# FACTORS AFFECTING ACCEPTANCE LEVELS OF MALE CIRCUMCISION AMONG MALE ADULTS BETWEEN THE AGES OF 15 TO 49 AT RUSANGU CLINIC CATCHMENT AREA IN MONZE, ZAMBIA

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# ABSTRACT

**Purpose:** Male Circumcision is an old common procedure performed for cultural, health and religious reasons. Despite the apparent reasons for the performance of this procedure, its acceptability has not been universal.

The overall aim of the study was to assess factors affecting the acceptance levels of Male Circumcision at Rusangu Clinic catchment area among male adults between the ages of 15 and 49 years.

The study objectives included the assessment of knowledge levels on Male circumcision among males within the clinic's catchment area and to determine if there was any association between knowledge and willingness to have the procedure done. Furthermore, the researcher sort to identify Social-cultural factors that were associated with the uptake of Male Circumcision.

**Method :** This was a cross sectional study conducted in Monze district, around Rusangu clinic catchment area. Data was collected using a structured interview schedule and respondents were drawn from the six neighborhoods of Rusangu clinic catchment area which included; Chikonga, Sitembe, Hamakumo, Mandali, Mambo and Simungali. Fifty (50) respondents were sampled using convenient sampling technique and the data was analyzed using IBM SPSS for windows statistical software version 20.0. Chi-square test was used to test the association between the dependent and independent variables. The confidence interval was set at 95%, and a result yielding a P value of 5% or less was considered to be statistically significant.

**Findings:** The study findings revealed an acceptability level of 39(78%) respondents who were willing to undergo MC. The study findings on knowledge about MC revealed that 48(96%) respondents heard about MC and 41(82%) understood its benefits especially in regards to the prevention against HIV/AIDS. The study also revealed that socio- cultural values/beliefs were not a hindrance to the uptake of MC and majority of the participants, 31(79.5%) thought that it was culturally right for a man to undergo MC.

There was no association between knowledge and willingness to undergo male circumcision. The results further indicated that although the uptake of MC was still low in Rusangu clinic catchment area the procedure was perceived positively.

*Conclusion* : The study results indicated that there was no association between acceptance of Male circumcision and lack of knowledge, culture and attitude by health care providers.

#### 1. INTRODUCTION

Male Circumcision is the procedure that can range from a small snip to full removal of the foreskin of the penis for health, cultural or religious reasons (Rivers, Angleton & Coran, 2002; Lisulo, 2009).

It is one of the oldest and commonest surgical procedure performed for cultural, religious, social and medical reasons (UNSAID, 2007; Chiwele, 2011). If conducted in adolescence, Male Circumcision was characterized by a maturation process that underscores it, as a rite of passage into manhood. In such cases, it also defined individual, group and gender identity which led to a number of tribal groups to accept it (Rivers, Angleton & Coran, 2002; Lisulo, 2009). The practice appeared to have been universal amongst all strata of society in Ancient Egypt (Short, 2009).

In the late 19<sup>th</sup> century circumcision became routine in the United States of America and elsewhere as a result of pronouncements from various physicians, (Remondino, 1891; Gollaher, 1994; Alanis &Lucidi, 2004) who recognized the health benefits of circumcision which included prevention of penile cancer, phimosis and as an important intervention in prevention of the spread of HIV transmission heterosexually (WHO, 2007;UNSAID, 2007; Chiwele, 2011). According to (Musika, 2014) some of the health benefits of Male Circumcision included the reduction in the risk of cervical cancer in women. However, It is acceptability despite all these apparent advantages has not been universal.

Globally greater percentages (70%) of males who accepted and where circumcised were Muslims while 30% of men were not circumcised (WHO, 2008; WHO, 2007). According to (William, 2009) about 62% of African males had accepted and were circumcised. However, the rate varied widely between different regions, ethnic and religious groups. Studies in twelve African countries revealed that the barriers to male circumcision in non-circumcising areas included cost, fear of pain, concern for safety, cultural practices, lack of information, reduction in sexual pleasure, religious beliefs and medical staff attitude. On the other hand, it was noticed that the main facilitators were improved hygiene and reduction in sexually transmitted illnesses.

Zambia is located in southern Africa, a region with few societies that conducted male circumcision as a cultural practice. Male circumcision was a normal practice in some communities (Chiwele, 2009). However, many societies had no tradition of Male Circumcision and some strongly opposed to it. As a result, acceptance varied greatly across the world (William, 2009).

The Voluntary Medical Male Circumcision (VMMC) prevalence rate in Zambia among adults between the ages of 15 to 49 was 13% in 2007 and 22% in 2013(CSO, 2007). During the launch of the 2015 August Voluntary Medical Male Circumcision (VMMC) in Lusaka Zambia, it was reported that over 950,000 (87.7%) males had accepted and were circumcised since the introduction of the safe medical procedures in public clinics (Daily nation, 06 August 2015) from the total population of 1,082,998 males captured during 2010 census (CSO,2010). Gabriel (2015) showed that only 900(0.1%) males accepted and were circumcised in southern province of Zambia. Comparatively this was a small number to the total population of males which was at 777,659(51%) in the province (CSO, 2010).

This study therefore assessed factors associated with acceptance levels of male circumcision at Rusangu clinic catchment area in Monze District which was in the southern province of Zambia.

In southern province of Zambia, the prevalence of Male Circumcision was 4.4% (CSO, 2009). Rusangu clinic had a catchment population of4,214 males of which 2,476 were between the ages of 15 to 49 (MDHO, 2016). Male Circumcision commenced in December, 2013 with about 87 (3.5%) males circumcised between the ages of 15 to 49 years. In 2014 the Center target was at 250(10.1) of the total male population between the ages of 15 and 49 and only 78 (3.1%) were circumcised. In 2015 the Center target was at 270 and only 60 (2.4%) males were circumcised.

Therefore, from January 2014 to December 2015 about 138 (5.6%) males were circumcised (MDHO, 2016). This, therefore was very low compared to the 2014, 2015 Center target respectively. With the above statistics only 225 males were circumcised from December 2013

to December 2015 representing 9.1% which was still lower than even the 2015 Center target of 270.

These statistics demonstrate a low rate of Male Circumcision uptake, far much lower than the Center target. The April VMMC campaign was targeting 80,000 males to be circumcised country wide and 13,000 males at provincial level as well as 7,000 males per district(MOH,2016).Therefore comparing the 225 males circumcised at Rusangu clinic as a Center from 2013 to 2015 was too low to contribute to the 7,000 to be circumcised within two months which was from April to May 2016.This was a clear indication that the scaling up of male circumcision in Zambia, particularly in southern province was facing some challenges. The government of the republic of Zambia had adopted and implemented the Montreux recommendations of 2007 (WHO, UNSAIDS, 2007), which stated among others free medical male circumcision at all health facilities, training and certification of providers in order to provide quality services and integration of male circumcision with other services.

Despite all these interventions being put in place, the MC rate in this area had constantly remained low. It was for this reason that the researcher carried out the study to assess the factors that were affecting acceptability of Male Circumcision in Rusangu clinic catchment area. The table below shows the rate of Male Circumcision at Rusangu clinic from 2013 to 2015. The objectives of this study were as follows;

- (i) To assess the knowledge levels on Male Circumcision among males.
- (ii) To determine association between knowledge on Male Circumcision and willingness to undergo Male Circumcision
- (iii) To identify Social-cultural factors associated with the uptake of Male Circumcision

And the Null hypothesis: There is no association between acceptance of male circumcision and the following factors; inadequate sensitization, culture, lack of knowledge, effects of sexual pleasure and fear of pain.

