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Original Article

Determinants Influencing Utilization of Antenatal Care Services in Tabora Region, Tabora Municipality, Tanzania

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This study examines the determinants influencing the utilization of antenatal care services (ANC) in in Tabora region with a particular focus on Tabora Municipality, Tanzania. The study used both quantitative and qualitative methods to analyze the problem. The study uses primary and secondary data obtained from the field. Tools used for data collection were questionnaires, interviews, and observation. This study employed a cross-sectional research design. This design was preferred because the design allowed the collection of data from different groups of respondents at one point at a time. Similarly, the design had a greater degree of accuracy and precision in the data collected and used for statistical description and interpretation. The study found that there was low utilization of antenatal care services in Tabora Municipality. The study revealed that the low utilization of ANC in Tabora Municipality can be solved by addressing the determinants that are responsible for the low use of ANC services. The study identified a number of determinants that influence ANC visits such as spousal involvement in antenatal clinics, the attitudes of health service professionals, clinic opening days for the antenatal care services by client satisfaction and integrated approach to antenatal care services. The determinants that affect the use of ANC visits are not only many and complex, but they play different roles in different situations. The study revealed that men and the whole community should be included in the ANC campaign so that they understand more about potential risks for pregnant women. This would increase the level of ANC use and thus reduce the high incidence of maternal and neonatal death in Tanzania including the Tabora region that results from poor utilization of ANC services. Also, this study adds knowledge to health service providers in understanding the determinants that limit pregnant women's utilization of antenatal services finding ways to improve the services and encourage women to utilize ANC services. The study findings will enable programme planners, policymakers, implementers and managers to come up with strategies for interventions that will enable pregnant women to start seeking and utilizing ANC services early in pregnancy and to have fewer pregnancy complications that lead to maternal and neonatal deaths.

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INTRODUCTION

The utilization of antenatal care services depends on several determinants such as socioeconomic and geographical accessibility to health care services (Claudia, 2013). Antenatal care refers to the interventions to curb maternal and infant mortality. It is the care a woman receives throughout her pregnancy, and it is acknowledged as an effective method of preventing adverse outcomes in pregnant women and their babies (WHO/UNICEF, 2003). Antenatal care is concerned mainly with prevention, early diagnosis, and treatment of general medical and pregnancy-associated disorders (Turyasiima, 2014). Various international organizations such as the World Health Organization have indicated a lack of antenatal care for maternal mortality (Villar *et al.*, 2001). The lack of antenatal care in various developing countries has been identified as a leading risk factor for maternal mortality and other adverse pregnancy outcomes (Fawcus *et al.*, 1996).

Despite some global and national efforts to improve women's health, the death of women during childbirth due to poor antenatal care services utilization remains the biggest challenge to many sub-Saharan countries. According to WHO every day in 2020, almost 800 women died from preventable causes related to pregnancy and childbirth. About 287,000 women died during and following pregnancy and childbirth in 2020 (WHO, 2024). Almost 95% of all maternal deaths occurred in low and lower-middle-income countries and most could have been prevented.

The preventable loss of almost 3 million lives of women between 2010 and 2020 is not only a global tragedy but also an indicator of gross health inequality between and within countries and a flagrant human rights violation (João *et al.*, 2023). In some areas of East Africa, the lifetime risk of maternal death ratio was 1 in 11 (WHO, 2012). In Tanzania, approximately 106 babies die each day before reaching their first month and 129 stillbirths occur every day (UNICEF, 2024). These are statistics from hospitals and health facilities. However, there are deaths taking place in the communities which are not recorded (Simbaya, 2014). Data shows that Tanzania's maternal mortality rate (MMR) is still high about 238 per 100,000 live births (World Bank Gender Data Portal, 2020). In developing countries like Tanzania, many factors interfere with the implementation of ANC services.

Understanding the determinants influencing the utilization of antenatal care services is a matter of great policy concern to the government and other stakeholders, especially donors. In other parts of the world, several studies have been cited attempting to understand the determinants influencing the utilization of antenatal care services. Such studies include; a study conducted by Gupta *et.al.* (2010) on the determinants of the utilization pattern of antenatal and delivery services in an urbanized village of East Delhi, India. Muriithi (2013) on the determinants of the demand for health care services in the largest Kenyan slum (Kibera). A study by Addai (1998) on the determinants of the use of maternal-child health services in rural Ghana. A study by Mbinya

(2015) on factors influencing the utilization of antenatal care services among reproductive women in Kibera, Nairobi County, Kenya. A study by Babalola (2014) on the determinants of urban-rural differentials of antenatal care utilization in Nigeria. The authors identify a number of factors such as maternal education, maternal employment, age, poverty, and access to the media as influencing the utilization of antenatal care services.

