# An investigation of factors affecting the utilization of antenatal care services among women in post-natal wards in two Namibian hospitals in the Khomas region

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## Abstract

**Background.** Antenatal care (ANC) services are the care provided by skilled healthcare professionals to pregnant women to ensure the best health for both mother and baby during pregnancy and after delivery. In Namibia, utilization of antenatal care services has been reported to be dropping from 97% in 2013 to 91% in 2016.

**Objectives.** The objectives of this study were to investigate the factors affecting the utilization of ANC services.

**Methods.** A quantitative approach and a cross-sectional analytical design were used to carry out the study. The study population was all mothers who delivered and were admitted to the postnatal ward of Intermediate Hospital Katutura and Windhoek Central Hospital during the time of the study. Data were collected from 320 participants using self-administered structured questionnaires. The data were analyzed using the Statistical Package for Social Science (SPSS) Version 25 software.

**Results.** Participants were aged between 16 and 42 years with a mean age of 27 years. The results show that 229 (71.6%) utilized ANC while 91(28.4%) did not utilize ANC services. Factors such as the negative attitude of health care workers, long distance to and from health facilities, lack of transport money to travel to and from the health facilities, lack of knowledge regarding antenatal care, attitude towards pregnancy, and others, were found as hindrances to the utilization of antenatal care services. Participants also indicated motivators for ANC utilization such as preventing complications, knowing their HIV status, getting health education, knowing the estimated date of delivery, and identifying and treatment of medical conditions. The study reveals the higher knowledge of participants on ANC utilization, most participants have the right to make decisions and had positive attitudes toward the quality of ANC services. The level of attitude toward pregnancy was associated with the utilization of antenatal care services with an odd ratio OR=2.132; and P=0.014.

**Conclusions.** The study identified factors that affect utilization of ANC services such as age, marital status, mother's education, partner's formal education, negative attitude toward health providers, long distance to and from ANC health care facilities, fear of HIV test and results, Covid-19 regulations, inability to determine the pregnancy at the earlier stages and financial constraints Based on this study findings, it is recommended that the utilization of ANC might be improved through effective community mobilization and outreach maternity services to educate and improve awareness on the importance of ANC.

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## Introduction

The World Health Organization (WHO) requires all pregnant women to use antenatal care services (ANC) during pregnancy. Pregnant women without complications are recommended to at least have four comprehensive ANC visits before delivery.[1] Namibia is a member of WHO, and it adheres to WHO recommendations on ANC for pregnant women. Namibia Demographic and Health Survey indicate that 53% of mothers who did not utilize ANC services were being delivered by a skilled attendant in hospitals,[2] as compared with 92% of women who utilized ANC services.[3] According to the Ministry of Health and Social Services,[3] ANC utilization in Namibia has been reported to be decreasing from 97% in 2013 to 91% in 2016. It was reported that in Intermediate Hospital in Katutura and Windhoek Central Hospital,

there is an increase in pregnant women not utilizing ANC.[4,5] A decrease in the number of ANC utilization by pregnant women is a threat to maternal mortality and neonatal mortality reduction.

## Materials and Methods

### Ethical considerations

The study was approved by the University of Namibia, Research Ethical Committee (SON 2/ 2020). Approval was also obtained from the Ministry of Health and Social Service Research Ethics Committee and hospital management of Intermediate Hospital Katutura and Windhoek Central Hospital respectively. Confidentiality was ensured by not recording the patient names: pseudomonas numbers were used instead. Participants who agreed to participate in the study were asked to sign an informed consent after full explanation of the study's purposes and their right to withdraw from the study at any time if they wish.

### Study design

This study used a quantitative, cross-sectional analytical study design.

