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Determinants of Non- Adherence to Antenatal Care Among Pregnant Women

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Abstract:
Background: *Early antenatal care (ANC) and regular follow up of service more often provide a range of opportunities for delivering health information and interventions that can significantly conveying the well-being of the mother and the fetus. However, in most cases, women in Africa hold up until the momentof the second or third trimester in pregnancy to make the initial antenatal care visit, reducing their chances of making at least four visits. The aim of this study was to assess the determinants of non- adherence to antenatal care among the pregnant women. Methodology:A descriptive exploratory research design was utilized for this study. Convenient sample included 300 pregnant women who attended antenatal care clinic at El-Manial University Hospital with gestational age 16 weeks and more in the first visit, their age 20-39 years,low risk pregnancy and not reported any previous medical problems during pregnancy. The required data was collected through Structured interviewing questionnaire developed by the research investigator. Results:The study results revealed that the mean age of the study sample was 26.8 ± 4.2 years. The majority of them (95%) were housewives. Sixty point seven percent live in rural area as well as 52.3% of the study sample married at age < 20 year. The majority of the study sample has unsatisfactory knowledge about ANC. There were many reasons and factors which lead to late booking among the study sample such as; high cost of investigation, high living expenses, undesired pregnancy, not have the freedom of decision to start ANC, mother –in-law refusal, far setting, long waiting time, no good communication and some of the women reported that they haven't complained in the first three months so they come late. Conclusion& recommendation: Economic, social and psychological factors in addition to the level of knowledge related to antenatal care play an important role in determining time of first ANC visit. Excessive efforts needed to inform the pregnant women about the importance of early booking to encourage them to engage early with the maternity services.*

Keywords: *Antenatal care, factors of late booking.*

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I. Introduction

Pregnancy and childbirth might undermine a woman's life since of obstetric complications. Every year, around the world maternal deaths contribute to more than half a million of deaths, and of these, 99% occur in developing countries and 286,000 of maternal deaths as a result of complications that can be avoided through fitting antenatal care in term of early antenatal care booking and follow up visits as often as possible (WHO & UNICEF, 2014 &WHO, 2013).

Antenatal care (ANC) is a key preventive wellbeing benefit utilized in developed nations and around the world by giving hopeful mothers with regular health evaluations and information about the course of the pregnancy, labor, birth, and parenthood this care ought to begin from the starting of pregnancy and end at delivery (Kriebs, 2010; Mansur, Rezaul, Mahmudul&Chowdhury, 2014). It gives early detection and treatment of problems and complications, anticipation of complications and diseases, health promotion, planning for childbirth and potential complications (Lincetto, Mothebesoane-anoh, Gomez &Munjanja, 2013). It points to decrease the chance of unfavorable pregnancy and birth outcomes, prevent health problems in both the fetus and mother and to guarantee that each newborn child has a great begin (Kriebs, 2010; Sullivan &Hirst, 2011). Moreover, ANC, in conjunction family planning, talented delivery care and emergency obstetric care, is a key component of the package of services pointed to improve maternal and newborn health (WHO, 2010).

Research recommended that in low-income nations, especially in Africa, pregnant women frequently don't get the suggested ANC. Across sub-Saharan Africa there's wide variation in ANC participation: in spite of the fact that 71% of pregnant women attend formal ANC at least once, only 44% attend ANC four or more times (Kinney, Kerber, Black, Cohen & Nkrumah, 2010). To guarantee that women accomplish four ANC visits and the potential complications are recognized in early pregnancy and managed effectively, the WHO, 2011 recommended that women ought to start ANC during the first trimester of pregnancy. Recent Demographic and

Health Survey (DHS) data illustrate that the variation in timing of ANC start over Africa remains striking: for example, 11% of women begun ANC in the first trimester in Ethiopia; 16% in Nigeria; and 55% in Ghana (CSA in Ethiopia, 2011, & Ghana Statistical Service (GSS), 2009).

