

# Factors Influencing the Elimination of Mother to Child HIV Transmission Services at Mbarara Regional Referral Hospital, Mbarara District, Uganda.

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## ABSTRACT

This study was carried out at Mbarara Regional Referral Hospital, Mbarara District with the purpose of identifying the factors influencing low utilization of elimination of Mother to child Transmission (eMTCT) services by pregnant mothers. A descriptive design was employed and 81 respondents were selected using simple random sampling method. Data was collected using interview guides. The study found out that respondents faced various socio-economic factors influencing utilization of eMTCT services by pregnant mothers. For instance, although all respondents 81 (100%) had ever heard about eMTCT services and 50 (62%) obtained information about eMTCT services from health workers, most 50 (61.7%) understood eMTCT as giving ARVs to the mother and baby and 40 (80%) prevention of MTCT as a benefit of eMTCT. However, 60 (74.1%) felt stigmatized because of using eMTCT services and most 40 (66.7%) were stigmatized by their friends and 40 (49%) sometimes got support from their husbands in accessing eMTCT services. Other factors included 20 (24.7%) labeling and stigmatization, 16 (19.7%) lack of support, 13 (16.2%) unemployment and 12 (14.8%) poverty among others. Respondents also faced various health facility factors influencing utilization of eMTCT services by pregnant mothers and although most 50 (62%) reported that they had ever attended eMTCT services, most 35 (70%) did not find the services confidential, 30 (60%) said eMTCT services were not available all the time despite 50 (62%) health workers having positive attitudes towards pregnant mothers utilizing eMTCT services. In conclusion, the study found out that pregnant mothers faced both socio economic and health facility factors influencing utilization of eMTCT services at Mbarara Regional Referral Hospital. The key recommendations included improving male partner support, ensuring ready availability of services, health education about how to reduce stigma attached to the illness as well as the importance and benefits of eMTCT services.

**Keywords:** HIV infections, ARVs, eMTCT, health workers

## INTRODUCTION

Elimination of Mother to Child Transmission of Human Immunodeficiency Virus (eMTCT) is a major health service provided to expectant mothers infected with HIV [1, 2, 3, 4, 5, 6]. It has been noted that there is an increase in number of babies infected with (HIV) most especially within the developing countries of which Uganda is among.

[2; 3, 7, 8, 9, 10] stated that every year, 330,000 babies were infected with HIV and the major route of HIV becoming Mother to Child Transmission (MTCT). The term validation was used when a country had successfully met the criteria for eliminating mother to child transmission (eMTCT) of HIV at a specific

moment in time and elimination is when the disease or infection incidence falls to zero within a geographical area [3, 11, 12, 13, 14, 15].

According to Adewole *et al.* [4], globally, in developed and developing countries, the eMTCT strategy had proved to be effective in prevention of vertical transmission of HIV, but other reports on eMTCT involvement among male partners indicate that the lack of knowledge and positive attitude towards eMTCT by women aged 15 - 45 years of age have a direct impact on their attendance of eMTCT programs [16, 17, 18].

In Sub Saharan African countries, the utilization of eMTCT services remains low. For instance, although Nigeria has an

estimated national HIV prevalence of 4.6%, the third largest number of people living with HIV/AIDS in the world and it is estimated that in 2014, Nigeria had an estimated 2.95 million people currently infected with HIV and 278,000 children were living with HIV, while more than 90% of the infections among children occur through MTCT [2]. However, the utilization of eMTCT services remains low due to factors such as lack of confidentiality and privacy at health facilities, poverty, long distance to health facilities as well negative attitudes of health workers towards mothers [2, 19, 20].

According to Baryomunsi *et al.* [5], in studies carried out in East African countries like Tanzania and Kenya, findings have shown that eMTCT is well provided at hospital and health center level, but the level of utilization of these services by women aged 15 - 45 years of age remains low. The particular factors influencing low utilization of eMTCT services included lack of awareness about the services, lack of support as well as level of education of household head. Homsy *et al.* [6] reported in their study in Ugandan hospitals that eMTCT was well provided and readily available across various levels of health facilities, its utilization by mothers remains lower than expected due to various factors such as poverty, lack of funds for transport, unavailability of reliable and affordable transport as well as lack of interest in eMTCT services among others.

#### **Problem Statement**

In Uganda, HIV/AIDS remains a major public health problem and it was estimated that up to 95% of babies who were infected with HIV acquired infection through Mother to Child Transmission (MTCT), and over 90% of HIV infections in children less than 15 years was due to MTCT and 15 - 45% of children born to women aged 15 - 45 years of age acquired infection in the absence of intervention such as eMTCT [7].

According to Asiimwe *et al.* [7], in every district of Uganda there is an eMTCT center based in district hospitals and eMTCT services offered at the health

centers III and IV which showed a high level of coverage for the service. However, despite this high coverage and the fact that the services were free of charge, attendance to this program among women aged 15 - 45 years of age remained somewhat lower than expected [8].

According to Uganda National Central Public Health Laboratory-Exposed Infant Diagnosis Dashboard (CPHL-EID) [9]. Mbarara Regional Referral Hospital was at a positivity rate of 3.3% meaning out of 240 tests 8 became positive.

And only 60% of positive mothers who were due for a re-test during labor and delivery were tested for HIV, and only 40% of positive mothers during labor and delivery were initiated on ART immediately. (SIMS -Site Improvement Monitoring System, USAID RHITES). It was thus against this background that the researcher would like to carry out a study to identify these factors and suggest solutions to improve service utilization.

#### **Aim of the study**

The purpose of the study was to identify the factors influencing utilization of eMTCT services by pregnant mothers at Mbarara Regional Referral Hospital, Mbarara District.

#### **Specific objectives**

- 1) To identify the socio demographic factors influencing low utilization of eMTCT services by pregnant mothers at Mbarara Regional Referral Hospital, Mbarara District.
- 2) To determine the socio-economic factors influencing low utilization of eMTCT services by pregnant mothers at Mbarara Regional Referral Hospital, Mbarara District.
- 3) To identify the health facility related factors influencing low utilization of eMTCT services by pregnant mothers at Mbarara Regional Referral Hospital, Mbarara District.

### Research Questions

- 1) What are the socio demographic factors influencing low utilization of eMTCT services by pregnant mothers at Mbarara Regional Referral Hospital, Mbarara District?
- 2) What are the socio economic factors influencing low utilization of eMTCT services by pregnant mothers at Mbarara Regional Referral Hospital, Mbarara District?
- 3) What are the health facility related factors influencing low utilization of eMTCT services by pregnant mothers at Mbarara Regional Referral Hospital, Mbarara District?

### Justification of the study

The study may aid the clinicians, Mbarara Regional Referral Hospital administration/management in addressing the problem of low utilization of eMTCT services. This could be achieved through targeted promotion of the services as well as sensitization and

encouragement of pregnant mothers to access and utilize these services.

The study is also intended to assist policy makers and planner by identifying and isolating potential areas which still require more funding and development in terms of ensuring better provision of eMTCT services in all regions of Uganda.

