

# Effectiveness of Mobile Phone Text Messages in Uptake of Voluntary Medical Male Circumcision in Shinyanga Region

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Master of Arts in Mass Communication

### **CERTIFICATION**

The undersigned certifies that she has read and hereby recommends for acceptance by the St. Augustine University of Tanzania dissertation tittle: Effectiveness of Mobile Phone Text Messages in Uptake of Voluntary Medical Male Circumcision in Shinyanga Region.

**Signature**..... **Date**.....

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### DECLARATION

I understand the nature of plagiarism, and I am aware of the Saint Augustine University’s policy on this. I declare that this dissertation report is original work by me during my University project. Whatever has been quoted in this report, the author was acknowledged.

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**Benedicto Luvanda (MAMC 50271/2016)**

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## **DEDICATION**

To my wife Theresia Mendoza and parents late Oswald Luvanda and Saphina Mbená whose concern for academic excellence inspired the writing of this research

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## ABBREVIATIONS

<b>AIDS:</b>	Acquired Immunodeficiency Syndrome
<b>CDC:</b>	Center for Disease Control
<b>HIV:</b>	Human Immunodeficiency Syndrome
<b>ID:</b>	Identity
<b>IEC:</b>	Information Education Communication
<b>NACP:</b>	National AIDS Control Program
<b>MC:</b>	Male Circumcision
<b>MoHSW:</b>	Ministry of Health & Social Welfare
<b>PEPFAR:</b>	President Emergency Plan for AIDS Relief
<b>PA:</b>	Public Addressing
<b>PDA:</b>	A personal digital assistant
<b>SMS:</b>	Short Message Service
<b>TAYOA:</b>	Tanzania Youth Alliance
<b>TCRA:</b>	Tanzania Communication Regulatory Authority
<b>TMI:</b>	Text Message Interventions
<b>TTM:</b>	Trans theoretical Model
<b>TPB:</b>	Theory of planned behavior
<b>US:</b>	United State
<b>VMMC:</b>	Voluntary Medical Male Circumcision

## ABSTRACT

Given the relevance of mobile phone text messages in today's technologically advanced society, this study examines the effectiveness of mobile phone text messages in increasing uptake of Voluntary Medical male circumcision (VMMC) service in Shinyanga region. The study also attempts to access what makes mobile phones text messages effective and how they impact target audience. Telephone based focus group discussion interviews and content analysis were used to collect data to know if mobile phone text messages contributed in increased uptake of voluntary medical male circumcision among sexually active adult men aged between 19-49 in Shinyanga region, to learn what was communicated through text messages and how text messages recipients changed their perception toward VMMC after receiving text messages. Research findings show that text messages were not only providing information but they were also providing motivation and helping to address structural barriers which were limiting people from accessing the service hence increasing service uptake. While this study acknowledges again the effectiveness of mobile phone text messages in increasing uptake of voluntary medical male circumcision, it shows how important it is for text messages to address real challenges and for the text messages to address real challenges baseline assessment is important. There is a need for further studies to focus on comparing knowledge and attitude between those who received text messages and those who did not. Response from focus group discussion, and interviews makes it interesting to involve others from the same community who were not receiving text messages.

## CHAPTER ONE

### GENERAL INTRODUCTION

#### A. Introduction to the Chapter

This chapter sets the scene for this research and is divided into seven sections. The first part provides background of the study, the second part (statement of the problem) consists of brief description of what is the problem that need to be addressed with this study. The third part (objective of the study) answers the question to why this study is done and the fourth part consists of questions that need to be answered in this study. The last three parts consist of Significance of the study, Limitations of the study and definition of key terms.

#### B. Backgrounds of the Study

In 2007, the United Nations recommended provision of Voluntary medical male circumcision (VMMC) in settings with high Human Immunodeficiency Virus (HIV) prevalence and low rates of male circumcision (MC). This recommendation was based on randomized studies in Africa, which demonstrated that male circumcision reduces the acquisition of HIV by between 38% and 66%. Tanzania was among 13 countries selected for early implementation. In response, IntraHealth, through the US President's Plan for AIDS Relief (PEPFAR/Centres for Disease Control & Prevention (CDC), supported the Tanzania Ministry of Health & Social Welfare (MOHSW) to launch a Voluntary medical male circumcision program in Shinyanga region where HIV prevalence is high (7.4%) and VMMC is low (32%).

From October 2010 to September 2012, 65,812 males in Tanzania were circumcised in this campaign, of which only 7.1% were men over 20 years. Existing evidence proves that older men between the ages of 30-49 have the highest risk of contracting HIV and thus in greater need of the protective effects of VMMC yet significant cultural and attitudinal barriers hinder male circumcision acceptance and uptake in this population. To maximize the impact of VMMC, the project implemented an intensive social mobilization initiative that utilizes mobile phone text messaging and community sensitization activities targeting older men over 19 years.

From October 2012, IntraHealth in partnership with the Tanzania Youth Alliance (TAYOA) conducted a demand creation intervention for older men using mobile phone text messages. Mobile phone text messages were broadly adopted from the agreed text in the 'Male circumcision client information book' put together by the Tanzania VMMC Technical Working Group. The client information book was consulted by implementers and is used by them during counselling and demand creation activities. In collaboration with district councils, IntraHealth and TAYOA organized community meetings with strategic VMMC messages to sensitize community members on the availability and benefits of VMMC.

TAYOA and IntraHealth conducted VMMC information needs assessment to help them design relevant mobile phone text messages to tackle some local myths and identified social norms and associated risks. Mobile phone text messages were designed to appeal to the older men as each Short message service (SMS) is received as personal message tailored at that individual, mobile phone text messages were also used to set a clinic appointment where by those who were receiving text messages had to show their SMS to clinic service provider so as to get priority access to the service

This 'personal mobile phone text messages appointment' approach contrasts to previous situations when adults may have felt discouraged. A high percentage of the Shinyanga population work in farming, and so there have been instances where adult males having heard about the campaign, turned up and found they had to wait for a few hours, but then had to leave before getting seen, due to work commitments. This SMS system of being able to show they have an appointment means their time is not wasted and they are more likely to turn up knowing the slot has been booked for them.

