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Research Article

Assessment of Antenatal Care Service Client Satisfaction and Related Factors for Expectant Women at the Health Center in Lideta Sub City, Adis Ababa, Ethiopia

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Abstract

Background: Antenatal care (ANC) may be defined as the treatment given to pregnant women and teenage daughters by knowledgeable fitness professionals in order to ensure the optimal prenatal fitness conditions for both mother and child. The components of ANC include risk assessment, prevention and treatment of conditions related to or contemporaneous with pregnancy, strength training, and health promotion. ANC lowers maternal and perinatal depression and mortality rates directly by identifying and addressing pregnancy-related confusions, and indirectly by identifying mothers and adolescents who are more likely to experience confusions during labor and delivery, thereby guaranteeing a standard of comparison to an appropriate level of care. Moreover, ANC provides a major chance to prevent and control concomitant diseases through assisted childbirth, as indirect causes of maternal morbidity and deaths, including HIV and illness infections, contribute to approximately 25% of maternal deaths and near-misses. *Objective*: to evaluate pregnant women's satisfaction with prenatal care and related characteristics in public health facilities in Lideta subcity, Ethiopia. *Method*: From June 23 to June 30, 2025, a quantitative institution-based cross-sectional investigation was carried out. A rigorous random sampling procedure was used to choose 365 study participants in total. Questionnaires from pre-tested structured interviews were used to gather data. SPSS version 24 was used to evaluate the data after it was entered into a Google Sheet. To determine the variables linked to customer satisfaction with prenatal care, descriptive statistics, bivariate analysis, and multivariable logistic regression analyses were used. *Findings*: Overall, 169 pregnant women (51.5%) expressed satisfaction with the ANC service. According to the results of the multivariate analysis, pregnant women who were satisfied with ANC services were less likely than their respective referents to be illiterate, have a primary education (AOR=0.226, 95%CI: 0. 072, 0. 713) and have attended tertiary education (AOR=0.304, 95%CI: 0. 104, 0. 892), be less than 30 minutes away from home (AOR=0.0933, 95%CI: 0. 03, 0. 285), and have a waiting time of less than 30 minutes. *In summary*, over 50% of expectant mothers expressed satisfaction with ANC services. Additionally, this study identified waiting times, education, and the distance between health facilities and homes as predictors of satisfaction. Health facilities are advised to consider the opinions of mothers in order to enhance the quality of ANC services.

Keywords

Lideta Sub-city, Antenatal Care, Client Satisfaction

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1. Background

As part of the maternity care continuum, antenatal care (ANC) is a medical service given to expectant mothers. ANC is defined by the WHO as the treatment given to pregnant women and adolescent girls by qualified medical experts in order to guarantee the greatest possible health outcomes for both the mother and the unborn child throughout pregnancy. Risk assessment, prevention and treatment of pregnancy-related or coexisting conditions, health promotion, and health education are the elements of ANC. It also offers a chance for the integration of reproductive health services. Another crucial ANC strategy to reduce avoidable maternal and perinatal mortality and morbidity is making appropriate preparations for emergencies and delivery [1].

An estimated one million lives will be lost and maternal health and well-being will be burdened if the world doesn't meet the Sustainable Development Goals (SDG) objective at the current rate of advancement. Furthermore, half of the predicted 2 million stillbirths that occurred in 2019 occurred during labor and delivery, called intrapartum stillbirths. Pregnant mothers and their unborn children are significantly impacted by the deaths and impairments that occur during pregnancy and childbirth. Significant differences in the equitable provision of crucial maternal and perinatal health interventions and client satisfaction continue to be obstacles in many contexts, despite the fact that many nations have achieved notable progress [2].

Between 2000 and 2017, maternal mortality decreased by about 38% worldwide. One However, an estimated 810 women still lose their lives to pregnancy and delivery problems every day, with low- and middle-income nations accounting for the majority of these deaths. Many more women experience morbidity, impairments, and long-term illness for every woman who passes away from pregnancy-related reasons. By 2030, the worldwide maternal mortality ratio (MMR) should be less than 70 per 100,000 live births, and no nation should have an MMR higher than 140 per 100,000 live births, according to Sustainable Development Goal (SDG) 1 [2]. Ethiopia adopted the 2016 WHO model of eight contacts to reduce maternal and perinatal mortality and morbidities (1). Ethiopia has one of the worst rates of maternal mortality (401/100,000 live births) and neonatal mortality (33/1000 live births) in the world [1].

Every pregnant woman and newborn should receive high-quality care during their pregnancy, delivery, and postpartum period, according to the World Health Organization's (WHO) vision. Antenatal care (ANC) offers a platform for critical health-care tasks, such as illness prevention, screening and diagnosis, and health promotion, within the reproductive health care continuum. It has been demonstrated that ANC can save lives when proper and timely evidence-based approaches are used. Importantly, ANC also offers the chance to interact with and assist women, families, and communities during a pivotal period in a woman's life. The process of creating these ANC recommendations has brought to light the significance of respectfully offering pregnant women social, cultural, emotional, and psychological support as well as effective communication regarding physiological, biomedical, behavioral, and sociocultural issues. In addition to saving lives, these ANC support and communication roles are essential for enhancing patient outcomes, health care usage, and care quality. Good prenatal care and delivery experiences can lay the groundwork for a healthy motherhood [3]. Little is known about mothers' satisfaction in Ethiopia, despite the fact that it is thought to be essential to ensuring that all expecting mothers have access to appropriate prenatal care services [4]. Prenatal care's primary goals are to prevent, alleviate, treat, or manage health issues or diseases (including those directly related to pregnancy) that are known to have a negative impact on pregnancy and to give women and their families/partners the right information and guidance for a healthy pregnancy, childbirth, and postnatal recovery, including care for the newborn, encouragement of early exclusive breastfeeding, and support in making decisions about future pregnancies in order to improve pregnancy outcomes [5].

