Research Article

Timing and Factors Associated with Timely First Antenatal Care Booking Among Pregnant Women Attending Antenatal Clinics in Addis Ababa Selected Health Centers, Addis Ababa, Ethiopia, 2022

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Abstract

Background: The burden of maternal mortality is the problem of each evolved and growing nations, especially sub-Saharan Africa along with Ethiopia. This is understood because of bad fine of maternal health care offerings. Almost all reasons of maternal demise are preventable, so ANC is the access factor to address the ones reasons of maternal demise in addition to headaches throughout being pregnant. However, early initiation of first ANC goes to is not nicely practiced in Ethiopia consistent with evidences distinctive literatures. Due to this motive many moms died due to being pregnant headaches.

Objective: To assess timing and factors associated with first antenatal care booking among pregnant women attending antenatal clinics in selected health centers, Addis Ababa, Ethiopia, 2021

Methods: Facility primarily based totally Cross-Sectional take a look at layout was carried out from June- July, 2021 to evaluate the timing of first ANC reserving and related Study topics had been decided on through the use of systematic random sampling. Data was gathered through three BSc midwives recruited from different medical institution and supervised through one Ass. Data was gathered through questionnaire and entered onto a pc the use of Epi-data 7 statistical application then exported to SPSS v- 22 for evaluation. Logistic regression version was used to be expecting timing of first ANC reserving and related elements. Lastly, Significant of statistical affiliation was confident or examined the use of 95% self-belief c programming language (CI) and p fee of first antenatal reserving;

Result: All the 334 pregnant women were participated in this study making the response rate of 100%. One hundred fifty-nine (47.6%) of the study participants were in the age group of 25–35 years and the mean age (+ SD) of the participants was 31.39 (+ 6.61) years. Two hundred sixty-one (78.1) of the participants were married.

Regarding respondents' knowledge, 326(97.6%) of the respondents have good knowledge about ANC and the importance of ANC.

Keywords: Factors Associated, Timing of First Antenatal Booking, Pregnancy, Antenatal Care

Introduction

Background

Antenatal Care (ANC) is a kind of care given for women throughout being pregnant and it's far one of the bases of maternal health carrier [1]. The principal desires are Health promoting and sickness prevention, early detection and remedy of headaches and current diseases, delivery preparedness and hardship readiness making [2].

The World Health Organization recommends not less than 4 antenatal visits, comprising interventions consisting of tetanus toxoid vaccination, screening and remedy for infections, and identity of caution symptoms and symptoms Prevention and remedy of any headaches; emergency preparedness; delivery making plans; enjoyable any unmet nutritional, social, emotional and bodily desires of pregnant female; provision of affected person training, along with a hit care and nutrients of the newborn; identity of excessive

threat being pregnant; encouragement of companion (specially male) involvement in antenatal care are the principle goals of antenatal care [3].

The new WHO antenatal care version recommends that first ANC go to have to arise in the first trimester of being pregnant. The first go to gives a possibility to set up baseline records on the overall wellbeing of the mom and the being pregnant. It additionally allows the expectant moms investigate in my opinion the offerings supplied with inside the facility and increase their affect approximately the establishment [3, 4].

Identification of headaches or threat elements for headaches on well-timed goes to allows early initiation of interventions to relieve or mitigate the outcomes of such headaches at the moms and unborn babies [5].

Statement of the Problem
Globally, 10.7 million women have died withinside the 25 years among 1990 and 2015 because of maternal reasons. Over the route of that time, but the sector has made constant development in decreasing maternal mortality [6]. In 2015, a predicted 303,000 women died due to being pregnant and childbirth-associated hardship worldwide. Developing nations accounted for approximately 99% of world maternal deaths, with the maternal mortality ratio (MMR) of 239 according to 100,000 stay births [7]. Despite an obvious worldwide development made during the last and 1/2 of decades, the global MM dropped through approximately 45% in 2015 that is a long way from the decline Moreover, majority of the nations with the best maternal mortality are in sub-Saharan Africa, along with Ethiopia [8]. In EDHS 2016, the maternal mortality ratio in Ethiopia was predicted at 412 deaths according to 100,000 stay births. Most of those deaths arise unpredictably throughout labor, shipping, and the on-the-spot postpartum period [8, 9]. According to EDHS 2011 and 2016 simplest 34% and 62 % of women who gave delivery within side the 5 years previous the survey obtained antenatal care from a professional company respectively one female in each 5 (19%) made 4 or greater antenatal care Many health troubles throughout being pregnant may be prevented, detected and dealt with through educated medical experts throughout antenatal care visits [10]. However, current proof from growing nations along with Ethiopia suggests that few women are seeking for antenatal care at early level in their being pregnant [11]. According to Ethiopia Demographic Health Survey 2011 document simplest eleven% made their first ANC go to earlier than the fourth month of being pregnant [12]. Study in Debra Berhan metropolis, critical Ethiopia discovered that simplest 26.2% of pregnant moms began out ANC go to early within side the advocated time and every other take a look at in Ambo metropolis confirmed that simplest thirteen.2% of the take a look at respondents had been began out ANC well timed within side the first trimester of being pregnant.