This study served the purpose of identifying the factors influencing low utilization of eMTCT services by pregnant mothers. This may thus assist the administration of Mbarara Regional Referral Hospital as well as health workers, especially those in ANC clinic to come up with ways of health educating pregnant mothers about eMTCT and its importance to improve utilization of these services.

The results from this study provided a valuable reference point for future studies on this issue and also contributed to the available body of research on the factors influencing low utilization of eMTCT services by pregnant mothers.

### METHODOLOGY

#### Study Design

The study was descriptive cross sectional employing both quantitative and qualitative data collection methods. This study design was selected because it assisted in getting the required data for the study.

#### Study setting and rationale

The study was conducted at the ANC in Mbarara Regional Referral Hospital. It was selected because of its convenience to the researcher and there was limited information regarding factors influencing low utilization of eMTCT services by mothers attending at Mbarara Regional Referral Hospital, Mbarara District. The hospital has a bed capacity of 350 and is situated in Mbarara district, South-western Uganda. The hospital with its wide-ranging departments and modern diagnostic facilities, are managed by qualified and experienced medical personnel. Mbarara Regional Referral hospital policy is to deliver affordable and wide-ranging health care services to Ugandans. The hospital had a projected catchment population of 3.2 million

people and is 260 km by road south west of Kampala Uganda's capital city.

Mbarara Regional Referral Hospital provides many health services including but not limited to internal medicine, pediatrics and obstetrics and gynecology, ANC and post natal services, surgery among many other services.

#### Study Population

The study included pregnant mothers attending ANC services at Mbarara Regional Referral Hospital in Mbarara District.

#### Sample Size and sampling method

The sample size was got from the formula;

$$N = \frac{z^2 pq}{d^2}$$

The Kish and Leslie formula (1965)

Where, n represents the sample size.

d represents precision of study, a precision of 0.1(10%) will be used due to limited resources and the time factor consideration during the study.

z-Represents standard normal deviation corresponding to 95% confidence interval which is 1.96.

p-Represents proportional characteristics where no reasonable estimate is given, 0.7(70%) was used.

q-Represents 1-p.

Therefore;  $n = \frac{(1.96)^2 \times 0.7(1-0.7)}{(0.1)^2}$

n =81 respondents.

#### **Sampling procedure**

Simple random sampling method was applied in this research to obtain the required number of respondents. The researcher wrote words YES and NO on pieces of paper and inserted them into an enclosed box. The researcher offered potential respondents an opportunity to participate in the study by picking papers from the enclosed box and any respondent who picked a paper with the word YES written on it were requested to participate. This was continuously used until the total of 81 respondents was achieved. Simple random sampling method was used due to the ready availability of respondents at the ANC clinic and also because it ensured that bias was avoided and everybody got an equal opportunity to participate in the study. Data was collected in a period of one week there were four ANC days in a week meaning every clinic day 20 respondents were allowed to participate in the study.

#### **Inclusion criteria**

The researcher selected pregnant mothers who met study criteria, were in good condition to participate in the study and agreed to consent and include them in the study.

#### **Exclusion criteria**

The study excluded women who were not pregnant, those pregnant but not attending ANC services, those who were in poor condition and not able to participate as well as any respondents who had not consented to participate in the study.

#### **Definition of Variables**

The study addressed the following variables;

#### **Independent variables**

Utilization of eMTCT services

#### **Dependent variables**

1. Socio demographic factors
2. Socio economic factors

### **3. Health facility related factors**

#### **Data Collection Procedure**

After the approval of the research proposal, the letter of introduction was obtained from the school that was presented to the Hospital Director of Mbarara Regional Referral Hospital and the ANC seeking approval. After securing approval, the researcher sampled out the respondents and the questionnaires were administered to the selected respondents who were able to read and understand the questions and wrote down the reply in the spaces meant for the purpose in the questionnaire.

#### **Data management**

Data management included data editing before leaving the area of study to ensure that there were no mistakes or areas left blank, and any found were corrected before leaving the respondent. The interview guides were put in an envelope and kept under lock and key awaiting data analysis and it was only accessible to the researcher.

#### **Data analysis, processing and presentation**

Data was analysed using both qualitative and quantitative methods. For qualitative data, themes were developed for responses that related to similar issues. For quantitative data, analysis involved calculations of percentages, and presented graphically. Conclusions were drawn by determining the frequency in the data and at this level biases were detected. Data pieces were collected through document search, interviews and questionnaire were analyzed on a qualitative basis involving data reduction, organization and interpretation. Frequency distribution tables, charts and graphs were made.

#### **Ethical Considerations**

A scientific/ethical approval letter was obtained from the administration of Kampala International University, introducing the researcher and seeking approval to carry out the study from Mbarara Regional Referral Hospital. Once approval had been granted, the researcher was introduced to the in-charge of the ANC who hence introduced the researcher to the respondents. Participants were

assured of maximum privacy of all the information given and numbers instead of names were used to identify respondents. The study only commenced after the

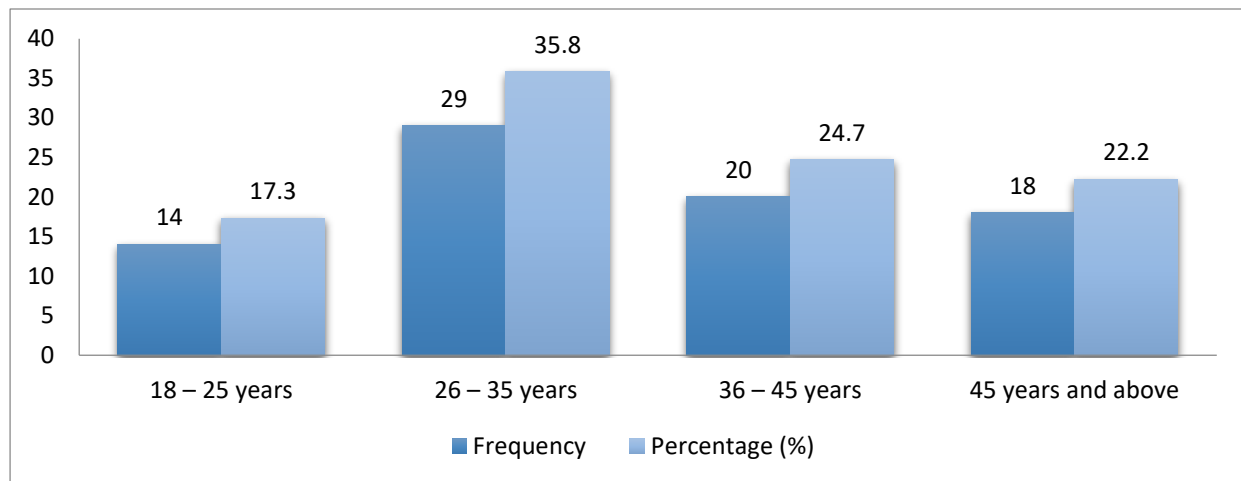
Katigi objectives of the study had been well explained to participants and they had consented to participate in the study.