Evaluations of excellent care frequently include the measurement of client satisfaction. It is an entirely subjective evaluation of the standard of medical care [6]. Preventable pregnancy-related maternal illnesses and deaths continued to rise during the start of the sustainable development goal [7]. In addition to contributing to poor pregnancy outcomes and infant health, the increase in maternal deaths would result in the failure to meet the broad public health goals of enhanced women's health [8]. High-quality antenatal care (ANC) can lower maternal and newborn morbidity and death as well as stillbirths by preventing, identifying, and treating pregnancy problems or preexisting illnesses [9-11].

Inadequate coverage and quality of ANC services have been associated with poor pregnancy outcomes. Lower maternal mortality and morbidity are predicted by the quality of prenatal care services [12, 13]. An estimated 289 000 maternal deaths occurred worldwide in 2013 (MMR of 210 maternal deaths per 100 000 live births). 62% of maternal deaths occur in sub-Saharan Africa alone, and 99% of deaths occur in underdeveloped nations. Women who do not receive professional care prior to, during, or following childbirth have higher rates of maternal mortality [14-16]. Prenatal care (ANC) is not particularly effective in lowering maternal mortality on its own, but it does open the door for interventions that allow medical professionals to identify these dangerous conditions and refer them for early management, which improves maternal outcomes [17-19].

User satisfaction levels are highly relevant signals because they reflect clients' perceptions of the standards attained, their assessments of the "goodness" of care, and the success of providers in meeting client values and expectations, even though there is much disagreement about how quality of care

should be measured [21, 22].

However, a 2009 study conducted on ten health centers in Addis Ababa to evaluate the quality of prenatal treatment based on the facility, competency, and degree of satisfaction of the care provider revealed that overall client satisfaction with prenatal care was as high as 89% [17]. The study covered socio demographic and obstetric factors, waiting times, satisfaction levels, and an evaluation of the quality of amenities. The desire to register at the same institution for the subsequent pregnancy was the only significant correlation with client satisfaction [18]. Women who had trouble understanding what a doctor or midwife was saying were less satisfied with prenatal care than women who did not have such problems. This study found that language and ethnic diversity were not connected with satisfaction levels [19].

Eighty-one percent of participants expressed satisfaction with the services. Overall satisfaction was rated as "Excellent" by 59% of respondents. "Very good" satisfaction levels were indicated by the remaining participants. The main reasons for discontent are lengthy wait times, subpar lab services, and language barriers [11]. According to a different research done in Malaysia in 2005, 56.7% of respondents were pleased with the service they received, while 43.3% were not [12]. MHC services revealed that 57.8% of respondents were happy with the service center's amenities and 76.6% of respondents were very satisfied with the provider support [14].

Additionally, a few researches on the development of counters were recorded. For instance, the majority of respondents (31.1%) waited between 31 and 60 minutes, 30.1% waited between 91 and 120 minutes, and 29.8% waited 30 minutes or less before receiving care at the various health centers, according to a study that sought to determine women's satisfaction with antenatal care services at primary health centers in Mushin, Lagos, Nigeria [15].

Egyptian women's contentment and impression of ANC services, a 2012 study on Shawa Village, Egypt, shows that waiting times, test results, center cleanliness, and privacy are all highly satisfactory (>90%) [16]. However, a 2009 study by Workinesh Sinishaw on ten health centers in Addis Ababa to evaluate the quality of prenatal treatment based on the facility, skill, and degree of satisfaction of the care provider revealed that overall client satisfaction in prenatal care was as high as 89% [17].

The willingness to register at the same facility for the following pregnancy was the only significant correlation found in a study on women's perceptions and satisfaction with the quality of ANC services at University College Nigeria. Its conclusions have implications for research findings, recommendations, and practice [18]. Language and ethnic diversity were not linked to the degree of satisfaction, according to another study on women's satisfaction with the current state of prenatal care for pregnancies complicated by fetal anomalies, which surveyed five academic perinatal units in Ontario. Women who had trouble understanding what a doctor or midwife was saying were less satisfied with prenatal care than women without such difficulties [19].

Additionally, a study on the statues of client satisfaction in governmental health facilities in the Agra District sought to determine the degree of client satisfaction and identify areas of dissatisfaction, including overall time spent by the doctor, the skill of the care provider, and the cost of health services. Conversely, relatively low satisfaction was found regarding the registration process, waiting time, cleanliness, and comfort of the waiting area and examination room [20]. Additionally, the study shows that the quality of prenatal care services and provider-client relationship were highly satisfactory to over two thirds of the clients and slightly less than two thirds of them, respectively [21].

Thus, the study made an effort to characterize how satisfied pregnant women were with the antenatal care services. As a result, the current study investigated pregnant women's satisfaction with prenatal care and related variables in Lideta sub-city's public health facilities.

2. Methodlogy

2.1. Population and Study Area

Lideta Sub City was the site of the study. One of the eleven sub-cities under the Addis Ababa municipal administration is Lideta Sub municipal Administration. According to estimates from the 1999 housing and population census, Lideta Sub City would have 373,326 residents overall in 2017 ETC, with 182,290 men and 190,396 women. There are eight health centers in the Sub City. In 2017, 89% of the subcity was covered by health insurance.

2.2. Study Design and Timeframe

To find out how satisfied clients were with prenatal care and related characteristics, a facility-based cross-sectional study was carried out in Lideta sub-city public health facilities. Data was gathered between June 23 and June 30, 2025.

2.3. Population Under Study

The study included all sampled pregnant women who satisfied the inclusion requirements and were receiving prenatal care services at public health facilities in Lideta sub city.