Most of the research conducted on antenatal care in Tanzania has focused on rural areas. Only a few researchers headed out to the urban areas. In fact, there are few existing studies on the factors influencing the utilization of antenatal care services in Tanzania. Few researchers have looked at particular aspects of antenatal care utilization in Dar es Salaam, Nkasi district, Morogoro Municipality. Moreover, these studies were conducted about eight years ago, in the 2007 and 2008. For example, Nyamtema *et al.*, (2008) studied about perinatal care needs assessment in Dar es Salaam health institutions to assess the factors underlying the present poor perinatal outcome. The emphasis of their research was on the analysis of resources for the provision of antenatal care services. Samson (2012) examined the utilization and factors affecting delivery in health facilities among modern delivered women in Nkasi district. The primary focus of his study was to investigate on the inadequate knowledge and skills for health workers on the management of obstetrics cases. In addition to that, Mosha *et al.*, (2010) studied factors influencing pregnancy outcomes in Tanzania with a particular focus on Morogoro Municipality. The central focus of the study investigated on maternal knowledge and attitudes regarding the risk factors that adversely affect pregnancy outcomes in Morogoro Municipality.

A study by Nduguru (2007) on the assessment of the utilization of maternal health services and associated factors for women with infants in Rural Morogoro District Council. A study by Mngale (2007) on assessment of focused antenatal care services in Dar es Salaam. However, these studies done in Tanzania in a different part of the country

does not suffice the needs of the current study. Tabora region in general and Tabora Municipality, in particular, is the area where the determinants influencing utilization of antenatal care services are not assessed, and the level of utilization of these services is not examined. Thus, identifying determinants peculiar to a given geographic area and socio-economic and cultural settings is crucial for understanding community-level determinants of antenatal care service utilization. Thus, this study aimed to examine the determinants influencing the utilization of antenatal care services in Tabora region, particularly Tabora Municipality. Despite inadequate studies on antenatal care services utilization in Tanzania, econometric studies on antenatal care utilization in Tabora Municipality are completely missing. Therefore, a wide gap remains in the literature available on the determinants influencing the utilization of antenatal care services in Tabora Municipality.

The existing data from the Ministry of Health and Social Welfare (MoHSW) 2013 shows that regions with lowest ANC utilization are Tabora (26.4 percent), Tanga (29.3 percent), Shinyanga (29.9 percent), Arusha (33.6 percent), Kilimanjaro (34.9 percent) and Kagera (36.7 percent). Data also indicates that ANC utilization is very low in Tabora which is (30.9 percent) compared to other regions such as Coastal region which is (49.6 percent) (MoHSW, 2015). Evidence from the MoHSW (2009-2015) noticed that the pattern of antenatal care service utilization in Tabora region fluctuates. For example, in 2009 utilization of ANC services in Tabora was (32.6 percent), 2010 (34.7 percent), 2011 (36.6 percent), 2012 (34.0 percent), 2013 (26.4 percent), 2014 (24.0 percent) and 2015 (30.9 percent). It is in this view that this study was undertaken to address the question “which determinants influence the utilization of antenatal care services in the Tabora region, particularly Tabora Municipality?” Knowing these determinants would help to improve the utilization of ANC services in various health facilities in the area and will also explain why Tabora is the region with the highest MMR in

Tanzania with 465 deaths per 100,000 live births (MoHSW, 2013).

Objectives of the Study

This study had one objective which was to identify the determinants influencing the utilization of antenatal care services in Tabora Municipality.

Research Question

To achieve the objective of this study, the research was guided by one research question which was “What are the determinants influencing women’s utilization of antenatal care services in Tabora Municipality?”

METHODOLOGY

Tabora Municipality is the headquarters of the Tabora region, located in the western part of Tanzania. Tabora Municipality borders Uyui district in the east, north, and west and Sikonge district in the south and is 800 km west of Dar es Salaam, 320 km east of Kigoma port on the shores of Lake Tanganyika, and 360 km south of Mwanza City. The Municipality acquired a township council status in 1958 and was raised to Municipal Council in July 1988. Tabora Municipality was chosen because it is among the areas in the Tabora region that have a low utilization rate of antenatal care services. In the Municipality the rate was 27.0 percent in 2013 and in 2014 the rate dropped to 24.0 percent while in 2015 it was 25 percent. This is unlike other districts like Nzega district which was 42.4 percent in 2013, 41.0 percent in 2014 and 2015 it was 30 percent (RCH services, Tabora, 2013; 2014; 2015).

This study employed a cross-sectional research design. This design was preferred because the design allowed the collection of data from different groups of respondents at one point at a time. Similarly, the design had a greater degree of accuracy and precision in the data collected and used for statistical description and interpretation. This design was also selected because it was well suited to studies that collect data from a large group of subjects, gather information on people’s

attitudes and behaviours and answer questions in the form of how, who and what happened. In this study, the researcher was able to get information on attitudes, behaviours and opinions of pregnant women in Tabora Municipality on the determinants influencing the utilization of antenatal care services.