## RESULTS

### Demographic and Social Characteristics

The interview guide included questions on demographic and social characteristics such as age, marital status, level of education, occupation, level of education of husband/partner and occupation of husband/partner. This information was

assessed to determine its relationship with the factors influencing low utilization of eMTCT services by pregnant mothers at Mbarara Regional Referral Hospital, Mbarara District. The results were presented as follows.



**Figure 1: Distribution of respondents by age n=81**

Results from figure 1 above, showed that 29 (35.8%) respondents were in the age range of 26 - 35 years, followed by 20

(24.7%) who were 36 - 45 years, 18 (22.2%) were 45 years and above while the least 14 (17.3%) were 18 - 25 years.

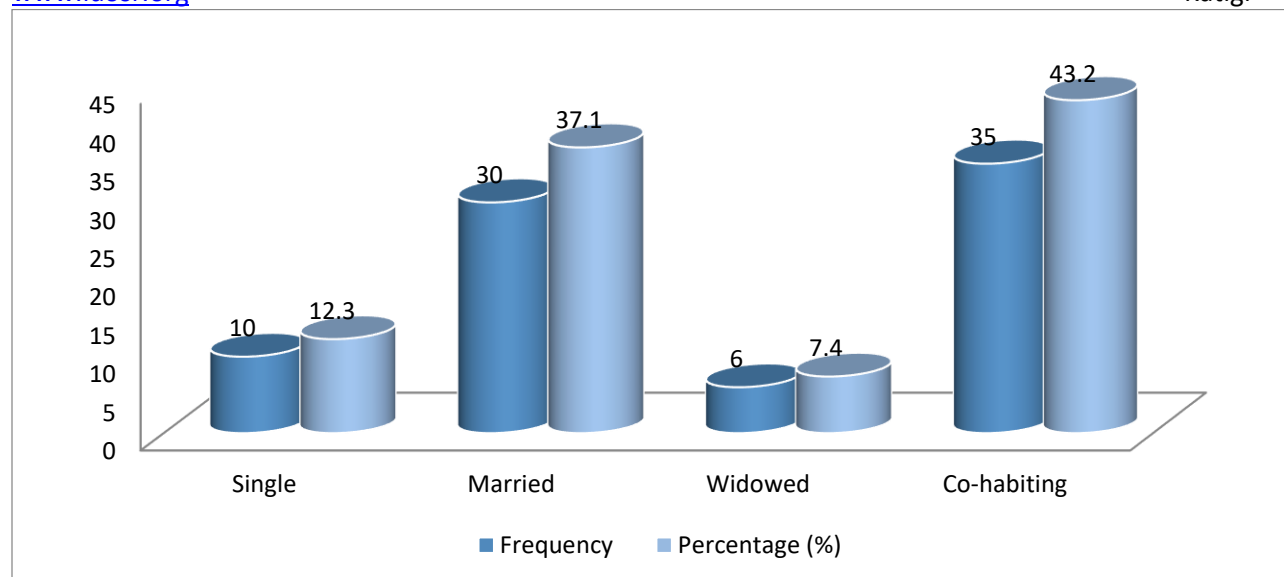


Figure 2: Distribution of respondents by marital status n=81

From figure 2 above, findings showed that 10 (12.3%) were single while the least 6 (7.4%) were widowed. 35 (43.2%) respondents were co-habiting, followed by 30 (37.1%) who were married,

Table 1: Distribution of respondents by religion n=81

Religion	Frequency	Percentage (%)
Protestant	20	24.7
Catholic	40	49.4
Muslim	12	14.8
Pentecostal	9	11.1
<b>Total</b>	<b>81</b>	<b>100</b>

The majority of respondents 40 (49.4%) were Catholic, followed by 20 (24.7%) who were Protestant, 12 (14.8%) were Muslims

while the least 9 (11.1%) were Pentecostals.

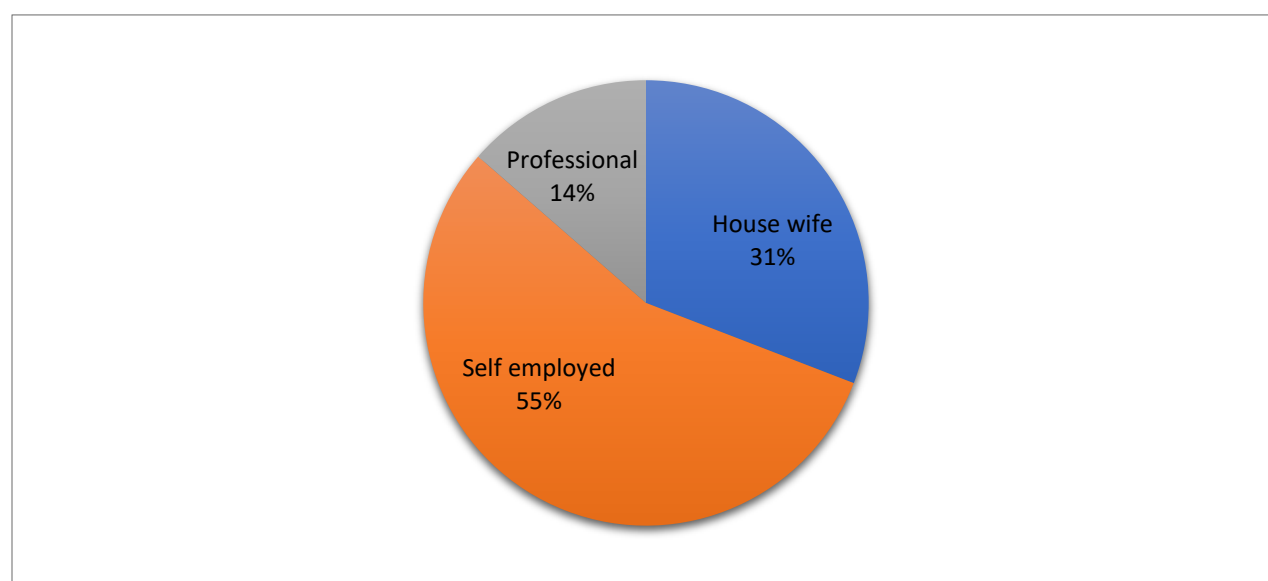


Figure 3: Distribution of respondents by occupation n=81

From figure 3 above, showed the majority of respondents 45 (55%) were self-employed, followed by 25 (31%) were