2.4. Determining the Sample Size

Taking into account the following assumptions, a formula for estimating the fraction of a single population was used to establish the sample size for the quantitative study:

$$n = (Z\alpha/2)2 \times p\ (1-p)/\ d2$$

Where n = Sample size
Zα/2 = Confidence level at 95% = 1.96

P = Proportion of satisfaction of women which is Unknown; Assumption of 50% (p=0.5)

d = margin of error of 5%

n = (Za/2)2 * P (1 – P), n = (1.96)2*0.5(1-0.5) d2 (0.05)2 n=384

Since the number of average expected pregnant women within study period were 8872 (which is less than 10000), correction formula was used as follow:

nf = $\frac{1}{1+n/N}$ is used, where, N = Source population- all estimated pregnant women, nf = Required Sample Size, n=calculated sample size, Hence, the sample size was calculated at total of source population N=8872 and n=384 and nf= 365%, the total sample size was 365 pregnant women.

2.5. Methodology and Process for Sampling

The sampling procedure includes all eight of the sub-city's public health facilities. Selection was carried out using a systematic sampling technique, and the sample size was established proportionately from each of the eight medical facilities. The number of clients in each health institution was ascertained by looking through their annual report, and the proportionate to size allocation technique was used to decide how many participants from each facility would be included in the study. Every four ANC clients were chosen after the first participant was chosen at random using the lottery procedure on the first date.

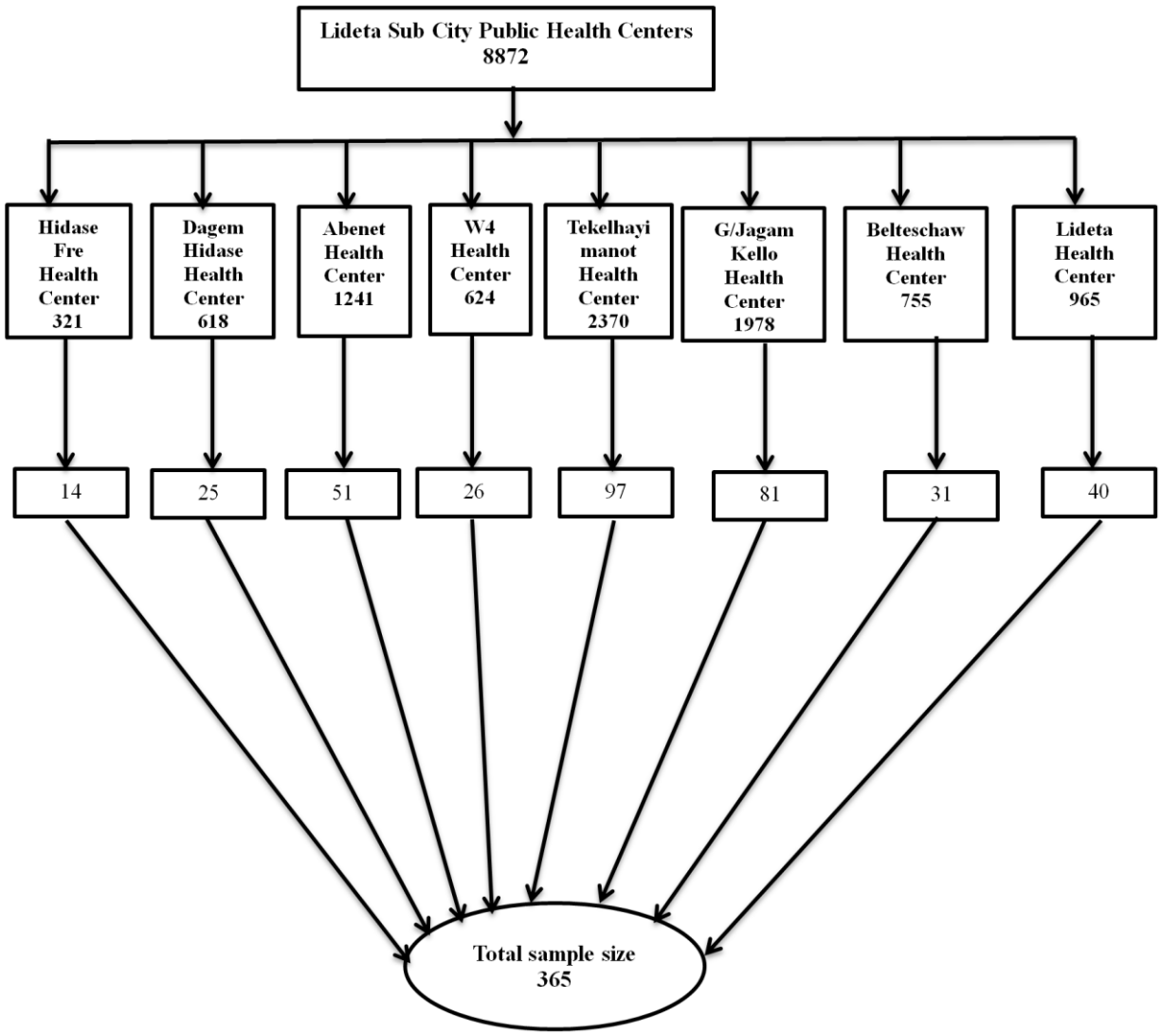

Figure 1. *Proportional allocation of sample size to each of public health facilities in Lideta sub city, Addis Ababa, 2025.*

2.6. Data Gathering Method

Eight medical professionals gathered the data, and two supervisors were chosen. Supervisors were chosen from the sub-city health office, and interviewers were chosen from the health centers and sub-city health office to gather data from the health centers. The interview was performed at the client

exit OPD. A half days training sessions were offered for the interviewers and supervisors on the goal of the research in general and interviewing skills and methodologies.

Data was collected using a structured and standard questionnaire for patient satisfaction studies. The majority of the inquiries were pre-coded. Instrument was finished following necessary adjustments.

