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Contextual Factors Influencing Utilization Of Antenatal Care Services Up To 4 Visits Among Pregnant Women At Enzaro Health Centre, Vihiga County, Kenya

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Abstract:

Background: Antenatal care contributes to good pregnancy outcomes and benefits of antenatal care depend on timing and quality of care provided. Antenatal care is important for the prevention of maternal and fetal mortality and morbidity. Maternal complications contribute to more than half of the deaths among women annually. **Objective:** To establish contextual factors influencing the utilization of antenatal care services up to four visits among pregnant women in Enzaro Health Centre, South Maragoli ward, Ideleri sub-location, Vihiga Sub-county, Vihiga County, Kenya. **Design:** A descriptive cross-sectional study. **Setting:** Enzaro Health Centre, South Maragoli ward, Ideleri sub-location, Vihiga Sub-county, Vihiga County, Kenya. **Subjects/Participants:** All mothers with children under one year within our mother-child welfare clinic. **Results:** The study established that long waiting hours that leads to delay in service delivery influences utilization of antenatal services greatly followed by geographical terrain and poverty among antenatal mothers explaining why there was delay in service delivery.

Conclusion: Long waiting hours for antenatal mothers should be addressed, strengthen outreaches routinely to those far catchment areas, home visiting and defaulter tracing strengthened and proper communication skills to promote staff client interpersonal relationship among antenatal mothers

1. INTRODUCTION

Health status of woman is an important indicator of the overall economic health and well-being of a country. Maternal health care is closely linked with survival of newborns. Focused Antenatal care is one of the interventions to reduce maternal morbidity and mortality. It recommends four targeted visit during pregnancy within which essential services are offered. The sustainable Development Goals target a global maternal mortality ratio not greater than 70 maternal deaths per 100,000 live births by 2030. Maternal mortality still remains a burden to the health care system.

Antenatal care services are the first steps towards ensuring the health of mothers and new born. Globally 86 percent of pregnant women access antenatal care with skilled personnel, at least once, 62 percent receives at least fair antenatal visits. Regional coverage of at least one visit is 69 percent national wide, Kenya stands at 50 percent, Western region 51.3 percent (UNICEF, 2018). County and regional level, Mombasa, Embu, Machakos and Nandi counties ANC service is virtually universal 99 percent. Focused antenatal care (FANC) recommends that all health pregnant

women should have a minimum of four schedules comprehensive antenatal visits during pregnancy. It is guided by five principles which are quality of care rather than quantity of visits, individualized care, disease detection contrary to risk categorization, evidenced based practices and birth/ complications readiness. The FANC model suggests that visits should take place before 16 weeks, between 16 and 28 weeks, at 28 – 32 weeks and about 36 weeks. Vihiga County is among the middle counties in uptake of FANC. West Pokot County at 18% (UNICEF 2018). Enzaro Health Centre at 52% i.e. from January – December 2018 only 135 women managed to attain the fourth visit (DHS 2017).

Limitation of study:

One of the limitations encountered during the study was language barrier for the mothers who were either illiterate or unable to read or write in English. The problem was solved by interviewing the mothers who were not able to fill the questionnaires. The other challenge that was encountered was fear of victimization especially when participants reported weaknesses in the services offered by the health care workers. This was overcome by assuring them that the study was not meant to victimize anyone and they were required not to indicate their particulars on questionnaire

Assumption of the study:

The study assumed to get willing respondents who will accept voluntarily to offer information correctly and truthfully which will be analyzed. Furthermore it is assumed that the study will include mothers seeking maternal services at Enzaro Health Centre understand the need of antenatal care services that leads to attaining at least four visits during their antenatal period of pregnancy.

2. MATERIALS AND METHODS

Study Area: The study was carried out at Enzaro Health Centre which is situated in South Maragoli ward, Ideleri sub Location, Vihiga sub-county. The health centre has a total population of 6634 people within its catchment population. The facility is

attached two community units that is, Masana and Ideleri which forms a complete referral system from community to facility and Vice versa.

Study Design: The study adopted a descriptive cross-sectional study design.

Study population: The study comprised of mothers who have children under one year who come for continual mother child health care clinic. From the population of 6634; target population of 255 represents number of pregnant women which is equal to 3.85% proportion of total population by the health statistics.

Sample size and sampling procedures:

Sample size:

The sample size was 38 Mothers visiting the maternal and child health clinic in Enzaro Health Centre. The number was derived according to Mugenda and Mugenda (2013) when the study population is less than 10,000, a sample size of between 10% and 30% is good representation of target population and hence 15% is adequate analysis.