#### **2.0 METHODOLOGY**

### 2.1. Sampling

In order to obtain a representative sample of the population selected for the study, the sample was obtained from the target population.

The total population of Rusangu clinic was 8,601 with the population of men at 49% (4,214) of the total population (MDHO, 2015) and the population of men between the ages of 15-49 was at 59% (2,486) of the total male population.

Rusangu clinic was purposively sampled. Rusangu clinic was divided into 7 neighborhoods. Six neighborhoods were selected using simple random selection and the sample size was determined proportionally based on the number of household in the 6 neighborhoods. Respondents were drawn from each section and the number was obtained by dividing the sample size by the number of neighborhoods (50 divided by 6 = 8). The sampling interval was calculated by dividing the number of households in each neighborhood by the number of households the researcher decided to visit every day (40 divide by 8). Each house was counted as a household. The first house was randomly selected using a table of random numbers and from there on subsequent households were systematically sampled using every fourth household. Respondents were conveniently selected (because of the age specifications required). Those that were absent at the time of the interview a second visit was arranged the following day or by appointment before being replaced. Similarly, female headed household where there were no males living there were replaced.Convenience sampling of 50 participants was used since they were few.

## 2.2. Instruments for Data Collection

A semi-structured interview schedule was used as a data collecting tool.

## 2.2.1 Semi - structured interview schedule

In this study a semi-structured questionnaire was used in order to collect quantitative data. The semi-structured interview schedule had both the open and closed ended questions. The open ended questions allowed the respondents to respond in their own words and to verbally express themselves.

Closed ended questions helped the researcher to capture specific and guided responses.

The semi-structured interview schedule comprised of five sections. Section A consisted of questions on the respondents' socio- demographic data. Section B comprised of questions on knowledge of male circumcision and section C had questions on whether the respondents accepted male circumcision or not. Section D comprised of information on traditional beliefs and values affecting the uptake of male circumcision and Section E had questions on the attitudes of the health provider.

The advantage of having used this tool was that it allowed the interviewer to probe and clear misunderstanding of questions during the interview.

## 2.2.2 Data Analysis

The raw data that was collected was sorted out and then grouped in categories. The data collecting instruments were checked for completeness, consistence, eligibility and accuracy

daily after data collection and after which data was coded. Data was analyzed using IBM SSPS for windows statistical software version 20.0.

Chi-square test was used to test associations between the dependent and independent variables. Data was displayed in 2 x 2 tables with 1 degree of freedom. Significance levels were set at 0.05 % with 95% confidence interval. The dependent variable was acceptance of male circumcision and the independent variables were: knowledge on male circumcision, socio cultural values/believes associated with circumcision and attitudes of health workers.

# 3.0 Study Area

The study was conducted at Rusangu clinic located about 15km away from Monze town in the southern part with a total population of about 8601 people of which 49% were males. Rusangu clinic serves the Rusangu Mission, Rusangu community police post, Rusangu University, Rusangu Secondary School, 3 basic schools, farms around considered asvillages and 7 neighborhoods which include Rusangu, Chikonga, Sitembe, Hamakumo, Mandali, Mambo and Simungali. Rusangu clinic borders with Chikuni hospital on the east,Zambia College of Agriculture clinic on the north, Manungu clinic on the west, St Mary's clinic and Chisekese clinic on the south.

Rusangu clinic offers the following services; Out Patient, Voluntary Counseling and testing, Male Circumcision, Environment Health and Youth Friendly services. It has a total of 8 health personnel who included 1 Clinical Officer,2 registered Nurses,1 enrolled nurse,1 environmental health technician and 3 Support staff.

# 4.0 Results

# 4.1 Participant Demographics

Section A presented the respondents demographic data. The variables considered were age, marital status, years in present marriage, tribe, whether male circumcision was talked about during church programs, educational level and occupation.

Age in years		Frequency	Percent
	15-30	31	62.0
	31-35	13	26.0
	36-40	4	8.0
	41-45	1	2.0

 Table 4.1: Respondents' demographic data (n=50)

	46-49	1	2.0
	Total	50	100.0
Marital status		Frequency	Percent
Waritai status	Single	31	62.0
	Married	19	38.0
	Total	50	100.0
Vegre in present mannings		Frequency	Percent
Years in present marriage	1-5	19	38.0
	6-10	19	38.0
	11-15	3	6.0
	16-20	9	18.0
	Total	50	100.0
Tribe		Frequency	Percent
Tribe	Tonga	46	92.0
	Lozi	2	4.0
	Bemba	1	2.0
	Chewa	1	2.0
	Total	50	100.0
Educational level		Frequency	Percent
	Never been to school	14	28.0
	Primary	7	14.0
	Secondary	21	42.0
	College	4	8.0
	University	4	8.0
	Total	50	100.0
Occupation		Frequency	Percent
	Farmer	21	42.0
	Formally employed	15	30.0
	Selfemployed	5	10.0
	Unemployed	9	18.0

	Total	50	100.0
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Table 4.1 revealed that the majority (62%) were aged between 15 and 30 years with the mean age of 26and that most of the respondents (62%) were married. Majority respondents (92%)were Tongas by tribe. About (42%) of the respondents attained the level of secondary education and 42% of the respondents were farmers.

## 4.3.2 Section B: Knowledge on male circumcision

In this section B, information on responses on knowledge of male circumcision was presented. The information presented included responses on whether respondent have ever heard of male circumcision and the source of information. It also included information on whether respondents knew what male circumcision was and whether male circumcision services were accessible. Apart from that, it also included information on whether respondent thought male circumcision was beneficial and what the benefits were.

Figure 4.1 Responses on whether respondent have ever heard of male circumcision (n= 50)

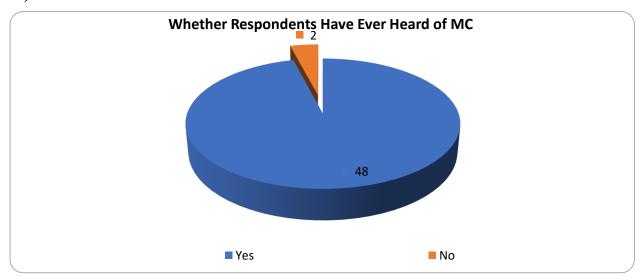


Figure 4.1 shows that the majority 48 (96%) of the respondents have heard of male circumcision and only 2 (4%) of the respondents did not hear of male circumcision.

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Figure 4.2 Responses on source of informationabout male circumcision (n= 50)
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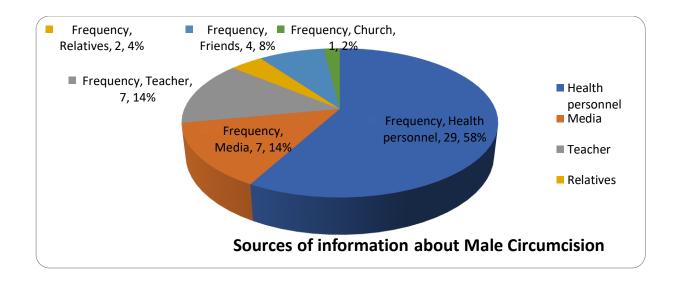
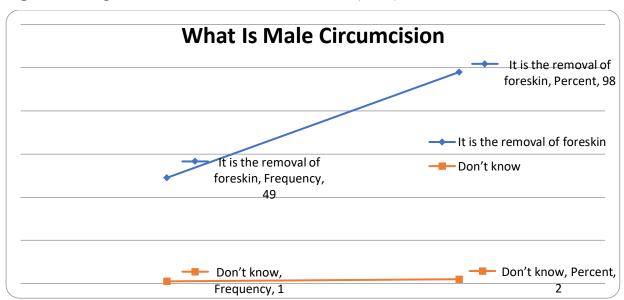


Figure 4.2 shows that slightly above half of the total respondents (n=50)29 (58%) had their source of information from the health personnel and 7 (14%) from the media and Teachers respectively and only 1 (2%) got from church.