The research approach of this study was a mixed method approach or a triangulation of quantitative and qualitative research methodologies. A qualitative approach was adopted as the survey required an in-depth understanding of the determinants influencing the utilization of antenatal care services. A qualitative research approach was proposed by its capacity to explore and describe the complexities of social reality (Creswell, 2009). Quantitative data was collected by using survey questionnaires. In addition to that, a quantitative approach was used to find relationships between dependent and independent variables. Using quantitative design allowed the study to test levels of association between variables. Combining qualitative and quantitative approaches enables the researcher to link different methods with the aims of seeking convergence results and ensure that the limitations of one method are complemented by the strengths of another (Janelle and Goodchild, 2011). The target population included all antenatal care users, health services providers, and service providers, as well as those in charge of health facilities who lived in Tabora Municipality. Also, the study further included a few ANC non-users and traditional birth attendants in the study area to get their views regarding ANC services in Tabora Municipality. The statistical formula applied for determining the sample size in the absence of knowledge of the sample population was as follows:

$$n = \frac{NpqZ_{\alpha/2}^2}{(N-1)e^2 + Z_{\alpha/2}^2 pq}$$

where n is the sample size N is the total number of women in each ward, $Z_{\alpha/2}$ is the abscissa of the

standard curve, p = estimated the proportion of an attribute of interest in the population and $q=1-p$, e = the desired level of precision. The value of Z is set to 1.96; p is 0.5 and $q=0.5$ and $e = 0.05$ accuracy with a confidence interval of 95 percent. The total number of women in each ward is obtained from the data available from RCHC-TMC (2014) which shows the total number of women in each ward, pregnant women and women of childbearing age (WCBA).

The sampling frame consists of 25 wards of which 10 wards were selected purposively. The selection of 10 wards depended onwards with dispensaries, health centres, and hospitals. The second criterion was the selection of wards with the highest women total population and women child-bearing age (WCBA) as the available data from RCHC-TMC (2014) indicate. According to the RCHC-TMC (2014) data, the wards were: Kanyenye, Mbugani, Chemchem, Kiloleni, Ipuli, Ng'ambo, Isevyia, Cheyo, Kitete and Kalunde. After the selection of wards the next stage was the selection of health facilities available in the wards. From each selected ward one health facility was chosen purposively. In case there was more than one health facility the researcher picked the one with the highest rank based on MoHSW criteria being a hospital, health centre or dispensary. From each of the selected health facilities, some pregnant women who attend antenatal care services aged between 15-49 years were chosen randomly. The respondents were sampled from ten (10) health facilities identified for the study. After that, the researcher administered the questionnaires to them on the spot. Finally, 381 questionnaires were administered to individual pregnant women in the selected health facilities.

The study used snowball sampling technique. This approach was particularly helpful, given the lack of a sampling frame of non-users of ANC services in Tabora Municipality. This is in line with Kothari (2004) who argues that snowball sampling technique is often used in hidden populations which are difficult for researchers to identify or access. Non-users in this study were women who did not attend ANC services at all. In this sampling technique, the ANC users helped to

locate the number of non-users in the area of study. Since there are births and deaths taking place in the community which are not recorded in health facilities, the only possibility to locate this number of women was through the snowball sampling technique, where pregnant women rendered information of other pregnant women available in their wards who were not attending health facilities after conceiving. The non-users of ANC identified helped to determine their fellows until the required sample was obtained. The non-users of ANC services were collected at the household level. Then, 74 questionnaires were administered to them on the spot.

The study applied purposive sampling. In this type of sampling, the researcher used his/her knowledge to choose individuals to be included in the sample. It was the only viable sampling technique in obtaining information from a very particular group of people. The study selected ten (10) ANC service providers and ten (10) in charge of health facilities in ten (10) selected health facilities. This was done purposively because they are the ones who deal with pregnant women in the selected health facilities in the study area. For every health facility at least there was one or more ANC service providers. In the place where there was more than one ANC service provider, the one with the highest rank was picked. There was only one person who was the in-charge, and this case was directly selected. The study used both primary and secondary sources of data. Primary data were collected through questionnaires, in-depth interviews, and observation. Secondary sources comprised of a review of books, journals, reports, files, publications, unpublished materials and internet sources. The first component of the field research was the administration of questionnaires in ten (10) selected health facilities. The questionnaire was administered face-to-face. This tool was preferred because it captured the status of the environment to which the community members were exposed. Adaptation of the instrument was made, informed by the pre-testing exercise to fit some of the concepts within the context of the studied settings and make the tool friendlier to use.