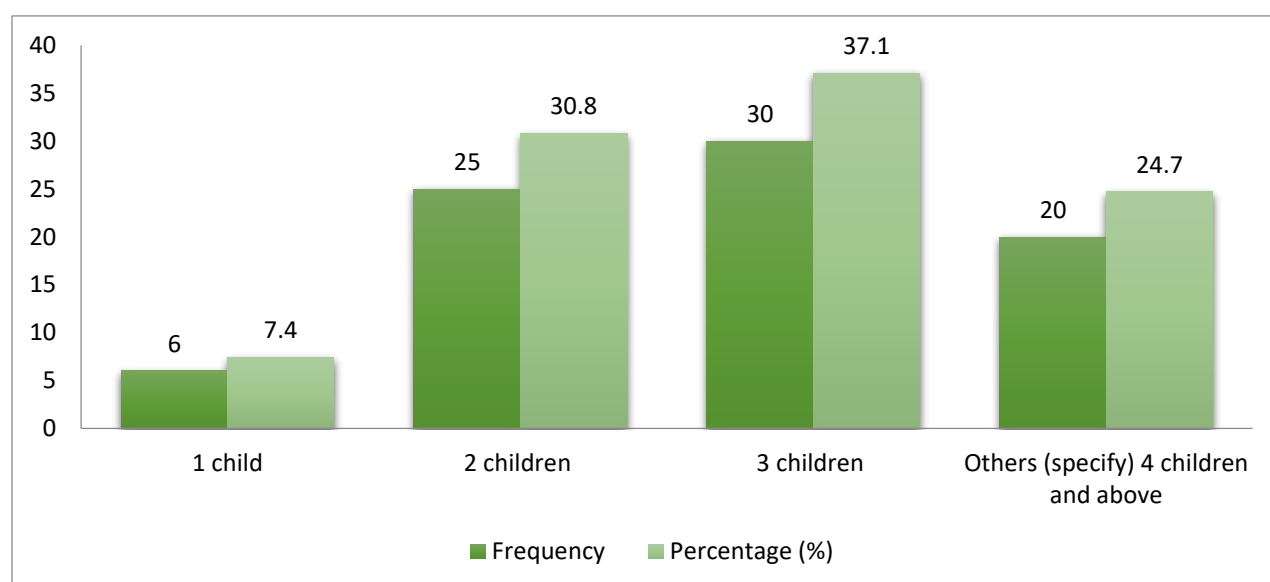
house wives while the least 11 (14%) were professionals.

**Table 2: Distribution of respondents by level of education n=81**

Level of education	Frequency	Percentage (%)
No education	19	23.5
Primary only	25	30.8
Secondary	22	27.2
Tertiary	15	18.5
<b>Total</b>	<b>81</b>	<b>100</b>

Results showed that 25 (30.8%) respondents attained primary level education, followed by 22 (27.2%) who attained secondary level education, 19

(23.5%) did not attain any education while the least 15 (18.5%) attained tertiary level education.



**Figure 4: Distribution of respondents by number of children n=81**

From figure 4 above, findings showed that 30 (37.1%) respondents had 3 children, followed by 25 (30.8%) who had 2

children, 20 (24.7%) had 4 children and above while the least 6 (7.4%) had 1 child.

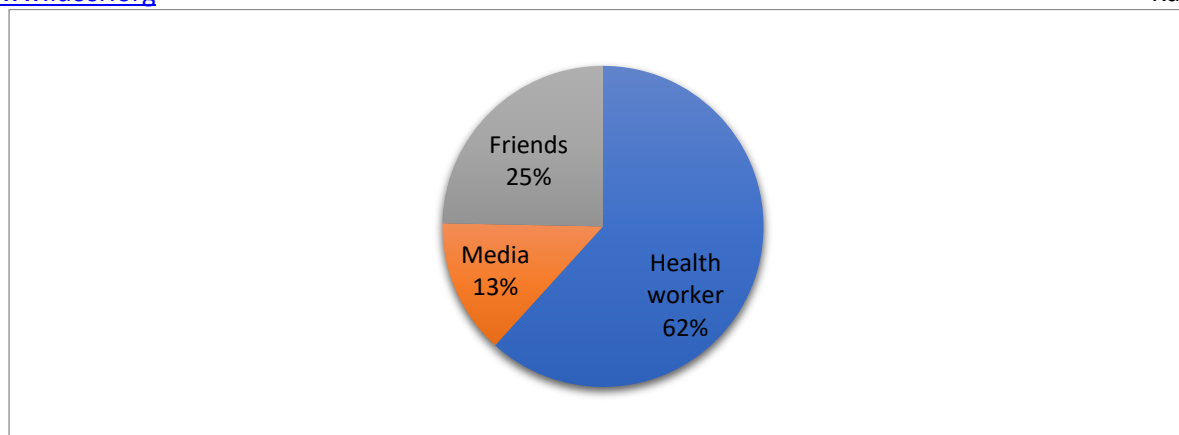
#### Socio economic factors influencing utilization of eMTCT services by pregnant mothers

**Table 3: Ever heard about eMTCT services, n=81**

Responses	Frequency	Percentage (%)
Yes	81	100
No	0	0
<b>Total</b>	<b>81</b>	<b>100</b>

All of the respondents 81 (100%) had ever heard about eMTCT services.





**Figure 5: Source of information about eMTCT services n=81**

From figure 5 above, the majority of respondents 50 (62%) obtained information about eMTCT services from health workers, followed by 20 (25%) who

obtained information from friends while the least 11 (13%) obtained information from media.

**Table 4: Respondents' understanding of eMTCT services n=81**

Responses	Frequency	Percentage (%)
Giving ARVs to the mother and baby	50	61.7
Continuous monitoring of mother and child	31	38.3
<b>Total</b>	<b>81</b>	<b>100</b>

Most respondents 50 (61.7%) understood eMTCT as giving ARVs to the mother and baby while the least 31 (38.3%)

understood it as monitoring of mother and child.

**Table 5: Awareness of benefits of using eMTCT services n=81**

Responses	Frequency	Percentage (%)
Yes	50	61.7
No	31	38.3
<b>Total</b>	<b>81</b>	<b>100</b>

Results showed that 50 (61.7%) respondents were aware of the benefits of using eMTCT services while the least 31

(38.3%) were not aware of the benefits of using eMTCT services.

**Table 6: Benefits of using eMTCT services n=50**

Benefits	Frequency	Percentage (%)
Prevention of MTCT	40	80
Ensuring that the baby is born healthy and strong	10	20
<b>Total</b>	<b>50</b>	<b>100</b>

Out of the 50 respondents who were aware of the benefits of using eMTCT services, most 40 (80%) reported

prevention of MTCT while the least 10 (20%) reported ensuring that the baby is born healthy and strong.