# Figure 4.3 Responses on what is male circumcision (n=50)

Figure 4.3 shows that the majority 49 (98%) of the respondents knew male circumcision as the removal of the foreskin and only1 (2%) of the respondents did not know.

Table 4.2 Responses on	whether male	e circumcision	services are	accessible(n=50)
Table 1.2 Responses on	whether mar	c chi cumerși on	services are	accessione(in 50)

Whether male circumcision services a	re 🛛	
accessible	Frequency	Percent
Yes	48	96.0

No	2	4.0
Total	50	100.0

Table 4.2 shows that the majority of the participants (96%) responded that male circumcision was accessible and only (4%) responded to the negative.

Whether respondent thought male circumcision was		
beneficial	Frequency	Percent
Yes	50	100.0
No	0	00

Table 4.3 show that all the participants (100%) thought that male circumcision is beneficial.

Figure 4.4	Responses on	benefits of ma	le circumcision	(n=50)

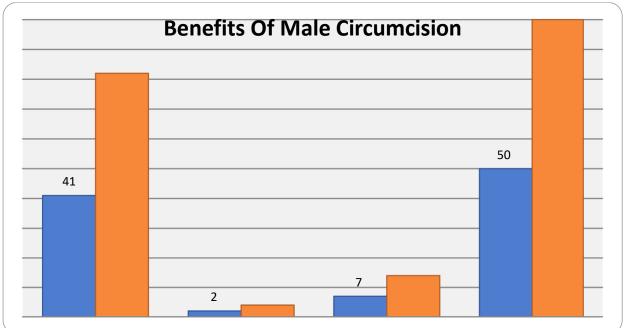


Figure 4.4 shows that the majority of the participants 41 (82%) responded that the benefits of male circumcision is to protect/prevent against HIV/AIDS. Other participants7 (14%) responded that it was part of hygiene and only 2(4%) responded that the benefits of male circumcision is to increase on sexual satisfaction.

# 4.3.3 Section C: Acceptance of male circumcision

In this section, information on responses on acceptance of male circumcision is presented. The information presented includes responses on whether respondents thought MC is good and felt

men must undergo circumcision. It further looks at whether respondent was willing to undergo MC and be able to advise friends and relatives to undergo MC as well. It also looks at whether respondent had any fear of MC and what the fears were.

Whether respondent think MC is good	Frequency	Percent
Yes	48	96.0
No	2	4.0
Total	50	100.0

Table 4.4 Responses on whether respondents thought male circumcision was good (n=50)

Table 4.4 shows the majority of the participants (96%) thought that MC is good and only (2%) thought that it is not good.

Figure 4.5 Responses on whether respondents felt like men must undergo circumcision is
(n=50)

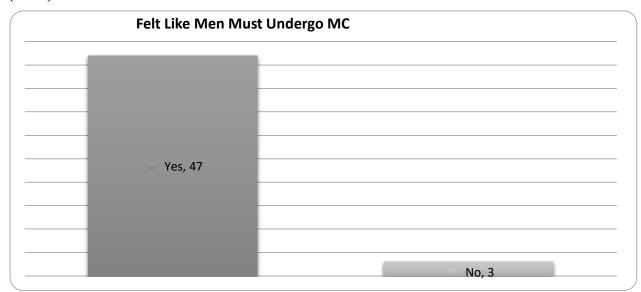


Figure 4.5 shows the majority of the respondents 47 (94%) felt like men must undergo circumcision and only 3 (6%) felt like men must not undergo circumcision.

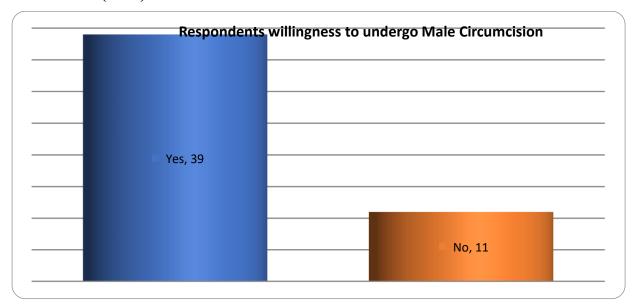


Figure 4.6 Responses on whether respondents would be willing to undergo male circumcision (n=50)

Figure 4.6 shows most of the participants 39 (78%) would be willing to undergo MC and only 11 (22%) were not.

Figure 4.7 Responses on whether respondents would advise friends and relatives to undergo MC (n=50)

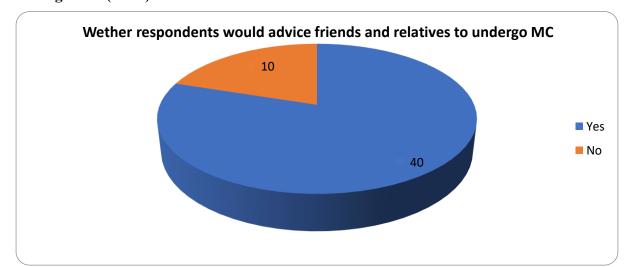


Figure 4.7 shows most of the participants 40 (80%) would advise their friends and relatives to undergo MC and the other participants 10 (20%) would not give such advice to friends and relatives.

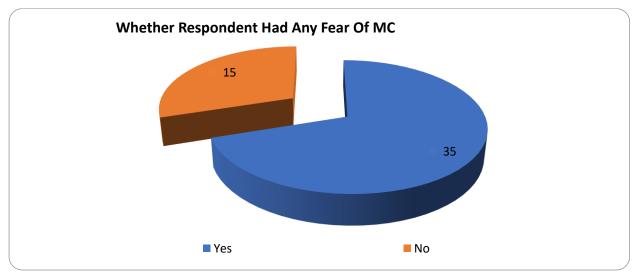


Figure 4.8 Responses on whether respondents have any fear of mc (n=50)

Figure 4.8 shows most35 (70%) of the respondents had fear of undergoing MC and 15 (30%) of the respondents had no fear.

# Figure 4.9 Responses onwhat are the fears (n=50)

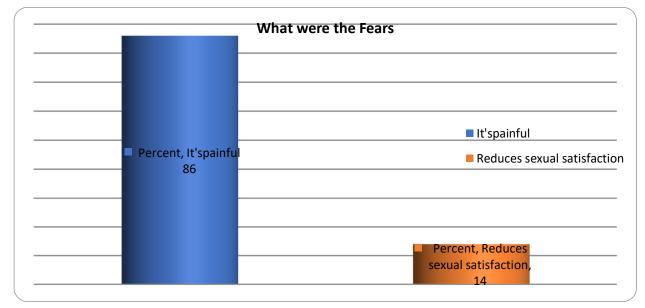


Figure 4.9 shows most of the respondents 43(86%) feared to be circumcised because of the perceived pain while others 7(14%) had of fear of losing their sexual libido.

# 4.3.4 Section D: Socio- cultural values/beliefs associated with male circumcision

In this section, information on responses on socio-cultural values /believes associated with MC is presented. The information presented includes responses on whether respondents discuss matters related to MC openly, whether respondents think it is culturally right for a man to undergo MC and whether it is a taboo to discuss MC with partner.