Therefore if

$$100\% = 255$$

$$15\% = ?$$

$$15/100 \times 255$$

38 clients were to represent total population of ANC mothers.

Sampling procedures:

Purposive sampling was used in this study consisting of clients whose inclusion criteria were enrolled until required sample size was obtained

Validity of the instrument:

Validity refers to the extent to which the test measures. What the researcher actually wishes to measure (Mugenda and Mugenda, 2003). To ensure that the instruments are valid, that is whether they measure what they ought to measure. The researcher used criterion related evidence to determine the degree of relationship between the values obtained

Reliability of the instruments:

Reliability refers to the constancy of the scores obtained how consistent they are for each individual from one administration to another and from one set of items to another. A researcher instrument is reliable when it provides consistent results.

Data analysis techniques:

After data collection, the raw data collected was systematically organized to facilitate analysis. Data cleaning involved identification of incomplete responses, then press checking against original material and corrected. This entailed the use of frequency distribution table percentages and to be graphs summarized data on the closed ended items in the questionnaire. Data obtained from open ended items in the questionnaire was categorized according to themes relevant to the study and was presented in narrative from using descriptions.

Ethical consideration:

Approval to conduct the study was sought from Uzima University College a constituent college of Catholic university of Eastern Africa. Then through the facility in charge of Enzaro Health Centre. Confidentiality was assured by avoiding writing names on study tools. Informed consent was sought verbally and in written. Confidentiality and anonymity was assured by not using any form of identification of study participants. No names were used or indicated on questionnaires, instead coding was used then data analyzed.

3. RESULTS

From the total participants of 38 involved in the study; the age bracket was from 16. 45 most mother who visit maternal and child health clinic in Enzaro Health centre were between the age of 36 – 40 with 23.7%. This was followed by a tie of 21% of cohort 26 – 30 and 31 – 35 respectively. The other proportion of months was presented by cohort of 16 – 20 ages which was 13.2% and lastly cohort 41 – 45 with 2.6%. The data implied that the services should be structured to respond of both young and adult and adult population.

Table 1: Distribution of respondents by age

Age (Years)	Frequency	Percentage
16 – 20	5	13.2
21 – 25	7	18.5
26 - 30	8	21.0
31- 35	8	21.0
36 - 40	9	23.7
41- 45	1	2.6
Total	38	100

The respondents were required to indicate their marital status which is represented in the table.

Table 2: Distribution of respondents by marital status

Age (Years)	Frequency	Percentage
Married	29	76.3
Single	6	15.9
Divorced	0	0
Separated	3	7.9
Widowed	0	0
Total	38	100

From the above table married mothers accounted for 76.3% of the respondents single mothers were 15.9%, separated mother were represented by a population of 7.9%. From the whole simple population, divorced and widowed were not represented in the study. This showed that most mothers were utilized antenatal and postnatal services in Enzaro Health Centre are married. In question three, the study participants were asked to indicate their religion in terms of Christianity, Muslim, no religion and others. From the respondents all the participants were Christians i.e. 100%. Therefore Christianity could be having some influence on utilization of ANC services in Enzaro Health Centre. The respondents were tested on literacy, the respondents were to indicate if they have ever attended school or no 92.1% represent proportion of those that attend school and 7.9% didn't attend school. The figure below 4.1 represents information.

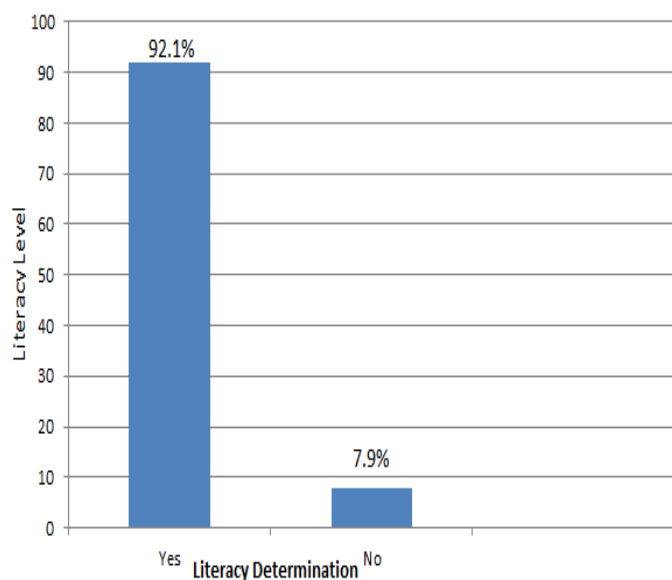


Fig. 1

From the above figure, it showed that almost all the mothers who took part in the study had attended some level of school hence some degree of understanding the importance of Arc service utilization to at least four visits per pregnancy. Question four (b) tested their level of literacy. The respondents were to indicate their highest level of education. They were to tick whether it was primary, secondary or tertiary education and the findings were presented in figure 4.2 below.