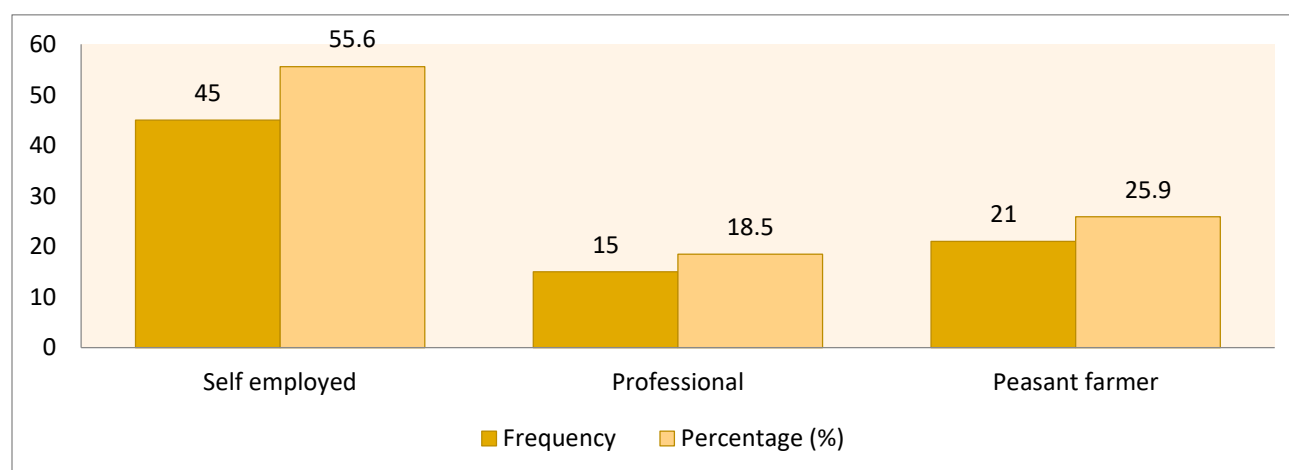


**Table 7: Level of education of partners n=81**

Level of education	Frequency	Percentage (%)
No education	16	19.7
Primary only	31	38.3
Secondary	21	25.9
Tertiary	13	16.1
<b>Total</b>	<b>81</b>	<b>100</b>

Results showed that 31 (38.3%) respondents reported that their partners attained primary level education, followed by 21 (25.9%) who attained secondary

education, 16 (19.7%) did not attain any education while the least 13 (16.1%) attained tertiary level education.

**Figure 6: Occupation of respondents' partners n=81**

From figure 6 above, most respondents 45 (55.6%) reported that their partners were self-employed, followed by 21 (25.9%) who were peasant farmers while the least 15 (18.5%) were professionals.

**Table 8: What friends and family said about eMTCT services n=81**

Responses	Frequency	Percentage (%)
It is a good service	50	61.7
It is a bad service	31	38.3
<b>Total</b>	<b>81</b>	<b>100</b>

The majority of respondents 50 (61.7%) reported that their friends said eMTCT is a good service because it helped prevent transmission of HIV from mother to child

while the least 31 (38.3%) said it is a bad service and this was attributed to the stigma attached to HIV.

**Table 9: Whether respondents felt at all stigmatized because of using eMTCT services n=81**

Responses	Frequency	Percentage (%)
Yes	60	74.1
No	21	25.9
<b>Total</b>	<b>81</b>	<b>100</b>

The majority of respondents 60 (74.1%) felt stigmatized because of using eMTCT

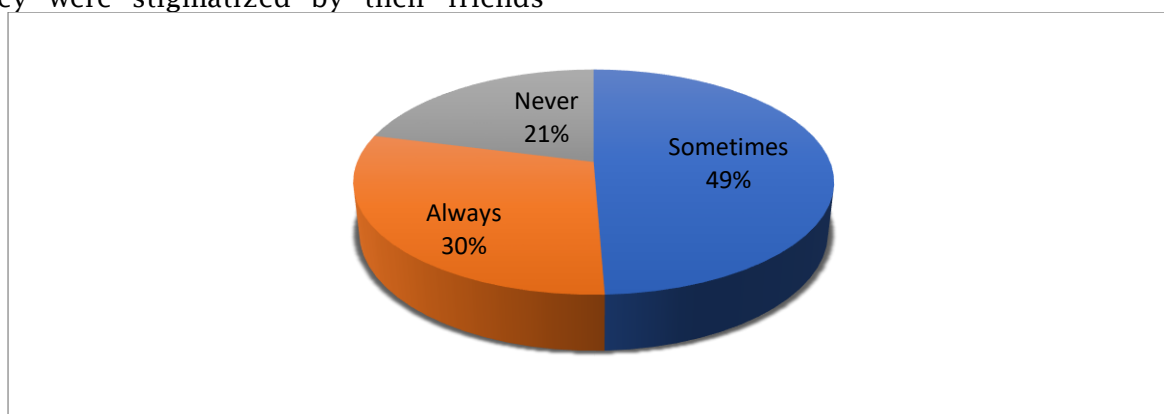
services while the least 21 (25.9%) did not feel stigmatized using eMTCT services.

**Table 10: Who stigmatized respondents n=60**

Responses	Frequency	Percentage (%)
My friends	40	66.7
My family	20	33.3
<b>Total</b>	<b>60</b>	<b>100</b>

Out of the 60 respondents who reported being stigmatized, most 40 (66.7%) said they were stigmatized by their friends

while the least 20 (33.3%) were stigmatized by their family.

**Figure 7: Whether respondents got support from their husbands in accessing eMTCT services n=81**

From figure 7 above, results showed that 40 (49%) respondents sometimes got support from their husbands in accessing eMTCT services, followed by 24 (30%) who

said they always got support while the least 17 (21%) said they never got support from their husbands.

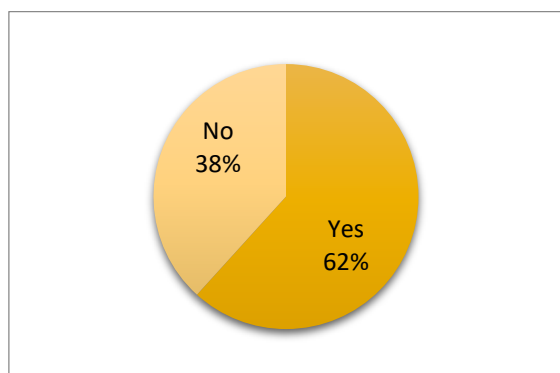
**Table 11: Socio economic factors influencing utilization of eMTCT services among pregnant mothers n=81**

Socio economic factors	Frequency	Percentage (%)
Unemployment	13	16.2
Poverty	12	14.8
Lack of support	16	19.7
Lack of knowledge/awareness	10	12.3
Negative attitudes towards services	10	12.3
Labeling and stigmatization	20	24.7
<b>Total</b>	<b>81</b>	<b>100</b>

Results showed that 20 (24.7%) respondents mentioned labeling and stigmatization as a socio-economic factor influencing utilization of eMTCT services, followed by 16 (19.7%) reported lack of support, 13 (16.2%) mentioned

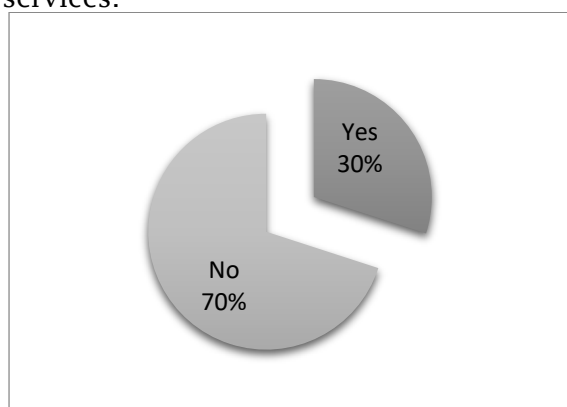
unemployment, 12 (14.8%) reported poverty while the least 10 (12.3%) reported lack of knowledge/awareness and 10 (12.3%) mentioned negative attitudes towards services respectively.