Whether respondent discusses		
matters related to MC openly	Frequency	Percent
Yes	37	74.0
No	13	26.0
Total	50	100.0

Table 4.5 Responses onwhether respondents discuss matters related to mc openly (n=50)

Table 4.5 shows most of the participants (74%) discussed matters of MC openly while (26%) did not.

# Table 4.6 Responses onwhether respondents think it is culturally right for a man to undergo mc (n=50)

Whether respondent think it is culturally right for a		
man to undergo MC	Frequency	Percent
Yes	41	82.0
No	9	18.0
Total	50	100.0

Table 4.6 shows the majority of the participants (82%) thought that it is culturally right for a man to undergo MC while others (18%) did not.

Figure 4.10 Responses on whether it is a taboo to discuss mc with partner (n=50)

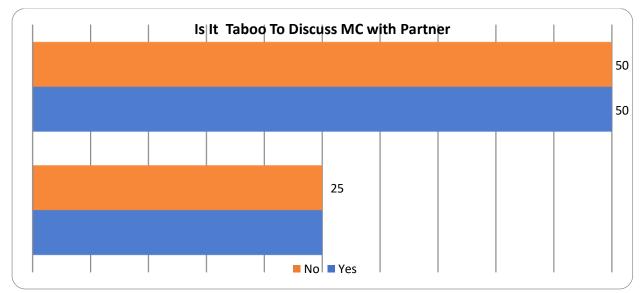


Figure 4.10 shows half of the respondents25 (50%) agreed that it is a taboo to discuss MC with partner and the other half 25 (50%) did not.

## 4.3.5 Section E: Attitudes by health providers

The information presented in this section includes responses on whether respondent thought health care providers receive clients who seek MC well and whether health care providers provide adequate information on MC.

# Figure 4.11 Responses on whether respondents think health care providers receive clients who seek mc well (n=50)

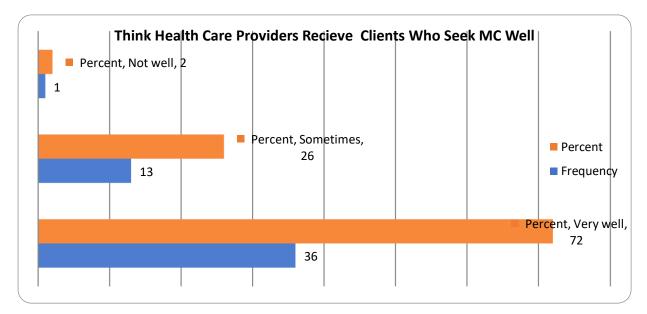


Figure 4.11 shows most of the respondents 36 (72%) confirmed that health care providers receive clients who seek MC very well and only 1 (2%) of the respondents thought that health care providers do not receive clients who seek MC well.

# Figure 4.12 Responses on whether health care providers provide adequate information on mc to clients who seek the service (n=50)

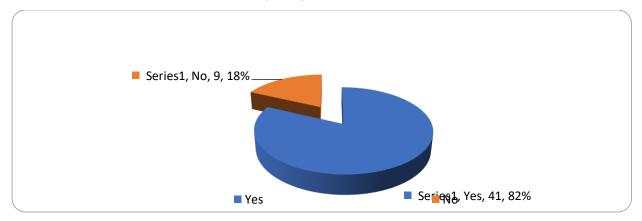


Figure 4.12above shows that majority of the respondents 41 (82%) agreed that health care providers provide adequate information on MC to clients who seek the service and other respondents 9 (18%) did not.

# Suggestions by respondents on how to create awareness on mc in the community Incorporate topics of MC in school curriculum

Suggestions on how to create awareness in the community about MC, 32 (64%) of the respondents (n=50)suggested that incorporating topics of MC in school curriculum would increase knowledge levels on MC which could result in an increased MC uptake.

#### **Phoning in Radio Programmes**

Thirteen (26%)respondents (n=50) suggested that health care providers needed to come up with a phoning in programme on radio, at least every month in local language where MC was going to be discussed. This will help the local people to ask and know more about MC as they would be phoning in.

## Come up with a programme to teach about MC in public places

The findings of the study also reviewed that 4 (8%)of the responded (n= 50) suggested that health care providers needed to come up with a programme to teach the general public about MC in market places and learning institutions. This would allow all those with busy schedules to have time to listen and learn more about MC.

## Incorporate MC during under five clinic

The findings also showed that 1(2%) of the respondents (n=50) suggested that health care providers should incorporate MC during under five clinic in order to involve women who in turn would encourage their sons and partners.

#### 4.3.6 Section F: Relationships between study variables

In section F, the relationship among the dependent and independent variables of the study were presented. These included the relationship between willingness to undergo MC and; Demographic data, Knowledge on male circumcision, acceptance of male circumcision, socio-cultural values/believes associated with MC and attitudes by health care providers.

Demographic data included respondent's age, marital status and educational level. Knowledge on MC included information on whether respondents had heard of MC and the source of information, it also included what MC was, if MC services were accessible and if respondents knew where to find them. It also included information on whether MC was beneficial and what the benefits were. Acceptability of MC by males and socio-cultural values/believe associated with male circumcision and the attitudes by health providers towards clients seeking MC services.

Whether respondent will be						P Value	
willing to undergo MC	15-30	31-35	36-40	41-45	46-49	Total	
Yes	23(59%)	10(26%)	4(10.3%)	1(2.6%)	1(2.6%)	39(100%)	
No	8(72.7%)	3(27.3%)	0	0	0	11(100%)	0.743
Total	31(62%)	13(26%)	4(8%)	1(2%)	1(2%)	50(100%)	

Table 4.7 Age and respondents' willingness to undergo mc (n=50)

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4:7 above shows that out of the 39 respondents who were willing to undergo MC, most 23 (59%) were aged between 15 and 30 while the other 10 (26%) were aged between 31 and 35. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.743). Therefore the researcher failed to reject the null hypothesis.

Table 4.8 Marital statusand respondents' willingness to undergo mc (n=50)

Whether respondent will be	Marital status			P Value	
willing to undergo MC	Single	Married	Total		
Yes	23(59%)	16(41%)	39 (100%)		
No	8(72.7%)	3(27.3%)	11(100%)	0.407	
Total	31(62%)	9(38%)	50(100%)		

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4.8 above shows that slightly above half 23 (59%) out of the 39 respondents willing to undergo MC were single while 16 (41%) were married. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.407). Therefore the researcher failed to reject the null hypothesis.

Whether respondent will be	Educational level						P Value
willing to undergo MC	Never been to school		Secondary	C	University		
Yes	9(23.1%)	4 (10.3%)	18(46.2)	4(10.3% )	4(10.3%)	39(100 %)	
No	5(45.1%)	3(27.3% )	3(27.3%)	0	0	11(100 %)	0.178
Total	14(28%)	7(14%)	21(42%)	4(8%)	4(8%)	50(100 %)	

 Table 4.9 Educational levelsand respondents' willingness to undergo mc (n=50)

Table 4:9above shows that out of the 39 respondents who were willing to undergo MC, most 18 (47%) had reached secondary education and 9 (23%) have never been to school. The Chisquare Test analysis showed no significant relationship between the two variables (P-value 0.178). Therefore the researcher failed to reject the null hypothesis.

