

Knowledge of and Acceptability to Promote Male Circumcision as part of HIV Prevention Strategy Among Second Years Medical Students at University of Namibia-Windhoek

A. Ntumba^{1*}, L. Kazembe³

¹Katutura State Hospital, Windhoek, Namibia

²School of Public Health, Texila American University, Guyana

³Department of statistics and population studies, University of Namibia, Windhoek, Namibia

*Corresponding Author: alexisjbejj@gmail.com

Abstract

Background: The Voluntary Medical Male Circumcision (VMMC) was recommended as part of HIV prevention strategy after the randomized controlled trials conducted in three African countries including South Africa, Kenya and Uganda. Sub-Saharan Africa is more affected by HIV. The ABC (Abstinence, being faithful and condom use) messages seemed not to reduce HIV, hence adding more HIV prevention strategies is recommended. Since VMMC had proven to reduce HIV transmission, the knowledge of people in this matter is paramount.

Aims: This study was designated to evaluate the knowledge and acceptability of VMMC among 51 second years medical students.

Materials and Methods: A cross-sectional study was conducted among second years medical students in 2016, both boys and girls were enrolled in the study.

Results: The results showed that all medical students have good to excellent knowledge of MC; 33% have good knowledge, 49% very good knowledge and 18% excellent knowledge of MC. All participants (100%) accepted to promote MC as part of HIV prevention strategy.

Conclusion: The knowledge of the second years medical students was good to excellent, making it easy for MC promotion for HIV prevention.

Keywords: Circumcision, HIV, prevention, Medical students, Windhoek, Namibia.

Introduction

The HIV pandemic has increased morbidity and mortality worldwide and in Africa, especially Sub-Saharan Africa.

According to UNAIDS (2008), Sub-Saharan Africa remains the region most affected by HIV, accounting for 67% of all people living with HIV and for 75% of AIDS deaths. The number of new infections is also on the increase. According to UNAIDS (2015), in 2014, 36.9 million people were living with HIV and 2 million people became infected with the disease. In addition, UNAIDS stated that Sub-Saharan Africa remains the region most heavily affected by HIV, accounting for 2/3 of all people living with HIV.

Namibia too is severely affected, with a population of 2,2 million, 16.2% the population is infected with HIV virus (Namibia HIV sentinel survey, 2014). The new HIV infections

are concentrated among youth ranging between 15 to 24 years. Young people aged 15-24 account for an estimated 45% of new HIV infections worldwide (UNAIDS, 2008).

In Namibia, the HIV prevalence is 10.6% between 20-24 years old and 24.7% between 25-49 years (Namibia HIV sentinel survey, 2008). The ABC (Abstinence, being faithful and condom use) messages did not seem to reduce the incidence of HIV. Thus, Male Circumcision was found to be efficacious in HIV prevention.

For instance, in 2007. Bailey et al conducted a research to determine whether male circumcision had a protective effect against HIV infection. They conducted a randomized controlled trial of 2784 men aged 18-24 years in Kisumu, Kenya. Men were then assigned to two groups; one group for intervention (1391) and another group for control (1393). The finding revealed that the 2-year HIV incidence was 2.1% in the intervention group and 4.2% in the

control group; the relative risk of HIV infection in circumcised men was 0.47, which corresponds to a reduction in the risk of acquiring an HIV infection of 53%.

The adjustment for non-adherence to treatment and exclusion of four men found to be seropositive at enrolment revealed that the Protective effect of circumcision was 60%. Today Male Circumcision is added to HIV prevention strategies and adopted by many countries in Africa, Namibia is not an exception. The government of Namibia adopted the MC as part of HIV prevention strategies since 2009, however the knowledge of MC as HIV prevention needs to be understood for men to undergo surgery.

The objectives of the study were to assess the knowledge of second year medical students on HIV as part of HIV prevention strategies, to determine the acceptability of the second years medical students to promote MC for HIV prevention and to come up with recommendations based on the study findings.

Methods

Study Population

The second years medical students who presented into class in January 2016 were conveniently selected for this cross-sectional study. All second years medical students were targeted, however only those who presented in class the day of data collection were part of the study. A total of 51 students present were part of the study.

