

The assessment of community knowledge, attitudes and practices towards medical male circumcision in Njombe town council, Tanzania

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ABSTRACT

Introduction: Tanzania started implementing the voluntary medical male circumcision (VMMC) project in 2009 as a scale-up of a proven HIV prevention intervention. The project was implemented in regions with high HIV prevalence and low medical male circumcision (MMC) prevalence, including Njombe region in southern Tanzania. Although the VMMC project has met its target of scaling the coverage of male circumcision to 80% in Njombe, it is not clear if this achievement came with changes in knowledge, attitudes and practices, which may determine the sustainability of VMMC after the project is phased out. This study assessed knowledge, attitudes and practices towards MMC among community members of Njombe Town Council. **Methods:** The study used a descriptive cross-sectional design involving 156 community members who were randomly selected from the study population. A self-administered questionnaire was used to collect data from respondents. Data were analyzed using SPSS V.20. **Results:** A majority of respondents (89.7%) knew that circumcision reduces the risk of HIV acquisition. Furthermore, only 43.6% of respondents knew that circumcision does not protect completely against HIV. Over 60% of respondents had a positive attitude towards MMC. Moreover, male circumcision is practiced in Njombe Town Council, with 73.7% of respondents saying that their community is practicing male circumcision. **Conclusion:** Knowledge, attitudes and practices of community members of Njombe Town Council towards MMC has been found to be good, though not among the entire community. More initiatives should be carried out by the government and other stakeholders to advocate MMC to community members of Njombe Town Council.

Keywords: Community members, Medical male circumcision, HIV / AIDS, Knowledge on MMC, Attitude towards MMC and Practices towards MMC.

In 2007, the World Health Organization (WHO) and the joint United Nations Program on HIV/AIDS (UNAIDS) recommended voluntary male medical circumcision (VMMC) as a

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key component of HIV prevention in countries with high HIV prevalence and low level of male circumcision (Njehmeli et al., 2014). This occurred after a randomized, controlled intervention trial was conducted in a general population of South Africa (Auvert et al., 2006), which showed that male circumcision may reduce the risk of HIV transmission from women to men by up to 60% (Gray et al., 2007). Thus, the program was set to scale up as an HIV prevention intervention in 14 priority countries in sub-Saharan Africa where there is high prevalence of HIV and low male circumcision prevalence (www.avert.org).

Tanzania launched the VMMC project by conducting a VMMC pilot in 2009 and launching the National Strategy (2010 - 2015) for VMMC in 2010 to promote the scale-up of VMMC as a prevention intervention as per WHO and UNAIDS recommendations. The National VMMC Strategy targeted males between the ages of 10 – 34 years, who comprised 42.7% of the male population in regions with high HIV prevalence and low male circumcision prevalence. These regions were Iringa, Njombe, Mbeya, Rukwa, Katavi, Shinyanga, Geita, Mara, Mwanza, Tabora, Simiyu, and Kagera. For instance, Iringa had 15.7% HIV prevalence and 37.7% MC prevalence (URT/MOHSW, 2010-2015).

There have been several strategies set by the National Strategy for VMMC, but this study focused on a demand creation strategy, which was conducted through community mobilization for VMMC using techniques appropriate to the local context. The strategy intended to increase knowledge and attitudes towards VMMC that would increase the coverage of VMMC by at least 80% by 2017.

In 2016 it was reported that the VMMC project had achieved 80% coverage in Njombe and Iringa (Lija, 2016). Njombe Town Council, the urban centre of Njombe Region, has been implementing VMMC since the beginning of the project in 2010 and has reached 80% coverage target. Despite meeting the 80% target in 2017, little is known about the knowledge, attitudes and practices regarding MMC among community members in Njombe Town Council.

Knowledge, attitudes and practices of the community may determine the sustainability of the project when resources are scarce (Yoder, 2008). Since the VMMC project is currently implemented in Njombe Town Council through donor funds, which will not continue after the project phases out, it is important to assess the knowledge, attitudes and practices of the community in Njombe Town Council regarding male circumcision in order to know whether this project will be sustainable.

METHODOLOGY

Setting

We conducted a cross-sectional study in Njombe Town Council in Njombe Region of Tanzania. The study area was chosen because it was one among 12 traditionally non-circumcising regions and one of the first councils to implement the VMMC program due to high HIV prevalence (14.8% in 2016) and low male medical circumcision prevalence (49% in 2012) (MoHCDGEC, 2017). The population of Njombe Town Council was estimated to be 130,223 in 2012 (MoF, NBS & NTC, 2014).