Table 4.10 Having heard of mc and respondents' willingness to undergo mc (n=50)

Whether respondent will be willing to undergo MC		espondent have ever ale circumcision		P Value	
	Yes	No	Total		
Yes	37(95%)	2(5%)	39(99.9%)	0.443	
No	11	0	11		
Total	48(96%)	2(4%)	50 (100%)		

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4.10 above shows that the majority 37 (94.9%) of the respondents who were willing to undergo MC agreed to have heard of MC and only 2 (5%) did not. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.443). Therefore the researcher failed to reject the null hypothesis.

Table 4.11 Sources of information and respondents	s' willingness to undergo mc (n=50)
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Whether	Source of	informat	ion						Р
U U	Health								Value
undergo MC	personnel	Media	Teacher	Relatives	Friends	Church	Others	Total	
Yes	24(61.5%)	6 (15.4%)	4 (10.3%)	1(2.6%)	2(5%)	1 (2.6%)	1(2.6%)	39 (100%)	0.663
	5(45.5%)						0	11 (100%)	
Total	29 (58%)	7 (14%)	7(14%)	2(4%)	3(6%)	1(2%)	1(2%)	50 (100%)	

Table4.11 above shows that out of the 39 (78%) respondents who were willing to undergo MC, the majority 24 (61.5%) had their source of information on MC from the health personnel. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.663). Therefore the researcher failed to reject the null hypothesis.

Table 4.12 What is male	circumcision and	l respondents v	willingness to	undergo mc (n=50)

	What is male	circumcision		P Value
Whether respondent will be	It is the			
willing to undergo MC	removal of			
	foreskin	Don't know	Total	
Yes	39 (100%)	0	39 (100%)	0.051
No	10 (90.9%)	1 (9.1%)	11 (100%)	
Total	49 (98%)	1 (2%)	50 (100%)	

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4.12 above shows that all 39 (100%) the respondents who were willing to undergo MC knew MC as the removal of the foreskin. The Chi-square Test analysis statistically showed

significance relationship between the two variables (P-value=0.051). Therefore, the researcher failed to reject the null hypothesis.

Table 4.13 Respondents' willingness to undergo mc in relation to whether mc services are	
accessible(n=50)	

Whether respondent will be willing to undergo MC		ale circumcision		P Value
whiling to undergo with	Yes	No	Total	
Yes	38 (97.4%)	1 (2.6%)	39 (100%)	
No	10 (90.1%)	1(9.1%)	11 (100%)	0.329
Total	48 (96%)	2 (4%)	50 (100%)	

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4.13 above shows that the majority 38 (97.4%) of the respondents who were willing to undergo MC agreed to have had access to MC services while 1 (2.6%) did not. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.329). Therefore the researcher failed to reject the null hypothesis.

Table 4.14 Benefits of male circumcision and respondents' willingness to undergo mc

	Benefits of male circumcision				P Value
Whether respondent will be	Prevents	Increase on			
willing to undergo MC	against	sexual			
	HIV/AIDS	satisfaction	Hygiene	Total	
Yes	30 (77%)	2(5.1%)	7(17.9%)	39 (100%)	0.213
No	11 (100%)	0	0	11(100%)	
Total	41 (82%)	2(4%)	7 (14%)	50(100%)	

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4:14 above shows that out of the 39 respondents who were willing to undergo MC, most 30 (77%) said that it prevents against HIV/AIDS. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.213). Therefore the researcher failed to reject the null hypothesis.

Whether respondent will be willing to undergo MC	whether respondent thought MC is good			P Value	
winning to undergo with	Yes	No	Total		
Yes	37(95%)	2 (5%)	39 (100%)	0.443	
No	11 (100%)	0	11 (100%)		
Total	48 (96%)	2 (4%0	50 (100%)		

 Table 4.15 Respondents' willingness to undergo mc in relation to whether respondents thought mc is good

Table 4:15 above shows that the majority 37 (95%) of the respondents thought that MC is good and 2 (5%) did not. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.443). Therefore the researcher failed to reject the null hypothesis.

Table	4.16Respondents'	willingness	to	undergo	mc	in	relation	to	whether
respon	dentswould advise f	riends and re	lativ	es to under	rgo m	c (n=	=50)		

Whether respondent will be willing to undergo MC		spondent would s and relatives to		P Value
	Yes	No	Total	
Yes	30 (76.9%)	9(23.9%)	39(100%)	
No	10(90.9%)	1(9.1)	11(100%)	0.306
Total	40(80%)	10(20%)	50(100%)	

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4:16 above shows that most 30 (76.9%) of the respondents said that they would advise their friends and relatives to undergo MC while 9 (23.9%) did not. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.443). Therefore the researcher failed to reject the null hypothesis.

Table 4.17Respondents' willingness to undergo mc in relation to whether respondents had any fear of mc (n=50)

Whether respondent will be willing to undergo MC	Whether res fear of MC	spondent had any		P Value	
winning to undergo with	Yes	No	Total		
Yes	25(64.1%)	14(35.9%)	<b>39</b> (100%)	0.087	
No	10 (35.9%)	1(9.1)	<b>11</b> (100%)		
Total	35(70%)	15(30%)	<b>50</b> (100%)		

Table 4:17above shows that most 25 (64.1%) of the respondents said that they had fear of MC such loss of libido while 14 (35.9%) had other fears such as pain. The Chi-square Test was used to test the above relationship and the result was not statistically significance (P-value=0.087). Therefore, the researcher failed to reject the null hypothesis.

Table 4.18 Respondents' willingness to undergo mc in relation to whether respondents
discuss matters related to mc openly (n=50)

Whether respondent will be willing to undergo MC	Whether respondent discuss matters related to MC openly			P Value
whiling to undergo wie	Yes	No	Total	
Yes	30(79.9%)	9(23.1%)	39 (100%)	0.375
No	7(64%)	4(36.3%)	11(100%)	
Total	37(74%)	13(26%)	50(100%)	

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4.18 above shows that most 30 (79.9%) of the respondents said that they discuss matters related to MC openly, while 9 (23.1%) did not. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.375). Therefore the researcher failed to reject the null hypothesis.

Table 4.19Respondents' willingness to undergo mc in relation to whether respondents thought it is culturally right for a man to undergo mc(n=50)

Whether respondent will be willing to undergo MC				P Value
	Yes	No	Total	
Yes	31(79.5%)	8(20.5%)	39(100%)	
No	10(90.9%)	1(9.09%)	11(100 %)	0.384
Total	41(82%)	9(18%)	50(100%)	

Table 4.19 shows that most 31 (79.5%) of the participants thought that it is culturally right for a man to undergo MC while 8 (20.5%) thought vice versa. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.384). Therefore the researcher failed to reject the null hypothesis.

 Table 4.20Respondents' willingness to undergo mc in relation to whether it is a taboo to

 discuss mc with partner(n=50)

Whether respondent will be willing to undergo MC	Whether it is a taboo to discuss MC with partner			P Value
whiling to undergo with	Yes	No	Total	
Yes	18(41.2%)	21(53.8%)	39(100%)	
No	7(63.6%)	4(36.4%)	11(100%)	0.306
Total	25(50%)	25(50%)	50(100%)	

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4.20 above shows that out of the 39 respondents 18 (41.2%) said that it is a taboo to discus MC with partner while on the other hand 21 (53.8%) said that it was not a taboo to discuss MC with partner. However the Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.306).Therefore the researcher failed to reject the null hypothesis.