Procedures

The participants were given a self-administered questionnaire of 12 questions of which 11 questions on MC knowledge and 1 question on acceptability to promote MC as part

of HIV prevention strategy. They were given 30 minutes to answer to the questions. All participants completed the questionnaire within allocated time. Four categories were designated according to the performance.

Analysis

The primary outcome measure was participant's knowledge of MC as HIV prevention strategy. The secondary outcome was the acceptability to promote MC as part of HIV prevention strategy.

Four categories were designated according to the performance: deficient performance (less than 6), good knowledge (between 6-7), very good performance (between 8-9) and excellent knowledge (between 10-12). The hypothesis was that each category has equal proportion, i.e.25% each.

Results

General Characteristics

All 51 participants were second years medical students.

Knowledge of male circumcision as part of HIV prevention strategy. (table 1)

Overall, none of the participants had poor knowledge. All participants had good to excellent knowledge; 33% (n=17) had good knowledge of MC, 49% (N=25) had very good knowledge and 18% (n=9) had excellent knowledge. All of them know that MC provides partial protection to HIV transmission. All (100%) accepted to promote MC as part of HIV prevention strategy. Being medical students and being informed of the benefits of MC, it is not a surprise to have all participants accepting to promote MC for HIV prevention.

Table 1. number of respondents per category and performance

Category	Performance	Number of students	Percentage
Less than 6	Poor knowledge	0	0
Between 6-7	Good Knowledge	17	33
Between 8-9	Very good knowledge	25	49
Between 10-12	Excellent knowledge	9	18
	Total	51	100

Discussion

The participants demonstrated high level of knowledge as none was having poor knowledge and most about 67% had very good to excellent knowledge. This is consistent with the study conducted by Chikutsa (2011) who noted that at Stellenbosch University the knowledge of MC as an HIV prevention intervention was high. Similarly, Tarimo et al (2012) revealed that the participants were knowledgeable about the benefits of circumcision. The knowledge of MC as HIV prevention is high and this will promote men to undergo MC for HIV prevention.

Overall, the results of the current study revealed that students were knowledgeable about the health benefits of male circumcision. However, almost a quarter did not have very good to excellent knowledge. This suggests that another session of Male circumcision must be planned to increase the knowledge to at least 90% of students with very good to excellent knowledge since these students will be looked up in the community to answering to questions related to MC as part of HIV prevention strategy.

Male circumcision appears to be highly acceptable among the respondents. All students showed willingness to promote MC for HIV prevention. The findings are consistent with the study conducted by Mubekapi C (2013) where 95.6% of participants accepted MC as part of HIV prevention. This finding is also similar to the results found in Kenya, Swaziland, Tanzania and Zimbabwe (UNAIDS, 2006). The MC program should continue to be provided free of charge in Namibia and more awareness must be conducted in areas not yet visited.

Conclusion

The knowledge of respondents on male circumcision for HIV prevention is good, very good and excellent. There was no poor knowledge among the participants giving confidence that the students will be able to provide the right information to the community members where they live and can therefore promote MC for HIV prevention. All the students are willing to promote MC for HIV prevention which is a key for MC prevention. Although the knowledge is good, more than a quarter had good knowledge ranging from 6-7 out of 12 questions, it is of paramount importance to organize some presentation to

empower students in terms of increased MC knowledge that will build confidence for MC promotion for HIV prevention.

Acknowledgments

The author acknowledges the contribution of Prof Lawrence Kazembe for his contribution and guidance of the study.