Study population and sampling

The study target population consisted of community members who were age 18 years and older from three wards of Njombe Town Council. The wards were selected based on their

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urban/rural settings. These wards were Njombe Town ward (urban), Uwemba ward (semi-urban) and Matola (rural).

We calculated a sample size of 156 participants from a population of 69,642 people aged 18 years and above at the precision level of 8%. First, three wards were purposively selected based on demographic criteria, that is urban, semi-urban and rural. Second, households in the three wards were randomly selected using simple random sampling. The researcher obtained the number of households for each ward from the Planning department of the Town Council. Third, one study participant was randomly selected from each selected household using simple random sampling. All mentally fit people aged 18 years and above able to read and write who were residing in Njombe Town Council were eligible for the study.

Measurements

The study questionnaire was adapted in part from a study conducted in Namibia by Nyoni & Ellion (2017), and some questions were also designed by the research team to adapt to the specific needs of the current study. The questionnaire was piloted among 16 people before study data collection began. Questions were translated into Swahili, and the questionnaire was self-administered under the supervision of the data collectors (members of the research team). In addition to questions on sociodemographic variables, the questionnaire included eight questions measuring knowledge, six questions measuring attitudes, and ten questions measuring practices; all were answered on a 5-point Likert scale. It typically took 20 to 30 minutes for a participant to complete the questionnaire. A composite variable was calculated for knowledge and attitudes by taking the average of the responses for each. For the knowledge variable, the score rank used to determine level of knowledge was 7-8 for high knowledge, 4-6 for medium knowledge and less or equal to 3 for the low knowledge, while the score used to determine attitude was 5-6 for positive attitude, 3-4 for moderate attitude and 1-2 for negative attitude.

Data Analysis

The collected data were sorted and cleaned manually to detect errors before making any computations. Data entry was done using MS Excel 2013 and imported to the Statistical Package for Social Sciences (SPSS V.20) for analysis.

Ethical issues

All subjects were asked to provide informed consent before participating in the study. All community members had an equal chance of being involved in the study, participation was voluntary, and all study data and personal identifying information was kept confidential.

RESULTS

Study questionnaires were administered to 165 people from three wards in Njombe Town Council, of which 156 were completely filled with all information needed (94.5% response rate) (Table 1). There were no significant differences of responses from the three wards. Most (67.9%) respondents were between 18 and 39 years old, and there were 87 (55.8%) males and 69 (44.2%) females. A majority (71.8%) of respondents were married; more than half (52.6%) of respondents had attained a secondary education while 41.0% had attained only primary education. Most respondents (78.8%) were farmers.

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Table 1: Demographic characteristics of respondents on the assessment of knowledge, attitude and practices towards MMC at Njombe Town Council, March – June 2018

Characteristic	Frequency	Percent
Total	156	100%
Age (Years)		
18-28	59	37.8
29-39	47	30.1
40-49	40	25.6
50 and above	10	6.4
Gender		
Male	87	55.8
Female	69	44.2
Marital status		
Married	112	71.8
Single	32	20.5
Separated	3	1.9
Widow	9	5.8
Education level		
Primary	64	41.0
Secondary	82	52.6
Vocational trainings	2	1.3
University	8	5.1
Occupation of respondent		
Farmer	123	78.8
Employed	6	3.8
Business owner	19	12.2
Unemployed	8	5.1

The knowledge of respondents on medical male circumcision was determined by both general knowledge on medical circumcision and risks associated with HIV and STIs, which can be lowered through medical male circumcision (Table 2). With regard to knowledge of MMC, a majority of respondents (89.7%) correctly answered that circumcision of HIV-uninfected men reduces their chance of getting HIV. Nearly half (48.7%) of participants answered incorrectly by disagreeing with the statement that circumcision of an HIV-negative man does not completely remove his chance of getting HIV. However, results show the majority (86.5%) of respondents correctly agreed it is easier to get STI if a male is uncircumcised, and 83.3% correctly responded that uncircumcised men are at higher risk of getting penile cancer. The mean knowledge score, out of a maximum of 8, was 6.2 with a standard deviation of 1.44. Most (75%) of respondents answered 6 to 8 questions correctly, whereas 6% answered 0 to 3 questions correctly.