2.7. Quality Control of Data

Data collectors received training on how to standardize their interviewing technique and questions, as well as how to be familiar with the research's goal and methodology. Every day, the lead investigators closely monitored the data collector's work in the field, and supervisors accompanied the data collector. The lead investigator examined and verified the questionnaires for completeness, accuracy, and consistency both throughout field data collection and at the conclusion of each day. Corrective actions were then implemented. Questionnaires that were only partially or completely completed were not included in the study. Data cleansing were performed by running frequencies of each variable to verify for accuracy and inconsistencies.

2.8. Definition of Operations

Waiting time: the amount of time customers must wait before receiving service; a small wait time is acceptable if it is less than 30 minutes, and a lengthy wait time is more than 30 minutes [20].

The distance from home to facility: is defined as follows: a walking distance of 5 km or less than 30 minutes is acceptable (accessible); a walking distance of more than 30 minutes is deemed unacceptable (not accessible) or too far from the client's home [20].

Provider related factors: this refers to the respondents' opinions of interpersonal aspects of the degree of privacy, equity, and respect they receive from the service provider.

Facility related factors: these include the respondents' opinions of the hospital's overall cleanliness and waiting times.

Service expectations: regarding the cleanliness of the facility, the availability of medication, and the assistance of the service provider are referred to as service expectations.

Knowledge of clients: describes the client's level of familiarity with prenatal care. Seventeen items were used in all, with one point awarded for a right response and zero for a wrong one, which were then added together.

Client satisfaction on prenatal care: The degree to which the client's expectations were fulfilled in regard to facility and provider-related criteria. The level of client satisfaction was determined by using Likert's scale. All 27 questions were scored from 5 to 1 and individual score was summed up and cut of point was calculated using the demarcation threshold formula. Satisfied responses across all items were averaged and transformed to obtain an overall level of satisfaction. In this study refers to clients who had the overall satisfaction of equal and above the median score (52.5) and dissatisfied who had the overall satisfaction of below the median score (52.5).

2.9. Management and Processing of Data

The lead investigator pre-coded the questions and created a template for data entry prior to gathering all the required data. Data entry and cleanup were done using Google Sheet. Data cleansing were performed by running frequencies of each variable to verify for accuracy and inconsistencies.

Data Analysis

Data analysis was done using SPSS version 24 statically packaged. The univariate analysis such as percentages and frequency distributions were employed for describing data. Bivariate logistic regression analysis was utilized to determine significance of connection between dependent and independent variables. Independent variables with p-value less than 0.05 under 95% CI was considered as having significant connection with dependent variable and were reported using both p-value and odds ratios. All independent variables with p value of less than 0.25 were incorporated in to multivariable logistic regression models to examine their independent association with client satisfaction about antenatal care P-value < 0.05 was accepted as statistical significance in this study.

2.10. Ethical Consideration

Ethical approval was acquired from Management organizations of Lideta Sub city Health Office. Letter of collaboration and support from the Health office coupled with the ethical permission letter was presented to Health Centers. Moreover, participants were informed verbally about the goal and benefit of the study along with their right to reject and consent was gained. Confidentiality of the study participants was assured by employing questionnaire identifying number and privacy by eliminating names and other identifiers during the interview.

3. Result

Findings of the study are provided in seven sections. The first section deals with the univariate analysis on the socio demographic characteristics of the respondents, Section 2 Obstetric characteristics of the respondents, Section 3: Pregnant women's satisfaction on ANC service, Section 4: Accessibility and Service associated factors, Section 5: Knowledge of pregnant women about prenatal care, Section 6: Service expectation and Section 7: The link between independent & dependent variables.

3.1. Features of the Socio-demographic

About 328 consumers, or 90% of the 365 pregnant women

in total, answered the questionnaire. According to the respondents' age distribution, the second group, which consisted of people aged 20 to 29, had the largest percentage (57.9%), followed by the first group, which consisted of people aged 15 to 19, who had 9%, and the third group, which consisted of people aged 30 to 39, who had 40.5%. The fourth group, which consisted of people aged 40 to 49, had 0.6%. In terms of marital status, 305 (93%) were married, 19 (5.8%) were unmarried, and the remaining 4 (1.2%) were divorced. Of the respondents, 6.4% were illiterate, followed by 26.2% who had completed primary school, and 11% and 56.4% who had completed secondary and tertiary education, respectively. The majority of the clients—44.8%—were housewives, followed by private sector workers (28.7%), government workers (17.7%), and students (3.7%) and others (5.2%), respectively (Table 1).

Table 1. *Socio-demographic characteristics of pregnant women attending ANC in Lideta sub city Public health facilities, Addis Ababa, 2025.*

Characteristics	Number (n= 328)	Percent
Age (Years)		
15-19	3	9
20-29	190	57.9
30-39	133	40.5
40-49	2	0.6
Marital Status		
Married	305	93
Single	19	5.8
Divorced	4	1.2
Educational Status		
Illiterate	21	6.4
Primary	86	26.2
Secondary	36	11
Tertiary school	185	56.4
Occupational Status		
Housewife	147	44.8
Private Employee	94	28.7
Government employee	58	17.7
Student	12	3.7
Others, Specify	17	5.2

3.2. The Respondents' Obstetrical Characteristics

The frequency of the client's answers to the obstetric characteristics questions, as shown in percentage and number, was calculated using descriptive statistics. Regarding parity, it was found that 174 respondents (53%) had given birth to more than two children, 64 (19.5%) had never given birth, and 90 (27.2%) had given birth to one kid. The majority of respondents—296 (90.2%)—agreed that their current pregnancy was planned and desired, while the remaining 32 (9.8%) disagreed. When evaluating the client's past abortion history, 100 women (30.5%) had prior abortion history, whereas the remaining 228 women (69.5%) had no prior abortion history. Most respondents (76.2%) reported that this was their second or more visit, while the remaining 78 (23.8%) reported that this was their first visit. 245 (74.7%) of the respondents agreed that they would give birth to their current child at a health center, whereas 75 (22.9%) and 8 (2.4%) said they would give birth at a hospital or private medical facility, respectively. Of the women, 75 (22.9%) gave birth in a hospital. Among the many opinions of women who favored giving birth in a hospital, 47.7% of respondents thought that hospitals were better equipped to manage problems, and 43.1% of respondents agreed (Table 2).