TAYOA worked with popular opinion leaders to recruit clients during community sensitization activities six weeks prior to a VMMC outreach campaign. Clients who expressed an interest in VMMC filled out a subscription card including their mobile number, place of residence and consent to receive free mobile phone text messages. The client information was entered into the TAYOA's Mobile phone text message system. Subscribed clients were receiving text messages on daily basis with information on definition, myths and misconceptions, the health benefits of VMMC for men and women, services provided, the availability and dates of VMMC services. SMS reminders were sent to clients about service locations and times a week before each VMMC outreach campaign. The clients who eventually received VMMC services filled in another card at the facility, which was entered into text messages software and received post circumcision and follow-up instructions on proper wound care via mobile phone text messages.

Project activities report proves that before the intervention, October 2010 - Sep 2012, only 7.1% of men circumcised were 20 years and above. During a nine-month intervention period (October 2012 to Jun 2013), a total of 63,873 men and boys were circumcised. In quarter one of the project, 22% (5,054) of all men circumcised were 20 years or more; in quarter two, 28% (5,364) and in quarter three, 32% (6,968) were 20 years or older. As further evidence of the effectiveness of the intervention, during the third quarter, 29% (6,382) of clients were 20 years and above.

Existing data was collected from the national VMMC Service register whose front page contains a section with questions on why the client is attending. Closed ended questions include: Self Referred, Voluntary HIV Counselling and Testing, Provider Initiated HIV Counselling and testing, and other.

The “Self-Referral” box was the most popular choice for adult men who were showing up for the service. Counsellors had to probe further to find out if this self-referral is as a result of receiving a mobile phone text messages, talking to a community mobilizer, hearing a PA announcement or talking to friends and family, and note this down where possible.

Providers would note if a client attended due to the TAYOA SMS in case the client was referred through TAYOA SMS communication. Although there is evidence that there were an increasing number of adults who were going for the service there is no clear link between mobile phone text messages and service uptake since there were many other demand creation activities going on in the community.

### *C. Statement of the Problem*

For a long time, inadequacy and unavailability of local studies to prove effectiveness or ineffectiveness of mobile phone text messages for health service demand creation has placed mobile phone text messages between effective and ineffective way of having health communication objectives reached. Absence of studies to prove effectiveness or ineffectiveness of mobile phone text messages in meeting communication objective made it hard for communicators in health sector to decide whether to use text messages only or not. As a result, decision to use text messages is considered as a trial, which might end with failure or success.

This study examined the effectiveness of mobile phone text messages in men’s uptake of voluntary medical male circumcision in the Shinyanga region where text messages and other communication approaches were used to increase uptake of voluntary medical male circumcision among adult men.

Existing evidence prove that using text messages for health communication and examining its effectiveness is not simple since there are many other variables that may contribute into an individual decision to go for service. Existing project reports from service points indicates that there were an increasing number of people who were going for the service from the time when mobile phone text messages were engaged for demand creation. However, at the same time organizations were conducting other activities in the community including working with popular opinion leaders, using public addressing system, radio promotions and community meetings making it hard to attribute the increasing service uptake with mobile phone text messages only

This study examined the effectiveness of mobile phone text messages in uptake of voluntary medical male circumcision in Shinyanga region learning directly from people who received text messages and document reviews (mobile phone text messages).

Despite of the fact that many health communicators are recently using text messages, still there were no proof whether text messages are effective in increasing service uptake. Using the right content, delivered at the right time in the right context, is critical. Having adding the right kind of interaction to communication makes text messages more engaging, and increases its power in encouraging health service uptake. Positive health communication campaigns are important to be measurable and this is not easy and this is particularly difficult when target audience cannot be accessed physically, and this is always the case with mobile phone text messages

### *D. Objectives of the Study*

The Objective of this study is to examine the effectiveness of mobile phone text messages in uptake of VMMC in Shinyanga. Given the relevance of mobile phone text messages in today's technologically advanced society, the study involves general examination of effectiveness of mobile phone text messages in increasing uptake VMMC service in Shinyanga region. The study also attempts to access what makes mobile phones text messages effective and how they impact target audience

With this Specificity, this study had to accomplish the following tasks:

- To know if mobile phone text messages contributed in increased uptake of voluntary medical male circumcision among sexually active adult men aged between 19-49 in Shinyanga region.
- To learn what was communicated through text messages
- To learn how text messages recipients changed their perception toward VMMC after receiving text messages

### *E. Research Questions*

The objectives of this study are to find answers for the following questions:

- Is there any direct relationship between mobile text messages and men’s uptake of voluntary medical male circumcision?
- What kind of mobile phone text messages were communicated?
- How did mobile phone text messages change community perception on VMMC?

#### *F. Significance of the Study*

This study was design to find useful information on the effectiveness of mobile phone text messages in men's uptake of Voluntary medical male circumcision. Results from this study provide vital information for health communicators in taking appropriate action toward the choice of effective ways of increasing health service uptake and make the use of mobile phone text messages more useful.

The study also is a footprint to direct health communicators on what works and what does not work especially when it comes to using mobile phone text messages for health communication particularly in promoting health service uptake

This study also helps communicators particularly in the health sector to know what should be done to make mobile phone text messages more effective in health service promotion and the demand for health services

The study validates the possible links between mobile phone text messages and Health service uptake by learning from message recipient to know if received text messages contributed into their decision to go for the service. Ultimately, at the end it recommends possible strategies in connecting missing links between mobile phone text messages and health service uptake

In Tanzania this might be the first research examining effectiveness the of mobile phone text messages in uptake of voluntary medical male circumcision. The point of emphasis in this research was to know if mobile phones are effective or not, if they are not, the survey was designed to find out the answer why they are not? And if they are effective still there was a questions of what makes mobile phone test message effective and to whom and when text messages are more effective

#### *G. Limitations of the Study*

In the process this study faced the difficulty in isolating the specific effects of mobile phone text messages from that of other communication campaigns. There was a challenge in recalling other external influences that contributed into increased uptake of VMMC services.

Information in this evaluation is self-reported, which likely introduces some bias toward answers respondents think the interviewer wanted to hear. However, through the use of technology (telephone focus group discussion and telephone interviews) confidentiality and anonymity made it easy for respondents to answer honestly

Many people do not keep records on what influenced them to go for the service and most of them do not feel comfortable discussing about sexual reproductive health especially when the discussion involves reproductive organs

Lack of enough fund was another limitation of the whole process of the study especially sample selection. Absence of enough funds made it hard to find an ideal study sample thus the sample for study included few randomly selected message recipients responding to the financial ability to cover the cost for telephone interviews.