# Health facility factors influencing utilization of eMTCT services by pregnant mothers



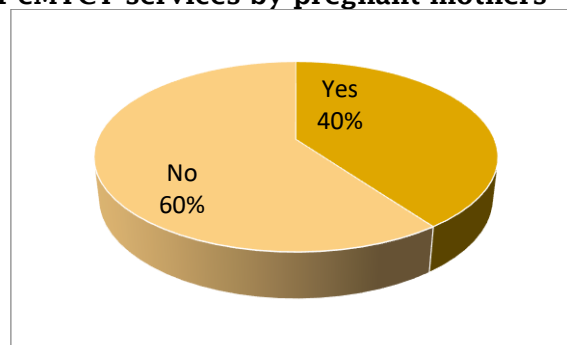
**Figure 8: Ever attended eMTCT services n=81**

From figure 8 above, most respondents 50 (62%) reported that they had ever attended eMTCT services while the least 31 (38%) had never attended eMTCT services.



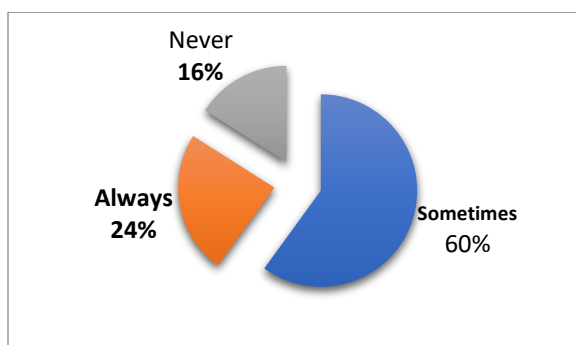
**Figure 9: Whether respondents found the services confidential n=50**

From the 9 above, out of the 50 respondents who had attended eMTCT services, most 35 (70%) did not find the services confidential while the least 15 (30%) found the services confidential.



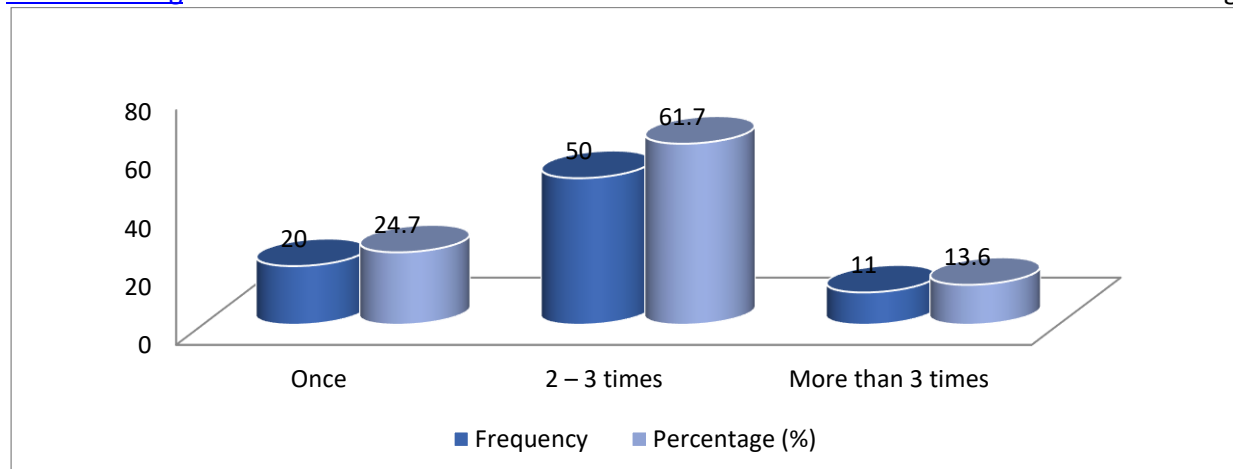
**Figure 10: Whether eMTCT services were available all the time n=50**

From the figure 10 above, out of the 50 respondents who had ever attended eMTCT services, results showed that most 30 (60%) reported that eMTCT services were not available all the time and this affected their utilization of the eMTCT services as health workers would not be available while the least 20 (40%) said the services were available all the time.



**Figure 11: Whether health workers were available to offer eMTCT services at all times n=50**

From the figure 11 above, most respondents 30 (60%) reported that health workers were sometimes available to offer eMTCT services at all times, followed by 12 (24%) who said they were always available while the least 8 (16%) said they were never available.



**Figure 12: Number of times pregnant mothers should test for HIV n=81**

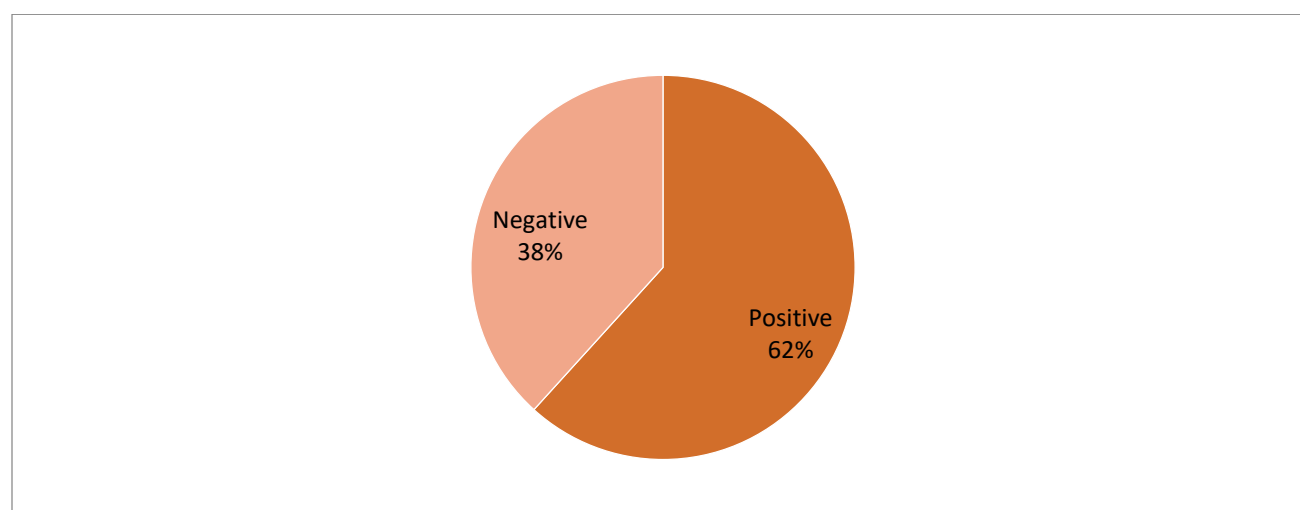
From the figure 12 above, results showed that 50 (61.7%) respondents reported that pregnant mothers should be tested for HIV 2 - 3 times, followed by 20 (24.7%) who mentioned once while the least 11 (13.6%) reported more than 3 times.

**Table 12: Duration of breast feeding for a mother with HIV n=81**

Duration	Frequency	Percentage (%)
6 months	15	18.5
1 year	24	29.6
More than one year	20	24.7
Should not breast feed	12	14.8
I don't know	10	12.4
<b>Total</b>	<b>81</b>	<b>100</b>

Results showed that 24 (29.6%) respondents reported that mothers with HIV should breast feed for one year, followed by 20 (24.7%) reported more

than one year, 15 (18.5%) reported 6 months, 12 (14.8%) reported that mothers should not breast feed while the least 10 (12.4%) did not know.