### Study setting

The study settings were Intermediate Hospital Katutura and Windhoek Central Hospital. The target population was all women who gave birth and were admitted to postnatal wards at the Intermediate Hospital in Katutura and Windhoek Central Hospital at the time of data collection. The study included all the mothers who did and did not utilize ANC services during their pregnancy. The list of all names of mothers admitted to the postnatal ward during data collection time was obtained from the sisters in charge of the maternity wards and used as a sampling frame. A simple random sampling method was used to select the sample of this study. According to the delivery registers at the Intermediate Hospital in Katutura and the Windhoek Central Hospital, an average of 300 and 330 deliveries were respectively recorded. From the average population of women who delivered at the Intermediate Hospital in Katutura, a total of 178 mothers were sampled, at a 95% confidence interval and 5% margin of error, and 169 women were also sampled for the Windhoek Central Hospital. The study sample was composed of 347 women. Women who were unstable, seriously sick, or were not admitted to the two postnatal wards of the Intermediate Hospital Katutura and Windhoek Central Hospital at the time of data collection were excluded from the study.

### Data collection and analysis

Data were collected from November 2020 to December 2020. The validity and reliability of the data collection tool were ensured. The data collection tool was given to an expert in the field to assess the clarity, relevance, and simplicity of the content of the instrument. The instrument was piloted one month before the main study on 32 mothers to ensure that all important variables of concern were covered for reliability. Corrections and adjustments were done after piloting. Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26. Self-rating was used to rate participants' attitudes toward pregnancy, knowledge regarding ANC, right to make decisions, and quality of the service being provided at ANC facilities. There were four questions on attitude with three points on the Likert scale. The minimum score was 4 and the maximum score was 12. The attitude was then categorized into two levels: participants who scored 4 to 7 were classified as having a positive attitude toward their pregnancy; while participants with scores of 8 to 12 were classified with a negative attitude. The right to make decisions had 3 questions with 3 Likert scale points. The minimum score was 3 and the maximum was 9. A score of 3 to 5 was given to participants who had no right to make decisions while a score of 6 to 9 was given to those who had the right to make their own decisions. There were 9 questions on the quality of the services with three Likert scale points. The minimum score was 9 while the maximum score was 27. Quality was then categorized as good quality and poor quality. A score of 9-14 was rated as good quality services and 15-27 as poor quality.

## Results

### Socio-demographic data

The socio-demographic information obtained refers to participants' age, marital status, educational level, employment status, religion as well as and ethnic group as presented in Table 1. The findings indicate that the average age of mothers who participated in this study was 27 years. Results for socio-demographic factors indicate that the majority of the participants were single (282, 88.1%), while 11.9% were distributed among married, divorced, or windowed. Findings further show that 194 (60.6%) participants had secondary education qualifications, while 36 (11.6%) participants had no education. Participants' partners' highest education level indicated that the majority (185, 57.8 %) had secondary education and 36 (11.3%) had no educational background. The results also revealed that more than 186 (89.4%) participants were Christians, 3.4% were Muslims and 1.6% belonged to other religions. The study also shows that most participants were unemployed (147, 45.9%) with 41 (12.8%) participants being students/learners. The majority was from Oshiwambo ethnic group (157, 49.1%) and Caprivian (17, 5.3%). Nama/Damara were 70 (21.9%), Kavango was 46 (14.3%) while 25 (7.8%) were from other ethnic groups with 5 (1.6%) participants who did not indicate their ethnic group. Moreover, 229 (71.6%) participants utilized ANC services while 91(28.4%) did not. Furthermore, most participants (61, 26.75%) had 4 ANC visits/contacts, followed by 3 times (47, 20.61%) while one participant (0.44%) had utilized ANC 20 times. It was also noted that 190 (59.4%) participants had become pregnant either once or twice with 18 (5.6%) participants having had five or more pregnancies. The study also shows that 267 (83.4%) participants had no previous miscarriage, 29 (9.1%) had one miscarriage in their lifetime, and 18 (5.6%) had two miscarriages. Results from the study highlighted that about 264 (82.5%) had normal deliveries, 19 (5.9%) delivered through instrumental assistance and 16 (5.0%) delivered through caesarean sec-