Table 2. *Obstetric characteristics of respondents in in Lideta sub city Public health facilities, Addis Ababa, 2025.*

Characteristics	Number (n= 328)	Percent
Parity		
Zero	64	19.5
One	90	27.4
More than two	174	53
Wanted status of pregnancy		
Wanted	296	90.2
Unwanted	32	9.8

Characteristics	Number (n= 328)	Percent
Abortion		
Yes	100	30.5
No	228	69.5
Number of visit		
First visit	78	23.8
Second or more visit	250	76.2
Where do you plan to deliver your current child?		
Health center	245	74.7
Hospital	75	22.9
Private health facility	8	2.4
If in hospital, why do you choose to deliver in hospital (n=75)		
Hospital can handle complications better	52	47.7
Advised by husband	10	9.2
I got problems during previous childbirth so I had to go to the hospital	47	43.1

3.3. Pregnant Women's Satisfaction Levels with the Various Prenatal Care Service Components

Most respondents (90.2% and 83%, respectively) expressed great satisfaction with the general examination they received from the service provider and the explanation of the ANC follow-up procedures. 95.5% of respondents were satisfied overall with civility. Ninety-three percent of respondents stated that the care provider was helpful, and ninety-three percent indicated that the care provider was polite. These findings suggest that most respondents were satisfied with the courtesy section. While the majority of respondents (92.7%) expressed high satisfaction with the health care provider's responses to their questions, only 41.8% of respondents indicated that the care provider favors one client over another, suggesting that the respondents' satisfaction levels are low. Of the respondents, 92% expressed great satisfaction that the health care provider spent enough time with them, 69.9% expressed satisfaction with the manner in which the health care provider presented themselves to them, and 31.2 percent expressed total dissatisfaction. The majority of respondents, 78.1%, expressed great satisfaction with the explanations of examinations provided by healthcare providers. The majority of respondents (93%), when it came to client privacy, expressed high satisfaction with the care provider's respect for their privacy. Additionally, 87.2% of respondents expressed high satisfaction with the overall cleanliness and appearance of the health facilities' internal compound. The majority of respondents, 79.3%, thought that waiting times for services were acceptable, and 89.3% expressed satisfaction with working hours in the waiting time section (Table 3).

Table 3. *Pregnant Women's satisfaction on ANC service in in Lideta sub city Public health facilities, Addis Ababa, 2025 (n= 328).*

Characteristics	Strongly disagreed	disagreed	Uncertain	agreed	Strongly agreed
Satisfied with the general examination provided by	4 (1.2%)	10 (3%)	18 (5.5%)	174 (53%)	122 (37.2%)
The care provider explains your ANC schedule	7 (2.1%)	7 (2.1%)	13 (4%)	177 (54%)	124 (37.8%)
The instructions by your care provider help you.	6 (1.8%)	9 (2.7%)	17 (5.2%)	176 (53.7%)	120 (36.6%)
Satisfied with explanations about what will be done to you during ANC follow up	6 (1.8%)	15 (4.6%)	35 (10.7%)	156 (47.6%)	116 (35.4%)

Characteristics	Strongly disagreed	disagreed	Uncertain	agreed	Strongly agreed
Overall you are satisfied with your experience with ANC	4 (1.2%)	8 (2.4%)	27 (8.2%)	172 (52.4%)	117 (35.7%)
You feel the courtesy of the care provider	4 (1.2%)	11 (3.4%)	34 (10.4%)	179 (54.6%)	100 (30.5%)
The care provider respects you as a person	4 (1.2%)	9 (2.7%)	10 (3%)	183 (55.8%)	122 (37.2%)
The care provider listens to your inquiries	2 (0.6%)	7 (2.1%)	11 (3.4%)	185 (56.4%)	123 (37.5%)
The care provider listens and answers all your questions	6 (1.8%)	4 (1.2%)	14 (4.3%)	179 (54.6%)	125 (38.1%)
The care provider favors some clients over others	64 (19.5%)	116 (35.4%)	11 (3.4%)	79 (24.1%)	58 (17.7%)
The care provider spends enough time with you	8 (2.4%)	8 (2.4%)	10 (3%)	192 (58.5%)	110 (33.5%)
The care provider presents himself to you (greet you by name)	14 (4.3%)	56 (17.1%)	32 (9.8%)	132 (40.2%)	94 (28.7%)
The care provider provides you clear explanations about the Examinations	12 (3.7%)	27 (8.2%)	33 (10.1%)	158 (48.2%)	98 (29.9%)
The care provider explains things for you in simple and clear manner	11 (3.4%)	12 (3.7%)	38 (11.6%)	161 (49.1%)	106 (32.3%)
Satisfied about answers to your questions	13 (4%)	8 (2.4%)	9 (2.7%)	158 (48.2%)	140 (42.7%)
It is easy to exchange smiles with the care provider	12 (3.7%)	40 (12.2%)	33 (10.1%)	135 (41.2%)	108 (32.9%)
Your privacy was respected during your ANC session	6 (1.8%)	9 (2.7%)	7 (2.1%)	172 (52.4%)	134 (40.9%)
Privacy respected during physical examination	11 (3.4%)	3 (0.9%)	6 (1.8%)	170 (51.8%)	138 (42.1%)
The waiting area is convenient	9 (2.7%)	14 (4.3%)	31 (9.5%)	188 (57.3%)	88 (26.2%)
Satisfied regarding cleanliness of waiting room	8 (2.4%)	15 (4.6%)	19 (5.8%)	199 (60.7%)	87 (26.5%)
Waiting room has enough sitting chair	15 (4.6%)	48 (14.6%)	21(6.4%)	162 (49.4%)	82(25%)
Satisfied regarding cleanliness of examination room	9 (2.7%)	5 (1.5%)	16 (4.9%)	203 (61.9%)	95 (29%)
The waiting area is comfortable	17 (5.2%)	16(4.9%)	34 (10.4%)	175 (53.4%)	86 (26.2%)
You are happy with the time you normally have to wait	15 (4.6%)	28 (8.5%)	25 (7.6%)	167 (50.9%)	93 (28.4%)
You are happy with this distance	11 (3.3%)	16 (4.9%)	29 (8.8%)	180 (54.9%)	92 (28%)
You are happy with the availability of drugs	4 (1.2%)	14 (4.3%)	21 (6.4%)	181 (55.2%)	108 (32.9%)
You are happy with working hours of the facility	9 (2.7%)	10 (3%)	16 (4.9%)	185 (56.4%)	108 (32.9%)