Numerous pregnant women start antenatal care attendance late, mostly in the second and third trimester (Bbaale, 2011). Which will due to having high parity; younger age and unplanned pregnancy, lack of knowledge regarding the importance of early ANC are the causes for delayed booking for ANC (Phafoli.2007). Also Socio-demographic data such as poor backgrounds, living in rural areas, and/or with low levels of education are less likely to access antenatal services, indeed in the event that they are given (Simkhada, van Teijlingen, Porter, Simkhada, 2008). Other factors, including having a husband with a low level of education, living a long distance from a clinic, and having high parity, have also been identified as barriers. (Brown, Sohani, Khan, Lilford&Mukhwana, 2008, and Basani, Surkan, Olinto, 2009, andAli, Osman, Abbaker, Adam, 2010). So it is imperative for health policymakers to better understand the factors affectingappropriate and prompt utilization of antenatal care (Beeckman,Louckx, Putman, 2010).

Significance of the study

In Egypt, there are only afew studies have been conducted to investigate the factors associated with late booking of antenatal care. The results of this study will help policy makers in improvement or strengthen policies related to provision of ANC and identify priorities and take appropriate decision. The study would helpfully be used as baseline for health care provider to plan and act in motivating pregnant women to use ANC earlier and consequently in maternal, infant mortality and morbidity will be reduced. Therefore, this study aims at determining factors associated with low utilization of ANC services among pregnant women.

Aim of the study:

The study aimed to examine the determinants of non-adherence to antenatal care among the pregnant women.

Research question

What are the determinants of non-adherence to antenatal care among the pregnant women?

Operational definition

-***Non-adherence to antenatal care***: in this study refers to pregnant women who do not attend to ANC at proper time (late booking: from 16±2 weeks of gestation) or more

-***Determinants***: in this study means the factors that affect women from adherence to antenatal care as measured by interviewing tool.

II. Subjects and Methods

Research design and setting: A descriptive exploratory research design was used in the current study, which was carried out in the outpatient antenatal clinic in El-Kasr Al-Ainy Obstetrics and Gynecology Hospital in Cairo, Egypt. It is a university affiliated to Cairo University hospitals providing free health care to maternity as well as gynecological clients, being large university hospital in a metropolitan city.

Subjects:A convenience sample of 300 pregnant women during first antenatal care visit, who attended to the antenatal clinics at El-Manial University Hospital. Inclusion criteria; Age 20-39years, low risk pregnancy (without any complications), first antenatal care visit (late booking: from 16±2 weeks of gestation and more) and not reported any previous medical problems during pregnancy.

Tools for data collection:Structured interview questionnaire

It was developed by the research investigator after extensive review of related literature and the consultation of the experts in the field of Maternal and Newborn Health Nursing. The questionnaire composed of 36 questions, it encompassthree sections as the following:

section I: relay on description of study sample,it includes two main parts:A) the first part was about personal characteristics of the study sample such as age, residence, age at marriage, income, occupation, level of education,number of children, husband's age, husband's education and husband's occupation. B) the second part was about the obstetrical profile of the study sample include obstetric history as number of previous pregnancies, number of previous labor, number of still birth, number of abortion, mode of previous deliveries as well as data related to the current pregnancy as date of last menstrual period, expected date of deliveries (EDD), gestational age and purpose of this visit.

Section II: describe data related to women`s knowledge regarding antenatal care, such as importance of antenatal care to fetus, importance of antenatal care to mother, what are the basic service that should be available in the antenatal care clinic, how many times the pregnant woman should visit the antenatal care clinics, when the antenatal care visit should be during the pregnancy, what are the medications or vitamins that should take by the pregnant woman during pregnancy, and what are the sources of assistance in case of any problem related to the pregnancy. Scoring system for this section,eachquestion was to be answered as "complete" or "incomplete" or "do not known" these were scored three, two and one respectively.For each area of knowledge, the score of the items were summed-up and converted into percent scores. And then categorized as following: the total score of Knowledgeis 24, score from 0<14.4 (<60%) was considered as unsatisfactory, while knowledge score 14.4-24 (≥ 60%) was considered as satisfactory level of knowledge.

Section III: this section related to causes of late adherence to antenatal care during pregnancy, as what is the cause of delaying your visit? Are you having the freedom of decision to start the antenatal care? Are you having a problem in dealing with the health personnel? Are you having any fears during the antenatal care? Are the health personnel cooperative and provide all the needed information? & is the reaching to the place of antenatal care is difficult for her?