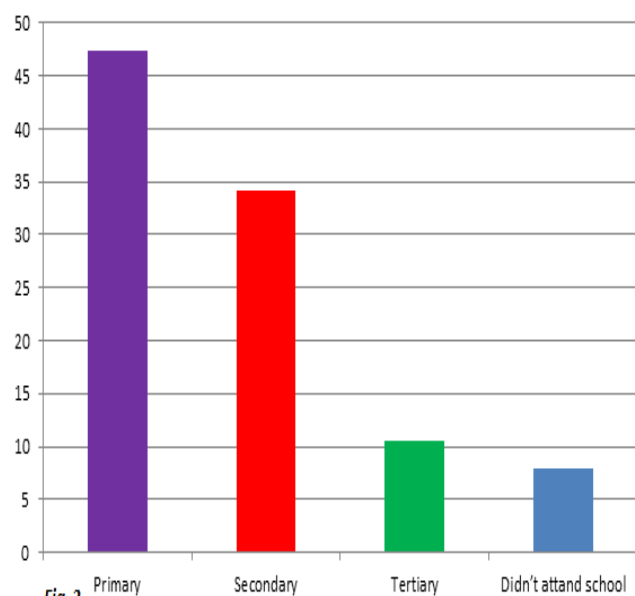


Fig. 2

Out of 38 mothers who had some form of literacy, 47.4% had primary education, 34.2% had secondary education while 10.5% had tertiary education. 7.9% never attended school. This indicated that the majority of mothers who seek

maternal and child health services have either primary or secondary and tertiary. In question 5 respondents were asked about their economic engagement by indicating what they do for a living. The responses were summarized in the table below

Table 3: Distribution of the respondents by economic activities

What to do for living	Frequency	Percentage
Farming	24	63.2
Business	4	10.5
Casual wok	3	7.9
Employed\others (specify) student	4	10.5
	3	7.9
Total	38	100

From table 4.3 the highest proportion of mothers who participated in the study 63.2% were famers, business and employed were represented by 10.5% each respectively. Casual work was represented by 7.2% as well as those will undergo school (students economic activity has an influence on utilization of ANC services. This is because the economic activity will determined whether the mother will get time during clinic hours for services and transport costs to the facility because most of the mothers use motorcycle to access the facility.

Obstetric information:

Table 4: Distribution of the respondents by parity

How many deliveries have you ever had?	Frequency	Percentage
One	7	18.4
Two	10	26.4
Three	7	18.4
Four	7	18.4
Five	3	7.9
Six	4	16.5
Total	38	100

It is evident from the above data that most of the mothers had only two deliveries. One, three and four deliveries were proportioned to 18.4% each while these who had six deliveries represented 10.5%. The least number of deliveries were mother with five deliveries with 7.9%. From these findings

we can conclude that mothers with highest deliveries six attend clinic less than mothers with two deliveries. As the number of children increase, mother's attendance of ANC services reduces. In relation to age for the first pregnancy, the mothers were asked how old they were when they gave birth to their first child. The responses were summarized into cohorts of 15 – 19, 20 -24, 25 – 59 with an interval of 5.

Table 5: Distribution by age at first child

How old were you on first child delivery	Frequency	Percentage
15 – 19	18	47.4
20 - 24	15	39.5
25 – 29	5	13.2
Total	38	100

The above table indicated that mothers in mother child health clinic had their first child in the age between 15 – 19 representing 47.4%, this was followed by cohort 20 – 24 at 39.5% and lastly 25 – 29 with 13.2%. This gave an impression that they had first pregnancy while adolescents. And therefore this trend continues with number of pregnancy.

Utilization of antenatal care services:

Through the questions underutilization, the researcher sought to find out how mothers utilize antenatal care services in Enzaro Health Centre in order to meet the, minimum visits of four during antenatal period.