Data from ANC users and non-users were collected to capture information about respondent's views on the determinants influencing the utilization of ANC services in the study area. A questionnaire for ANC users was administered to the client who was receiving the services. This study used face-to-face interviews to collect primary data. An in-depth interview was used to validate and clarify the information collected through a questionnaire. They were conducted for the purpose of complementing the questionnaire surveys and to deepen research results. Nind (2008) describe the in-depth interview as a technique of the study which helps to elicit people's views and perspectives on the world. It offers the opportunity for investigators to seek more clarification on any topic and capture all the needed details. The research team ensured that those selected for the interviews were well-informed about the issues being researched, to enable them to provide relevant information. Each interview was conducted using an interview guide that listed the main topics and sub-topics to be explored. The guide was designed in such a way that similar types of information would be elicited from all respondents. The flexible guide, therefore, helped the team pace the interview and made the interview process more systematic and comprehensive. Participants were encouraged to express themselves in as much detail as they could and to discuss issues that they felt were of greatest relevance and interest to them.

The key informant interview was conducted with in-charge officials of health facilities to collect an inventory of resources and support services. The resources assessed are those required to provide service at internationally accepted standards. The support services are those that are commonly acknowledged as essential management tools for maintaining health services. All this information was obtained from the officials of health facilities. It was a safe method which enabled a researcher to know the stock of resources available for providing ANC services. In this study, ten (10) in-charge officials of health facilities were selected because there is only one in-charge for every selected health facility in the study area.

Moreover, key informant interviews were also conducted with ANC service providers. ANC service providers were interviewed for information on their qualifications (training, experience, continued education), supervision they have received and perceptions of the service delivery environment. The ANC service providers included nurses, clinical officers, midwives, community health workers and reproductive health coordinators. In this cadre, 10 respondents were interviewed.

Finally, key informant interviews were administered to traditional birth attendants (TBAs) who were selected purposively based on their knowledge of the community and their professionalism. TBAs were interviewed because they are the ones who helped non-users of ANC services during the time of pregnancy complications and delivery. In the community, they are closer to the mothers than the ANC health facility. Under the participant observation method, the information was sought by the researcher through direct observation in the field without specifically addressing questions to the respondents. This practice was done in the selected health facilities. Some of the activities in which the study participated include the following: Check-up of necessary infrastructure for provision of antenatal care services, availability of essential equipment for antenatal care service and availability of key drugs for antenatal care services. This method gave the researcher the opportunity to observe and experience the live reality and also cross-check information obtained in the interviews and questionnaires with what was observable in the selected health facility.

The secondary data were collected from the latest and relevant statistical publications from various sources such as the National Bureau of Statistics. Other principal sources included documented material from relevant ministries dealing with health issues such as the Ministry of Health and Social Welfare (MoHSW). Other sources were published and relevant unpublished dissertations, academic literature sources such as books, journals and manuscripts from Archbishop

Mihayo University College of Tabora library, Tabora Regional Medical Officer (RMO) office, various health facilities and internet sources. A documentary review of ANC services utilization was undertaken. However, there is a paucity of these data.

Data analysis is a process that involves editing, coding, classifying and tabulating the collected data (Kothari, 2004). As indicated earlier, the study used both quantitative and qualitative methodologies which supplemented each other. Qualitative research is characterized by an emphasis on understanding and explaining complex phenomena. Thus, data analysis in qualitative research provides ways of discerning, examining, comparing, contrasting, and interpreting meaningful patterns or themes in research results (Oakley and Mardsen, 1984). In this study, the collected data was analysed using a multidisciplinary approach consisting of a combination of these two research methods. Compilation and processing of both quantitative and qualitative data started immediately after the fieldwork. The data were coded and processed through the IBM SPSS statistical programme version 21. Frequency distributions and cross-tabulation were made to study the relationships between variables. In addition to that, various indices such as the chi-square analysis were employed. The resulting indices measure the extent of association between the variables being compared. Frequency tables, graphs and charts were used to present the findings. Qualitative data were sorted and arranged in thematic areas. The content was subjected to thematic analysis and presented using narrations.

