

## Original Research Article

# Facility Related Factors That Influence Utilization of Antenatal Care at Saku Sub-County, Kenya

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**Abstract: Background:** Antenatal care (ANC) is the continuous care that is accorded to women in the course of pregnancy. Notably, antenatal care is an efficient health intervention aimed at inhibiting maternal mortality and morbidity majorly in areas where women have poor health. This study therefore assessed the facility related factors that influence utilization of ANC at Saku sub-county, Kenya. **Methods:** This research applied descriptive cross sectional study design. The study was carried out in Saku Sub County in the following randomly selected health facilities: Marsabit County Referral Hospital, Dakabaricha Dispensary and Jirime Dispensary. The study population comprised of post-natal mothers aged between 15-49 years seeking services at maternal and child health clinic (MCH) in Saku Sub County. The Cochran's Sample Size Formula was used to calculate a sample size of 154 respondents. The study employed a researcher- administered semi-structured questionnaire and use of focused group discussions. Descriptive statistics, chi-square tests and logistic regression were used in the analysis. **Results:** Majority 89.6% (n=133) stated that the health-care facilities and health care personnel were fairly neat during the ANC visit. 90% (n=148) of the respondents did not report delay during ANC visits. 42% (n=65) of the healthcare providers were friendly. 97.4 % (n=150) stated that privacy was maintained during ANC visits. 63% (n=97) stated that the distance to the health facility was below five (5) kilometer. 30.5% (n=47) used between three and four hundred shillings as fare when going for ANC clinics. **Conclusion:** Among Facility related factors, none was statistically significantly associated with utilization of ANC Services.

**Keywords:** Antenatal care, utilization of Antenatal care, Facility related factors influencing utilization of Antenatal care.

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## INTRODUCTION

Antenatal care (ANC) is the continuous care that is accorded to women in the course of pregnancy [1]. Notably, antenatal care is an efficient health intervention aimed at inhibiting maternal mortality and morbidity majorly in areas where women have poor health. The prenatal period is a vital duration whereby health professionals help to determine any possible health threats during pregnancy. Moreover, obstetricians and midwives offer the pregnant mothers with guidance on proper nutrition, positive approach to birth and family planning. The care conferred to the pregnant women during this period is crucial for the survival and the overall health of both the expectant mother and the unborn child. Prenatal care increases the likelihood of a skilled being present during delivery [2].

Prenatal care should begin at the early stages of pregnancy since it ensures that women enjoy access to information pertaining to the availability of screening tests early enough. There has been a proposal that women with a normal pregnancy should visit a health care center for prenatal services not less than four times [2]. The first visit should be scheduled for as early as at 0 to 16 weeks gestation or in the first trimester after missing two periods, the second visit should take place during the 16 to 28 weeks gestation, the third visit should take place between 28 to 36 weeks and finally the fourth one should be scheduled after 36 weeks. Currently, ANC Model recommendation that pregnant women have eight contacts with the health system during each pregnancy. The first contact scheduled to take place in the first trimester (up to 12 weeks of gestation), two contacts scheduled in the second trimester (at 20 and 26 weeks of gestation) and five

contacts scheduled in the third trimester (at 30, 34, 36, 38 and 40 weeks). Depending on the country context, the definition of “contact” may include the more familiar model of clinic-based ANC visits, as well as Antenatal care and/or counseling sessions for pregnant women at the household and community levels [3]. The processes of pregnancy and childbirth are meant to take place naturally. Nevertheless, a significant number of women are vulnerable to pregnancy and childbirth difficulties at instances when the mother does not use ANC services. Globally, nearly 600,000 women die from difficulties attributed to pregnancy annually. Over 90% of those deaths are experienced in Asia and Sub-Saharan Africa regions [4]. The major cause of this high Maternal Mortality Rate (MMR) in Africa is due to insufficient use of antenatal services [5]. The problem of insufficient use of ANC services arises since pregnant mothers travel long distance to access these services and bad terrains. In addition, others are faced with poor health management system where access to ANC is affected by health care provider’s continued industrial strikes. Thus the responsiveness and perceptions about prenatal care concerning maternal health care service can significantly impact the survival and general health of the mother and child [6].