Therefore, Timely ANC is usually stated to be an powerful technique of stopping damaging results of being pregnant and over-

due initiation of ANC might also additionally cause undetected or overdue detection of maternal health troubles and in the end unmanaged hardship amongst pregnant women and as a result contributes to So this take a look at supposed to evaluate timing of first antenatal care go to and related elements amongst pregnant women attending ANC health facility in Addis Ababa public health institute, 2021.

Significance of the Study
Every pregnant female is susceptible to being pregnant associated hardship. To limit this threat, pregnant women have to begin first ANC go to early in first trimester in order that they will have sufficient time for crucial analysis and remedy of the but there may be hole in timing of first ANC go to in our county of Ethiopia. EDHS 2011 mentioned that simplest 11% of ANC customer began out first go to within side the advocated time. Some research had been executed in evolved nations however there may be few in our county of Ethiopia.

There is insufficient take a look at carried out in this timing of first ANC go to reserving inside advocated time in Addis Ababa as a long way as my knowledge concerned.

Thus, the end result of the take a look at will make pregnant mom beneficiary from this take a look at extensively utilized as enter for making plans and implementation of fine antenatal care carrier in The end result of take a look at will assist as enter for Health Bureau of Addis Ababa City Administration; show fine of ANC and carrier given through health experts at health centers; for managers, coverage makers at distinctive stage who're involved for and different groups extensively utilized as enter for researchers who will fascinated to do at the identical problem within side the future.

Objective
General Objective
• To assess timing and factors associated with first antenatal care booking among pregnant women attending antenatal clinics in selected health centers, Addis Ababa, Ethiopia, 2022

Specific Objective
• To decide time of first antenatal care amongst pregnant women attending ANC clinics in selected health centers, Addis Ababa, Ethiopia, 2022
• To pick out related elements for timing of first antenatal care amongst pregnant women attending ANC clinics in selected health centers, Addis Ababa, Ethiopia, 2022

Method and Material
Study Area
Kirkos sub-city is one of the 11 sub-cities in Addis Ababa city administration which is located at the center of city; Kazanchis bounded by Arada and Yeka in North, Bole in East, Lideta in West and Nifas Silk Lafto and Bole in South direction. Kirkos Sub-city has a Sub-tropical highland climate which varies from seasons of summer, 9 months to cool months of rainfall, about three months,

with an overall average maximum and minimum temperature of 22.9 and 10.8 degree centigrade, respectively. Kirkos sub-City is located at the center of Addis Ababa with an area of 14.62 km2 and population size of 245, 578; is a densely populated, less than 1/8th area of Akaki Kality, sub-City with an area of 118.08 km2 less population size of 201,216. Kirkos sub-city has 11 Woreda. The sub city has 2 Governmental hospital, 4 private hospital 8 Governmental health centers and 103 private health centers.

According to the Kazachis health center report the health center monthly attends 1050 women's attending the ANC follow up. From my medical enjoy at the same time as I operating with college students throughout medical attachment, I were dealing with troubles related to overdue initiation of first ANC go to. Lot of moms includes distinctive being pregnant headaches at 2nd or 3rd trimester for or her first time. This makes me to elevate questions what are the elements related to overdue initiation of first ANC go to.

Study Layout and Take a Look at Period
Institution mainly based totally cross sectional take a look at layout was used from June 1-July, 2022.

Population
Source Population
All pregnant women attending Addis Ababa public health facilities.

Study Population
Pregnant women who're attending ANC Clinics in Kirkos sub city health centers throughout records series period.

Study Subjects
Individual pregnant women come to Kazanchis and Efoyta health center in Kirkos sub city.