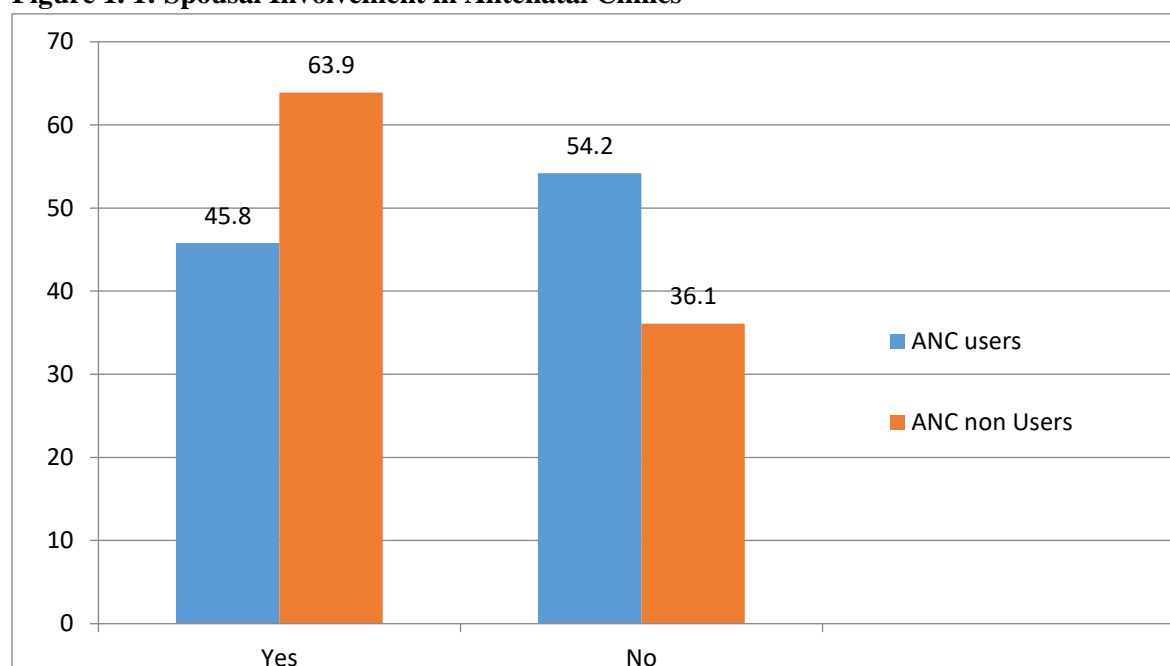
FINDINGS AND DISCUSSION

Spousal Involvement in Antenatal Clinics

The behaviour of men, their beliefs and attitudes affect the maternal health outcomes of women and their babies. The exclusion of men from maternal health care services could lead to few women seeking maternal health services and as a result, worsening the negative maternal health outcomes

for women and children. Increasingly, recognition is growing on a global scale that the involvement of men in reproductive health policy and service delivery offers both men and women significant benefits (Naomi, 2005). The involvement of men in ANC can play a vital role in ensuring a safe pregnancy, delivery and moral support to the women. However, little attention has been placed on male partner's involvement in maternity care in developing countries, including Tanzania and particularly Tabora Municipality. The study was interested to know if their spouses accompanied pregnant women during ANC visits. Data presented in Figure 1.1 shows that 54.2 percent of ANC users and 63.9 percent of non-users did not accompany their spouses during ANC clinics. About 45.8 percent of ANC users and 36.1 percent of non-users accompanied by their husbands during ANC clinic.

Figure 1. 1: Spousal Involvement in Antenatal Clinics



Source: Tabora Field Survey, 2023

Figure 1.1 indicates that the majority of pregnant women were not accompanied by their spouses during ANC visits. Expectant mothers claimed that the reasons for men not accompanying their partners/wives to antenatal clinics were ANC services traditionally were designed to serve women and not men. Also, the study noted that men were mostly busy and would not feel concerned about ANC services. Of those respondents accompanied by their spouses to the antenatal clinic majority of them did that only during the first trimester (1-12 weeks) or if there were pregnancy complications because they were forced to come with their spouse. Some of the men refused to go to ANC clinics, and if the service providers forced expectant mothers to bring their husbands, most of them stopped attending ANC services in that health facility or stopped accessing antenatal services at all. Interestingly, 45.8 percent of pregnant women who were usually accompanied by their spouses to antenatal clinics reported that it was beneficial to attend with their husbands for ANC so that they could get first-hand information about the health of their wives and unborn babies. Indeed, it was also noted that those who accompanied their wives were only going with them when there were specific health

issues, pregnancy complications, or when laboratory tests involving them were necessary. This seemed to be a one-off act not leading to routine accompaniment.