The fact that this area is not well researched in Tanzania also hindered the study, since it resulted into lack of data and home reviews to support the study.

## CHAPTER TWO

### LITERATURE REVIEW

#### A. Introduction to the Chapter

This chapter presents the general conceptual issues of mobile phone text messages and how they are linked to increasing uptake of health services. More than that this chapter gives general assessment on what makes demand creation initiatives effective. Literature related to mobile phone text messages for communication health issues, demand creation and what makes demand creation effective will be introduced with a specific focus on what other scholars wrote about mobile phone text messages in general.

#### B. Definition Of The Key Terms

##### ➤ *Examine:*

Online Cambridge dictionary defines examine as testing someone's knowledge or skills in a particular subject. Another definition is looking or consider a person or thing carefully and in detail in order to discover about them. In this study examine means look in close detail and establish the key facts and important issues surrounding an effectiveness of mobile phone text messages in increasing uptake of VMMC in Shinyanga Region.

##### ➤ *Effectiveness:*

According to Oxford dictionary effective means Successful in producing a desired or intended result. In this study effectiveness of VMMC communication initiatives refers to the to the capabilities of producing a desired results/outcome/The degree to which objectives are achieved and the extent to which targeted problems are solved (increased uptake of VMMC among adult men and Increased knowledge) (Chib, Wilkin, Ling, Hoefman, & Van Biejma, 2012).

##### ➤ *Text Message:*

Commonly referred to as SMS (Short Message Service) is sending short messages of up to 160 characters (224 characters if using a 5-bit mode) to mobile devices, including cellular phones, smartphones and PDAs ("What is SMS Marketing?," n.d.). Is a service component of telephone, World Wide Web, and mobile telephony systems? It uses standardized communications protocols to enable fixed line or mobile phone devices to exchange short text message.

##### ➤ *Mobile Phone:*

Is a portable telephone that can make and receive calls over a radio frequency carrier while the user is moving within a telephone service area (wikipedia, 2015). In this context A mobile phone is defined to as is a wireless handheld device that allows users to make calls and send text messages, among other features. A mobile phone may also be known as a cellular phone or simply cellphone (Techopedia, n.d.).

##### ➤ *Male Circumcision:*

Is the removal of the foreskin from the human penis. In the most common procedure, the foreskin is opened, adhesions are removed, and the foreskin is separated from the glans. After that, the circumcision device (if used) is placed, and then the foreskin is cut off (Humphries, van Rooyen, Knight, Barnabas, & Celum, 2015; Price et al., 2014; Reed et al., 2012; Siegfried, Muller, Deeks, & Volmink, 2010; Umar, Mandalazi, Jere, & Muula, 2013; Wikipedia, n.d.). In this study Male Circumcision refers to voluntary surgical removal of the foreskin - the retractable fold of tissue that covers the head of the penis by trained health professionals.

##### ➤ *mHealth:*

Is a general term for the use of mobile phones and other wireless technology in medical care. The most common application of mHealth is the use of mobile phones and communication devices to educate consumers about preventive health care services (Arora, Peters, Burner, Lam, & Menchine, 2014; Margaret Rouse, n.d; World Health Organization, 2011).

#### C. Situating the Research within the Field of Health Communication

Communication in health takes place on many levels, including individual, group, organization, community or mass media. Communication in health can be defined in much the same way as communication has generally been defined: a transactional process. The main difference in communicating health is that the focus is not a general one but one specific to health information. (Kreps, 2003) summarizes the addition of 'health' to the definition of communication as a 'resource' that allows health messages (for example prevention, risk or awareness) to be used in the education and avoidance of ill health. This broad definition incorporates the fact that health communication can take place at many levels and embodies a holistic approach to health promotion.

Health communication encompasses the study and use of communication strategies to inform and influence individual and community decisions that enhance health. It links the domains of communication and health and is increasingly recognized as a necessary element of efforts to improve personal and public health (Aarva, de Haes, & Visser, 1997; National Institutes of Health, 2013; Roxanne Parrott, 2004).

Health communication can contribute to all aspects of disease prevention and health promotion and is relevant in a number of contexts, including (1) health professional-patient relations, (2) individuals' exposure to, search for, and use of health information, (3) individuals' adherence to clinical recommendations and regimens, (4) the construction of public health messages and campaigns, (5) the dissemination of individual and population health risk information, that is, risk communication, (6) images of health in the mass media and the culture at large, (7) the education of consumers about how to gain access to the public health and health care systems, and (8) the development of telehealth applications (National Institutes of Health, 2013; O'Toole, 2008; Wilson, 2007).

For individuals, effective health communication can help raise awareness of health risks and solutions, provide the motivation and skills needed to reduce these risks, help them find support from other people in similar situations, and affect or reinforce attitudes (Kreps, 2003). Health communication also can increase demand for appropriate health services and decrease demand for inappropriate health services. It can make available information to assist in making complex choices, such as selecting health plans, care providers, and treatments (Piotrow et al., 1997).

For the community, health communication can be used to influence the public agenda, advocate for policies and programs, promote positive changes in the socioeconomic and physical environments, improve the delivery of public health and health care services, and encourage social norms that benefit health and quality of life.

The practice of health communication has contributed to health promotion and disease prevention in several areas. One is the improvement of interpersonal and group interactions in clinical situations (for example, provider-patient, provider-provider, and among members of a health care team) through the training of health professionals and patients in effective communication skills (Piotrow et al., 1997).

Collaborative relationships are enhanced when all parties are capable of good communication. Another area is the dissemination of health messages through public education campaigns that seek to change the social climate to encourage healthy behaviors, create awareness, change attitudes, and motivate individuals to adopt recommended behaviors (Monaghan, 1968; RL. Parrott, 2005).

