ጤና ተቋም ውስጥ የቅድመ ወሊድ ክትትል በስራ ስዓት ሙሉ አገልግሎቱ ይስጣል ብለሽ ታስቢያለሽ ?	1.አዎን 2. አይሰጥም 3.አላዉቅም	
602	ከቤትሽ እስከ ጤና ተቓም ያለውን ርቀት እንዴት ታይዋለሽ ?	1. በጣም ቅርብ 2. መካከለኛ 3. በጣም ሩቅ	
603	ወደዚህ ጤና ተቋም ለመድረስና ለመመለስ የከፈሉት የገንዘብ መጠን በብር?	1.ምንም አልከፈልኩም 2.የከፈሉ ከሆነ የገንዘብ መጠን ብር-----	
604	ክትትል ለመጨረስ ግፋ ቢል ምን ያህል ሰዓት ወሰደብሽ?	1. ከ2 ሰዓት በታች 2. ከ2 እስከ 3 ሰዓት 3. ከ4 ሰዓት በላይ	
605	የቅድመ ወሊድ ክትትል በያደርጉበት ጊዜ በጤና ባለሞያዎች በሚደረግልሽ ህክምና ደስተኛ ነሽ?	1. አዎን 2. አይደለሁም	
606	ወደዚህ ጤና ተቋም ለቅድመ ወሊድ ክትትል ትመለሻለሽ?	1.አዎን 2.አልመለስም 3. አላውቅም	
607	ለነፍሰ ጡር ቅድመ ወሊድ ምርመራ የከፈለሽዉ ገንዘብ ነበር?	1. አዎን 2. የለም	መልሶ የለም ከሆነ ወደ ጥያቄ ቁጥር 609ይለፉ
608	ለጥያቄ 607, መልሶ አዎን ከሆነ ለምን ጉዳይ ነበር የከፈሉት?	1. ለመታየትና ለካርድ 2. ለላበራቶሪ 3. ለአሌትራሳውንድ 4. ለመድሃኒት መግዣ	

		5. ሌላ ካለ/ይገለጽ________		
609	ለቅድመ ወሊድ ክትትል የምትከፍይውን ገንዘብ እንዴት ትገልጭዋለሽ ?	1. ትንሽ ነው 2. መካከለኛ ነው 3. በጣም ብዙ ነው		
610	የሚከተሉትን የአገልግሎት አሰጣጥ በእራስሽ የእርካታ መጠን ግለጭዉ?	1.የባለሞያዎች አቀራረብ	1. በጣም ረክቻለሁ **2.** ረክቻለሁ **3.** መካከለኛ ነኝ **4.** አልረካሁም **5.** በጣም አልረካሁም	
		2.የላበራቶሪ ምርመራ	1. በጣም ረክቻለሁ 2. ረክቻለሁ 3. መካከለኛ ነኝ 4. አልረካሁም 5. በጣም አልረካሁም	
		3.ምርመራውየሚ ፈጀው ጊዜ	1. በጣም ረክቻለሁ 2. ረክቻለሁ 3. መካከለኛ ነኝ 4. አልረካሁም 5. በጣም አልረካሁም	
		4.ገመና አጠባበቅ	1. በጣም ረክቻለሁ 2. ረክቻለሁ 3. መካከለኛ ነኝ 4. አልረካሁም 5. በጣም አልረካሁም	

ጊዜዎን ሰዉተው ለሰጡኝ መረጃ ከልብ እያመሰገንኩኝ በጥናቱ ላይ ግሌፅ ያልሆነልዎ ነገር ካለ ሊጠይቁኝ ይችላሉ፡፡

____

የአማረኛው ትርጉም የኳሊቴቲፍ መጠይቅ

ክፍል አንድ፤ አንድ: ለአንድ: የሚደረግ :መጠይቅ ለነፍሰጡ:እናት::

ስምምነታቸውን: ካገኝን :በኋላ :መቅረጸ -ድምጽን እና;በራዋለ ፡፡ ነግግራችንን: ተስታፊዋን ;ለፈቃደኝነቷ በማመስገን; እንጀምራን፡፡

የቃለ ምልልሱ ቁጥር : ________

የተሳታፍዋ መለያ ቁጥር : ________

ቃለምልልሱን ያካሃደዉ ሰው :________

ኮድ: ________

የቃለ ምልልሱ ቀ ን : ________

1. **እሺ: አሁን :ስለአንቺ እና ስለ :አሁኑ: እርግዝናሽ: እንወያያለን::**
   - እድማሽ ስንት ነ ዉ?
   - ስራሽ ምንድን ነዉ/የገቢ ምንጭሽ ምን ድነ ዉ ?
   - ትምህርት አስከ ስንት ተምረ ሻ ል ?
   - አግብተሻል ?
   - በጠቅላላ; ስንት;እርግዝና; ነበረሽ ?
   - ስንት; በሂወት;ያሉው ልጆች;አሉሽ ?
2. መፀነስሽን:ስታዊቂ:ለመጀመሪያ:ጊዜ:የተሰማሽ:ስሜት:ምን:ዓይነት:ነበር?