Table 4.21Respondents' willingness to undergo mc in relation to whether respondentthought health care providers receive

clients who seek mc well(n=20)

Whether respondent will be willing to undergo MC	-	oondent though eeived clients w		P Value	
	Very well	Sometimes	Total		
Yes	29(74.4%)	9(23.1%)	1(2.6%)	39 (100%)	0.606
No	7(63.6%)	4(36.1%)	0	11(100%)	
Total	36(72%)	13(26%)	1(2%)	50(100%)	

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4.21 shows that most 29 (74.4%) of the respondents thought that health care providers receive clients who seek MC well while 9 (23.1%) thought that health care providers receive clients well only sometimes and only 1 (2.6%) of the respondents thought that heath care providers did not receive clients well. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.606).Therefore the researcher failed to reject the null hypothesis.

Table 4.22Respondents' willingness to undergo mc in relation to whether health careproviders provide adequate information on mc(n=50)

Whether respondent will be willing to undergo MC	Whether health care providers provide adequate information on MC			P Value
	Yes	No	Total	
Yes	32(82.1%)	7(17.9)	39(100%)	0.986
No	9(81.8%	2(18.2%)	11(100%)	
Total	41(82%)	9(18%)	50(100%)	

Chi-square Test, \*Indicates significant *p*-value at p < 0.05.

Table 4.22 above shows that the majority 32 (82.1%) of the respondents said that health care providers provide adequate information on MC while7 (17.9%) did not agree to that. The Chi-square Test analysis showed no significant relationship between the two variables (P-value 0.986).Therefore the researcher failed to reject the null hypothesis.

#### 4.3.7 Summary

Section A of the questionnaire looked at the socio-demographic factors and the study findings revealed that most of the respondents (62%) were aged between 15 and 30 years, with the mean age of 26and that most of the respondents (62%) were married. Majority respondents (92%) were Tongas by tribe and some of the respondents (42%) had reached secondary education while (42%) of the respondents were farmers.

Section B looked at knowledge on male circumcision and the findings revealed that there wasno significant relationship between willingness to undergo MC in relation to knowledge on MC basing on the following factors; whether respondent have ever heard of male circumcision (P-value=0.443), source of information (P-value 0.663), whether MC services are accessible (P-value =0.329), and what the benefits are (P- value =0.213). However, there was no statistically significant relationship between willingness to undergo MC and what MC is (P-value=0.051).

In section C following acceptance of MC, the findings revealed that there was no significant relationship between willingness to undergo MC and the following; whether respondents think MC is good (P-value=0.443), whether respondents would advice friends and relatives to undergo MC (P-value= 0.306). However, there was no significant relation relationship between willing to undergo MC and whether respondent has any fear of MC due to pain and loss of libido (P-value=0.087).

Section D focused on socio-cultural values /beliefs associated with MC and the findings revealed that there was no relationship between willingness to undergo MC basing on the following factors; whether respondents discuss matters related to MC openly (P-value=0.375),whether respondents thought that it is culturally right for a man to undergo MC (P-value=0.384) and whether it is a taboo to discuss MC with partner (P-value=0.306).

Furthermore, section E revealed that there was no significant relationship between willingness to undergo MC and the following factors; whether respondents thought health care providers received clients seeking MC well(P-value=0.606) and whether health care providers provide adequate information on MC (P- value=0.986).

#### **5.0 Discussion**

The researcher was guided by the study objectives. The researcher was prompted to conduct this study because of the low uptake of MC among Male adults of Rusangu clinic catchment area following the Center target of MC for 2014 and 2015 respectively. The 2014 Center target was at 250(10.1%) of the total male population between the ages of 15-49 and only 78(3.5%) were circumcised and the 2015 Center target which was at 270(10.9%) and only 60(2.4%) were circumcised (MDHO, 2016).

The study discussion is based on analysis of data collected from a sample size of 50 respondents conveniently selected by use of a semi-structured questionnaire from the six (6) neighborhood of Rusangu clinic which was selected using simple random selection.

### 5.1 Demographic characteristics of study sample

The Demographic characteristics of the respondents which were relevant to the study and essential for interpretation included; age, marital status and educational level. The respondents 31(62%) were males between the ages of 15 and 30 years. About 19(38%) of the respondents were married and 21(42%) attained the level of secondary education (Table 4.1).

## 5.2 Discussion of study variables

## 5.2.1 Knowledge on male circumcision

Section B of the questionnaire had closed ended questions that aided in determining whether respondents had knowledge on MC. The majority 48(96%) of the respondents had heard of male circumcision (**Figure 4.1**)and 29(58%) of the respondents had their source of information from the health personnel (**Figure 4.2**). This therefore showed that though the uptake of MC was still low in Rusangu clinic catchment area, lack of knowledge on MC was not the reason. The results showed that the majority of the participants 41(82%) indicated that the benefits of male circumcision were necessary to protect/prevent against HIV/AIDS.

While other participants 7(14%) reported that it was part of hygiene, 2(4%) indicated that the benefits of male circumcision increased sexual satisfaction (**Figure 4.4**).

The findings of this study are similar to Rain-taljard et al (2007) that revealed that 59% of the uncircumcised men in an area with high prevalence of HIV would accept to be circumcised if circumcision reduced transmission of HIV infection and sexually transmitted diseases. The study also reviewed that the majority 48(96%) of the respondents who were willing to undergo MC agreed to have had access to MC services (**Table 4.2**).

The findings are also similar to a study by Lukobo and Bailey(2007) which was carried out to assess the acceptability of MC as an intervention to improve male genital hygiene and reduction of STIs and HIV,

The study results therefore have shown that generally, respondents knew about MC and its benefits.

### 5.2.2 Acceptance of male circumcision

Section C of the questionnaire had both closed and open-ended questions that aided in determining acceptability of MC. The findings showed that the majority of the participants 48(96%) thought that MC was good (**Table 4.4**) and most of the participants 39(78%) were willing to undergo MC (**Figure 4.6**).

The findings of this study are similar to that of Largade (2007), which showed that 72% of uncircumcised men who participated in his study responded that they would want to get circumcised. However, they indicated that they would only undergo the procedure if it was protective against HIV and sexually transmitted illnesses. In figure 4.7 findings of this study showed that most of the participants 40(80%) would advise their friends and relatives to undergo MC.

These findings relates well to Bailey and West camp (2006), that approximately 75% of the parents would seek circumcision for their sons if it was safe, affordable, and shown to protect against transmission of HIV/AIDS. It was also found that in 13 studies from 9 countries, the median proportion of uncircumcised men willing to become circumcised was 65%.

Sixty nine percent of women favored circumcision for their partners and 71% of men and 81% of women were willing to have their sons circumcised.

The findings are also in line with that of Kigozi (2007), who stated that men who believed that circumcised men enjoy sex more than the uncircumcised ones were more willing to be circumcised. This showed that men were willing to undergo MC. This therefore revealed that respondents would advice friends and relatives to undergo MC.

However the findings in the study also showed that most of the respondents 43(86%) feared to be circumcised because of the perceived pain while others 7(14%) had fear of losing their sexual libido (Figure 4.9). Therefore these findings are similar to the findings of a study done by(Moore et al, 2006) in twelve African countries which revealed that the barriers to male circumcision in non circumcising areas are cost, fear of pain and concern for safety, while the

main facilitators are improved hygiene, reduction in sexually transmitted illnesses and attractiveness.

The findings of this study in relation to respondents having fear of losing their sexual libido contradicts the findings of the study by Chiwele (2011), that showed that his participants believed that male circumcision did not reduce sexual pleasure.