#### *D. Review of Relevant Theories*

One of the central questions that communicators have been debating is whether mobile phone text messages are effective in increasing uptake of health service or not? This is due to the fact that health service uptake is closely related with behavior change. The specific factors influencing uptake of service (or its failure) are many but they can be classified into fewer groups with some differences across theoretical perspectives. A number of theoretical models that use these groupings for explaining and linking communication and health service uptake. This study is based on transtheoretical Model

The transtheoretical model (TTM), more frequently referred to as the 'stages of change' model, is a cyclic model developed by Prochaska & Diclemente 1983. The model suggests that people change their behavior and perceptions at certain stages in life, rather than making one major change. During these incremental stages, they consider whether or not to make changes to their behavior. This cyclic model is based on the premise that people are at different levels of readiness to change, and during the change process they move through a series of stages. People move from precontemplation (not ready to change) to contemplation (thinking of change), to preparation (getting ready to change), to action (performing the change), to maintenance (continuing the change), to relapse (abandoning changes and reverting to former behaviors). A person may start at any of these stages and may move between stages.

The TTM uses are extensive and the model has frequently been used in interventions with special targets and tailoring information to appropriate stages of change. (Kidd, 2003) indicate that the TTM could provide precision when examining effectiveness and long-term efficacy in an intervention. It has also been said that it is a model that is 'simple, powerful, discerning and practical' (De Nooijer, J., Van Assema, P., De Vet, E. & Brug, 2005). One of the most appealing aspects of the TTM to practitioners is its simplicity. Although originally designed for communication on smoking interventions, recently the TTM has been used in areas that include promoting HIV service, injury prevention (Kidd, 2003) and physical activity (S. J. Marshall & Biddle, 2001).

According to Trans theoretical Model (TTM) it is true that before making behavioral changes, individuals progress through a series of stages from pre-contemplation (not yet even considering a change) to action and maintenance. That action could be best directed by targeting interventions at the appropriate stage, and that failure to operate on the same level of change can result in resistance, are primary features of the TTM. A recent variant of the TTM is the Social-Cognitive Stage Model (Prochaska & Velicer, 1997) which couples the classic stage model as found in the with determinants of stage movement from classic social cognitive theory (Bandura, 1986). This means that in order to get men going for VMMC service developed text messages must be able to take an individual through different stages as identified in Trans theoretical Model

The Precaution-Adoption-Process Model (Weinstein, 1988) is another stage based model that can be used to assess the effectiveness of health communication initiatives, this model differs from other models in a sense it focuses on individual patterns of change over time rather than on predicting behavior across individuals and with a special emphasis on reactions to health hazards and precautionary behaviors. Both the Information-Motivation-Behavioral- Skills Model (Fisher & Fisher, 2002) and the Information-Motivation- Strategy Model (DiMatteo & DiNicola, 1982; Martin, Haskard-Zolnierrek, & DiMatteo, 2010; DiMatteo, Haskard-Zolnierrek, & Martin, 2012) take a simplification approach, noting that three basic elements are necessary if service uptake or healthy changes, of whatever sort, are to be initiated and maintained. The former primarily targets behavioral skills in the targeted population; whereas the latter addresses the extensiveness of the communication initiative, target audience motivation and finally action.

In order to understand the health related behavior, change The Information-Motivation-Strategy Model (Fisher & Fisher, 2002) is also effective. This approach recognizes that in order for people to go for service they must first know what it is that they are to be doing, in this sense they must know what is VMMC and why they are supposed to go for the service. This will be followed by activities designed to make sure that target audience are appropriately motivated to engage in the necessary action like communicating benefits, and, finally, they must have the resources to carry out the desired action.

According to Information-Motivation-Strategy Model any one or two of these elements is insufficient; all three are essential. An individual may understand the importance to go for the service perfectly but have little interest in carrying it out; or the individual might understand and be highly motivated but experience in surmountable barriers to effecting change. It is only when all three factors are in place and are sustainable that healthy behaviors are possible. It is readily apparent that communication is key to achieving each of the three requirements for health behavior change and treatment adherence.

Problems are created at the first stage of the model when information is not clearly explained, is omitted, or includes many details without support for helping the recipient to remember the information. Once the needed information is in place, much can be done to motivate target audience but only when there is a clear understanding of target audience life circumstances, concerns, ideals, and goals. Thus, mobile phone text messages effective communication is, again, key. Finally, barriers can also be addressed through mobile phone text messages, and individualized strategies can be developed for increasing health service uptake only when the particular nature of individuals' experiences and challenges are recognized. Mobile phone text messages can facilitate the entire process.

#### *E. Previous Research on the Topic*

##### ➤ *Mobile Phone Text messages*

According to the international telecommunication union (1985) The missing link: report of the Independent Commission for World-Wide Telecommunications Development: In 1984, before the development and proliferation of mobile phones, more than half of the world's population lived in countries with one telephone for every 100 people, whereas two-thirds of all people worldwide had no access to telephones. Thirty years later, mobile penetration has reached 90% in developing countries, there are almost 7 billion mobile phone subscriptions worldwide, and the global mobile penetration rate reached 96% (ITU, 2014). According to Tanzania Communication regulatory authority (TCRA) in quarterly communication statistics report (TCRA, 2016) Quarter three, there are 35,920,090 mobile phone subscribers in Tanzania with an approximate of 45 million citizens it means that 75 percent of Tanzanians can access mobile phone services

Among the most frequently utilized interpersonal mobile communication channels is called short message service (SMS), or text messages, involving the creation and real-time exchange of alphanumeric messages of 160 characters or fewer. These forms of messaging have become ubiquitous, and an estimated three-quarters of all mobile users use text messaging (Sale, 2014). In the United States, texting among adult mobile users in 2011 was higher among Hispanics (83%) and African Americans (76%) than Whites (70%) (Zickuhr & Smith, 2012). In 2013, According to the report on annual wireless industry summary report 1.91 trillion text messages were sent in the United States, and more than 8 trillion text messages were sent worldwide. However, texting rates have dipped slightly in recent years following the availability of free mobile-messaging applications such as WhatsApp, Kik, and Facebook Messenger. In Tanzania, for the period of July to September 2015 Tanzania Communication Regulatory Authority issued the report that in three months' period 13,330,829,144 text messages were sent.