Table 6: Gestational stage at first visit for ANC for previous

In previous pregnancy months at first ANC Visit	Frequency	Percentage
3 months	5	13.1
4 months	4	1.5
5 months	10	26.3
6 months	11	28.9
7 months	6	15.8
8 months	2	5.3
Total	38	100

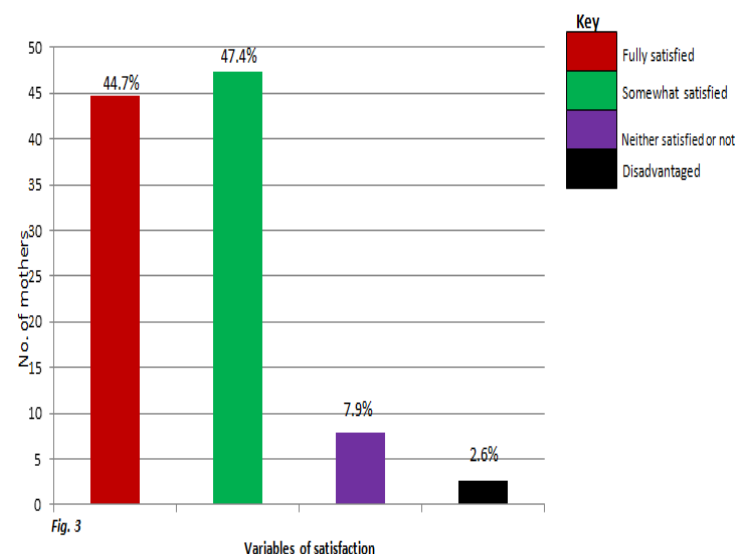
Table 4.8 clearly shows that most mothers visited for the first time for antenatal care services at 6 months in the r previous pregnancy. This indicates

why most mothers did not meet a minimum of four visits in previous pregnancy as FANC model requirements. Only 13.1% of the months started attending the AVC within the recommend first 12 weeks of pregnancy 5.3% of the mothers started attending the clinic towards pregnancy term. The study also wanted to know whether there were only complications associated to previous pregnancy. The table 49below illustrated the number of mothers with complication and without complication.

Table 7: Complications during previous pregnancy

Any complications in previous pregnancy	Frequency	Percentage
Yes	7	18.4%
No	31	81.6%
Total	38	100

From the above table 31.6% did not have any complication during their previous pregnancy. Only 18.4% of the proportion under study had complication. The complications included low hemoglobin level of 7g/dl, breed presentation and prolonged labor. Due to majority not having a complication despite no meeting minimum number of visits, it influences antenatal care services in the subsequent pregnancies. The question on whether the others were satisfied with focused antenatal care services offered in the health centre was answered and feedback summarized in fig 3 below.



From the figure above 47.4 percent representing study population were somewhat satisfied with

antenatal services delivery. Fully satisfied mothers accounted for 44.7% of total population. Those mothers who felt not to have been served to their satisfaction were represented by neither satisfied or not satisfied by 7.9% and those disadvantaged were 2.6%. Somewhat satisfied mother were appreciated because with little failure for fully satisfaction may affect utilization of antenatal services up to at least 4 visit. For proper utilization of antenatal services, the mothers were asked to indicate whether they were aware of antenatal services being carried out in Enzaro Health Centre. The following table presents their responses

Table 8: ANC services awareness

ANC service awareness	Frequency	Percentage
Yes	36	94.7
No	2	5.3
Total	38	100

Table 10 indicates that almost all mothers are aware of ANC services available at Enzaro Health Centre representing 94.7% and the least of 5.3% of not aware of ANC services. The awareness of the service may influence ANC visit. They were asked to list the services which they listed as the following ANC profile, intermittent preventive treatment, prevention of mother to child treatment, folic and ferrous tablets, weight taking and blood pressure measurement. Once all the above is carried out in one visit; they feel no need of coming back because all services have been carried in are well. Question 13 sought to find out if the mothers would come back for antenatal service in case she becomes expectant again.

Table 9: Preferences to come back for ANC if expectant

Prefer to come again for service if expectant	Frequency	Percentage
Yes	37	97.3
No	1	2.4
Total	38	100

Socio – cultural factors

The mothers were asked how far their homes are in relation to the facility, distance of 5Km were represented by 47.3% and 6-10Km, sought their means of transport as motorbike to access the facility was 100 Kenyan shillings to which getting

the money for every visit was difficult. The opening day for ANC at the facility was represented by 100% but the convenience to some mothers varied with their own individual reasons. Opening hours was represented by 92.1% for the convenience mothers and a proportion of 7.8% not convinced with opening hours at the facility.