**Table 1. Age of participants (n=320).**

| Age groups | Frequency | % |
|---|---|---|
| Below 20 | 47 | 14.7 |
| 21-25 years | 89 | 27.8 |
| 26-30 years | 87 | 27.2 |
| 31-35 years | 51 | 15.9 |
| 36-40 years | 23 | 7.2 |
| 41 and above years | 7 | 2.2 |
| Ages not indicated | 16 | 5.0 |
| Total | 320 | 100 |

tion. The study found that most participants heard information about ANC through midwives (120, 37.5%), while 38.2% indicated the sources of ANC information as either through the radio, traditional birth attendance, or relatives and 1 participant (0.3%) indicated other sources which were not specified. In addition, 228 (71.3%) participants did not have a previous stillbirth, while 35 (10.9%) experienced between one to two stillbirths. Additionally, 222 (70.9% had no medical condition while 35 (10.9%) had high blood pressure, 14 (4.1%) had diabetes, and 31 (9.4%) had other medical conditions.

### Factors that prevent pregnant women from utilizing antenatal care services

Participants identified factors that prevent them from utilizing ANC services as presented in Table 2. Table 2 shows that 19 (20.9%) participants did not utilize ANC services because of the long distances to the ANC health facilities. 12 (13.2%) participants stated that it was due to lack of transport and money to pay for transport to antenatal care facilities; while 12 (13.2%) did not utilize ANC services because they did not find it important and there were too many follow-ups. Moreover, 12 (13.2 %) participants did not utilize ANC services because they were not aware that they were pregnant In addition, negative attitudes of health care workers, Covid-19 restrictions, work engagement, and time constraints were stated by some participants. In addition, 7 (7.7%) participants stated that they were afraid to be tested for HIV and stigmatization if the results come back HIV positive. The previous unpleasant experience with ANC services was stated by 4 (4.4%) participants.

### Factors that motivate pregnant women to utilize antenatal care services

The results on motivators for ANC utilization are presented in Table 3. 63 participants (27.5%) indicated that the main reason for utilizing ANC was to make sure that their health and that of their unborn baby was protected. The importance of health education (19, 8.3%) and monitoring of baby growth (43, 18.8%) were also mentioned by participants. Furthermore, 34 (14.8%) participants utilized ANC because they wanted to prevent complications during pregnancy. Factors like going to get medication, knowing the estimated date of delivery, and having certain medical conditions were some of the reasons why some women utilized ANC services.

### Attitude of participants toward pregnancy

Participants were asked about their attitudes towards their pregnancy using indicators on a 3-point rating scale (agree, neutral, disagree). 147 participants (45.9%) agreed that they wanted to have another baby right before they became pregnant. 217 participants (67.8%) agreed that they would want a baby in the future. Furthermore, 230 participants (65.3%) stated that their family members were happy about their pregnancies. However, 108 participants (33.7%)indicated that they were scared to visit a health facility for ANC service during pregnancy.

### Knowledge about antenatal care services

261(86.14%) of the participants indicated that pregnant women should visit the antenatal health care facilities 3 or more times, 13 (4.29%) indicated that they should only visit 2 times and 14 (4.62% ) indicated that there was no need for pregnant women to use ANC services. 164 (53.59%) participants indicated that a pregnant woman should start ANC during the 1st trimester, 108 (35.29%) indicated that ANC should start in the 2nd trimester, and 23 (7.52%) reported that they should start in the 3rd trimester. Findings revealed that 238 (74.4%) participants acknowledged that checking up during pregnancy reduced the risk of maternal deaths. About 239 (74.7%) of the mothers acknowledged that checking up during pregnancy reduces the risk of neonatal deaths. In addition, 227 (70.9%) participants indicated that the first ANC examination should be conducted in the first three months. Half of the participants highlighted that anemia should be prevented by eating iron-based food during pregnancy. Furthermore, 280 (87.5%) participants acknowledged that pregnant women's blood pressure need to often be checked. The study also showed that 225 (70.3%) participants acknowledged that Tetanus toxoid injection reduces the risk of both the mother and the baby getting tetanus disease. Furthermore, about 230 (71.9%) participants stated that delivery conducted by a traditional attendance was not clean therefore, the mother still needed to visit the hospital for further observations. 244 (76.3%) participants showed a high level of knowledge of ANC services.