### 5.2.3 Socio-cultural values/beliefs associated with mc

Section D of the questionnaire had both closed and open-ended questions that aided in determining the socio –cultural values/beliefs associated with MC. The results showed that most 37(74%) of the respondents discussed matters related to MC openly, while 13(26%) did not (Table 4.5). The majority 41(82%) of the participants thought that it was culturally right for a man to undergo MC while 9(18%) thought otherwise (Table 4.6). It also showed that half 25(50%) of the respondents said that it was a taboo to discus MC with partner and the other half 25(50%) said that it was not a taboo to discuss MC with partner (Figure4.10). This therefore showed that the majority of the respondents despite different cultures they discussed MC and culture had no hindrance in undergoing MC.

This Study however is different from that of (Chiwele, 2011) which revealed that the majority (76.2%) of his respondents from non circumcising tribe believed that they would lose their cultural identity by embracing male circumcision.

However, other authors cited ethnic and cultural identity among the non circumcising tribes as possible barriers to male circumcision (Caldwell and Caldwell, 1994; Ntozi et al, 1994; Nnko et al, 2001; Bailey et al, 2002; Kebaabetswe et al, 2003;Ran Taljaard et al, 2003).

Furthermore some societies in Zambia have practiced MC as a traditional right of boys to manhood. According to Rivers, Aggleton& Coran; 2002, traditionalists and custodians of the practice stated that this ceremony had been and continues to be a very important part of the development and building of the boy child's character in terms of shaping personal discipline, livelihood skills, family life skills, community life and village systems.

The study findings therefore showed that there was no relationship between socio-cultural values and willingness to undergo MC.

#### 5.2.4 Attitudes by health providers

Section E of the questionnaire had both closed and open-ended questions that aided in determining the attitude by health care providers. The study revealed that most of the respondents 36(72%) thought that health care providers received clients seeking MC very well

(Figure 4.11). The study also showed that the majority of the respondents 41(82%) indicated that health care providers provided adequate information on MC to clients seeking the service (Figure 4.12).

#### 5.3 Relationship among study variables

#### 5.3.1 Willingness to undergo Male circumcision and Age

The study results showed that of the 39 respondents who were willing to undergo MC most 23 (59%) of the respondents were aged between 15 and 30 while the other 10 (26%) were aged between 31 and 35(**Table 4.7**). This showed that there was no significant scientific relationship between age and willingness to undergo male circumcision. The study therefore showed that age did not affect the acceptability of MC.

The findings of this study are similar to that of Chiwele, 2011 that indicated that there was no association between age and willingness to undergo male circumcision.

## 5.3.2 Willingness to undergo MC and marital status.

The study findings showed that slightly above half 23(59%) of the respondents were single while 16(41%) were married (**Table 4.8**). The findings showed no significant relationship between willingness to undergo MC and marital status.

The findings of this study contradicted that of Donewell (2014), who said that where older men in a focus group discussion said they were too old for the procedure and there was no need of them undergoing the procedure. It was also stated that village headmen were worried about possible behavioral disinhibition following MC, they said circumcised people especially youths would think that they were now protected from HIV and that their sexual organs have been "sharpened" resulting in risky sexual activities.

#### 5.3.3 Willingness to undergo MC and educational level

The findings of the research showed that of the 39 respondents who were willing to undergo MC, most 18(47%) had attained secondary education and 9(23%) have never been to school **(Table 4.9)**. The findings showed no significant relationship between willingness to undergo MC and educational level. The study therefore showed that one's educational level did not affect the uptake of MC. The findings of the study match with that of Chiwele, (2011) that showed that there was no significant relationship between willingness to undergo MC and educational level.

#### 5.3.4 Willingness to undergo MC and having heard of MC

The findings showed that the majority 37(94.9%) of the respondents who were willing to undergo MC agreed to have had heard of MC and only 2(5%) did not (**Table 4.10**). The findings therefore showed no significant scientific relationship between willingness to undergo MC and having heard of MC.

The result of this study agrees with that of Chiwele, (2011) whose findings showed that the majority of his respondents (99%) had heard about male circumcision. The study findings therefore showed that though the uptake of MC is still low in Rusangu clinic catchment area, lack of knowledge on MC is not the reason.

### 5.3.5 Willingness to undergo MC and source of information

The findings of the study showed that of the39(78%) respondents who were willing to undergo MC24(61.5%) had their source of information on MC from the health personnel and 1(2.6%) had their source of information from the relatives, church and others respectively(**Table 4.11**). The findings showed no significant scientific relationship between willingness to undergo MC and the source of information about MC. However the findings contradicted that of Chiwele (2011) that showed that the majority of his respondents (99%) had their commonest source of information from friends (80%).

### 5.3.6Willingness to undergo MC and what MC is

The study results showed that all 39(100%) the respondents who were willing to undergo MC knew what MC was, as the removal of the foreskin (**Table 4.12**). However, the results on knowledge about MC showed no significance scientific relationship between willingness to undergo MC and what MC was (P-value=0.051).

## 5.3.7 Willingness to undergo MC and whether MC services are accessible

The findings of the research showed that the majority 38(97.4%) of the respondents who were willing to undergo MC agreed to have had access to MC services while 1(2.6%) did not (**Table 4.13**).

The results showed no significant relationship between willingness to undergo MC and whether MC services were accessible.

#### 5.3.9 Willingness to undergo MC and benefits of male circumcision

The findings of the study showed that of the 39 respondents who were willing to undergo MC, most 30(77%) said that it prevented against HIV/AIDS while 7(17.9%) reported that it was part of hygiene and 2(5.1%) indicated that the benefits of MC increased sexual satisfaction (Table 4:14). The findings showed no significant relationship between willingness to undergo MC and benefits of MC.

The findings of this study are similar to Rain-taljard et al (2007) that revealed that 59% of the uncircumcised men in an area with high prevalence of HIV would accept to be circumcised if circumcision reduced transmission of HIV infection and sexually transmitted diseases.

The study findings were also in line with that of Largade (2007) that showed that 72% of uncircumcised men who participated in his study in South Africa responded that they would need to get circumcised. However, they indicated that they would only undergo the procedure if it was protective against HIV and sexually transmitted illnesses.

# 5.3.10Willingness to undergo MC and whether respondent would advise friends and relatives to undergo MC

The findings of the study showed that most 30(76.9%) of the respondents indicated that they would advise their friends and relatives to undergo MC while 9(23.9%) did not(**Table 4:16**). The findings showed no significant relationship between willingness to undergo MC and whether respondents would advice friends and relatives to undergo MC.

The study findings are similar to that of Chiwele (2011), that showed that the majority 275(67.6%) of his respondents indicated that they would advice their male relatives or friends to go for male circumcision

The findings of the study were also similar to that of bailey, 2006 that showed that Sixty nine 69% of women favored circumcision for their partners and 71% of men and 81% of women were willing to circumcise their sons.

#### 5.3.11 Willingness to undergo MC and whether respondent has any fear of MC

The findings of the study showed that most 25 (64.1%) of the respondents indicated that they had fear of MC such as loss of libido while 25(35.9%) had other fears such as pain (**Table 4:17**). The findings showed no significance relationship.

Therefore the findings were similar to Moore et al, (2006), in twelve African countries who stated that the barriers to male circumcision in non circumcising were cost, fear of pain and

concern for safety, while the main facilitators were improved hygiene, reduction in sexually transmitted illnesses and attractiveness.

The findings of this study in relation to respondents having fear of losing their sexual libido contradicted the findings of the study by Chiwele, (2011) that showed that his participants believed that male circumcision did not reduce sexual pleasure.