## METHODOLOGY

The study used the design of a descriptive cross-sectional study and was comprised of both quantitative and qualitative techniques of data collection. The study was carried out in Saku Sub County in the following randomly selected health facilities: Marsabit County Referral Hospital, Dakabaricha Dispensary and Jirime Dispensary. The study population comprised of post-natal mothers aged

between 15-49 years seeking services at maternal and child health clinic (MCH) in Saku Sub County. The Cochran’s Sample Size Formula was used to calculate a sample size of 154 respondents. and postnatal mothers were selected purposively when seeking postnatal care services. Simple random method was used to recruit respondents in the study. The study included Post-natal mothers attending MCH services at Saku Sub County, Exclusion criteria of the study was Post-natal mothers who were very sick or mentally incapable.

Research administered questionnaire was used to collect quantitative data. Focus Group Discussions guide was used to collect qualitative data from 3 focus discussion groups consisting of each with a minimum of eight and maximum of 12 participants with homogeneous characteristics. Data was coded and entered into Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics, Chi-square test was used in analysis.

## RESULTS

The study comprised a total of 154 post-natal mothers aged between 15-49 years seeking services at maternal and child health clinic (MCH) in Saku Sub County. This represents a 100% response rate. Majority of the respondents 62% (n=96) were Muslim while 38% (n=58) were Christians. Majority of the respondents 41.6% (n=64) were between the age of 20-24 years while only one respondent (0.6%) was within the age of 40-44 years. About education, most 47.4% (n=73) of the respondents had primary education where minority 1.9% (n=3) had post-secondary education. This is shown in table 1.

**Table-1: Social demographic characteristics of the respondents.**

Variable	Frequency n =154	Percentage (%)
<b>Religion</b>		
Christians	58	38
Muslims	96	62
<b>Age</b>		
15-19	31	20.1
20-24	64	41.6
25-29	36	23.4
30-34	19	12.3
35-39	3	1.9
40-44	1	0.6
<b>Level of Education</b>		
Primary	73	47.4
Secondary	25	16.2

Post-secondary	3	1.9
university	6	3.9
none	46	29.9
not applicable	1	0.6

**Facility related factors that influence utilization of Antenatal care services**

**1.1 Cleanness of health centers and health care personnel's**

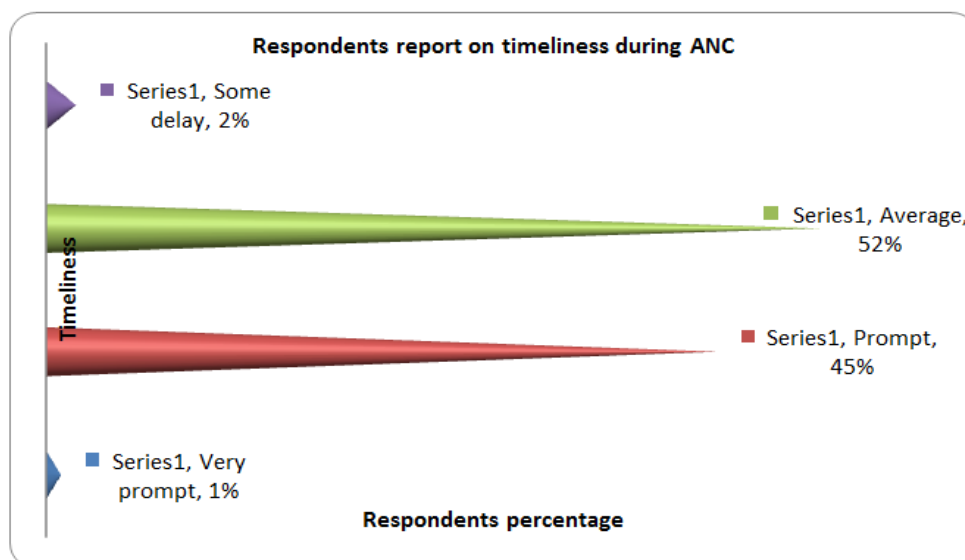
Majority of the respondents 89.6% (n=133) stated that the health-care facilities and health care personnel were fairly neat during the ANC visit (Table 1.1).

**Table-1.1: Respondents who reported Cleanness of health-care facilities and health-care personnel**

Feature	Frequency (n)	Frequency (n)
Very neat	14	9.1
Fairy neat	138	89.6
Dirty	2	1.3
Total	154	100

**1.2 Timeliness of care during antenatal care**

Approximately more than 90% (n=148) of the respondents did not report delay during ANC visits (Figure 1.2).



**Fig-1.2: Respondents report on Timeliness on antenatal care**

**1.3 Health care workers attitude during antenatal care**

Almost half 42% (n=65) of respondents stated that the healthcare providers were friendly. However,

only 14% (n=22) of postnatal mothers stated that health care workers had wanting attitude (Table 1.3).