References

- [1]. Chikutsa, A. (2011). Contextualizing the adoption of MC as an HIV prevention strategy in Zimbabwe. Retrieved December 17, 2012, from <http://uaps2011princeton.edu/papers/110446>.
- [2]. Dévieux et al (2015). Knowledge, Attitudes, Practices and Beliefs about Medical Male Circumcision (MMC) among a Sample of Health Care Providers in Haiti. <http://dx.doi.org/10.1371/journal.pone.0134667>.
- [3]. Hoffman J.R., Arendse K.D., Larbi C., Johnson N. & Vivian L. M. H (2015). 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. Published online: 02 March 2015.
- [4]. Ikwegbue J.N, Ross A. & Ogbonnaya H. (2015). Rural Zulu women's knowledge of and attitudes towards medical male circumcision. *Afr J Prim Health Care Fam Med.* 2015; 7(1): 775.
- [5]. Lissouba et al (2010). Knowledge, attitudes and practices of women towards male circumcision after three years of roll-out in Orange Farm, South Africa. pag.ias2011.org/Abstracts.aspx?AID=935.
- [6]. Lukobo MD & Bailey RC (2007). Acceptability of male circumcision for prevention of HIV infection in Zambia. *AIDS Care.* 2007;19(4):471-477. <http://dx.doi.org/10.1080/09540120601163250> [PubMed].
- [7]. Mavhu et al (2011). Prevalence and factors associated with knowledge of and willingness for male circumcision in rural Zimbabwe. *Tropical Medicine and International Health.* volume 16 no 5 pp 589-597 may 2011 doi:10.1111/j.1365-3156.2011.02744.x.
- [8]. Milford C, Rambally L, Mantell JE, Kelvin EA, Mosery NF & Smit JA (2016). Healthcare providers' knowledge, attitudes and practices towards medical male circumcision and their understandings of its partial efficacy in HIV prevention: Qualitative research in KwaZulu-Natal, South Africa. *Int J Nurs Stud.* 2016 Jan; 53:182-9. doi: 10.1016/j.ijnurstu.2015.07.011. Epub 2015 Aug 1.

- [9]. Mubekapi C. (2013). Knowledge, Attitudes and Practices of Male Circumcision as an HIV Prevention Method among Males in a Mine, Geita, Tanzania. Copyright © 2013 Stellenbosch University.
- [10]. Mndzele S.L. & Tegegn G.A. (2015). Knowledge, attitude and acceptance of voluntary medical male circumcision among male students attending Botswana University. *Journal of Public Health and Epidemiology*. Vol. 7(1), pp.6-14, January 2015.
- [11]. MOHSS (Ministry of Health and Social Services), Government of Namibia. (2005). Report of the 2014 National HIV Sentinel Survey. Ministry of Health and Social Services, Windhoek (Namibia).
- [12]. Mugwanya k. k., Baeten J. M., Nakku-Joloba E., Katabira E., Celum C., Tisch D & Whalen C. (2010). Knowledge and attitudes about male circumcision for HIV-1 prevention among heterosexual HIV-1 serodiscordant partnerships in Kampala, Uganda. *AIDS Behav.* 2010 Oct;14(5):1190-7. doi: 10.1007/s10461-010-9696-x.
- [13]. Naidoo PV, Dawood F, Driver C, Narainsamy M, Ndlovu S, Ndlovu V. (2012). Knowledge, attitudes and perceptions of pharmacy and nursing students towards male circumcision and HIV in a KwaZulu-Natal University, South Africa. *Afr J Prm Health Care Fam Med.* 2012;4(1), Art. #327, 7 pages. <http://dx.doi.org/10.4102/phcfm.v4i1.327>.
- [14]. Robert C Bailey, Stephen Moses, Corette B Parker et al (2007). Male circumcision for HIV prevention in young men in Kisumu, Kenya: a randomised controlled trial. www.thelancet.com vol 369 February 2007.
- [15]. Sengwayo S.F., Colvin J. C., Newell M & Imrie J. (2009). Men's knowledge, attitudes and beliefs about medical male circumcision: A qualitative study in rural northern KwaZulu-Natal, South Africa.
- [16]. Online available: <http://www.academia.edu/7353297>.
- [17]. Tarimo E.A., Francis J.M., Kakoko D., Munseri P., Bakari M & Sandstrom E. (2012). 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. PMID: 22812484 [PubMed - indexed for MEDLINE] PMID: PMC3416658.
- [18]. UNAIDS, (2006). Male Circumcision: Africa's Unprecedented Opportunity. http://www.unaidsrstes.or/site/default/files/malecircumsicion/mc_africa-opp-en.pdf.
- [19]. UNAIDS (2015). Report on the Global AIDS Epidemic. Geneva. Switzerland.
- [20]. Westercamp N & Bailey RC (2007). Acceptability of male circumcision for prevention of HIV/AIDS in sub-Saharan Africa: a review. *AIDS Behav.* 2007;11(3):341–355. [PMC free article] [PubMed].