Validity and reliability:

The content validity of the data collection tool was examined by five experts who were affiliated to maternal & newborn health nursing. The tools were examined for content coverage, clarity, relevance, applicability and wording. Based on experts comments and recommendations minor modifications have been made such as rephrasing and rearrangement of some sentence. Internal consistency was measured to identify the extent to which the items of tool measure the same concept and correlated with each other by using Cronbach`s alpha reliability and it was 0.74.

Pilot Study:

The pilot study was conducted on 10% of the sample who met the inclusion criteria to investigate and ensure the feasibility, objectivity, applicability, clarity, adequacy, content validity, and internal consistency of the study tool.

Ethical Consideration

Ethical approval was obtained from the research ethical committee of the Faculty of Nursing, Cairo University. An official permission was granted from the administrative personnel in the selected setting for data collection. The researchers explained the aim of the study to the pregnant women and informed them that the information obtained will be confidential and their participation was in a voluntary base. An informed consent was taken from women who met the inclusion criteria to obtain their acceptance to participate in the research. The researchers explained the aim of the study to the mothers and informed them that the information obtained will be confidential, their participation was in a voluntary base and they have the rights to refuse and/or withdraw at any time without providing a reason and without any effect on the mother'sroutine care. Confidentiality was also assured through coding the data; each assessment sheet was coded anonymous.

Statistical Analysis

The collected data were, coded, categorized, tabulated, and analyzed using the Statistical Package for the Social Science (SPSS 20.0). Descriptive data were expressed as mean and standard deviation. Qualitative data were expressed as frequency and percentage. Comparison of means was performed using paired-sample t-test. Correlation among variables was done using Pearson correlation coefficient. Level of significance at $p<0.05$ were used as the cut of value for statistical significance.

III. Data Analysis and Finding

The aim of the current study was to examine the determinants of non-adherence to antenatal care among the pregnant women. Finding of this study will be presented in fourmain sections.

Section I: Description of the Sample

This section includes two main parts: A) description of the personal characteristics and B) obstetrical profile

A) Description of the personal characteristics.The age of the study sample ranged from 20-39 years with a mean of 26.8 ± 4.2 years. Forty-five percent of the study sample their age ranged from 25-29 years, and only 4.7% their age ranged between 35-39 years old. More than half of the study sample (60.7%) live in rural area while, 39.3 % lived in urban area. Twenty eight percent of the study sample can read and write compared to only 1.7 % who had received university education. Regarding to the occupation, the result revealed that 95% were

housewife. And 54.7%of the study sample had income between 1000-1200 L.E. /month. Moreover 52.3% of the study sample married at age < 20 year. Regarding to age of women's husbands, the result revealed that their age ranged from 20-47 years with a mean of 31.8± 4.8 years, and 52.7% of the husbands were not educated, as well as 51.4% were workers (table1).

Table (1) Personal characteristic of the study sample(n= 300)

Items	Personal Data	No.	%
Age / years	20 -<25	90	30
	25 -<30	135	45
	30-<35	61	20.3
	35-39	14	4.7
Mean ± SD	26.8 ± 4.2 years		
Place of residence	Urban	118	39.3
	Rural	182	60.7
Educational Level	Unable to read and write	76	25.3
	Read and write	84	28
	Primary education	51	17
	Secondary education	30	10
	Diplom	54	18
	University education	5	1.7
Mother's job	House wife	285	95
	Employee	15	5
Type of work (n= 15)	Teacher	6	40
	Worker	9	60
Income/ L.E	< 1000	88	29.3
	1000 -1500	164	54.7
	>1500	48	16
Mean ± SD	1105 ± 403.9 L.E		
Age at marriage/ years	< 20	157	52.3
	≥ 20	143	47.7
Mean ± SD	21.2 ± 3.3 years		
Husband's age / years	20 -<29	64	21.3
	29 -<38	211	70.3
	38 – 47	25	8.4
Mean ± SD	31.8± 4.8 years		
Husbands' educational level	Educated	142	47.3
	Not educated	158	52.7
Husband's job	Worker	154	51.4
	Crafts man	97	32.3
	Governmental work	31	10.3
	Private work	18	6

*B) Obstetrical profile:*which include past obstetric history and current pregnancy history. Regarding past obstetric history, theresults indicate that 54.7% of the study sample was gravida three or more while, 13% from them was gravida one. Also, 87%of the study sample their parity from 1 to ≤5, as well as 65.5% from the study sample had one or two living children while, 34.5% had more than three living children. Twenty-five point three percent of the study sample had history of previous abortion. Regarding to the mode of previous delivery, 76.2% of them their last delivery was vaginal delivery(table 2).