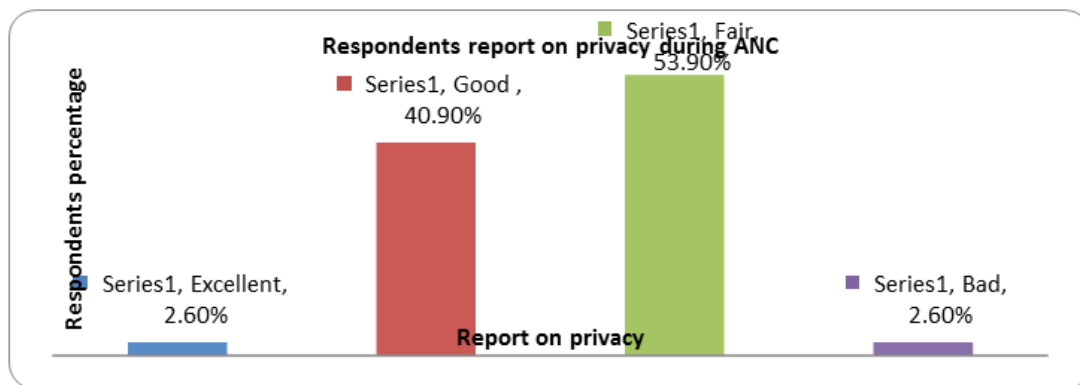
**Table-1.3 Respondents report on health care workers attitude during ANC**

Attitude of health care providers	Frequency (n)	Percentage (%)
Friendly	65	42
Approachable	44	28
Ignore clients	34	22
Helpful when in good moods	36	23
Wanting attitude	22	14
Not indicated	47	30
Total	154	100

**1.4 Privacy during antenatal care**

Majority of the respondents 97.4 % (n=150) stated privacy was maintained during ANC visits, while

less than three percent 2.6 % (n=4) reported lack of privacy (Figure 1.4).



**Fig-1.4: Respondents report on privacy during ANC**

**1.5 Distance to the health facility**

Slightly less than two thirds of the respondents 63% (n=97) stated that the distance to the health facility was below five (5) kilometers (Table 4.8). Also,

majority of the respondents 61.4% (n=95) indicated that they walked to the health facility, 30% (n=46) used motorcycles while 8.6% (n=13) motor vehicles.

**Table-1.5: Respondents report on distance to the health facility**

Distance	Frequency (n)	Percent (%)
Below 5km	97	63.0
6-10km	51	33.1
11-20 km	5	3.2
21-30 km	1	0.6
<b>Total</b>	<b>154</b>	<b>100</b>

On the amount of money used on transportation, almost a third of the respondents 30.5%

(n=47) used between three and four hundred shillings as fare when going for ANC clinics (Table 1.6).

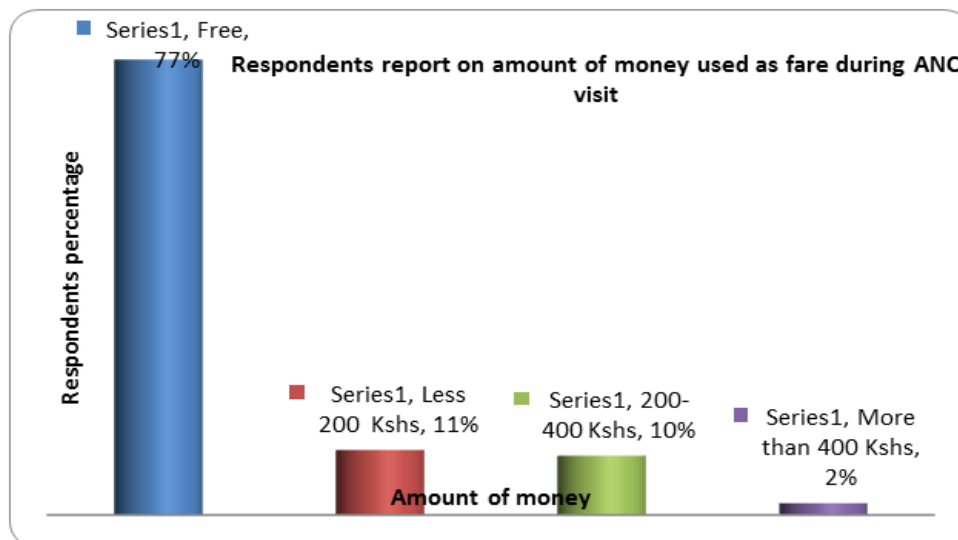
**Table 1.6: Respondents' report on amount of money spent on transport during ANC visit**