### Right to decide on antenatal care utilization

Participants were assessed on their autonomy regarding the utilization of antenatal health care services. The participants were given statements where they agreed or disagreed with the statements. 157 (49.0%) participants disagreed with the fact that they needed to obtain permission from their husbands/elders in the house before going for ANC services, opposing 124 participants (38.8%). In addition, 159 (49.7%) participants indicated that they did not need an elder person's company while seeking ANC serv-

**Table 2. Factors that prevent pregnant women from utilizing antenatal care services (n=91).**

| Factors | Frequency | % |
|---|---|---|
| Negative attitude of healthcare workers | 9 | 9.9 |
| Covid-19 restriction measures | 5 | 5.5 |
| Long distance to health facilities | 19 | 20.9 |
| Fear of positive HIV test results | 7 | 7.7 |
| Feeling that ANC is not important | 12 | 13.2 |
| Not aware of being pregnant | 12 | 13.2 |
| Lack of transport money | 12 | 13.2 |
| Previous bad experience with ANC | 4 | 4.4 |
| Work engagement and lack of time | 9 | 9.9 |
| Factors for not utilizing antenatal care not stated | 2 | 2.1 |
| Total | 91 | 100 |

ANC, antenatal care.

**Table 3. Factors that motivate pregnant women to utilize antenatal care services during pregnancy (n=229).**

| Factors motivate ANC utilization | Frequency | % |
|---|---|---|
| Due to medical conditions | 1 | 0.4 |
| ANC is important | 29 | 12.7 |
| Importance of the health education | 19 | 8.3 |
| To ensure the good health of the mother and unborn baby | 63 | 27.5 |
| To determine the risks that might occur during pregnancy | 16 | 7.0 |
| To get medication | 7 | 3.1 |
| To know the HIV status | 13 | 5.7 |
| To know the estimated date of delivery | 1 | 0.4 |
| To monitor the growth of the unborn baby | 43 | 18.8 |
| To prevent complications | 34 | 14.8 |
| No factors stated to the utilization of ANC | 3 | 1.3 |
| Total | 229 | 100 |

ANC, antenatal care.

ices. Furthermore, 152 (47.5%) participants indicated that they were not usually accompanied by a family member when accessing the ANC service. The results show that 170 (53.1%) participants had the right to make decisions regarding visits to the antenatal health facility for services.

### Quality and services satisfaction of antenatal care services

The quality of the ANC services being provided was also assessed using questions on the Likert scale. 229 (71.6%) participants indicated that the environment where the ANC services were offered was clean and the toilets were clean as alluded by 213 (66.6%) participants. 229 (71.6%) participants indicated that healthcare workers at the health facilities were helpful. Regarding the services provided by health care workers during the antenatal visit, about half (159, 49.7%) of the participants disagreed with the fact that they had to wait for a long time before seeing a doctor/nurse, while 103 (32.2%) participants asserted that they waited for a long time before they were seen. Moreover, 192 (60.0%) participants indicated that there were no long queues during antenatal care services, while about half (160, 50.0%) of the participants did not agree with the fact that they spent too much time with the nurse/doctor. 249 (77.8%) participants indicated that the nurses/doctors were treating them with respect. 263 (82.2%) participants reported that the doctor/nurse had explained to them their health status and that of their unborn baby. Similarly, 267 (83.4%) participants indicated that the doctor/nurse had explained to them their prescription and its benefits. The study revealed that about 233 (72.8%) participants indicated that the ANC service was of good quality.

### Factors that predict utilization of antenatal care services

Participants' attitude towards non-utilization of ANC services was significant (OR=2.132) and (P=0.034). Knowledge of the mothers regarding antenatal care services was also a strong predictor of non-utilization of ANC services, increasing the odds by 1.1, but the result was not statistically significant. However, the level of autonomy was shown to be a poor predictor of the non-utilization of ANC services.