Inclusion and Exclusion Criteria
Inclusion Criteria
• All pregnant women who're attending antenatal care in Kazanchis and Efoyta Health Center that comes to ANC service.

Exclusion Criteria
• Pregnant women who're- not able to pay attention and communicate, significantly unwell and not able to respond.
• Any attendants come to health center considered as exclusion criterion.

Sample Size Determination
Margin of error = 0.05, at 95% self-belief programming language, Margin of blunders is 5%.and 10% nonresponsive rate, the pattern length was calculated through the subsequent components:☐The pattern length was calculated through the use of unmarried populace share components primarily based totally on the subsequent assumptions: Proportion of well-timed ANC go to 1.

Significant stage at n = $(Z\alpha/2)2$ P (1-p) d2 n = (1.96)2 (0.271) (0.729) = 304 (0.05)2

Where: n = the specified Sample length p = occurrence timing of first ANC reserving (27.1% or P=0.271) (31). Z = the fee of the same old ordinary curve rating similar to the given Confidence c programming language 1.96 d = the permissible Margin of blunders (the specified precision) = 5% By including 10% of non-reaction rate, general of 334 pregnant women had been recruited as take a look at devices amongst pregnant women who attended ANC comply with up at fitness centers in Addis Ababa metropolis of non-reaction rate, general of 282 pregnant women had been recruited as take a look at devices amongst pregnant women who attended ANC comply with up at health centers in Addis Ababa metropolis.

Sampling Procedure
In this take a look at, all health establishments which give ANC carrier had been decided on. Based on those, 3 public health establishments, (one sanatorium and health facilities) had been included. The general populace for those health establishments (their common month-to-month ANC flows of preceding, at the least for 2 months is predicted that daily 35 ANC follow up is received through proportionally allocating to those decided on health centers Lastly, topics (pregnant mom) had been taken through systematic Random sampling. Based on evaluation of every medical institution month-to-month load, through systematic random sampling method (i.e., Kth=N / pattern length =>752 /334 ≈ 2 this means that Kth= 2), as a result each 2nd pregnant women who attended first ANC reserving was recruited as take a look at devices in every health center till the full pattern length for this take a Variables of the take a look at.

Variables
Dependent Variable
Timing of first antenatal care go to.

Independent Variables
Socio demographic function of individual (age of mom, marital popularity, career, academic popularity house), preceding use of carrier, parity, expertise on timing of first ANC, month-to-month earnings, distance from health carrier, ready time, value of carrier.

Operational Definition
Timely ANC reserving: reserving first ANC earlier than fourth month of being pregnant).
Lately ANC reserving: reserving first ANC inside fourth to 9th month of being pregnant [1].

Data Series Device
Data was gathered the use of standardized and pretested questionnaires through interviewing pregnant moms. The device was tailored from Safe motherhood and changed from preceding executed researches. It has six parts, that is open to apply and the writer is stated. Data access and Analysis procedure after records series,

the questionnaire will check for completeness and records access was made through.

Data Quality Control
The gathered records were entered in to Epi-data model and exported to Statistical Package for Social Science (SPSS) model 22 for evaluation. A logistic regression was used to pick out the affiliation of the unbiased variables at the structured variable after which multivariate logistic regression was used to govern cofounders and statistically giant institutions in among variables. And additionally descriptive information was implemented to explain suggest and SD. Lastly, Significant of statistical affiliation was confident or examined the use of 95% self-belief c programming language (CI) and p fee [14]. Data series procedure Interview method was used to acquire records with dependent and pretested questionnaire.

Ethical Clearance
Ethical clearance was obtained from Rift Valley University Abichu Campus College of health science department of Public Health IRB (institutional review board) of research committee. The ethical clearance was obtained from Addis Ababa Public Health Research and Emergency Management Directorate. Permission letter was written from Addis Ababa health bureau to the Kirkos health centre for their cooperation and participation. Moreover, a written consent was obtained from the study subjects before interviewing. All respondents have the right to withdraw from the study at any time without any consequences. Confidentiality was assured and no personal details was recorded or produced on any documentation related to the study. No one was obliged to participate unless otherwise agreed to take part.