   አብራራ/ሪ
   - ምን :አይነት :ስሜት/ሁኔታ?
   - የበለጠ: መፀነስሽን :ያረጋገጥሽው :ምን :ዓይነት :ምልክቶችን :በራስሽ : ላይ: ስታይ :ነው?
   - ስለፅንሱ: ከቤተሰቦችሽ: ጋር ተወያይተሻል?
   - ቅድመ ወሊድ አገልግሎት ሳይጀምሪ በፊት ወደዚህ እንዲመጡ የመከረሽ ሰው ነበር? በውሳው የተሳተፈ ነበረ?
3. መፀነስሽን: ካረጋገጥሽ: በኋላ :ሐኪም/ጤና :ባለሞያ :ጋር :እስክትሄጂ :ድረስ : ምን: ያህል :ጊዜ ነው :የቆየሽው? (የቅዱመ: ወሊድ : አገልግሎት :ሳትጀምሪ)
4. ለመታየት: የቆየሽበት :ነገር : ምንድነው መፀነስሽን:ካረጋገጥሽ: በኋላ?
5. አንድ: ነፍሰጡር: እናት :ምንም: ዓይነት :ችግር :ባይገጥማትም : ሐኪም /የጤና: ባለሞያን ማማከር :ይጠበቅባታል :ብለሽ :ታስቢያለሽ?ለምን? እንዴት?

6. እርዳታ:ያደርጉልሽ:ዘንዴ:በእርግዝናሽ:ጊዜ:ሰው:ከጎንሽ:አለሽ:ወይ?

   አብራራ/ሪ

   ➢ ከእነዚህ :ሰዎች :መካከል :በቀጠሮሽ :ቀን :የቅድመ : ወሊድ :አገልግሎትን :እንድታገኚ የሚረዱሽ: ይኖራለን?

7. በሆስፒታል / በጤና ጣቢያ መታየት ችግር አጋጥሞዎታል?

መደ ምደ ሚያ

በእኔ; በኩል ;ያለኝ ;ጥያቄ; ይሄ ;ነው፡ ፡ በቆይታችን ;በጣም ;ደስተኛነኝ ፡ ፡ የምትጨምሪው ;ነገርካ; ለመቅ ረ ጰ -ድምጹን ከማጥፋቴ ;በፊት ;እድሉን ;ልስጥሽ ፡ ፡

ስለ;ነበረን;ቆይታ ;እጅግ አድርጌ;አመሰግናለሁ!

ክፍል ሁለት ፤ ለጤና፡ ባለሞያዎች፡ የተዘጋጀ ፡መጠይቅ፡፡

ስምምነታቸውን፡ ካገኘን ፡በኋላ ፡መቅረጸ -ድምጽን እና በራዋለ ንነግግራችንን፡ ተስታፊን;ለፈቃደኝነቷ ቱ/በማመስገን እንጀምራን ፡፡

የቃለምልልሱ ቁጥር : ________ የተሳታፍ መለያ ቁጥር : ________

ቃለ ምልልሱን ያካሃደዉ ሰው ስም:________ ኮድ: ________ የቃለ ምልልሱ ቀን : ________

1. እስቲ ስለራስሽ/ስለራስ ንገረ? እድሜ________የስራ ልምዶ ፡ ________ የተመረቁበት ሞያ ________ የሚስሩበት የጤና ተቋም፡ ________________________
2. የቅድመ ወሊድ እንክብካቤ ምንድን ነው እና ለምን አስፈላጊ ነው?
3. ስለ ነፍሰጡር ክትትል ስልጠና ወስደሻል/ወስደሀል
4. ለቅድመ ፡ወሊድ ፡ክትትል ዘግይተው : ስለሚመጡት ፡እናቶች ፡ያሎትን : ልምድ ቢያብራሩልኝ ?
5. አንዳንድ፡ ነፍሰ ፡ጡር እናቶች : ለቅድመ ፡ወሊድ ፡ክትትል፡ዘግይተው : የማይመጡት ፡ለምንድነው ? ያብራሩት ➢ ምክንያታቸው ምንድነው ዘግይተው የሚመጡበት ምን ይመስሎታል ?
6. እናቶች ወደ ቅድመ ወሊድ የጤና ክትትል በጊዜ እንዲገቡ የሚመክሯቸው በታዎች የት ናቸው ?

መደምደሚያ

በእኔ;በኩል ያለኝ;ጥያቄ;ይሄ;ነው፡ ፡ በቆይታችን;በጣም; ደስተኛነኝ ፡ ፡ የምትጨምሪው; ነገር;ካለ ;መቅረ ጸ -ድምጹን ከማጥፋቴ; በፊት እድሉን ልስጥ ሽ ፡ ፡

ስለነበረን ቆይታ እጅግ አድርጌ አመሰግናለሁ