In addition to their frequent use and enormous reach, text and multimedia messaging have many other characteristics that make them well suited for public health interventions. Although text-messaging interventions (TMIs) may be scalable at a relatively low cost, and simple TMIs can reach large groups of people at a low cost per person, more complex interventions may have a higher per capita cost. TMIs also have the potential to incorporate qualities often associated with more effective health communication interventions, such as tailoring, interactivity, personalization, and/or high message repetition (Hubbard, 1953). Furthermore, text messages appeal to users' addiction-like desire to receive messages and the unconscious pleasure of the dopamine release associated with this reward. As a result, it has been found that 99% of received mobile text messages are opened, and 90% of all mobile text messages are read within three minutes of being received (A K Hall, Cole-Lewis, & Bernhardt, 2015; Amanda K Hall, Cole-Lewis, & Bernhardt, 2015a, 2015b)

Text messaging for health is considered part of the larger strategy of mobile health (mHealth), which is the application of mobile technologies to support and enhance the performance of health care and public health practice (Chib et al., 2012; World Health Organization, 2011), the first study using text messaging for health was published in 2002 (Neville R, et al), and it has since been followed by dozens of other published studies and hundreds of largely unpublished pilot projects. The first systematic review of texting for health was published in 2009 (Amanda K Hall et al., 2015a) and was subsequently followed by more than 20 published systematic reviews and meta-analyses, each one addressing a slightly different aspect of the application of text messaging for improving or protecting health. The first known systematic review of reviews was published in 2014 and explored findings from reviews of TMIs and health care delivery, including 13 systematic reviews, 3 of which focused on clinical appointment reminders; however, only two databases were searched (Horvath T, et al 2012).

In Tanzania text messages has been linked with Improvements in health systems, where researchers found that a mobile phone based integrated management of childhood illness manual resulted in improved adherence to treatment protocols by healthcare workers (DeRenzi et al., 2012). Similar results were reported in Uganda, where wireless Personal digital assistance used for disease surveillance also produced 24 per cent cost savings over the previous paper-based approach (Sasaki & Gebru 2008). In China, text message appointment reminders saved one-third of the cost of phone-call reminders (Leong et al., 2006; Lund et al., 2012). Although these results are all promising, none of these applications were implemented on a large scale, or for a protracted period of time, thus limiting their ability to be generalized to other settings.

➤ *Assessing Effectiveness of Communication in Health.*

Research evidence strongly supports the importance of effective communication in the process of delivering medical care, as well as patient-centered approaches to help individuals maintain healthy behaviors and adhere to recommended treatments (Doyle, Lennox, & Bell, 2013).

While assessing effectiveness is scientific, health communication practitioners are not only encouraged to utilise tested theories and methodologies in projects designing and implementation (European Centre for Disease Prevention and Contr (ECDC), 2014), it also becomes hard to but also to plan and employ better evaluation designs that are appropriate to the complexity of the campaign activities (Rychetnik, Frommer, Hawe, & Shiell, 2006) However, many difficulties have been documented when attempting to evaluate health communication campaigns, particularly in relation to the selection of appropriate evaluation designs and indicators to measure the impact of the campaign on public health outcomes (World Health Organisation Europe et al., 2010)

In the area of disease prevention and control, the health impact of campaigns is usually measured in the form of increased knowledge and service uptake. However, as it is in our case the campaign aimed also at changing behavior by increasing awareness. Evaluating mobile phone text messages therefore may include knowledge, attitude and behavior surveys as a means of assessment evaluation (Coffman, 2002)

In assessing effectiveness, short-term outcome measures such as message recall and recognition, attitudinal correlates of targeted behavior, social norms, intentions to change, and behavior change (European Centre for Disease Prevention and Contr (ECDC), 2014; Evans, Uhrig, Davis, & McCormack, 2009), are often chosen as they are predictive of longer term behavior changes as outlined by theories of behavior change such as the Theory of Planned Behaviour (Icek Ajzen, 1987). Other short term measures such as reactions to campaign materials, likeability or perceived message effectiveness are common but less informative in terms of actual campaign effectiveness as they lack a strong theoretical basis (Evans et al., 2009)

It is also recommended that when choosing outcome measures that they are relevant to both the participants of the study and to the broader health system context, including economic measures (Treadwell, Lucas, & Tsou, 2014) Others would propose that if the campaign aims to generate action (for example, to increase uptake voluntary medical male circumcision) then at least alternative measure of that action is necessary to convey campaign success (McOwan, Gilleece, Chislett, & Mandalia, 2002)

Campaign exposure is a key outcome examined in most effectiveness assessments studies as various levels of exposure to mobile phone text messages can be linked with varying levels of effectiveness such as a service uptake. The significance of Campaign exposure as an outcome measure, however, is often open to discussion, as quite often it is measured by self-reporting, which may have questionable reliability (Coffman, 2002) Process evaluation may aim to track campaign implementation by examining frequency of message distribution regarding the specific media channel (Coffman, 2002).

(Naranbhai, Karim, & Meyer-Weitz, 2008) while reviewing studies from the USA, highlighted the need for self-reporting of risky sexual behavior change to be supported by biological indicators such as HIV or STI prevalence and incidence rates (Naranbhai et al., 2008). They also recommend future evaluation studies to utilize indicators that are based on a common set of standardized outcome measures such as those laid out by the World Health Organization (programmatic indicators, determinant indicators, behavioral indicators, and impact indicators) (European Centre for Disease Prevention and Contr (ECDC), 2014) Similarly, a Canadian report recommends exploring communication outcomes on four levels, namely the individual, the network, the organization and societal (Sixsmith, Doyle, & Barry, 2013), These would also help to reduce difficulties that may arise in attempting to draw cross-country comparisons of campaign effectiveness.

For communication to effective there must a longer-term individual level outcome, these very short-term message outcomes provide a complete picture of how behavior change may occur in a health communication campaign. It can be useful to focus on these short-term message outcomes when evaluating communication campaign In other words, without evidence that a communication campaign/message is achieving effects in the table below, it is very unlikely that it will contribute to behavior change or increased service uptake.