## Discussion

### Sociodemographic factors

The age of participants reflects that all participants were of childbearing age which is 15-49 years old.[2] The current study results concur with the study by Nketiah-Amponsah *et al*.: [6] older women tend to utilize ANC more compared to young women. In the current study, the majority of older women utilized ANC services, possibly because they were aware that pregnancy risk increases with age. Older women are at risk of developing pregnant related complications like pregnant induced hypertension, diabetes, *etc*.[5] The study findings are similar to those of a study that was conducted in Vietnam where older women were utilizing ANC services more than other age groups.[7] Furthermore, the findings are similar to a study conducted in China where women over 30 were more likely to have adequately utilized ANC than younger women.[8] However, Pearce disagrees with the current study findings,[9] as a Zambian study found that women whose age was over 35 were less likely to utilize ANC services because they felt that they were too old to be pregnant and that they tended to believe in traditional treatment compared to modern medicine.

The study shows that most married pregnant women utilized antenatal care services. The increase in the percentage of utilization among married women is that they mostly have partner support, their pregnancies are planned, and are financially stable. The above findings are supported by a study conducted in Zambia, which revealed that married women utilize ANC compared to unmarried or single women.[10] Moreover, in Ethiopia, Chol *et al*. found that unmarried women had poor utilization of ANC services because they were afraid to be seen as pregnant.[11] This is supported by the study conducted in Sudan, which found that women needed their husband's support to utilize ANC services.[12] Mother's educational level also plays a role in the utilization of ANC services. Women with a high level of education are known to be well-informed, and able to read the pregnancy information, the importance of ANC services, and its advantage. Education was found to be significant with ANC utilization with a P<0.05 in a study conducted in Nigeria.[13] In Pakistan, women with primary education were less likely to utilize ANC compared to women with secondary and tertiary education.[14] The current study outcomes show that women whose husbands or partners were educated utilized ANC services more than those who were not educated. In Nepal, Tripathi and Singh emphasize that women whose partners are educated are more likely to attend ANC services because partners may be well-organized in the use of available information on maternal and child care and well-informed about healthy practices endorsing safe motherhood.[15] However, women whose partners had low or no education may be less likely to utilize ANC services because their husbands do not understand the importance and advantage of utilizing ANC services.[16]

Employment status may also contribute to the utilization of antenatal care services. Unemployed women, students, or housewives were unlikely to utilize ANC because they had no money to pay for transport to and from antenatal care health facilities. Acknowledging the findings of the study carried out in Nigeria, financial difficulties are a significant barrier to antenatal care for migrant women who move from one place to another place.[17] Similarly, a study from India has shown a positive association between socioeconomic status and the utilization of ANC.[18] The current study findings show that the majority of Christian women utilize ANC more than women belonging to other religions. Similarly, it was found that Christian women were utilizing ANC more compared to non-Christians .[19] This might be because women who were not Christian believed more in cultural practices, hence, they found it less important to utilize antenatal care services than traditional birth attendance.

Certain ethnic groups may utilize ANC more than other ethnic groups because they have different understating regarding the utilization of ANC services. The finding of the present study shows that Caprivian women were utilizing antenatal care services at higher rates than other ethnic groups. The study further shows a higher number of non-utilization among the Nama/Damara tribe. These results may be because different ethnic groups may have different cultures, values, norms, and beliefs that may affect the beneficiaries' behaviors and perceptions regarding the utilization of ANC services. In support, a study in Ethiopia indicated that the Amhara women were 3.5 times more likely to receive ANC services from skilled health personnel than the Oromo women. On the other hand, the results revealed that the Gumuz women were less likely to receive service from skilled health personnel than those of the Oromo women.[20] In Ghana, certain ethnic groups perform a ritual before the pregnancy is revealed and if this is delayed then the women will not be able to utilize ANC services.[21]