Amount of money	Amount of money	Percent (%)
50-100ksh	3	1.9
100-200ksh	4	2.6
200-300ksh	35	22.7
300-400ksh	47	30.5
400-500ksh	14	9.1
More than 500	14	9.1
Walking	18	11.7
Others	1	0.06
<b>Total</b>	<b>154</b>	<b>100</b>

**1.6 Health care expenses**

Majority of the respondents 77% (n=119) stated that ANC was free, but 11% (n=17) reported

using less than 200 Kenyan shillings as fare to the health facility (Figure 1.7).



**Fig-1.7: Respondents report on amount of money used as fare during ANC**

### 1.7 Themes: Health-related factors

Based on the responses from FGDs, the main health-related factors that influenced ANC utilization were organized into three sub-themes namely personality of health-care workers, timeliness of ANC and expenses incurred.

#### Sub-theme 1: Personality of health care workers

It came out evidently that personality of health care workers influenced ANC utilization. Specifically one respondent noted that:

*“Health care workers are rude and intolerant; they do not listen and provide to us ANC when we arrive late at the clinic”* Respondent 5 of FGD 1

#### Another respondent in the same FGD supported the sentiment by noting that

*“Health care workers are not human, when we come late they will not attend to us and we don’t get the health education provided, they should know that we can get involved in other things which can make us to delay”* Respondent 7 of FGD 1.

#### Sub-theme 2: Timeliness of ANC

Timeliness of ANC was also agreed to influence utilization of ANC. One participant said that:

*“Health care workers had no time to serve us because one health care worker was working in child immunization, family planning and treatment room in addition to the ANC at the same time. Sometimes we had to wait to be served and we are not given quality time”* Respondent 3, of FGD 1.

The above sentiment was supported by other postnatal mothers who complained about being served late in the evening despite them arriving very early in the morning in the clinic. One responded said:

*“I had to wait to be served after many hours despite arriving early in the morning in the clinic and I was not given enough time”* Respondent 1 of FGD 4.

#### Sub-theme 3: Expenses incurred

It was clear that expenses incurred by respondents influenced ANC utilization. Specifically one respondent noted that:

*“Most of us we have come on foot; we cannot afford money for even hiring motorcycles. It is too expensive for us since we use more than 400 Kenya shillings as fare, which we cannot afford”* Respondent 7 of FGD 2.

The same statement was supported by other respondents in FGDs who argued that lack of funds, poor means of transport and illiteracy were some of the difficulties that they faced when utilizing ANC services. One responded reported that:

*“We lack money to buy drugs which are expensive, and because of this we see no need to attend ANC”* Respondent 7 of FGD 4

Lastly, other respondents in the FGDs supported the above sentiments by revealing that they were referred to other health care facilities, mostly private, for investigations. These investigations in these health care facilities were expensive. One respondent indicated that:

*“I was sent to a private health care facility for ANC profile which was expensive and I could not afford”* Respondent 3. of FGD 2

### 1. 8 Facility-related factors and its association with the Utilization of ANC

All facility related factors were not significantly associated with ANC utilization (Table 1.8).