Table 1 Menu of Communication Message Outcomes That May Contribute to Individual Behaviour Change and Service Uptake

1.	Ability to recall the message (generally, as well as specific content)
2.	Reported knowledge gains from the message (i.e., new things learned).
3.	Emotional reaction (liking, not being offended by) toward the message (tone, appeal)
4.	Ability to understanding the message content
5.	Beliefs about the accuracy and credibility of the message (Is the information in this message true? Do you agree with it?)
6.	Attitude toward the message source
7.	Attitude toward the messenger (in the ad/message)
8.	Beliefs about whether the message is relevant (to someone like me)
9.	Number of times the message is discussed with others
10.	Content of the discussions about the message with others (number of positive mentions; number of negative mentions)
11.	Reported skill gains from the message (i.e., new skills gained)
12.	Reported influence by the incentives within the message (based on perceived gain or loss).
13.	Actions taken to collect more information related to the topic of the message
14.	Intention/plans made to act on the message
15.	Actions taken toward the behavior recommended in the message

Source: Borrowed from (Jodi Thesenvitz & MacDonald, 2011)

#### F. Rationale for the Study

Resource allocation for health communication evaluation research is a recurring issue, as mass media campaigns alone are perceived as expensive and high quality evaluation may be viewed as an unnecessary luxury to which the budget simply cannot stretch (European Centre for Disease Prevention and Contr (ECDC), 2014). However, this may in a way render the campaign itself a futile exercise, as evaluation is necessary to determine effectiveness, and if effectiveness is not established, an expensive campaign may hold little benefit to public health outcomes, or worse, bring unintended harmful effects.

Determining the potential unintended effects of a communication campaign is a vital undertaking, particularly for professionals in the area of communication. Further examination of the literature regarding communication for the prevention and control of communicable diseases, in terms of considering unintended effects is of great important.

In Tanzania by 2013 there were five projects using mobile phone text messages listed in global mobile health project summaries and there was only one project with formal evaluation results. 28 projects out of 94 projects had formal evaluation results available making it hard to assess its effectiveness particularly of interventions like those of mobile phone text messages for health since it is a new area that need more research to measure its effectiveness

Understanding the need for evaluation, this assessment is designed to fill existing information gap on effectiveness of mobile phone text messages on increasing health service uptake. There is also a gap on how mobile phones text messages programs used to be evaluated. For example, many project successes are reported by looking at number of subscribers and number text messages sent while health communicators are suggesting that effectiveness must be measured by looking at communication efforts ability to increase service uptake, change attitude, social norms and behaviours.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### *A. Introduction to the Chapter*

The methodology developed for this study is rooted in the conceptual framework that recognizes the effectiveness of mobile phone text messages in increasing uptake of voluntary medical male circumcision. All methodologies for this study target at assessing the effectiveness of mobile phone text messages in increasing uptake of VMMC services. In assessing effectiveness of text messages designed methodologies helped in realising the study objectives including: assess the effectiveness of mobile phone text messages in increasing uptake of voluntary medical male circumcision in Shinyanga region, Assess the possibility for text messages recipient to act upon information received through text messages and suggest best approach through which mobile phone text messages can be made even more effective.

#### *B. Approach to the Study*

This study employed the use of qualitative methods where by the main target was to conduct regression analysis in assessing effectiveness of text messages in uptake of VMMC. Regression analysis helped in assessing the link/relationship between uptake of VMMC services and mobile phone text messages.

Regression analysis also helped in ruling out whether the uptake of VMMC services was due to the effectiveness of mobile phone text messages. It also helped to know how other variables contributed into increased uptake of VMMC services.

#### *C. Area of the Study*

This study was conducted in Shinyanga Tanzania where by people who were subscribed to the SMS systems are residing and the project was implemented in the region for the sake of increasing uptake of VMMC services among adult men (19-49).

#### *D. Target Population*

Target population for this study was selected from the SMS database where by adult men aged between 19-49 living in Shinyanga who were previously subscribed to the mobile phone text messaging system to receive text messages on VMMC. Text messages were designed to increase uptake of voluntary medical male circumcision in the region and individuals were subscribed to the SMS system by using their mobile phone numbers.

#### *E. Sample and Sampling Technique*

53317 men were subscribed to the SMS system to receive text messages on VMMC. The applied convenient sampling where by 40 text message recipient who were expected to provide unique and rich information of value to the study were selected for the study based on other demographic factors including age and residence.

Since VMMC is closely linked to sexual reproductive health and people might not feel comfortable to discuss about the topic, 20 SMS recipient were reached through two sessions of 10 participants in each telephone based focus group discussion and 20 with semi structured telephone interview. The decision to conduct telephone focus group discussion came up as the result of the fact that many men (who received text messages during the campaign) were no longer living in the same localities and those who were still living in Shinyanga were not comfortable discussion about VMMC in face to face focus group discussion

Non-Probability sampling (convenience) respond to the nature of the study where by adult men who were previously subscribed to mobile phone text messaging system are expected to provide useful feedback in assessing the effectiveness of text messages in increasing access to voluntary medical male circumcision.

#### *F. Data Collection Methods*

Data collection methods comprised of mobile phone text messages content analysis, telephone focus group discussion and telephone interviews. Selected methods responded to objectives of the research which was to assess effectiveness of mobile phone text messages in increasing uptake of voluntary medical male circumcision. It was therefore important to know what text messages were communicated and whether the communication initiative was effective or not. In general, these methods were preferred because the research was aimed at exploring contents of communication, describe and make extrapolation about characteristics of communication and at last explore the effect of communication to the targeted audience.

### *G. Data Management and Analysis*

#### ➤ *Data Management*

For the sub-set of mobile phone text messages recipient who participate in an interview their mobile phone numbers acted as a unique ID. Participant list along with verbal informed consent forms were administered prior to beginning the focus group discussion and interviews. Data collection tools, consent forms, and recorded audio materials were named after the ID. Completed interviews and focus group discussion contents were kept in a safe place that was accessible to research team leaders for analysis.

The interviewers were recording during an interview focus group discussion. Recorded materials were expanded into written notes after interview/focus group discussion. Interviews and focus group discussion audios as they were collected to ensure quality and clarity.

#### ➤ *Data Analysis*

Data were organized, collected information and begin the analysis by familiarizing with the data. Themes and recurring issues were highlighted and categorised for further analysis.

Data were synthesized and interpreted according to research questions and to improve the validity of the answers, triangulations were performed using the various data sets to help validate the accuracy of the findings. Notes taken/recorded in Kiswahili and SMS contents were translated into English and integrated with other notes.

Thematic and content analysis were performed to establish whether the information addresses the assessment questions or not.

### *H. Validation of Research Instruments*

Focus group discussion and interviews were conducted by using a short guide for focus group discussion and interviews, interviewers discussed with SMS recipients who consented verbally to participate in a focus group discussion or an interview. 10 mobile phone text messages recipient were interviewed using a short, qualitative questionnaire.