Question 16 sought to find out factors that influence woman's access for ANC service at Enzaro Health Centre. The factors included not very far from home and therefore can walk 47.3% the facility has Boresha Afya ya Mama program which initiated by the County Government of Vihiga to promote ANC coverage by giving mothers 1000 Kenya shillings for a visit representing no charges for service 100% and few clients to be attended to with 63.2%.

The mothers too faced challenged in relation to accessing antenatal services at Enzaro Health Centre. He major challenge was long waiting for the service 80% poor terrain in order to reach facility 78.4%, few nurses to offer the service timely 76.5% lack of money for transport cost incase not enrolled on Boresha Afya ya Mama program (Otichilo care) 70%, cultural believe and norms of attending clinic early in pregnancy 10.5% family responsibility 10.5% poor decision making on when to attend clinic 7-9% and lastly trust in traditional birth attendants in better service delivery than shifted health workers 10.4% and inadequate support from couple 28.4% respectively.

Table 10: Social – cultural factors influencing utilization of ANC services among pregnant mothers to at least 4 visits in Enzaro Health Centre

Variables	Frequency	Percentage
Distance to ANC facility	18	47.3
0.5km		
6-10km	20	52.7
Above 10Km	0	6
Transport means	20	52.7
Motorcycle		
Footing Influencing factors	18	47.3
Long wailing hours	31	80%
Poor communication	21	54.4

Geographical terrain	30	78.8%
Few health care workers	29	76.5%
Boresha Afya ya Mama Program (Otichillo care)	27	70%
Lack of funds for transport	24	63.2
Family responsibilities	11	28.9
Poor decision making	3	7.9
TBA influence	4	10.4
Inadequate couple support	10	28.4
Cultural norms	4	105%

Knowledge about antenatal care to four visits

Mothers were asked questions to find out their level of knowledge concerning antenatal care services to attaining four visits. This was sought to find out their awareness of the FANC model.

Table 11: Knowledge about Antenatal care to four visits variables

Variables	Frequency	Percentage
Do you know why early ANC in pregnancy		
Yes	33	86.8
No	5	13.2
Reasons for early ANC services		
Enrolment for Boresha Afya ya Mama (Otichillo care)	31	80%
ANC profile	22	73.7%
HIV status	26	68.4
Health status of baby	30	78.9
Don't know	5	13.1
Number of antenatal visit pregnant woman need to attain		
4 times	21	55.2
At least 4	11	28.9
3 times	7	18.4
2 times	2	5.2
Don't know	1	2.6
When woman should access antenatal care services		
1 st trimester 1 – 3 months	21	55.2
2 nd trimester 4-6	13	34.2
3 trimester	3	7.9
Don't know	1	2.6

From table 4.13 most mothers know why an expectant mother should visit ANC in early pregnancy by 86.8%. major reasons why they think mothers should attend ANC early was to enroll for Boresha Afya ya Mama (Otichillo care) which gives 1000 bob for first visit, 4th visit, 1st immunization, 3rd baby immunization 9 months immunization (measles) and 1 ½ immunization (measles). To access health status of the baby represent 78.9% and for ANC profile at 73.7% reasons.

The number of visits of ANC visits according to the mothers knowledge represented by four visits is 55.2%, four visits 28.9%, those representing 3 times were 18.4% and 5.2% for 2 times. The number of visits was associated with when the ANC service began. For first trimester the proportion was 55.2% the mothers' knowledge when to start ANC visit was appreciated but implementation was the problem.

Table 12: Health care influence on ANC utilization

Variables	Frequency	Percentage
Did you get clear instruction from health care providers on health problems during pregnancy?		
Yes	35	92.1
No	3	7.8
Health care attitude		
Friendly	25	65.8
Partly friendly	11	28.9
Arrogant	0	
Delayed service	2	5.2
Totals	38	100

Based on Table 4.4, it is clear that 92.1% of respondents were given clear instruction by health care mothers while 7-8% was not instructed. From the table 65 – 8 of the respondents described health care workers as friendly while 28.9% of respondents described them as partly friendly.