Table (2) Distributionof the study sample related to past obstetrical history (n= 300).

Obstetric history		No.	%
Gravidity	1	39	13
	2	97	32.3
	3 or more	164	54.7
Mean ± SD	2.2 ± 1.4 time		
Parity	Nullipara	39	13
	1-5	261	87
Mean ± SD	1.9 ± 1.2 time		
Number of children (n= 261)	1- 2	171	65.5
	3-5	90	34.5
Mean ± SD	1.6 ± 1.2 child		
Previous history of abortion	Yes	76	25.3
	No	224	74.7
	If yes: gestational age/ weeks		
	4:8	48	63.2
	9:13	28	36.8
	Mean ± SD	2.3 ± 1.02 time	

Mode of previous delivery (n= 261)	VD	199	76.2
	C.S	62	23.8
outcomes of previous delivery (n= 261)	Normal baby	253	96.9
	Low birth weight	7	2.8
	Baby with congenital anomalies	1	.3

In relation to history of current pregnancy, the result shows that 62%of the study sample their gestational age at recruitment was 16<20 weeks while, 2.3% their gestational age was ≥32 with a mean of 19.3 ± 8.5 weeks. Also, the results indicated that 75% from the study sample their pregnancywas planned while, 25% their pregnancy was unplanned. Seventy point seven percent of the study sample attended to the antenatal clinics due to complaint compared to 2.0% attended to confirm the date of delivery. In addition, 40.6% from the study sample their complaintwas lower abdominal pain compared to only 4.3% their complaintwas vaginal itching (Table 3).

Table (3) Distribution of the study sample regarding to history of current pregnancy (n= 300).

Current Pregnancy		**No.**	**%**
Starting initial prenatal visit by GA /weeks	16-	186	62
	20-	72	24
	24-	29	9.7
	28-	6	2
	32- 35	7	2.3
Mean ± SD	19.3 ± 8.5 weeks		
Current pregnancy planned	Yes	225	75
	No	75	25
Reasons from antenatal care	Pregnancy test	7	2.3
	Follow up	75	25.0
	Confirm delivery date	6	2.0
	Complaint	212	70.7
Type of complains n= 212	Lower abdominal pain	86	40.6
	Back pain	56	26.4
	Felling dizzy	46	21.7
	Vaginal itching	9	4.3
	Lower limp edema	15	7

Section II:Women`s knowledge and causes of late antenatal care booking

This section includes; A) women`s knowledge regarding antenatal care; B)causes of late antenatal care booking

A) Women`s knowledge regarding antenatal care

Table (4) reveals that 62.7% of the study sample had unsatisfactory level of knowledge regarding antenatal care compared to 37.3% who had unsatisfactory level of knowledge.

Table (4) Total knowledge scores regarding to antenatal care (n= 300).

Items	No	%	Mean ± SD
Satisfactory knowledge	112	37.3	16 ± 1.3
Unsatisfactory knowledge	188	62.7	12.8 ±1.1

B) Causes of late antenatal care booking

The result shows that there were various factors of late booking among the study sample.Regarding financial factors, 42.7 % of the study sample mentioned that the cause was the high investigation cost while, 27% reported the high living expenses. Concerning to social factors, it can be noticed that the lack of decision to start ANC was the most common cause mentioned by the women (41.7%), while advice from the relatives to book late was the least reported cause (2%). As for the psychological factors, 19% of the study sample reported the cause as unplanned pregnancy while, 7% reported fear from examination. Regarding health care setting factors, 32% of the study sample reported that the cause was far distance, and 22% reported that wait for a long time in the ANC clinics. Concerning health team members` factors,14.7% of the study sample reported bad communication form the medical team members, 8.7% reported the cause was the presence of man physician while, 6.6% reported that there was no useful instruction. Twelve point three percent of the study sample reported that the cause of their late booking was that they have no complaint and 10 % reported that they were unaware of their pregnancy (Table 5).