Result
Socio Demographic Characteristics of Respondents
All the 334 pregnant women were participated in this study making the response rate of 100%. One hundred fifty-nine (47.6%) of the study participants were in the age group of 25–35 years and the mean age (+ SD) of the participants was 31.39 (+ 6.61) years. Two hundred sixty-one (78.1) of the participants were married. Two hundred and twenty-one (66.2%) of the participants were Orthodox in the religion, and 88 (26.3%) were privet employer. Regarding educational status, 184 (55.1%) of the participants took secondary and above education, and the mean monthly income of the respondents was 1814.37 Ethiopian birr.

Respondents' knowledge About ANC and Perception on Timing of ANC
Regarding respondents' knowledge, 326(97.6%) of the respondents have good knowledge about ANC and the importance of ANC. About 105 (31.4%) of the participants perceived ANC timing to be after 4 weeks of gestational age.

Obstetric History, Current and Previous Pregnancy Related Factors of Respondents
Among the total participants, 113 (33.8%) were prim gravid, and 116 (34.7%) were no child. eighteen (5.4%) of the respondents were having a problem in their current pregnancy.

Previous and Current ANC Service Utilization Related Factors of Respondents
Out of the total 334 respondents, 137 (41.0%) pregnant mothers had experienced ANC service utilization in their previous pregnancies and 281(84.3%) of them was experienced Permission from husband to initiate ANC booking the ANC for their first pregnancy. About 250 (74.9%) of them started the ANC in their previous pregnancies after 16 weeks of gestational age.

Discussion
The overall magnitude of timely attendance of ANC was 27.5% (95% CI: 23%-32. This finding was almost similar with the studies done in Benin (24.6%), Tanzania (29%), Uganda (27.9%), Halaba Kulito (27.1%) and Debre birhan (26.2%) [13-17]. Finding of this study is higher compared to studies done in, Zambia (17%), Nigeria (15.4%), Tanzania (12.4%), Ambo (13.2%) and Arba Minch (17.4%) [7, 18-21]. This might be due to the difference in socio-demographic characteristics of respondents, infrastructures and time disparity and due to the more efforts done recently to decrease maternal mortality. This finding was lower as compared to similar studies conducted in Gondar (35.4%) and Mekelle (32.7%) and this might be due to differences in socio-demographic characteristics of study participants, infrastructures and accessibility of health facilities [11, 22]. The mean GA at first ANC booking of this study was 18.49 weeks with a SD of 5.548 (18.49 ± 5.548 weeks) weeks and it was lower compared to the studies conducted in Uganda which were 27.9 weeks, Nigeria (20.86 ± 6.39 weeks), Arba Minch (5 ± 1.5 months), and this might be due to difference in living standards, time variation [15, 19, 21]. It was almost nearly comparable with the studies in Ambo (4.7 months) and Gondar (17.7 ± 7.5 weeks) [7, 11]. In the multivariable analysis, maternal education was found to be significantly associated with timely attendance of ANC; mothers whose educational status was secondary school and above were two times more likely to attend their ANC timely compared to the mothers who took primary school or who had no formal education. This study is similar to the studies conducted in Vietnam, Benin, Uganda, Ambo and Adigrat [6, 7, 13, 23, 24]. This might be due to, educated mothers might be knowledgeable about what is necessary during pregnancy, the importance of ANC and early booking and they might book timely. Maternal level of knowledge was found to be significantly associated with timely beginning of ANC; respondents who had good knowledge about the importance of ANC and early booking were about three times more likely to book timely as compared to those respondents who had poor knowledge about the importance of ANC and early booking. This is equivalent with the study findings in Benin, Zambia, Tanzania, Rwanda, Ambo, Debre brhan, Mekelle and Adigrat in which mothers who lack knowledge about ANC were more likely to book late [6–8, 13, 17, 20, 22, 25]. Unintended pregnancy was also found to be the predictor of late ANC commencement. The likelihood of pregnant women with planned pregnancy to book timely was about three times higher compared to those who have the unplanned pregnancy. This was in line with

the studies conducted in different areas in which mothers with the unplanned pregnancy were more likely to book late; Zambia, Arba Minch, Addis Ababa, Debre brhan and Adigrat [6, 8, 17, 21, 26]. This might be due to: if mothers did not plan to get pregnant, they might not know whether they are pregnant or not timely and they will be late for first ANC booking and also even if they know that they are pregnant early, they might not be interested with the pregnancy, they might be careless for that pregnancy and they fail to book timely.