**Figure 13: Attitude of health workers towards pregnant mothers utilizing eMTCT services, n=81**

From the figure 13 above, the majority of respondents 50 (62%) reported that health workers had positive attitudes towards pregnant mothers utilizing eMTCT

services as they were welcoming and polite to the mothers while the least 31 (38%) had negative attitudes towards pregnant mothers utilizing eMTCT

services as they were rude and unwelcoming.

Table 13: Problems encountered in utilizing eMTCT services at the hospital n=81

Problems	Frequency	Percentage (%)
Long waiting time to receive services	19	23.4
Unavailability of services sometimes	15	18.5
Lack of privacy and confidentiality	23	28.4
Long distance to the hospital	13	16.1
Negative attitudes of health workers	11	13.6
<b>Total</b>	<b>81</b>	<b>100</b>

Results showed that 23 (28.4%) reported lack of privacy and confidentiality as a problem they encountered in utilizing eMTCT services at the hospital, followed by 19 (23.4%) reported long waiting time to receive services, 15 (18.5%) mentioned

unavailability of services sometimes, 13 (16.1%) reported long distance to the hospital while the least 11 (13.6%) mentioned negative attitudes of health workers.

## DISCUSSION

### Demographic and Social Characteristics

Results showed that 29 (35.8%) respondents were in the age range of 26 - 35 years, followed by 20 (24.7%) who were 36 - 45 years, 18 (22.2%) were 45 years and above. This showed that most respondents were relatively mature which implied that health care services at Mbarara Regional Referral Hospital were mostly appreciated and utilized by older people as compared to younger ones.

Findings showed that 35 (43.2%) respondents were co-habiting, followed by 30 (37.1%) who were married, which implied that since most respondents were married or resided with their partners, they would be able to at least count on the emotional, physical and financial support of their partners and ensure adequate access and utilization of ANC and eMTCT services. This concurs with a study done by Orne-Gliemann *et al.* [10] about improved knowledge and practice among end-users of mother to child transmission of HIV prevention services in rural Zimbabwe who found out that, lack of support and involvement by male partners hinder utilization of eMTCT services.

The majority of respondents 40 (49.4%) were Catholic, followed by 20 (24.7%) who were Protestant, 12 (14.8%) were Muslims while the least 9 (11.1%) were Pentecostals. This showed that all the

respondents belonged to various faith denominations. However, this did not have any bearing on the study.

The majority of respondents 45 (55%) were self-employed. However, although level of income was not assessed, it implied that since most respondents were economically active, they would be in better position to access and utilize ANC and eMTCT services provided in their areas. This study finding was contrary to Orne-Gliemann *et al.* [10] whose study about improved knowledge and practices among end-users of mother-to-child transmission of HIV prevention services in rural Zimbabwe found out that poverty, unemployment, low socio-economic status as well as lack of support and involvement by the male partner.

Results showed that 25 (30.8%) respondents attained primary level education, followed by 22 (27.2%) who attained secondary level education. This demonstrated that most respondents had attained a fair level of education and would thus be more aware and knowledgeable about eMTCT as well as its objectives and benefits which could further positively influence their attendance and utilization of the services. This study finding was in agreement with Cartoux *et al.* [11] who documented in their study about acceptability of voluntary HIV testing by women aged 15 -

45 years in developing countries that some of the socio demographic factors influencing utilization of eMTCT services by pregnant mothers included low level of educational attainment by the woman and her partner and failure to appreciate the importance/benefits of this service.

#### **Socio economic factors influencing utilization of eMTCT services by pregnant mothers**

All of the respondents 81 (100%) had ever heard about eMTCT services and 50 (62%) obtained information about eMTCT services from health workers. This implied that since all the respondents were aware of the eMTCT services, they would ensure improved use of the services. This study contrasts to Adewole *et al.* [4] who mentioned in their study about the prevention of mother-to-child transmission of HIV/AIDS in Nigeria that one of the important socio demographic factors influencing utilization of eMTCT services by pregnant mothers included inadequate knowledge about the benefits of eMTCT services.

Most respondents 50 (61.7%) understood eMTCT as giving ARVs to the mother and baby while the least 31 (38.3%) understood it as monitoring of mother and child. Furthermore, 50 (61.7%) respondents were aware of the benefits of using eMTCT services and out of the 50 respondents who were aware of the benefits of using eMTCT services, most 40 (80%) reported prevention of MTCT while the least 10 (20%) reported ensuring that the baby is born healthy and strong. This implied that since most respondents were fully aware of the benefits of eMTCT services, they would put in place measures to ensure improved utilization of the services. This study finding was in agreement with Mpinganjira *et al.* [12] whose study reported that mother-to-child transmission of HIV infection and its prevention that unavailability of information about the benefits and advantages of eMTCT services among pregnant mothers were some of the socio-economic factors influencing utilization of eMTCT services.

Results showed that 31 (38.3%) respondents reported that their partners

attained primary level education, followed by 21 (25.9%) who attained secondary education, 16 (19.7%) did not attain any education. This showed that most respondents' partners had attained a fair level of education and would thus be expected to possess more knowledge about eMTCT and the importance of supporting their partners to ensure adequate access to and utilization of eMTCT services. This study finding was contrary to Cartoux, Meda and Van de Perre [11] who documented in their study about acceptability of voluntary HIV testing by women aged 15 - 45 years in developing countries that some of the socio demographic factors influencing utilization of eMTCT services by pregnant mothers included low level of educational attainment by the woman and her partner and failure to appreciate the importance/benefits of this service. The majority of respondents 50 (61.7%) reported that their friends said eMTCT is a good service because it helped prevent transmission of HIV from mother to child which could promote the utilization of the eMTCT services.

The majority of respondents 60 (74.1%) felt stigmatized because of using eMTCT services and out of the 60 respondents who reported being stigmatized, most 40 (66.7%) said they were stigmatized by their friends while the least 20 (33.3%) were stigmatized by their family. This showed that stigmatization remained prevalent and this could affect utilization of eMTCT services among mothers.

Results showed that 40 (49%) respondents sometimes got support from their husbands in accessing eMTCT services, followed by 24 (30%) who said they always got support while the least 17 (21%) said they never got support from their husbands. This showed that support from respondents' partners was not consistent and this could greatly affect the utilization of eMTCT services. This study finding was in agreement with Jebesse and Teka [13] whose study about knowledge and attitude towards mother to child transmission of HIV and its prevention among post-natal mothers in Tikur Anbessa and Zewditu Memorial

Hospital, Addis Ababa found out that level of support from partners/husbands directly affected eMTCT service utilization as mothers sometimes lacked transport money to the health facilities. Results showed that 20 (24.7%) respondents mentioned labeling and stigmatization as a socio-economic factor influencing utilization of eMTCT services, followed by 16 (19.7%) reported lack of support, 13 (16.2%) mentioned unemployment, 12 (14.8%) reported poverty while the least 10 (12.3%) reported lack of knowledge/awareness and 10 (12.3%) mentioned negative attitudes towards services respectively. This showed that respondents were fully aware of the various socio-economic factors influencing utilization of eMTCT services. This study finding was in agreement with Igwegbe and Ilika [14] who revealed in their study about knowledge and perceptions of HIV/AIDS and mother to child transmission among antenatal mothers at Nnamdi Azikiwe University Teaching hospital, Nnewi, Nigeria that socio economic factors influencing utilization of eMTCT services by pregnant mothers included lack of knowledge about the services, lack of interest as well as unemployment among others.