### Obstetric factors

The current study findings show that non-utilization of ANC services is common among multiparous women. These women

might not be utilizing ANC because they delivered many times and knowing their previous experience they might feel that ANC utilization is not important. The current study shows that primigravida was utilizing ANC more compared to multiparous women. Similarly, a study conducted in rural Tanzania found out that parity is a determinant to antenatal care utilization as primigravida were utilizing ANC more compared to multiparous.[22] Nevertheless, the current study found out that women with previous bad obstetric history were mostly determined to utilize ANC because they might want to prevent complications, promote health and monitor their pregnancy. The current study findings concur with the study in Ethiopia, which finds a statistically significant association between a history of stillbirths and antenatal care service utilization.[23] Therefore in the current study, most women who had previous cesarean sections utilize antenatal care services compared to women who had a normal delivery.

### Factors that prevent women to utilize antenatal care services

The study highlighted that some participants were not utilizing ANC services because of long distances to and from the health facilities and lack of transport money. This could be because there was no money available to pay for taxi fees to and from the antenatal health care facility and some participants reside far from the antenatal health care facilities. Similar findings were reported in Malawi, where pregnant women were not utilizing ANC because they did not have money to pay for the services and transport.[10] In Zimbabwe, pregnant women who are not financially independent were finding it difficult to pay for transport and services due to high costs.[24] Some pregnant women needed to be accompanied by family members which would double the cost they cannot afford. Negative attitude of health care workers was reported by some participants as a factor that prevents them from utilizing ANC services. In Malawi, Bwalya *et al*. revealed that pregnant adolescents indicated that older health workers tend to disrespect them and they end up feeling ashamed and stigmatized.[25] This is similar to the study conducted in Zimbabwe, where pregnant women reported midwives as hostile and abusive.[24] Moreover, in Nigeria, unprofessional conduct by healthcare workers such as lack of respect, privacy, confidentiality, and traditional beliefs of patients made up 27.5% of the reasons why pregnant women did not attend ANC services.[26]

The current study revealed that some participants did not utilize ANC services for the following reasons: they felt that ANC was not important; there are too many follow-ups; they were not aware they were pregnant until time to deliver; they were not aware of the gestational age thus they thought there was still enough time to start ANC and they feared to be tested for HIV. The current study results are corresponding to the study findings in South Africa, where some pregnancies are kept secret until showing or until deliveries.[27] The same findings came up in Kwa-Zulu Natal and Mpumalanga: pregnant women fear that healthcare workers will not keep their HIV status confidential. They perceive HIV testing to be mandatory and fear that if they refuse to be tested, they will be denied access to ANC services.[28]

The study revealed that Covid-19 regulations hinder 5.5% of participants to utilize ANC services due to the national lockdown. The Covid-19 restrictions like avoiding unnecessary movements, taking fewer numbers of pregnant women at antenatal care services to avoid overcrowding, and fear of being infected by the virus might be the reasons for non-utilizers. In Nepal, Covid-19 nationwide lockdown was found to be one of the factors that contribute to the decline in antenatal care utilization.[29]

### Factors that motivate pregnant women to utilize antenatal care services

The current study revealed numerous factors that motivate participants to utilize antenatal care services such as the importance of ANC, getting health education and knowing their HIV status, preventing complications, the importance of health education, and knowing the estimated date of delivery of their unborn babies. The WHO motivates pregnant women to utilize antenatal care services for similar motives.[1] In Ethiopia, some of the factors that motivated pregnant women to give birth in a health facility include prevention of mother-to-child HIV transmission service, referral service, women-friendly services, emergency obstetric services, good interpersonal care from health workers, and fear and experience of obstetric danger signs and complications.[30] Contrary, in Nigeria, pregnant women indicated that the only time to utilize ANC is when the pregnant woman has pregnancy complication.[31]