**Table-1.8: Facility-related factors and its association with the Utilization of ANC**

Facility-related factors	Category	Low level of ANC utilization	High level of ANC utilization	Chi-square test	Degree of Freedom	P-value
Cleanness of personnel and health Centre	Very Neat	9(5.8)	5(3.2%)	2.405	2	0.300
	Fairy Neat	59(38.)	79(51.3)			
	Dirty	1(0.6%)	1(0.6%)			
Timeliness on Service delivery	Very prompt	4(2.6%)	0	7.600	3	0.055
	Prompt	31(21.1%)	49(31.8%)			
	Average	33(21.4%)	36(23.4%)			
	Delays	1(0.6%)	0			
Privacy during ANC visits	Excellent	4(2.6%)	0	7.750	3	0.051
	Good	31(20.1%)	52(33.8%)			
	Fair	32(20.8%)	31(20.1%)			
	Bad	2(1.3%)	2(1.3%)			
Participant overall rating on ANC Services	Excellent	4(2.6%)	1(0.6%)	4.844	3	0.184
	Good	29(18.8%)	47(30.5%)			
	Fair	34(22.1%)	36(23.4%)			
	Bad	2(1.3%)	1(0.6%)			
Distance participants traveled to hospital	Below 5km	38(24.7%)	59(38.3%)	4.624	3	0.201
	6-10km	28(18.2%)	23(14.9%)			
	11-20km	2(2.3%)	3(1.9%)			
	21-30km	1(0.6%)	0			
Participants means of transport to hospital.	car/bus/lorry	9(5.8%)	8(5.2%)	1.833	3	0.608
	Motorcycle	49(31.8%)	63(40.9%)			
	Bicycle	1(0.6%)	0			
	Walking	10(6.5%)	14(9.1%)			
Expenses incurred by participants to access ANC services in hospital	Less than 50ksh	3(1.9%)	1(0.6%)	7.854	7	0.346
	50ksh to 100ksh	3(1.9%)	1(0.6%)			
	100ksh to 200ksh	3(1.9%)	4(2.6%)			
	200ksh to 300ksh	4(2.6%)	6(3.9%)			
	300ksh to 400ksh	4(2.6%)	3(1.9%)			
	400 to 500ksh	0	2(1.3%)			
	more than 500ksh	2(1.3%)	0			
	it's free	50(32.5%)	68(44.2%)			
Expenses incurred by participants in transportation to hospital	less than 50ksh	2(1.3%)	1(0.6%)	7.552	8	0.478
	50-100ksh	3(1.9%)	1(0.6%)			
	100-200ksh	7(4.5%)	11(7.1%)			
	200-300ksh	19(12.3%)	16(10.4%)			
	300-400ksh	18(11.7%)	29(18.8%)			
	400-500ksh	4(2.6%)	10(6.5%)			
	more than 500	8(5.2%)	6(3.9%)			
	more than 500	8(5.2%)	10(6.5%)			

## DISCUSSION

Majority of the respondents (98.7%) stated that the health centers and health care personnels were neat during the ANC visits. The same finding was reported in a study done in Arab by Fatusi *et al.*, (2006), where 85% of clients reported that the health facility environment was clean. Therefore, it is paramount that the environment in which ANC services are provided should be appealing to its clients.

According to the study, 42% of respondents stated that the health care professionals were friendly. Health care professionals should be friendly and approachable. The same finding was reported in Rwanda, where almost a half of participants (49%) reported that health care professionals were kind,

friendly and approachable and this made majority of them (85%) to attend ANC (Magadi, 2000).

Majority of the respondents (97.4%) reported that privacy was maintained during ANC. This finding was in agreement with a study done in Utta Pradesh by Fixelid *et al.*, (2015), who revealed that lack of privacy and confidentiality within a health care system hindered ANC Utilization. Respecting individuals' privacy and confidentiality is a form of recognition of their moral uniqueness. Breaching of privacy and confidentiality not only affect a person's dignity, but can also cause harm. Ensuring privacy can also promote more effective communication between health care workers and patients, which is essential for quality of care.



Slightly less than two thirds of the respondents (63%) and 33% stated that the health facility was below five (5) kilometers and between 6 to 10km respectively. This finding was not in agreement with a study done by Rodríguez, *et al.*, (2003), in Ethiopia, where 10% of respondents said that the distance to the health facility was below five kilometers. A study conducted by Magadi *et al.*, (2004), in Kenya, demonstrated that an increase in distance to the healthcare facilities was associated with fewer ANC visits. Moreover, in Ghana, it was noted that uncomfortable transport mechanisms, poor road conditions and difficulties in crossing rivers were barriers to utilization of ANC (Banda, 2013). To enhance Postnatal mothers access to ANC, reliable transport to a hospital must be available.

Majority of the respondents (76.6%) stated that ANC was free of charge, but almost 7% stated that they spent between two and three hundred Kenyan shilling to obtain the ANC services. There was no significant association between the cost of ANC and utilization of ANC, which was similar to a study done by Atuyambe *et al.*, (2009) in Nigeria. But this finding was not similar with Kasabiiti *et al.*, (2007) study in western Uganda where it was established that ability of a woman to afford ANC was significantly associated to the number of ANC visits she was likely to attend. According to systematic review done by Simkhada *et al.*, (2008), cost of services and low social economic status contributes to reduced number of ANC visits. Perceived high cost of ANC might influence some pregnant women, to resort to traditional birth attendants (TBAs).

## CONCLUSION

Facility related factors, none was statistically significantly associated with utilization of ANC Services

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## DECLARATIONS

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**Conflict of interest:** There are no conflicts of interest

**Ethical approval:** Ethical approval was obtained from Kenya Methodist University Ethics and Research Committee

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