Overall satisfaction with ANC services among pregnant women

The median of the satisfaction questions in this survey revealed that 51.5% of pregnant women were generally satisfied with the ANC service.

Table 4. *The overall Pregnant Women's satisfaction on ANC service in in Lideta sub city Public health facilities, Addis Ababa, 2025 (n= 328).*

Mean	Frequency	Percent
>52.5	169	51.5
<52.5	159	48.5

3.4. Aspects Pertaining to Accessibility and Services

In regards to the cleanliness of the medical facilities, 95.1% of the respondents agreed that they were clean, while 4.9% of the respondents thought so. In the waiting time section, 32.3% of respondents reported that it took them more than 30 minutes to see the doctor, while 67.7% reported that the examination took them less than 30 minutes. While 14.6% of respondents reported taking more than 30 minutes to get to the medical institution, the majority of respondents—85.4%—said they took less than 30 minutes (Table 5).

Table 5. Accessibility and Service related factors in in Lideta sub city Public health facilities, Addis Ababa, 2025 (n= 328).

Characteristics	Number (n= 328)	Percent
Institution Clean		
Yes	312	95.1
No	16	4.9
Waiting time ≤ 30 minuts		
Yes	222	67.7
No	106	32.3
Distance from home ≤ 30 minuts		
Yes	280	85.4
No	48	14.6

3.5. Pregnant Women's Awareness of Prenatal Care

Additionally, clients were questioned regarding their familiarity with the antenatal care services offered by the public health facility. Pregnant women's overall awareness of ANC services in this study was 80.2%, while 19.8% of respondents had knowledge that was below the median, as determined by calculating the median of the knowledge questions (Figure 2).

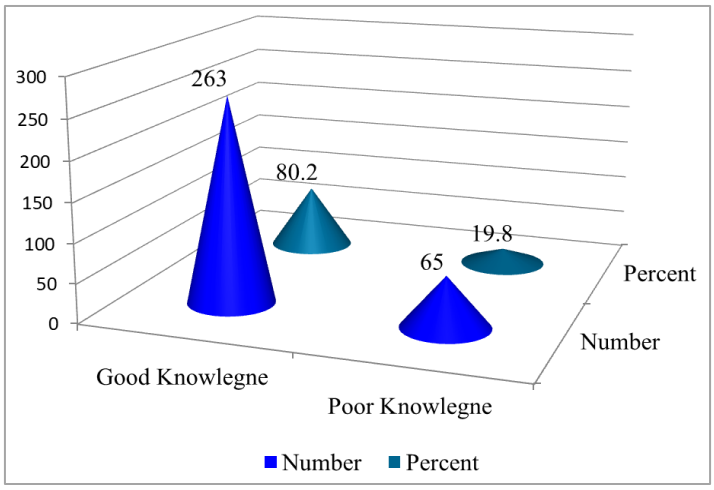

Figure 2. Knowledge of pregnant women on antenatal care in Lideta sub city Public health facilities, Addis Ababa, 2025 (n= 328).

3.6. Client Expectations Prior to Using the Health Service

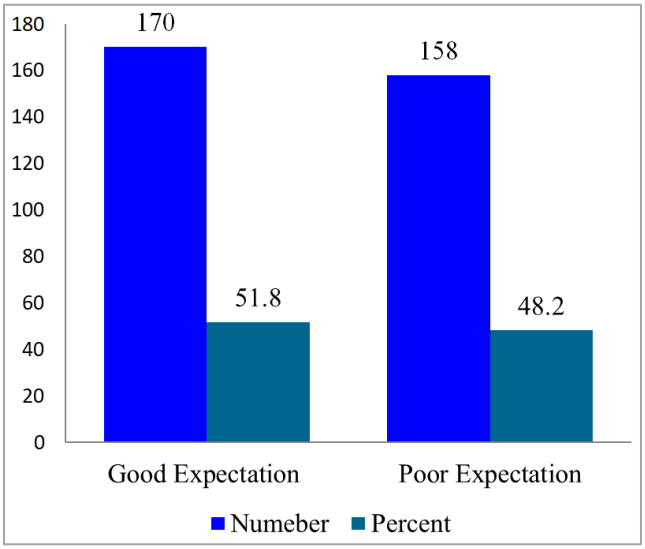

Figure 3. Expectation towards ANC service in Lideta sub city Public health facilities, Addis Ababa, 2025 (n= 328).

Every expectant participant in the study was questioned regarding their expectations for prenatal care. Overall, 158 respondents (48.2%) who responded below the mean score were deemed to have bad expectations, whereas 170 respondents (51.8%) who answered above the mean score were deemed to have good expectations (Figure 3).