Table (5) Distributionof the Study Sample Related to Causes of Late Antenatal Care Booking.

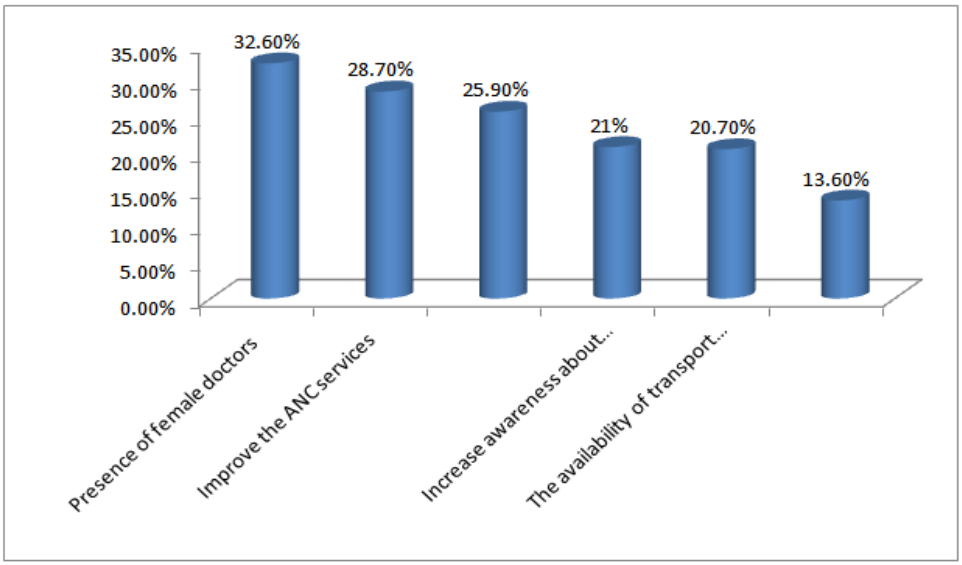
Items	No	%
Social factors		
Lack of decision to start ANC	125	41.7
Effect of mother –in – law	77	25.6
Sick person within the family	12	4.0
Relative advice to begin antenatal care late	6	2.0
Financial factors		
Highcost of investigation	128	42.7
High living expenses	81	27.0
Psychological factors		
Unplanned pregnancy	57	19.0
Fear from examination	21	7.0
Health care setting factors		
Far setting	98	32.7
Long waiting time	66	22.0
Health team members factors		
Bad communication	44	14.7
Male physician	26	8.7
No useful instructions	20	6.6
Other causes		
No complaint	37	12.3
Unaware about pregnancy	30	10.0

*Numbers are not mutually exclusive, i.e. there is more than one answer for the same woman.

Section III: Factors that helps early antenatal care booking visits as perceived by women

Regarding to theFactors that may help the pregnant women to book ANC early, 32.6% of the study sample reported that presence of female doctors will improve early ANC booking, 28.7% reported improve the ANC services, 25.9% reported the availability of proper waiting area, 21% reported increase awareness about importance of ANC & involvement of husbands, 20.7% reported the availability of transport facilities, moreover, 13.6% of the study sample reported that good communication from health care providers is important to early ANC (Figure 1).

Figure (1)Factors that helps early antenatal care booking visits as perceived by women



Section IV: Relations among variables

Using correlation analysis results indicated that there was a highly statistically significant relation between initial ANC by GA/weeks and husbands job ($p \leq 0.0001$), husband age ($p = 0.001$), income ($p = 0.001$). On the other hand, educational level of the husband had no statistically significant relation ($p=0.417$). Moreover, the results concluded that there were a highly statistically significant differences between the initial ANC visit and gravidity ($p = 0.001$), parity ($p = 0.003$), and mode of previous delivery ($p = 0.05$). On the other hand, there was no statistically significant difference was found between previous history of abortion and initial ANC visit ($p = 0.176$).