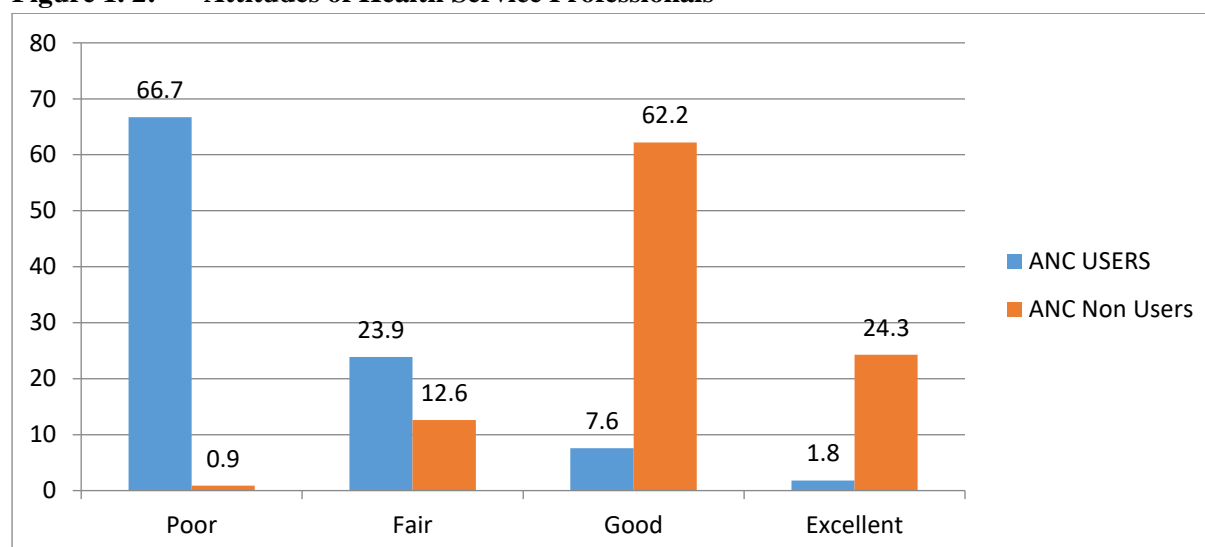
Studies have indicated it is important to follow all steps that will lead to maternal survival. There is always a man standing by the side of every woman knocking at the gate, before, during and after each pregnancy (WHO, 1995). Kasolo and Ampaire (2000) observed that for women to be able to access and utilize ANC services, male involvement needs to be emphasized at all levels of ANC service delivery. Pagel *et al.*, (1990) and Mutale *et al.*, (1991) noted that male involvement in maternal health results in a positive outcome for not only the pregnant woman but also for the unborn child. Lack of social support; especially from the husbands or family has adverse effects on foetal growth. In much poorer countries many of which have a patriarchal society, an increase in male involvement during pregnancy has been seen as a possible factor in reducing the number of children born with low birth weight (Mira and UNICEF, 2000). The study findings concur with Byamugisha *et al.*, (2011) that male involvement in antenatal care services plays a significant role as they make most decisions for their wives.

The Attitudes of Health Service Professionals

Health workers are likely to have more positive attitudes toward their work and to perform better when they receive the support and resources they need to provide essential services, and when the community values their work. Dennit *et al.*, (1995), observed that some women stated that the reasons affecting their delay in or lack of antenatal clinic attendance were most of the pregnant women were not treated well by the service providers. In this study, pregnant women were asked to rate the attitude of health service providers as indicated in Figure 1.2. The findings revealed that the majority of ANC users 66.7 percent reported that the attitude of the health professionals was poor, followed by 23.9 percent who said that the attitude of health professionals was fair. About 62.2 percent of non-users of ANC services said that the attitude was good and these

are women who were attended by TBAs followed by 24.3 percent who said that the attitude of health service providers was excellent. Overall the study findings in Figure 1.2 below revealed that the attitudes of health service providers were poor. The results show that the negative attitudes of health service providers were the barriers to the utilization of ANC services. The reason why 62.2 percent of non-users of ANC services said the attitude was good was because most of them visited TBAs and would only visit hospitals when attempts to correct complications like haemorrhage, eclampsia, and prolonged labour failure because of good customer care of the TBAs. The attitudes of health workers and society have psychological effects on pregnant adolescents who might avoid ANC services for fear of being ridiculed and harassed by health professionals and older pregnant women.

Figure 1.2: Attitudes of Health Service Professionals



Source: Tabora Field Survey, 2023

The presented findings in Figure 1.2 concur with the results from Aretakis (2004) who cited that some of the barriers, especially among African adolescent mothers, related to delays in seeking ANC services were offensive attitudes of health service providers towards pregnant adolescents. The findings also coincide with those by Mgawadare (2009) who found out that among of the factors that made pregnant women start ANC late or not at all in most rural areas in Malawi were health workers' negative attitudes.

Clinic Opening Days for the Antenatal Care Services by Client Satisfaction

Health facilities in Tabora Municipality are supposed to offer ANC services during weekdays. ANC is required to be provided from Monday through Friday. Antenatal care clinics should be scheduled in line with government policy that is they should open every weekday. The study was interested in finding out whether ANC clinic was opened on weekdays and whether clients were

satisfied with the opening days for the various ANC clinics and whether these days were convenient to pregnant women. The majority of ANC respondents know exactly the opening days for antenatal care services in their respective areas whereas 88.9 percent of ANC users indicated that clinics are open from Monday-Friday and the days were satisfactory to them. About 69.6 percent of non-users claimed that ANC clinics are opened from Monday to Friday and the days were satisfactory to them. The study has revealed that the majority of the antenatal care clinics are opened from Monday to Friday in a week. The majority of ANC users indicated that the days were satisfactory to them because at any time they went to health facilities they could get the services and most of the women are used to these ANC days.