#### **Health facility factors influencing utilization of eMTCT services by pregnant mothers**

Most respondents 50 (62%) reported that they had ever attended eMTCT services which demonstrated that eMTCT services were well attended by mothers which is a positive step for the prevention of MTCT. Out of the 50 respondents who had attended eMTCT services, most 35 (70%) did not find the services confidential which implied that lack of confidentiality could lead to poor utilization of the eMTCT services provided. This study finding was in line with Ginsburg *et al.* [15] who reported in their study about provision of care following prevention of mother-to-child HIV transmission services in resource-limited settings that some of the health facility related factors influencing low utilization of eMTCT services by pregnant mothers included

perceived or actual provision of confidential services.

Out of the 50 respondents who had ever attended eMTCT services, results showed that most 30 (60%) reported that eMTCT services were not available all the time and this affected their utilization of the eMTCT services as health workers would not be available while most respondents 30 (60%) reported that health workers were sometimes available to offer eMTCT services at all times. This study finding was in agreement with Homsy *et al.* [6] study which showed that non availability of services and health workers were some of the health facility factors influencing utilization of eMTCT services by pregnant mothers.

Results showed that 50 (61.7%) respondents reported that pregnant mothers should be tested for HIV 2 - 3 times, 24 (29.6%) respondents reported that mothers with HIV should breast feed for one year, followed by 20 (24.7%) reported more than one year, 15 (18.5%) reported 6 months, 12 (14.8%) reported that mothers should not breast feed while the least 10 (12.4%) did not know. This showed that respondents lacked sufficient knowledge about the recommended duration of breast feeding which implied that if this is not corrected, mothers may yet transmit HIV to the baby through breast feeding. Hence there is need to health educate mothers about safe breast feeding.

The majority of respondents 50 (62%) reported that health workers had positive attitudes towards pregnant mothers utilizing eMTCT services as they were welcoming and polite to the mothers which implied that since health workers had positive attitudes towards pregnant mothers, it would lead to improved attendance and utilization of eMTCT services. This study finding was contrary to Eyakuze, [2] whose study reported that the utilization of eMTCT services remains low due to factors such as lack of confidentiality and privacy at health facilities, poverty, long distance to health facilities as well negative attitudes of health workers towards mothers.



Results showed that 23 (28.4%) reported lack of privacy and confidentiality as a problem they encountered in utilizing eMTCT services at the hospital which was in agreement with Ginsburg *et al.* [15] who reported in their study about provision of care following prevention of mother-to-child HIV transmission services in resource-limited settings that some of the health facility related factors influencing low utilization of eMTCT services by pregnant mothers included perceived or actual provision of un confidential services.

Results showed that 19 (23.4%) reported long waiting time to receive services and 15 (18.5%) mentioned unavailability of services sometimes. This study finding was supported by Meda *et al.* [16] who explained how understaffing led to long waiting time to receive the services and

The study found out that respondents faced various socio-economic factors influencing utilization of eMTCT services by pregnant mothers. For instance, although all respondents 81 (100%) had ever heard about eMTCT services and 50 (62%) obtained information about eMTCT services from health workers, most 50 (61.7%) understood eMTCT as giving ARVs to the mother and baby and 40 (80%) prevention of MTCT as a benefit of eMTCT. However, 60 (74.1%) felt stigmatized because of using eMTCT services and most 40 (66.7%) were stigmatized by their friends and 40 (49%) sometimes got support from their husbands in accessing eMTCT services. Other factors included 20 (24.7%) labeling and stigmatization, 16 (19.7%) lack of support, 13 (16.2%) unemployment and 12 (14.8%) poverty among others.

Respondents also faced various health facility factors influencing utilization of eMTCT services by pregnant mothers and although most 50 (62%) reported that they had ever attended eMTCT services, most 35 (70%) did not find the services confidential, 30 (60%) said eMTCT services were not available all the time despite 50 (62%) health workers having positive attitudes towards pregnant mothers utilizing eMTCT services. Other

worse the unavailability of services coupled with opening and closing times were health facility factors influencing low utilization of eMTCT services by pregnant mothers.

Findings showed that 13 (16.1%) respondents reported long distance to the hospital while 11 (13.6%) respondents mentioned negative attitudes of health workers. This showed that respondents were aware of the various factors influencing utilization of eMTCT services. This study finding was in line with Eyakuze, [2] whose study reported that the utilization of eMTCT services remains low due to factors such as lack of confidentiality and privacy at health facilities, poverty, long distance to health facilities as well negative attitudes of health workers towards mothers.

## CONCLUSION

health facility factors included 23 (28.4%) lack of privacy and confidentiality, 19 (23.4%) long waiting time to receive services, 15 (18.5%) unavailability of services sometimes and 13 (16.1%) long distance to the hospital among others.

### Recommendations

#### Recommendations to the Ministry of Health

The Ministry of Health should improve upon the available sensitization campaigns and programs about eMTCT. The Ministry of Health should further endeavor to provide literature to all HIV positive mothers about the importance and benefits provided by eMTCT services. The Ministry of Health should also re-launch HIV/AIDS programs to health educate community members about the causes of HIV and how it could be prevented in an effort to reduce the high prevalent levels of stigma still attached to the diseases and experienced by people living with HIV/AIDS.

#### Recommendations for health workers at Mbarara Regional Referral Hospital

Health workers at Mbarara Regional Referral Hospital should endeavor to carry out community outreach and sensitization about the importance of eMTCT services.

The health workers should also invite the participation and involvement of male partners in the services as this also has various benefits and advantages.

Health workers should at Mbarara Regional Referral Hospital should endeavor to make the eMTCT services more efficient and reduce the waiting time of mothers to receive the services.

Furthermore, health workers should ensure maximum privacy and confidentiality during the provision of eMTCT services.

#### **Recommendations for pregnant mothers at Mbarara Regional Referral Hospital**

Pregnant mothers at Mbarara Regional Referral Hospital should endeavor to make adequate use of eMTCT services provided in their community as this safeguards the health of their children and prevents MTCT.

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Antenatal women should take it upon themselves to invite the involvement and participation of their husbands as this provided many potential benefits and advan5.4 Implications to nursing practice.

#### **The implications of these findings to the nursing practice include the following:**

Health workers, especially those working at Mbarara Regional Referral Hospital have an important role to play in increasing awareness and utilization of eMTCT services provided at the hospital. This could be done through carrying out regular sensitization, community outreach and health education of community members about the importance and benefits provided by eMTCT services.

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