### Association of different factors and utilization of antenatal care services

The current study findings show that about half of the participants had a negative attitude toward their pregnancy. Based on the finding this could be that most women were single and young, and pregnancies might be unplanned and this will promote a negative attitude. Similarly, in Malawi young pregnant women were also known to have a negative attitude toward their pregnancy because the pregnancy was unplanned, they feel too young to be pregnant and they wish to have a miscarriage so that they will get rid of the pregnancy.[10] The study also discovers that the majority of participants had a positive attitude toward ANC utilization. Women with a positive attitude are mostly happy and feel excited therefore the possibility to utilize ANC among them is higher. The type of attitude towards pregnancy was associated with the utilization of antenatal care services with an odd ratio OR=2.132; and P=0.014. This is similar to the findings of the study that was conducted in Mbombela, Mpumalanga province, South Africa, where they discovered that the ability of pregnant women to identify and accept that they are pregnant is one of the causes of the delay in seeking ANC services.[28] Furthermore, the study indicated that more women have a negative attitude toward their pregnancy, especially if the pregnancy is unplanned; they feel they are not prepared to make changes in their lives.[28]

The current study finds out that 76.3% know ANC, 86.14% of mothers knew how many times should pregnant women visit ANC and 53.59% were aware of when pregnant women should start ANC. Hence, women with high knowledge levels tend to utilize ANC services more compared to women with low knowledge levels. The opposing study found that women with a low level of knowledge can utilize ANC because they would like to know about problems regarding pregnancy other than women with high levels of knowledge who might be well informed and lack no information regarding the service being offered at ANC. However, the present study findings indicate that women with high levels of knowledge utilize ANC services in opposition to women with low knowledge levels. The same study done in Pakistan revealed that women with a high level of knowledge utilize ANC because they are mostly aware of their rights and health status to seek appropriate health services.[32]

Mode of transport to and from the antenatal health care facility plays a major role in ANC utilization. However, the study indicated that there was no association found between the mode of transport and utilization of ANC because the p-value is greater than 0.05, with P<0.883. This study reported similar results to the study in Bangladesh on distance, transportation cost, and mode of transport in the utilization of facility-based maternal services where

most of the women were using a taxi to access the ANC services.[33]

The right of a pregnant woman to decide on pregnancy plays an important role in the decision-making process on whether to utilize or not ANC. The study revealed that women who had the right to make decisions (75.3%) were found to utilize antenatal care services more than women with no right to make decisions (24.7%). Women who have no right to make a decision might suffer from gender-based violence; thus, they cannot decide anything regarding their health.[34]

However, regression results indicated that the right to make a decision is a poor predator of antenatal care utilization. Contrary, a study done in India revealed that utilization of maternal healthcare services was higher among women having a high level of decision-making autonomy compared to those who had a low autonomy in the household. The regression results indicate that women's autonomy was significantly associated with increased odds of maternal healthcare services.[35]

The quality of the antenatal care provided plays an important role in the outcomes of the pregnancy. This study found that 72.8% of pregnant women were satisfied with the quality and services provided at ANC. Good quality ANC services promote the behavior of utilization among pregnant women. This is in relation to the past study conducted in Namibia and Kenya on the quality of maternal health care service in 2016, Namibia was reported to be providing good quality services compared to Kenya. In both countries, the most commonly cited complaint was the waiting time, where 57.8% of women in Kenya and 40.1% of women in Namibia reported that the time they had to wait for their ANC visit was a problem.[36]

### Limitations

The study was conducted in two hospitals, so the findings could not be generalized.

## Conclusions

The study found that women aged 36-40 years and over 41 utilized ANC services more than other age groups. This study indicated that women who are below 20 years and 31-35 years old have a high percentage of non-utilization of ANC. Moreover, women who were married are more likely to use ANC. Formal education of the pregnant woman and the partner influence women to utilize ANC. The negative attitude of health providers, long distance to and from ANC health care facilities, fear of HIV tests and results, Covid-19 regulations, inability to determine the pregnancy at the earlier stages, and financial constraints are among the factors that prevent pregnant women from utilizing ANC services. However, the study revealed the motivators for ANC utilization such as the importance of the health status of the pregnant woman and the fetus, to get health education and to prevent complications.

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