Table 2. Knowledge about MMC among community members in Njombe Town Council, 2018

Question	Response	Frequency	Percent (%)
Circumcision of a man who does not have HIV reduces his chance of getting HIV	Yes (Correct)	140	89.7
	No	12	7.7
	Not sure	4	2.6
Circumcision of a man who does not have	Yes	68	43.6

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Question	Response	Frequency	Percent (%)
HIV does not completely remove his chance of getting HIV	(Correct)		
	No	76	48.7
	Not sure	12	7.7
There is NO chance for a circumcised man to get HIV	Yes	19	12.2
	No (Correct)	127	81.4
	Not sure	10	6.4
Circumcision of a man with HIV does not protect his partner from getting HIV	Yes (Correct)	72	46.2
	No	73	46.8
	Not sure	11	7.0
It is easier to get HIV when a male is	Circumcised	7	4.5
	Uncircumcised (Correct)	137	87.8
	No difference	10	6.4
	Don't know	2	1.3
It is easier to get an STI if a male is	Circumcised	13	8.3
	Uncircumcised (Correct)	135	86.5
	No difference	7	4.5
	Don't know	1	0.6
It is easier to maintain penile hygiene when a male is	Circumcised (Correct)	127	81.4
	Uncircumcised	25	16.0
	No difference	2	1.3
	Don't know	2	1.3
It is easier to get penile cancer if a male is	Circumcised	9	5.8
	Uncircumcised (Correct)	130	83.3
	No difference	4	2.6
	Don't know	13	8.3
SUMMARY KNOWLEDGE VARIABLE		MEAN	SD
		6.2	1.44

With regard to attitudes toward MMC, 60.3% of respondents strongly agreed and 17.3% agreed that circumcised men enjoy sex more than uncircumcised men (Table 3). A majority (71.8%) of respondents strongly agreed and 17.9% agreed that it is important for all males irrespective of their age to be circumcised. The mean score of the positive attitude expressed out of 6 questions was 5 (standard deviation 1.43).

Table 3: Attitudes towards MMC among community members in Njombe Town Council, 2018

Question	Response	Frequency	Percent (%)
Circumcised men enjoy sex more than uncircumcised men	Strongly agree (Positive)	94	60.3
	Agree	27	17.3

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Question	Response	Frequency	Percent (%)
	No opinion	10	6.4
	Disagree	18	11.5
	Strongly disagree	7	4.5
Circumcised men have more sexual feelings than uncircumcised men	Strongly agree (Positive)	13	8.3
	Agree	31	19.9
	No opinion	17	10.9
	Disagree	38	24.4
	Strongly disagree	57	36.5
Circumcised men can safely have sex without using condom and don't get infected with HIV as compared to uncircumcised men.	Strongly agree	35	22.4
	Agree	27	17.3
	No opinion	5	3.2
	Disagree	64	41.0
	Strongly disagree (Positive)	25	16.0
It is important for all males irrespective of their age to be circumcised.	Strongly agree (Positive)	112	71.8
	Agree	28	17.9
	No opinion	4	2.6
	Disagree	9	5.8
	Strongly disagree	3	1.9
Male circumcision proves manhood	Strongly agree (Positive)	63	40.4
	Agree	24	15.4
	No opinion	17	10.9
	Disagree	30	19.2
	Strongly disagree	22	14.1
Male circumcision is an old practice in our community and doesn't need to be re-introduced.	Strongly agree	22	14.1
	Agree	14	9.0
	No opinion	7	4.5
	Disagree	50	32.1
	Strongly disagree (Positive)	63	40.4
SUMMARY ATTITUDE VARIABLE		MEAN	SD
		5	1.43

With regard to practices towards MMC, the study found that 73.7% of respondents said that their community practiced medical male circumcision, while only 26.3% of respondents said that their community did not practice medical male circumcision. Majority of respondents 82.1% said their community promotes medical male circumcision campaigns as an HIV prevention strategy, and 17.9% of respondents said their community does not promote MMC campaigns. It was also found that 79.5% of respondents recommended MMC to their friends while 67.9% of respondents discussed MMC issues with their friends. Participants responded that the ideal age for circumcision, ranging from infancy to adult, was infant (13.5%), child (23.7%), adolescent (28.2%), and adults (11.5%), while 20.5% had no preference for the ideal age of circumcision (Table 4). A majority (73.7%) of respondents said that both parents should make the decision for a male member of the community to be circumcised. Most (89.7%) respondents reported that male circumcision is conducted at health facilities, and in

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case of circumcision complication, the majority (91.0 %) said that it was reported to the hospital. Therefore, results from this study on practices towards MMC showed that the majority of respondents practice medical male circumcision in their communities and have good practices which are associated with MMC.