Interview guides were developed, translated from English to Kiswahili, and pilot-tested to ascertain their validity and ascertain that respondents will understand the questions. Thereafter they were appropriately revised before using them to collect primary data. The assessment team administer the interview and discussions in English, Kiswahili, or both, depending on the respondent's choice of language. To learn what was communicated (text messages) and I reviewed text messages from the text messaging system.

## CHAPTER FOUR

### DATA PRESENTATION AND INTERPRETATION

#### A. Introduction to the chapter

This chapter provides a detailed account of the findings from the study conducted to learn about effectiveness of mobile phone text messages in increasing uptake of voluntary medical male circumcision. Accordingly, this chapter is structured into three parts; the first part discusses findings from text messages contents analysis, the second part focuses on the analysis of focus group discussion and interviews on the relationship between telephone text messages and uptake of Voluntary medical male circumcision. The third part presents findings from focus group discussion and interviews on how mobile phone text messages changed community perception on VMMC.

The methodology for this study, which had been discussed and explained in the previous chapter, has guided the data collection as will have explained in this chapter. The focus of this chapter is to present the results of the focus group discussion and interviews, a comparison of those findings with the relevant academic literature will be provided in the following Chapter.

#### B. Presentation of the Research Findings

##### ➤ What Kind of Mobile Phone Text Messages Were Communicated?

The content of the text messages was developed from VMMC client textbook which was developed by Ministry responsible for health in the United Republic of Tanzania. The textbook consisted of all important information for clients on VMMC. The development of this textbook involved Tanzania VMMC Technical Working Group and they developed this book as reference book for clients and service providers in provision of VMMC counseling and referral service.

There is evidence that the book was not widely distributed due to high printing and distribution costs. All recipients of text messages said that they know nothing about the book and the never come across VMMC text book. However, they said they that they don't think if they would feel comfortable reading the book on VMMC in public.

Development of text messages was preceded by information needs assessment where by people from the target groups and other community members were invited in a meeting where they were asked about their opinion on VMMC services and why people are not going for VMMC. Identified Issues, challenges and setbacks were used to develop text messages which were letter on communicated back to the larger community. Identified issues which were letter on used to develop text messages includes

- Poor understanding of Voluntary Medical Male Circumcision (VMMC) (meaning and the procedure)
- Lack of knowledge on the importance of voluntary medical male circumcision.
- Community Myths and misconception about the service (VMMC)
- Adult men not feeling comfortable to be circumcised b women service providers
- Poor knowledge on the procedure (VMMC operation)
- Fear of adverse events post circumcision
- What to do and not to do before and after VMMC

Responding to Identified issues TAYOA worked with other partners to develop text messages covering the following topics.

Table 1 Number of Text Messages Developed on Different Topics

N	Topic	No of text Messages
	Credits (source & Acknowledgement)	1
	Definition of VMMC	1
	Why VMMC and not the traditional circumcision	1
	Benefits of VMMC	8
	Myths and Misconception	5
	Information on the actual procedure	2
	Post Procedure wound care	7
	HIV Prevention post Circumcision	1
	Referral to other Services	1
	VMMC is not about Genital mutilation	1

Source: Field Data, 2016

All text messages which were analyzed were developed responding to the SMS contents development guideline developed by National AIDS Control Program (NACP) where by all text messages adheres to the following rules.

Table 3 This Table is Copied from IEC Materials Reviewing Guide Showing Important Issues to Consider when Developing Text Messages. The Third Column is not Part of the Original Table

Credits	Source	e.g. You are receiving this message from the ministry of Health
	Acknowledgement of authorities, stakeholders/partners and other individuals who participated in communication initiative.	
Time and frequency	When call text messages will be sent to intended audience	e.g. Morning, Afternoon or night
	How many times text messages will be sent to intended audience	e.g. One SMS per week, everyday
Message contents	Length (not more than 160 characters with spacing)	160 Characters
	Validity (of information for both voice and SMS)	Approved by the ministry
	Easy to understand	
	Specific	
	Objective	
	Consistency	
	Gender issues/sensitivity	

Source: IEC Modified by Author

➤ *Is There Any Direct Relationship Between Mobile Text Messages and Uptake of Voluntary Medical Male Circumcision?*

During interview and focus group discuss there are some features which were presented by all participants when they were thinking about their experience with VMMC. 73% of individual who participated in this assessment remembered some communication activities which were associated with VMMC campaigns. And 86% mentioned street banners and radio promotions as what they remember the most about VMMC. Participants experience shows that there was ongoing discussion all over the community about VMMC. However, they all acknowledged that despite of the situation many adults were not going for VMMC

During focus group discussion one participant said “Sometimes, during night we were watching videos on HIV prevention but they were not showing any videos on VMMC in their Cinema van”. This responds to the fact that parents and children were going together for video shows therefore it was not even easy to discuss issues about VMMC in public since people in Shinyanga consider any discussion on sexual reproduction health or sexuality as something which cannot be discussed in public.

“I remember in 2010 the major discussion was what is the different, do I need to go to hospital for circumcision while I can get this service traditionally” one participant said during focus group discussion when asked about their experience with VMMC. People were associating VMMC with bad government intention mostly ‘family planning’, “People were saying adult men who are going for VMMC will not be able to make a woman pregnant” therefore adult men were discussing not to go for VMMC.

There are evidences that many adults were not going for VMMC because they thought the target for the campaign was children, one participant said “My experience if different, many children from primary and secondary schools were going for VMMC, and this was so boring, you go for the service then you find there is long ques and I cannot waste my time competing with children in the que”. During interview we realised that primary school children were given some days off to go for VMMC this resulted into high population of primary and secondary school students in VMMC service provision sites which in-turn prohibited their brothers and fathers from going for the service.

• *What do you Remember About Receiving Text Messages on VMMC?*

Men who participated in this study were all subscribed in TAYOA’s SMS System to receive text messages on VMMC between 2012 to 2014. During this study there were asked to say anything they remember about receiving text messages on Voluntary Medical Male Circumcision (VMMC). Of 40 people who participated in study 2 participants said not to remember anything about receiving text messages about VMMC in their mobile phone. However, they acknowledged receiving forwarded messages form their peers and friends.