4. DISCUSSION

The study showed that the proportion of adult mothers was the majority attending antenatal care services. It could be attributed due to their high partly experience and age., they don't feel more need of starting ANC services early in order to attain a minimum of at least four visit. The study however showed that the highest level of education among the pregnant mothers was primary education among the pregnant mothers was primary education level. This level of literacy may have attributed the understanding need for attending at least minimum of four visits. With little knowledge level the mothers become ignorant of ANC importance. Highly educated women seek higher and frequent health care services for their own health and higher level of education has been shown to improve utilization of ANC service of woman of reproductive age. The study established that most of the others were married. This implied that family responsibilities were taking all of them, in relation to inadequate support from their spouses, the mothers find less time for attendance of ANC services. Further, these studies revealed that majority of respondents were not employed. Due to lack of employment, most mothers were not able to cater for their transport costs to the facility and therefore sit back home and fail to attend scheduled clinic. This study revealed that partly influenced four ANC visits. The part 2, being the highest number among the respondent, they failed to attain minimum of four visits, utilization of ANC services became less importance contrarily to part 6 months. This may be due to relationship with no complication in three previous pregnancies. Therefore if previous pregnancy ended well without any complication no much need for more ANC visits because the pregnancy is assumed to be similar in growth, physiological characteristic. From the findings majority of the mothers started their antenatal clinic at gestation age of 6 months. This automatically rules them out of attaining visits. Starting first ANC service at 6 months maybe associated with poor personal decision making on when to start clinic or parity due to assumption of the normals. Further late initiation of ANC service could be due to inadequate information of importance of ANC services,

culture, economic reasons and delayed service delivery. Antenatal mothers in Enzaro Health Centre identified long waiting hours and few health care workers are major socio – cultural factors influencing utilization of ANC service. This discourages clients coming for services because a lot of time is wasted while waiting to be served, other socio – cultural factors with strong evidence were geographical terrains in which facility is located not being favorable for pregnant woman. Furthermore other factors include poor communication; the clients are not informed in time why the delay in service delivery, family responsibilities, poor decision making, TBA influence, cultural norms and lack of funds for transport costs. The Boresha Afya ya Mama is a program ran by the county governor of Vihiga popularly known as OTICHILLO CARE. This program was started in 2018 November running in specific health facility within Vihiga County Enzaro Health Centre as one of the few selected facility to run the program. The program is steered towards encouraging mothers to start their ANC service early in order to benefit maximally from the care and achieve minimum FANC ANC required visits. Boresha Afya ya Mama a program influence antenatal care service positively. The study indicates majority of the mothers attending ANC services covers assistance of 6-10Km. These mothers use motorcycle as their transport means. Therefore in case one feels too tired to walk to the facility or lacks funds for transport, she doesn't come for clinic hence influencing utilization of ANC services. Attitude of being friendly and partly friendly is seen not to affect ANC utilization. Few health care services provides in antenatal care provision influences utilization of ANC service. Due to less nurses service delivery is delayed and hence mother get discouraged in coming back for care. In the study quality care of service delivery doesn't affect ANC service utilization. Preserved quality of care had no influence in antenatal care services. The knowledge about antenatal care to at least visit did not influence utilization. Most of the mothers had information why need for early ANC service and the number of visits a pregnant mother has to visit

the facility for care not forgetting the trimester in which to start ANC care services.

5. CONCLUSION

The purpose of the study was to assess the factors affecting utilization of antenatal care services in Enzaro Health centre, Vihiga County, Kenya. The study was guided by 3 objectives. The results of the study shows there's underutilization of ANC services in Enzaro health centre. The study findings showed long waiting hours hence delayed service delivery influences utilization of the services. This is in relation to understaffing. Distance from home and geographical terrain influences utilization of ANC services among mothers. Due the distance and lack of transport cost, the clients tend not to come back for the service. The study finds out when health workers are friendly the clients may come back for service. To determine challenges associated to health workers on utilization of antenatal service was found from the study as poor communication of antenatal mothers; why they have to wait for so long to be served communication is there in service delivery. Proper communication to mothers why certain issues are not being taken care in the time will influence her to comeback rather than letting them sit for a longer period until they decide to go back home without any explanation why no service for that day.

6. RECOMMENDATION

Long waiting for antenatal care services to be addressed in order to improve their utilization. There's need to increase nurses for and timely service delivery. Interpersonal relationship should be strength through training in order to promote communication skills among health care professionals. Strengthen outreaches to for distances in order to promote utilization of ANC services. When services are brought 10 ones door, it will be adequately used. Home visiting and defaulter tracing should also be strengthen in order to encourage the mothers to utilize ANC service adequately.

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