Table 4: Practices towards MMC among community members at Njombe Town Council, 2018

Question	Response	Frequency	Percent (%)
Do you practice medical male circumcision in your community?	Yes	115	73.7
	No	41	26.3
Does your community promote medical male circumcision as an HIV prevention strategy?	Yes	128	82.1
	No	28	17.9
Do you recommend medical male circumcision to your uncircumcised male friends/ male community members?	Yes	124	79.5
	No	32	20.5
Do you discuss medical male circumcision issues with your friends?	Yes	106	67.9
	No	50	32.1
At which age do you send your community members for male circumcision?	Infant (0 to < 1 year)	21	13.5
	Child (1-9 years)	37	23.7
	Adolescent (10-16 years)	44	28.2
	Adult (17 years and above)	18	11.5
	No preference	32	20.5
	Don't know	4	2.6
Who makes decision for a male member to be circumcised in your community?	Father	11	7
	Both parents	115	73.7
	Clan leader	16	10.3
	Client	14	9
Who is responsible to perform male circumcision in your community?	Medical Doctor	142	91
	Nurses	10	6.4
	Traditional Circumcisers	2	1.3
	Don't know	2	1.3
In which place is male circumcision performed in	Health	140	89.7

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Question	Response	Frequency	Percent (%)
your community?	facilities		
	At home	10	6.4
	Don't know	6	3.9
How much does it cost to receive male circumcision service in your community?	Free	129	82.6
	Less than Tsh. 9999	7	4.5
	Between Tsh. 10000 – 19999	11	7.1
	Between Tsh. 20000 – 29999	1	0.6
	More than Tsh. 30000	4	2.6
	Don't know	4	2.6
In case of circumcision complication of a community member, where do you report?	Police	10	6.4
	Hospital	142	91.0
	Traditional healers	1	0.6
	Don't know	3	1.9

DISCUSSION

The study found that there is significant knowledge among community members about the association of MMC with HIV, STIs and penile cancer. These findings are in line with a study conducted in Namibia on knowledge, attitudes and practices for HIV prevention among voluntary counseling and testing clients in northern Namibia (Ngodji et al, 2017). This awareness is believed to have been influenced by the voluntary medical male circumcision project that had been implemented for 9 years in the region (Lija, 2016). However, some respondents still had incorrect knowledge on the efficacy of medical male circumcision as nearly half of respondents did not agree that a circumcised man is not completely protected against HIV. This brings to light the importance of MMC advocacy initiatives, as the VMMC intervention was introduced as an HIV prevention strategy embedded within a comprehensive HIV package (WHO, 2010). This finding is supported by a study conducted by Tarimo et al (2012) which revealed that the knowledge of the efficacy of MMC on HIV infections improved among police officers in Dar es Salaam.

The current study found that there are positive attitudes towards medical male circumcision among community members of Njombe Town Council. More than half of respondents strongly agreed that circumcised men enjoy sex more than uncircumcised men, which may serve as a driver for uncircumcised men in the community to access medical male circumcision in order to enjoy sex while at the same time acquiring other important benefits

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of MMC. The majority of respondents of this study strongly agreed that it is important for all males irrespective of their age to be circumcised. These results resemble those found by Nyoni & Ellion (2017) in their study conducted in Zimbabwe, where respondents showed good attitudes towards male medical circumcision.

The current study revealed that male circumcision is practiced among community members of Njombe Town Council. Circumcision practices in the community are likely associated with high knowledge of medical male circumcision as well as positive attitudes towards medical male circumcision. As the study found, most study respondents claimed to practice male circumcision in their community. A majority of respondents said that their community promotes MMC campaigns, and they are willing to recommend MMC to their uncircumcised friends or family members. Moreover, when the ideal age for circumcision in the community was examined, there was a diversity of the preferred age for MMC among community members. These findings are in line with the study conducted in Uganda by Nevin *et al.*, (2015); in communities that had no culture of circumcision, it was reported that there was no age that was common to all people to get circumcised.

Generally, this study showed that community members of Njombe Town Council had knowledge and positive attitudes towards medical male circumcision, which may have led to their practices on medical male circumcision. This may have been due to the VMMC project in Njombe Town Council. These findings suggest that community members may continue to practice VMMC due to the high knowledge and positive attitudes they had on medical male circumcision as well as their current practices. We argue that more initiatives should be carried out by government and other stakeholders to increase knowledge, particularly knowledge on the risk of HIV even after circumcision.