3.7. Factors Influencing Pregnant Women's Satisfaction with Prenatal Care

Binary logistic regression was calculated to investigate the various impacts of maternal obstetric features, socio-demographic status, accessibility and service-related factors, and pregnant women's knowledge and service expectations on their satisfaction with ANC services. All independent variables with a p-value of less than 0.25 were incorporated into the model as a result of the multivariate analysis, and all variables with a p-value of less than 0.05 were deemed statistically significant.

According to the results of the multivariate analysis, pregnant women who were satisfied with ANC services were less likely than their respective referents to be: illiterate; to have completed primary education (AOR=0.226, 95% CI: 0.072, 0.713); to have attended tertiary education (AOR=0.304, 95% CI: 0.104, 0.892); to live less than 30 minutes from home (AOR=0.093, 95% CI: 0.03, 0.285); and to have a waiting time of less than 30 minutes (Table 6).

Table 6. *Multivariate analysis to determine factors affecting of satisfaction on antenatal care in Lideta sub city Public health facilities, Addis Ababa, 2025.*

Characteristics	Satisfied	Dissatisfied	AOR (95% C.I)
Marital Status			
Divorced®	2	2	1
Married	160	145	1.221 (0.106, 14.061)
Single	7	12	0.937 (0.068, 12.995)
Educational Status			
Illiterate®	8	13	1
Primary	53	33	0.226 (0.072, 0.713)*
Secondary	17	19	0.38 (0.103, 1.405)
Tertiary school	91	94	0.304 (0.104, 0.892)*
Parity			
Zero®	31	33	1
One	37	53	1.534 (0.690, 3.407)
More than two	101	73	0.806 (0.384, 1.690)
Wanted status of pregnancy			
Planned®	161	135	1
Unplanned	8	24	2.279 (0.786, 6.61)
History of abortion			
No®	127	101	1
Yes	42	58	1.765 (0.986, 3.162)
Where do you plan to deliver your current child?			
Hospital®	30	45	1
Health center	136	109	0.598 (0.303, 1.177)
Private health facility	3	5	1.664 (0.280, 9.881)
Institution Clean			

Characteristics	Satisfied	Dissatisfied	AOR (95% C.I)
No®	4	12	1
Yes	165	147	0.317 (0.083, 1.218)
Waiting time ≤ 30 minuts			
No®	23	83	1
Yes	146	76	0.164 (0.089, 0.300)*
Distance from home ≤ 30 minuts			
No®	4	44	1
Yes	165	115	0.093 (0.03, 0.285)*

4. Discussion

This section's goal is to talk about the study's conclusions. Pregnant women's satisfaction with ANC services at public health facilities and related factors were the main goals of the current study, which also looked at the impact of a few chosen socio demographic and intermediate factors on the outcome variables, such as pregnant women's satisfaction with ANC services.

4.1. Client Satisfaction Level

Eighty-two percent of the clients in this survey expressed satisfaction with the antenatal care services offered in the health institutions, which was lower than the previous study conducted in Sweden [10].

Overall satisfaction in this study was 51.5%, while a comparable study conducted in Oman yielded a result of 81% [11].

This result indicated that the current study was lower than the previous one, which might be attributed to a variety of factors, including the study region, participants, and so forth.

When compared to research carried out in Malaysia, which revealed satisfaction levels ranging from 56.7% to 93%, the current study's level of satisfaction is likewise lower [12, 14].

Similarly, a report from Bangladesh found that 76.6% of respondents were satisfied [13], this significant discrepancy may be caused by the social circumstances and population under observation at the time.

Overall client satisfaction was 98.5% in a similar study conducted in Nigeria [15] and 90% in another study conducted in Egypt [16]. The study area and study participant may be the reason why the results of this study were lower than those of the new study.

Overall satisfaction with ANC services was 89% [15] in this Addis Ababa study, which may be related to study time and other factors.

4.2. Factors Associated with Satisfaction with ANC

According to the bivariate analysis, there was no significant correlation between age and ANC service satisfaction, with the highest levels observed among those aged 20 to 29 when compared to younger and older age groups. Given their experience, the high expectations for ANC services at health facilities are likely the cause of the tapering down of satisfaction with ANC services after the age of thirty.

One important factor influencing pregnant women's satisfaction with ANC services is the mother's educational attainment. According to the study, education significantly predicts ANC service satisfaction (P<0.05). Subsequent investigation revealed that women with only a primary education had lower odds of being satisfied with ANC services (0.226), (95% CI, 0. 072, 0. 713) than women without any education. This could be due to the customer experience, and similar results have been reported in other studies [21, 22].

Clients who waited for less than or equal to 30 minutes in this study reported higher levels of satisfaction than those who waited for more than 30 minutes; however, multivariate analysis revealed a strong correlation between waiting time and satisfaction. This outcome is also consistent with earlier research carried out in the district of Agra [20].

Distance from home was a significant covariate to have satisfaction with ANC services, and its impacts on satisfaction with ANC services were as anticipated. Therefore, the hypothesis that ANC services were less likely to satisfy a distance of less than 30 minutes from home than the referent. This result was consistent with research conducted elsewhere, which found that the distance between a health facility and one's house is a reasonable measure of satisfaction with ANC treatments [20].

Age, marital status, employment, parity, history of abortion, number of visits, cleanliness of the institution, and plan to deliver the current child and expectation were not found to be significant predictors of satisfaction with ANC services (P >

0.05) in this survey. This finding is also consistent with a previous study that was carried out in Gaza [23].

5. Conclusion and Recommendation

5.1. Conclusion

Over 50% of respondents expressed satisfaction with the ANC services provided. Some clients expressed more dissatisfaction with the care provider's mannerisms, his explanations of the examination, the waiting area's comfort, and the waiting duration. Additionally, this study identified waiting times, distance between the health center and home, and educational status as determinants of satisfaction with ANC services.