IV. Discussion

Regarding to personal data of the study sample, the results indicated that the majority of the pregnant women their age was between 25-29 years, these finding were consistent with a study conducted by Tekelab and Berhanu (2014) to assessvariablesrelated with late start of antenatal care among pregnant women attend to antenatal clinic at publichealth care centers in Ethiopia,, they found that, women who were aged 25 years and above were three times more likely to attend late antenatal care compared to those who were less than 25 years.

Despite several governmental and nongovernmental efforts to delay age at marriage near half of the study sample (47.7%) married at age < 20 years. these finding supported by a study conducted by Worku, Meseret, and Amano (2014) who examined"timing and variables related with first antenatal care booking among pregnant mothers" in Gondar Town; North West Ethiopia, they found that the pregnant women whose age at marriage over twenty years were 2 times more likely to begin their ANC within the first trimester of pregnancy than those who married during their teens.

Also, the current study results found that there is no significant relationship between place of residence and late antenatal care this finding was disagreement with The result of Egyptian study conducted by Farahat, Esam , Alkot ,Shaheen and Abd-Elgwad (2012) who study variables of antenatal care utilization in Menofia Governorate, they found that place of residence had a highly significant relationship with the time of attendance for ANC visits where women lived in urban areas utilized ANC services twenty one times more than rural ones. In the same context, a finding of a study conducted by Tran, (2011) they found that women lived in urban areas had more visits and used more services than women in the rural ones. Similarly, Rahman, Islam and Isla (2008) who studied "rural& urban differentials of utilization of antenatal health-care services" in Bangladesh revealed that women lived in urban areas received antenatal care and had antenatal visits more frequent than rural women this is because of services accessibility. From investigator point of view this might be due to women in rural areas rarely perceive pregnancy as problem and therefore do not seek care early unless if a problem occurs.

The results of the current study proved that the majority of the study's samples with lower primary education. This finding was in agreement with the findings of the study conducted by Bbaale (2011); the study found that mothers with primary and lower education were more likely to book late for antenatal care compared to those with at least secondary education. Similarly, a cross-Sectional Study done at University of Gondar Hospital, Northwest Ethiopia by Belayneh, Adefris, and Andargie (2014) the study indicated that, those having formal education were 1.06 times more likely to book earlier compared to those who cannot read and write. This could be explained by the fact that women with secondary school or higher education were more likely to attend ANC. In the same context, Edgard-Marius et al. (2015) found that women with low education levels were less likely to use ANC services during the first trimester compared to women with more education (secondary and above).

The women in the current study appear to have been of low socioeconomic status. This is evidenced by the fact that majority of the study participants were housewives and more than half of their husbands were workers (their monthly income ranged between 1000-1200 L.E), and some of them stated that the cause of delayed booking was financial difficulties. This finding supported by a study done by Kisuule et al., (2013) to determine timing and variables associated with coming late for the first antenatal care booking visit by pregnant women in Uganda they found that the majority of the study women were house wives, some of them relate to the assertion that they did not have money for transport or to pay for antenatal care services and low socio-economic status further limits these women to seek antenatal care early as they may not afford the services.

Also, the results of current study indicated that there was significant relation of gravidity and parity with late ANC booking, these findings were supported by Tariku, Melkamu, and Kebede (2010) who studied "previous utilization of service does not improve timely booking in antenatal care" and found that as parity increases the experience of timely booking decreases and women with first pregnancy were about 2 times more likely to be booked for ANC within the recommended time compared to women with parity one and more. Some like a study conducted by Banda, Michelo and Hazemba (2012) to determine variables associated with late antenatal care attendance in selected rural and urban communities in Zambia, found that there was a tendency of starting ANC late amongst women of high parity and gravidity in both rural and urban areas. This could be explained as pregnant women with first pregnancy might have more desire to confirm pregnancy and reassuredabout the outcome of pregnancies compared to multi-parous women, who may contribute to their booking early, as well as multi gravida and multiparas depend on their previous experience so they can start their booking visit latter than prim one. On the contrary to, a study conducted byIfenne andUtoo (2012) in Nigeria showed that there was no significant relation between parity and gestational age at booking visit for ANC this difference might be due to the geographical differences