Limitations

This evaluation study had some constraints. First, because of the use of a self-administered questionnaire, participants would not have had a chance to explain or clarify their views or ambiguous questions hence the information obtained might not be a true reflection of their views. Second, due to budget and time constraints, only three wards were selected, thus study results may not be generalizable to the whole community of Njombe Town Council. Third, there was a potential for social desirability response bias, as respondents may have felt pressured to answer the questions in a way they assumed was desirable to the data collection team member. Fourth, the perceived knowledge, attitudes and practices towards medical male circumcision among community members might have been a result of other projects which were not evaluated in this study.

CONCLUSION

This study concludes that community members of Njombe Town Council had understanding of medical male circumcision, and the majority of community members had a positive attitude towards medical male circumcision. Moreover, community members said they practiced male circumcision. Therefore, community members are expected to adhere to medical male circumcision even after the phase-out of the project or during the scarcity of resources when VMMC project is still implemented.

REFERENCES

Auvert, B., Taljaard, D., Lagarde, E., Sobngwi-Tambekou J, Sitta, R., et al. (2006). Correction: Randomized, Controlled Intervention Trial of Male Circumcision for Reduction of HIV

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- Infection Risk: The ANRS 1265 Trial. *PLOS Medicine* 3(5): e226. doi: 10.1371/journal.pmed.0030226.
- Gray, R.H., Kigozi, G., Serwadda, D., Makumbi, F., Watya, S., et al. (2007). Male circumcision for HIV prevention in men in Rakai, Uganda: a randomised controlled trial. *Lancet* 369, 657–666.
- Lija, G. (2016). VMMC in Tanzania: Achieving 80% coverage in Njombe and Iringa Regions. VMMC Sustainability Summit. Dar es Salaam: NACP.
- MoF, NBS, NTC. (2014). NJOMBE TOWN COUNCIL SOCIO-ECONOMIC PROFILE, 2013. Njombe: NBS.
- MoHCDGEC. (2017). Tanzania HIV Impact Survey (THIS). Dar es Salaam.
- NACP. (2014). Third Health Sector HIV and AIDS Strategic Plan (HSHSP III) 2013 – 2017, Ministry of Health and welfare, National AIDS Control Programme. Dar es Salaam.
- Nevin, P. L. (2015). Perceptions of HIV and Safe Male Circumcision in High HIV Prevalence Fishing Communities on Lake Victoria, Uganda. *PLOS ONE*, 16:1-8.
- Ngodji, T. K. (2017). Knowledge, attitudes and practices of male circumcision for Human Immunodeficiency Virus (HIV) prevention among voluntary counselling and testing clients in a centre in northern Namibia. *International Journal of Healthcare*.42-49.
- Njeuhmeli, E., Hatzold, K., Mugurungi, O. (2014). Lessons Learned From Scale-Up of Voluntary Medical Male Circumcision Focusing on Adolescents: Benefits, Challenges, and Potential Opportunities for Linkages With Adolescent HIV, Sexual, and Reproductive Health Services. *PLoS*.
- Nyoni, N., & Ellion, S. (2017). Assessment of Knowledge, Attitudes and Practices of men towards voluntary male medical circumcision: Study of men between 15 to 49 years at Rundu state hospital. *SCIREA Journal of Clinical Medicine*, 2(3): 32- 47.
- Plotkin M, Castor D, Mziray H, Küver J, Mpuya, E., Luvanda, P.J., Hellar, A., Curran. K., Lukobo-Durell M., Ashengo, TA., Mahler, H., (2013). Social and individual factors affecting adult attendance at voluntary medical male circumcision services in Tanzania. *Glob Health Sci Pract*, 108-16.
- Tarimo, E. A. (2012). The Perceptions on Male Circumcision as a Preventive Measure against HIV Infection and Considerations in Scaling up of the Services: A Qualitative Study among Police Officers in Dar Es Salaam, Tanzania. *BMC Public Health*, 12:529.
- United Republic of Tanzania/Ministry of Health and Social Welfare, National Strategy for Scaling up Male Circumcision for HIV Prevention: Enhancing Men's Role in HIV Prevention 2010-2015.
- World Health Organization. (2010). Progress in male circumcision scale-up: country implementation and research update. Geneva: World Health Organization. . Joint United Nations Programme on HIV/AIDS.
- Yoder, R. A. (2008). Knowledge, Attitude and Practices Surveys. Primary Health Care Reforms. <https://www.avert.org/professionals/hiv-programming/prevention/voluntary-medical-male-circumcision>

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Conflict of Interest

The author declared no conflict of interests.

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