5.2. Recommendations

The following suggestions are sent in light of the study's findings:

For medical professionals

1) Techniques for obtaining daily consumer feedback ought to be improved.
2) Health care providers should focus on their patients.

For the administrators of the health center

1) Customers frequently have high expectations for the care they will receive from medical professionals. Therefore, both clinical and administrative workers should get appropriate training on civility and the code of behavior.
2) Reducing wait times and maintaining a comfortable and tidy waiting area.
3) Health facilities management authorities can promote empathy among healthcare personnel by offering in-service training to assist them connect more sympathetically with expectant moms.
4) Since these factors might eventually affect how customers use the services offered by the health facilities, efforts must be taken to provide them with the required infrastructure and maintain a high standard of cleanliness.
5) This study also demonstrates that even though clients are extremely satisfied with certain services and performances, the sub-city health office and medical facilities should put in more effort to improve client satisfaction. Effective production requires spending some resources on these customers to identify the true issue.
6) Lastly, additional research should be done, especially using qualitative methods, to improve understanding of the topic and yield more significant findings.

Abbreviations

ANC	Antenatal Care
CI	Confidence Interval
COR	Crude Odd Ratio
HSDP	Health Sector Development Program
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio

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Conflicts of Interest

The authors declare no conflicts of interest.

References

[1] MOH. National Antenatal Care Guideline, Ensuring Positive Pregnancy Experience! 2022; 5–7.

[2] World Health Organization. Strategies toward ending preventable maternal mortality (EPMM). Geneva: World Health Organization; 2015. 2-3.

[3] WHO. WHO recommendations on antenatal care for a positive pregnancy experience, 2016, ISBN 978 92 4 154991: 3–5.

[4] Chemir, Alemseged F W. Satisfaction with focused antenatal care service and associated factors among pregnant women attending focused antenatal care at health centers in Jimma town, Jimma zone, South West Ethiopia; a facility based cross-sectional study triangulated with qualit. BMC Res. 2014; 7: 164.

[5] Abdulraheem IS, Olapipo AR AM. Primary health care services in Nigeria: Critical issues and strategies for enhancing the use by the rural communities. J Public Heal Epidemiol. 2012; 4: 5–13.

[6] Ige OK NC. Areas of dissatisfaction with primary health care service in goverment owend health facilities in a semi urban community in nigeria. J Rural Trop Public Heal. 19. 2010.

[7] AHA. Health services utilization in United states of america. J women's Heal. 2014; 60–73.

[8] H Gage RC, J Hart SH HTA. The measurement of satisfaction practice from a systematic review. 2013.

[9] M. R. Women as consumers of maternity care: measuring "satisfaction" or "dissatisfaction"? J Blackwell Publ J. 2008; 35(1): 73–6.

[10] Hildingsson I RI. Swedish women ' s satisfaction with medical and emotional aspects of antenatal care. J Adv Nurs. 2005; 52(3): 239–49.

[11] Ghobashi M KR. Satisfaction among Expectant Mothers with Antenatal Care Services in the Musandam Region of Oman. Sultan Qaboos Univ Med J. 2008; 8(3): 325–32.

[12] Rizal SDP and AM. Patients' satisfation in antenatal clinic hospital University Kebanggaan Malaysia. 2005; 2005; 91737.

[13] A. H. patient satisfaction with maternal and child health services among mothers attending the maternal and child health traing institute in Dhaka Bangladesh. Mahidol Univ. 2007.

[14] HizlindaT, Teohsy, Sitinurbaiyah Ke, Azrina As, Mohamad Hafizzudin Mt CLN. A Cross-Sectional Study on Patient Satisfaction with Universiti Kebangsaan Malaysia Medical Centre (UKMMC) Primary Care Clinic. J Med Heal. 2012; 7(1): 12–23.

[15] Oo S, Oa A OJ. Three Decades after Alma-Ata: Are Women Satisfied with Antenatal Care Services at Primary Health Centres in Mushin, Lagos. J Med Med Sci Res. 2013; 2(3): 24–9.

[16] Montasser NAE, Helal RM, Megahed WM, Amin SK, Saad AM, Ibrahim TR et al. Egyptian Women ' s Satisfaction and Perception of Antenatal Care. Int J Trop Dis Heal. 2012; 2(2): 145–56.

[17] Sinishaw W. Assessment of quality of antenatal care in public health center of Addis Ababa health centers. Addis Ababa Univ Sch Grad Stud. 2009.

[18] Nwaeze IL, Enabor OO, Oluwasola TAO AC. perception and satisfaction with quality of antenatal care services among pregnant women at the universtiy collage hospital, Ibadan, Nigeria. Ann Ibadan Postgrad Med. 2013; 11(1).

[19] Yang T, Wen SW, Walker MC, Beduz M, Kim PCW, Alert F et al. Women ' s Satisfaction With the Current State of Prenatal Care for Pregnancies Complicated by Fetal Anomalies. A Surv Five Acad Perinat Units Ontario. 2007;

[20] Anand D KSG. a study on status of client satisfaction in patients attending government health facilies in agra district. indian J community Heal. 2012; 24(3).

[21] Elsaba. Women's Satisfaction with the Quality of Antenatal Care at the Primary Health Care Centers in Al-Madinah Al-Menawarh, KSA. Life Sci J. 2012; 9(4): 4291–9.

[22] A J. patient satisfaction towards out patient departement services in pakistan institute of medical sciences, Islambad. Mahidol Univ. 2005.

[23] Hillis JM. Satisfaction with Physiotherapy Services at Al-Shifa Hospital and Al-Wafa Medical Rehabilitation Hospital in Gaza. 2008.