Despite the days being satisfactory to non-users of ANC services they did not attend ANC services. The reasons given were the ANC days coincide with market days in some areas. Therefore, the women are faced with a choice to attend ANC services or go to the market to sell their products since market days operate from Monday to Friday in a week. Another reason given was a shortage of staff in various health facilities. About 0.8 percent of ANC users said that ANC clinic schedules in some health facilities were administered twice a week and the days were satisfactory to them. They have reasons for being in favour of the ANC clinic

opening days that the health service providers also run outpatient departments (OPDs) and other health services at the health facility; therefore, they need time to do other activities because there were only two nurses at the health facility. Also, 3.0 percent of non-users of ANC services said that in some few health facilities ANC clinic schedules were administered twice a week and the days were satisfactory to them. But they did not utilize ANC services because the health facility was usually crowded since they are run twice a week, and the best option is to see TBAs who attended patients even on Saturdays and Sundays.

Therefore, the woman takes time to wait before they get the services. About 71.4 percent of ANC users and 73.6 of non-users of ANC indicated that ANC services are available on weekdays but the days were not satisfactory to them. The ANC providers handle too many people in each clinic day. There is congestion at the ANC clinic because everybody wants to be assisted before noon when it is too hot although they have other engagements. Women cover long distances mainly on foot to get to ANC clinics, therefore, by the time they reach to a health facility, it is closed because the working hours are over. The other problem mentioned was that the clinic opening days coincide with market days in their areas. Therefore, the women are faced with a choice to attend ANC or go to the market.

Table 1. 1: Clinic Opening Days for the ANC Services by Client Satisfaction

ANC Opening Days	Satisfaction with the Opening Days			
	ANC users N=381		ANC non-users N=74	
	Yes Percent	No Percent	Yes Percent	No Percent
Weekdays	88.9	71.4	69.6	73.6
Twice a week	0.8	6.7	3.0	2.7
Weekly	3.9	6.2	1.8	1.3
Monthly	3.9	4.3	5.7	4.4
Don't Know	2.4	11.4	19.9	18
	$\chi^2=11.610$	$p= 0.020$	$\chi^2=15.306$	$p= 0.004$

Source: Tabora Field Survey, 2023

As indicated in Table 1.1 above it is clear that the majority of ANC attendees know exactly the ANC clinic days in their respective areas, but still, low

utilization of ANC services persists. The study revealed that utilization of ANC services does not depend only on one factor, but there are multiple

factors associated with it like barriers to access, such as user fees, and long travel distances. In addition to that the study noted that most of the days, there was one staff available to provide all the services (outpatient and maternal health care) starting from Thursday-Friday. Most of the respondents from various health facilities said most of the health facility is open half day on Friday because the staff stated that they used, this time, to go to the Mosque. The respondents knew of government-stipulated opening days for the health facilities and they implied that this was done to prevent people from accessing the services since Friday in most wards is the market day. Some informants further confirmed that Friday is a market day; it was feasible for them to combine their market trip and the clinic visit.

Overall the study indicates that opening days for ANC clinics in various health facilities is a key factor that determines women's utilization of ANC services in Tabora Municipality. When chi-square test of association was conducted between clinic opening days for ANC services and client satisfaction showed statistically significant association for both ANC users and non-users $\chi^2=11.610$, $p=0.020$ for ANC users, and for non-users $\chi^2=15.306$, $p=0.004$. This indicated that opening days were a determinant factor for client satisfaction hence utilization of ANC service. The study findings concur with Chitimbe (2006) who observed that pregnant women were aware of the ANC clinic opening days in their respective areas and the days were convenient to them thus the majority of pregnant women who were aware of opening days for the ANC clinics utilized ANC services more than those who were not aware.

Integrated Approach to Antenatal Care Services

Integration is the act of bringing together smaller components into a single system that functions as one. According to Lincetto (2006), pregnancy often represents the first opportunity for a woman to establish contact with the health system. There is a large gap between a single antenatal visit and optimum ANC, which would require follow-up visits and several preventive interventions. Several conditions that are prevalent in Africa, such as malaria, STIs, maternal and neonatal tetanus, HIV, tuberculosis (TB), and some nutritional deficiencies, can be addressed during ANC services. If not adequately managed, most of these conditions interact during pregnancy and may worsen pregnancy outcomes, especially HIV and Malaria. Thus, ensuring the integration of ANC services with other programmes can particularly be beneficial, both for the woman and her baby, who can receive better care and for the health system, as missed opportunities and programme costs can be reduced.

The finding shows that pregnant women were likely to attend ANC services if the following programmes were integrated into ANC services: family planning, STDs, HIV/AIDs, Child Immunization and how to care for the newborn. Whereby the majority of ANC users 84.9 percent and non-users 64.8 percent indicated family planning, 21.2 percent of ANC users and 43.3 percent of non-users reported STDs programme. There were some claims from respondents that most of the health facilities in the study area do not offer some of the programs as shown in Table 1.2 below.