Regarding level of women's knowledge, the current study found significant relationship between level of knowledge regarding ANC and late ANC booking, the majority of the study sample has unsatisfactory level of knowledge. This result was supported by a study conducted by Banda, et al. (2012) found that women with adequate knowledge were likely to initiate ANC early compared to those without. Also this congruent to Tariku,

et al. (2010) who found that pregnant women who well informed about ANC were more likely to early book for ANC within the recommended time than who do not.Moreover a study done by Ye, Yoshid, Rashid and Sakamoto (2010) confirmed that the utilization of ANC service among women with satisfactory level of knowledge about the benefits of ANC and the complications occurring during pregnancy was higher than among women lacking such knowledge.

The current study proved that higher percent of the study's participants reported that the pregnant women should seek ANC clinics only when suffering from complain and the majority of the study's participants prefer to ask family, pharmacist (42%, 23%, respectively) as a first action in case of any problem during pregnancy. Which mostly explains why they reported late for the first antenatal care visit.In this way, antenatal care appears viewed by most of the women as curative rather than preventive which is in sharp contrast with the objectives of antenatal care which are primarily preventive (ndid and oseremen.2010).

Meanwhile, the current study results showed that many of the study sample have lack of decision to start ANC and the majority of them their husbands had the decision to start the ANC not the woman herself, these results were supported by a study conducted by Gudayu, et al. (2014) that the study subjects who decided to use ANC by themselves were more than two fold to be booked in the right time than un-deciding mother. Also, the result of the current study showed that quarter of the study sample reported that the cause of delaying their first visit was mother –in – law refusal to start ANC booking early as a study conducted by Gross, et al. (2012) done in Tanzania in which the women who not being supported by the husband or other family member were identified as factors associated with a later antenatal care enrolment.

The result of the current study proved that nearly third of the study's sample reported that far setting is the cause of delaying their first visit this result was supported by a study conducted by Banda, Michelo&Hazemba (2012) whofound that pregnant women in rural areas reported that availability and accessibility of health facilities could be the cause of late antenatal attendance.

Studies suggest that psychological factors that include women's attitude towards their current pregnancy, i.e. whether or not the pregnancy was planned, were found to affect Antenatal care utilization. The results of the current study showed that quarter of the study sample had unplanned pregnancy and they stated that the cause of delaying their first visit was undesired pregnancy this result was supported by a study conducted by Berhe et al. (2014) the study showed that higher proportion of women, (81.2%), who wanted to get pregnant or planned a pregnancy used Antenatal care than mothers who had unplanned pregnancy(12.9%). furthermorethere is a study done in South Africa stated that unplanned pregnancy is a factor for delays in seeking ANC (Okunlola, Ayinde, Owonikoko, Omigbodun. 2006).

Some of study sample reported that they recognized their pregnancy late so their first visit delayed. This result supported by a study conducted by Gross, Alba, Glass, Schellenberg, and Obrist. (2012) on "timing of antenatal care for adolescent and adult pregnant women" in south-eastern Tanzania they found that late recognition of pregnancy was found to bea strong predictor of delayed ANC attendance.

V. Conclusions

The study concluded that there were various causes of late ANC booking among the study sample such as financial constrains, lack of decision to start ANC, unplanned pregnancy, far setting, bad communication and absence of complaint. Also the study proved that, women's age, age at marriage, income, parity, gravidity, mode of previous delivery, women level of knowledge, husband's age and husband's job were statistically significant factors for late ANC booking as compared to educational level of the women and their husbands, residence, women's job and past history of abortion had no significant relation.

Recommendations

Based on the findings of the study the following recommendations were suggested

- Extensive educational program for increasing awareness of women on the danger signs of pregnancy and the importance of early antenatal care utilization.
- Emphasis on involvement of husbands during information, education and communication are recommended to establish early ANC.
- Raise maternal awareness toward the effect of early ANC on fetal outcomes.
- Mass media program to raise family acceptance to early ANC.
- Improve services in health centers at each village will facilitate the early antenatal care booking.
- Accessibility of the health care services and improves health care provider communication.

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