This study also showed advice from significant others to be a significant factor for timing of ANC booking; those respondents who were informed to start ANC were about twice more likely to book timely than those who were not informed and it is in line with the studies done in Arba Minch, Addis Ababa and Gondar in which the participants who were not advised to start ANC before they start were more likely to book late [11, 21, 26]. The pregnant mothers may not know the correct timing of ANC. Advising mothers regarding timing of ANC attendance might motivate them to start their ANC timely; if they were informed on the time when to start, they might begin at the time they were advised to start. Having any problem in current pregnancy was also found to be a factor for timely booking. Those participants who had any problem in their current pregnancy were about three times more likely to begin their ANC timely compared to those who did not have any problem and it is comparable with the study results from Ghana, Malawi and Kenya, Benin and Mekelle [13, 22, 27]. This might be because of antenatal care is perceived by the mothers as curative rather than the preventive measure that is why the mothers start ANC timely if they get any pregnancy related illness. It is also found that perceived timing of ANC to be significantly associated with ANC attendance; Those mothers who perceived that correct timing of ANC initiation is before 16 weeks of gestational age were 3 times more likely to book their ANC timely than those who perceived it inappropriately ANC and this was supported by the studies conducted in Benin, Addis Ababa, Gondar, Mekelle and Adigrat [6, 11, 13, 22, 26]. This might be because of, mothers think that the correct timing of ANC attendance is after the pregnancy is physically known by the family and health care providers, most probably after 16 weeks of GA and they believe that as they get adequate ANC services starting that time. This study has also attempted to assess if mothers' previous experience of timely ANC attendance has an effect on the early timing of ANC in their current pregnancy. But previous ANC service utilization was not found to be statistically associated with timing of ANC; the pregnant mothers who experienced early timing of ANC in their previous pregnancy preceding the current pregnancy were failed to attend timely for the current pregnancy OR (95% CI): 1.088 (0.599–1.978)) and this is similar with study findings in Addis Ababa and Mekelle [22, 26]. This might be due to mothers' perception of not benefited from their previous early timing of ANC. This study was carried out using the combination of qualitative and quantitative methods; to dig out reliable information and strengthened the quantitative findings. However, this study was done only on public health facilities, private clinics were not included in this study; that is possible

differences between the mothers who attend ANC in public health institutions and those who attend in private clinics was not observed. In addition, as this study is cross sectional study, the time of occurrence of the cause and the effect might not be known, we cannot know whether the cause antedated the effect.

Conclusion

This study found high prevalence of delayed timing of ANC attendance in Axum town attributed to lack of awareness on the importance of ANC and appropriate timing of ANC; health care providers' recommendation to come after 16 weeks of gestation or after the fetus starts movement, unaware of being pregnant, and being busy. In addition, respondents' low level of education, poor knowledge about ANC and its importance, having unintended pregnancy, not getting any problem in current pregnancy, lack of advice about timing of ANC and wrong perceived timing of ANC were significantly associated with increased odds of delayed timing of ANC attendance. Therefore, efforts should be done to increase the knowledge of mothers, and front-line health care providers about importance of ANC and timing of ANC booking [28-52].

Conclusion & Recommendation
Conclusion

Only one third of pregnant mothers in this study practiced timely booking of first ANC. Current age of the mother 25 years and below, age at marriage above 20 years, means of pregnancy recognition via urine test, perceived right time as first trimester and having decision power to in using current ANC were statistically significant factors for timely booking. It is important to provide community-based information, education and communication on antenatal care and its right time of commencement. In addition, empowering women and strengthening and implementing the proclamation designed for the age at marriage is mandatory up to the local level.

Recommendation

As per the findings of this study.

Addis Ababa, Health Bureau

Should strengthen and maintain local information dissemination network on antenatal care and should develop a detailed and clear guideline and structure that will advance knowledge of reproductive age women on timing of Antenatal care. Community based information education and communication on ante natal care and its right time of commencement should be organized and implemented by HEW. Health care providers Give appropriate information on the importance of the early ANC visit need to be emphasized at the time-of-service provision.

ANC Provider

First ANC booking within the recommended time (within the first trimester) for the ANC visiting mothers.

Federal Ministry of Health

Should focus on increasing ANC coverage by giving ANC service

freely for all pregnant women at all public hospitals.

Researcher
Should do further studies both with qualitative and quantitative researches to improve the ANC service quality and importance of early first ANC booking. Community based cross sectional should be done.

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