Table 1.2: Integrated Approaches to Antenatal Care Services

Programmes	ANC users		ANC non-users	
	Frequency	Percent	Frequency	Percent
Family Planning	319	84.9	46	64.8
STDs programme	79	21.2	30	43.3
HIV/AIDS	6	1.6	29	40.8
Child Immunization	21	5.6	23	32.4
Care of the new-born/baby	12	3.2	19	26.8

Source: Tabora Field Survey, 2023

The study findings also revealed that ANC services must address multiple conditions directly or indirectly related to pregnancy to respond to the needs of pregnant women including issues related to newborns. ANC should also provide required information and advice on pregnancy, childbirth, and the postnatal period, including new-born care. The most efficient way to do this is through the integration of programmes and availability of healthcare providers with a broad range of skills. ANC services should take advantage of existing programmes, especially those with outreach activities targeting women of childbearing age to maximize opportunities for pregnant women. This is especially important in settings where ANC coverage is low. National strategies for malaria, HIV, STDs and nutrition need to be better integrated into ANC services. Some pregnant women felt that integration of ANC services with other healthcare services can encourage women to attend ANC services during pregnancy. It was noted that, majority of pregnant women failed to seek ANC during pregnancy because the services are provided exclusively to the other health care services.

During the interview with one non-user of ANC services stated that:

“I don’t start ANC because when I go to the health facility, they only provide few ANC services to pregnant women. If ANC was provided alongside with other services such as child immunization, I could have started attending ANC clinics because when I go with my little daughter for immunization, I could also register for ANC services. Therefore, I will stay at home until advanced stages of my pregnancy or during the time of delivery”.
[Non-users of ANC services/ Kalunde ward/ August, 2023].

Some pregnant women were of the opinion that ANC services at the health facilities should be integrated with other health care service programmes. This is because they felt that women can benefit from other services when they came for antenatal care services. The majority of ANC providers were of the opinion that the non-

integration of ANC services with other health services was attributed to the delay in starting ANC early. Women are discouraged from coming to the health facilities to receive only a few services, or sometimes nothing was offered. They would rather go there when they are sure of getting other services, either for themselves or, family members such as child immunization.

During the interview with ANC service provider, at SDA dispensary explained that:

“When ANC services are provided separately from other services such as family planning, child care, and immunization, nutrition education, most women are reluctant to come here only for ANC services especially when they are in early stages of their pregnancy.”
[Key Informant Interview with ANC service provider/ SDA dispensary/ Gongoni ward/ October, 2023].

This is in line with what has been observed by Sharma (2002) that the integration of maternal health service with family planning programmes may lead to better ANC visits in Nepal. Chitimbe (2006) contends that integration of ANC messages with other health care services such as OPD services, child health services, and family planning among others enables the dissemination of ANC messages to a wide range of target groups instead of targeting pregnant women only at the ANC clinics.

CONCLUSION AND RECOMMENDATIONS

The study investigates on the determinants influencing the utilization of ANC services in Tabora Municipality. Results of the findings identified a number of determinants that have an influence on ANC visits. Among them include; spousal involvement in ANC services, attitudes of health service professionals, clinic opening days and integrated approach to antenatal services. The findings revealed that husbands and the community as a whole play a greater role in the health of the mother. It seems that the husband and community did not take an active part regarding ANC use of the women. Therefore, men and the

whole community should be included in the ANC campaign so that they understand more about potential risks for pregnant women. This would increase the level of ANC use and thus reduce the high incidence of maternal and neonatal death in the Tabora region that results from poor utilization of ANC services.

Based on the conclusion, it is recommended that the Municipal Health Management Team in Tabora Municipality in collaboration with the community leaders should organise educational campaigns within the communities to educate community members, especially the men, on the importance and benefits of male involvement in antenatal care services. Such campaigns can also address negative socio-cultural norms and attitudes. Health care facilities should restructure their ANC clinics to make them more male-friendly. There is a tendency not to allow male partners into the labour wards this must be addressed and the labour wards must be redesigned to accommodate male also. The service delivery must aim at reducing the time spent at the health facility per visit. Health facilities must plan strategies to invite men to the antenatal and postnatal clinics. Health service providers must be trained in interpersonal skills and encouraged to have a good attitude towards their clients and their partners.

It is recommended that more efforts should be made by the government, NGOs, FBOs and CBOs to integrate ANC services with other programmes which are very essential for pregnant women. This will increase knowledge about the ideal time for starting ANC services, the number of ANC visits one should make, benefits of utilizing ANC services. Also, the study suggests that ANC clinics should be held on a weekday's basis for both groups of ANC attendees and clinic operational hours should be observed as laid down by the government working hours' rules and regulations.

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