# 5.3.12 Willingness to undergo MC and whether respondents think it is culturally right for a man to undergo MC

The findings of the study showed that most 31(79.5%) of the participants thought that it was culturally right for a man to undergo MC while 8(20.5%) others thought otherwise (**Table 4.19**). The findings showed no significant relationship between the two variables.

The study findings are different from that of Chiwele, (2011) that revealed that the majority 76.2% of his respondents from non circumcising tribes believed that they would lose their cultural identity by embracing male circumcision.

Furthermore some societies in Zambia were seen to practice MC as a traditional right of boys to manhood and according to Rivers, Aggleton & Coran; 2002, traditionalists and custodians of the practice stated that this ceremony has been and continues to be a very important part of the development and building of the boy child's character in terms of shaping personal discipline, livelihood skills, family life skills, community life and village systems.

# 5.3.13 Willingness to undergo MC and whether respondent thought health care providers receive clients who seek MC well

The research findings showed that most 29(74.4%) of the respondents thought that health care providers received clients seeking MC well while 9(23.1%) thought that health care providers received clients well only sometimes and only 1(2.6%) of the respondents thought that heath care providers did not receive clients well (**Table 4.21**). The findings showed no significant relationship between willingness to undergo MC and whether respondent thought health care providers receiving clients well.

Perceived staff negative attitude would deter people from accessing health services like male circumcision. The findings have brought to light that a positive attitude by health care providers would encourage the uptake of health services (MC).

# **5.3.14** Willingness to undergo MC and whether health care providers provide adequate information on MC

The findings of the study showed that the majority 32(82.1%) of the respondents said that health care providers provided adequate information on MC while 7(17.9%) did not agree to that **(Table 4.22)**. The results showed no significant relationship between willingness to undergo MC and whether health care providers provided adequate information on MC.

The findings of the study brought to light that providing adequate information on MC would lead to more people having an understanding of MC more especially its benefits, hence increasing the acceptance levels.

The findings of this study were similar to that of Chiwele, (2011) which showed that one of the participants in the focus group discussion indicated that lack of knowledge about the benefits of MC and lack of health education were responsible for the low uptake of male circumcision.

#### **5.4 Conclusion**

The study findings revealed an acceptability level of 39(78%) of the respondents willing to undergo MC. The study findings on knowledge about MC revealed that 96% respondents heard about MC and 41(82%) knew its benefits as to prevent against HIV/AIDS. This therefore showed high knowledge levels on MC, though the uptake was still low. The study also revealed that socio-cultural values/believes were not a hindrance to the uptake of MC and most 31(79.5%) of the participants thought that it was culturally right for a man to undergo MC.

This therefore concluded that there was no association between acceptance of male circumcision and the following factors; inadequate sensitization, culture, lack of knowledge, effects of circumcision on sexual pleasure and fear of pain.

Basing on the research findings, the researcher would therefore recommend the following to relevant authorities and institutions:

There is need to increase on the knowledge levels about MC through information, communication and education highlighting MC 's role in reducing the risk of cervical cancer, improving men's hygiene and enhancing men's sexual appeal to increase acceptance levels.

Incorporate topics about MC during under five clinics focusing on its benefits in order to involve women to encourage men and children to undergo MC. There is need to make timely supportive supervisory visits to the health centres and offer mentorship in all aspects of patient management especially MC.Need for continued campaigns and increased availability of services through scale-up will likely help towards increasing acceptability on MC. Train young and older men and women in the community to promote the service among their peers through

small group discussions. More research should be carried out to ascertain the factors leading to low uptake of MC

### Refferences

- Auvet, A, B., Emmanuel, Dirk, J. & Jaard, C. (20). Male Circumcision and HIV Prevention, PLoS Medicine. 11: 341-355.
- Basavanthappa, B.T. ((2014).Nursing ResearchandStatistics. ThirdEdition, NewDelhi,Jaypee Brothers Medical Publishers Ltd.
- Basavanthappa,B.T.(2007). Nursing research 2<sup>nd</sup> edition, New Delhi, Jaypee Bothers Medical Publishers Ltd
- Bowa,K. &Lukobo,M(.2006).Male Circumcision and HIV in Zambia ,East and Central Journal of Surgery.11:2
- Daily Nation News Paper, 06 August, 2015.
- Donewell&Bangure,(2014) Department of community medicine, university of Zimbabwe, Harare 00263,Zimbabwe.
- Dowsett, G.W.&Couch, M.(2007). Male circumcision and HIV prevention; is there really enough evidence of the right kind to proceed. Reproductive Health Matters. 15:33-44.
- Hallet,B.T.,Sigh,K.,Ienipher,A.S&Richard,G(2008).Understanding the impacting of Male Circumcision intervention on the spread of HIV in Southern Africa,PLoSMedicne 2008; 3(5).
- Kebaabetswe,P.,Lockman,S.,Mogwe,S.&Mandevu,R (2003). Male circumcision strategy for HIV prevention in Botswana. Sexually Transmitted Infections 79:214-219
- Kigozi, G., Stephen, W., Chelsea, B., Dennis, B., Kigundu, V., Wawert, M.J., David, S., Nalugonda, F., Kuwanuko, N., Melanie, C., Ssempijja, V., Makumbia, F., & Gray, H.R. (2007). Sexual medicine 101:65-70
- Loosli, B.C., 2004 Traditional Practices and HIV Prevention in Sub-Sahara Africa: Geneva.
- Lukobo M.D and Bailey R.C. (2007), Acceptability of Male Circumcision for Prevention of HIV Infection in Zambia.USA, Chikago State University.
- PlusNews: Global HIV/AIDS news and analysis 2010. AFRICAN: Tracking the male circumcision roll out, Available at: <u>http://www.plus</u>news.org/Report/88286/AFRICA-Tracking-the-male-circumcision-rollout. (accessed on 12 December, 2015, 14:00).

- Rain-Taljaard,R.,Largarde,E.,Tajard,D.J,C,ampbell,C.,Macphan,C.,Williams,
   B.&Auvet,B(2003) potential for intervention based on male circumcision in a South African with a high level of HIV infection. AIDS Care15, 315-327.
- Rennie, S.,Muula,A.&Westreich,D.(2007) male circumcision and HIV prevention: Ethical medical and public tradeoffs, Journal of medical ethics 33:357-351.
- Rivers Kim, Aggleton Peter and Coram Thomas (2002). Gender and HIV Epidemic: Adolescent Sexuality, Gender and the HIV Epidemic.UK, Research Unit, Institute of Education of, University of London, HIV and development Programme UNDP.
- Szabo, and R.V.Short,2008."How does Male Circumcision protect against HIV/AIDS: BritishMedical Journal",320,1592-1594.
- UNAIDS/CAPRISA (2007).Consultation, Social Science Perspectives on Male Circumcision for HIV Prevention: Summary Report. USA, UNAIDS/CAPRISA.
- Weiss,H.A.,M,Quigley and R. Hayes. 2000."male Circumcision and risk of HIV infection in Sub-Saharan Africa:a systematic review and meta-analysis".AIDS,14,2361-70.
- Westercamp N. and Bailey R,C, (2006). Acceptability of Male circumcision in Sub-Saharan Africa. Chicago USA, Division of Epidemiology and Biostatistics, School of Public Health, University of IIIinois at Chicago.
- WHO/UNAIDS 2007. WHO and UNAIDS announce recommendations from expert consultation on male circumcision for HIV prevention.
- Williams,B.G.,2006."The potential impact of male circumcision on HIV in Sub-Saharan Africa".PLoS Medicine 3(7), 262-86.