During follow-up we realised that, those who did not receive text messages their number were mis-captured when they were coping from SMS subscription card to SMS system. All numbers (2) were not valid (active) phone numbers.

All participants remembered about filling in SMS subscription cards where by most of them remembered getting SMS subscription card from village offices or during village meetings and others remembered receiving SMS Subscription cards from form their peers and friends. All participants were aware of the fact that it is possible to subscribe to the SMS System by sending the word ‘VMMC’ to 15017 as it was promoted but no one of the participant ever tried to subscribe.

Community leaders were also remembered by participants in this study. In program implementation community leaders were considered to as popular opinion leaders who were used to influence people (adult’s men) to first subscribe in the SMS system by filling SMS subscription cards and participate in the actual campaign. In this campaign community leaders were considered to as popular opinion leaders who were used to Distribute and Collect SMS subscription cards. All participants remembered the role played by community leaders in subscribing them in SMS system.

Justification for using community leaders to distribute SMS subscription instead of using them for knowledge provision is the fact that, in first place people were not comfortable discussing about VMMC in public, and community leaders were not conversant enough about the service. Since community leaders were from the same community it was thought that they might have the same myth and misconceptions about the service therefore using them to provide technical information in such a critical situation was expected to cause more harm than benefits

Other participants remembered about receiving text messages every day, “I was receiving one text message every day, once or twice I received two SMS per day” one participant said. During content analysis we realised that 29 text messages were developed and TAYOA’s SMS system is configured to send one text message every day. The only time when the system had to send more than text messages in when they were sending text messages on VMMC and text message on clinic appointment like inviting subscribers to go for VMMC when service is available in their village or nearby village or sending an SMS to remind them to go for post operation check-up.

During focus group discussion one participant said “There were so many other people who were not subscribed to the SMS system, I used to share text messages with them as I receive” when other people were asked if they remembered sharing text messages with their peers and friends, 32 acknowledged sharing text messages. Only 8 participants said they never shared text messages they received. “Other text messages were very interesting, especially those about misconceptions, kit was like there were designed to respond to our discussion, I was not sharing all text messages, but I remember sharing every interesting text messages.” Another participant said “it was not expensive to share text messages, I remember we were subscribing to telephone bundles and were getting many free SMS, I don’t remember using all of them, you know it is not easy”

All participants said they wish they could receive more text messages on different health issues. “Why did you stop sending us text messages? You would have told us if there is anything we are supposed to do so as to continue receiving text messages for free. I tried to subscribe to another SMS which was promoted in TV and they were taking money from my phone every day and I was not aware on how to unsubscribe, I even thought of changing my number” one participant complained during focus group discussion. All participants in this study presented to have had bad experience with subscribing to SMS based service (specifically using short codes).

- *How Mobile phone text messages influenced your decision to go for VMMC?*

There are evidence that text messages helped in increasing awareness about VMMC, its importance and effectiveness. “Like me, before I started receiving text I was not even thinking of going for VMMC, imagine if you were you, would you opt to go for VMMC at the age of 36?” One participant asked. Participants who were aged above 30 thought that it was too late to get circumcised but awareness brought in by text messages made them think that it is important for them to go VMMC. For those who were below 30 there were also feeling shy but receiving text messages made them aware of the fact that many people in their communities are not circumcised and the service is tailored to target adult men.

One of the biggest challenge which was solved by text messages according to participants is appointment setting. “I decided to go for the service after receiving the text message telling me that if I show my text message to service providers I will be given a priority and I don’t need to follow the que if I have an appointment SMS” One participant said. During an interview one participant said “It is not easy standing in a que with your son’s and uncles waiting for the service, it’s a shame, sometimes they don’t think if we not yet circumcised, I remember my text message allowed me to enter through the backdoor and I was asked few questions to test if I know each and everything about circumcision”

Text messages helped recipients to make an informed decision to go for the service by clearing myths and misconception which were limiting adult men to go for the service. For example, many adult men were not going for the service fearing of delayed healing and some of them were not going for service because they were told that they will not be able to get children after circumcision. “After knowing the benefits and answers for almost all myths which were in the community I decided to go for the service” One participant said.

Text messages helped partners to discuss about the crevice and decide together. In some circumstances even were subscribed to receive text messages on VMMC and Men who were receiving text messages were also sharing received text messages with their partners (sexual Partners). There are evidence that men who were in relationship (who were the major target of the service) were not going for the service because they knew that they had to abstain from sex for six weeks’ period. The challenge with this requirement for men they were thinking that their partner (women) will not be able to abstain for six weeks therefore there is a likelihood that they will start cheating. Research results proves that women who were receiving text messages were more supportive to their partners during VMMC as compared to those who were not receiving text message.

Women who were not receiving text messages were also asking their partners not to go for VMMC while those who were receiving text messages they also escorted their partners to the service. Text messages were also communicating other benefits which female partner will get if the man is circumcised including HIV Prevention and reducing the risk for cervical Cancer. If not for text messages women would not have supported and sometime forced their partners to go for the service.

- *Do you think if it's not for mobile phone text messages would you have gone for VMMC?*

During this study, participants were randomly asked if they would have gone for the service without receiving text messages. Since people had different opinions they proposed for voting where by 11 (27%) participants said its true that text messages helped them to increase knowledge about the service but they were planning to go for the service even before receiving text messages. However most of them said that text messages made it easy for them to decide to go for the service “I would have gone, receiving text messages fastened my decision” one participant said.

27 participants (68%) said if not for SMS they would not have gone for the service. “Why do you think this is easy decision to make? One participant asked. “Imagine at my age going for circumcision, it is not easy and it is not supposed to be easy, may be it is because you are not in our community, sometime you may find even your wife laughing at you because you want to go for circumcision at this age, sure am telling, if you investigate you will find many people (adult) were not circumcised but if you ask they will say they are already circumcised, nowadays thinks have changed people feel shame when they are not circumcised. Honestly receiving text messages made me go for VMMC.

“Text messages changed many things, perception, knowledge and most important thing is that many people in our community were receiving text messages therefore it changed the way everyone in the community is thinking about VMMC. At least we had something to share and talk about”

Only 2 participants who were not sure if receiving text messages made them decide to go for VMMC are the ones their numbers were wrongly added in the SMS system. However, they all acknowledged receiving forwarded text messages on VMMC from their friends.

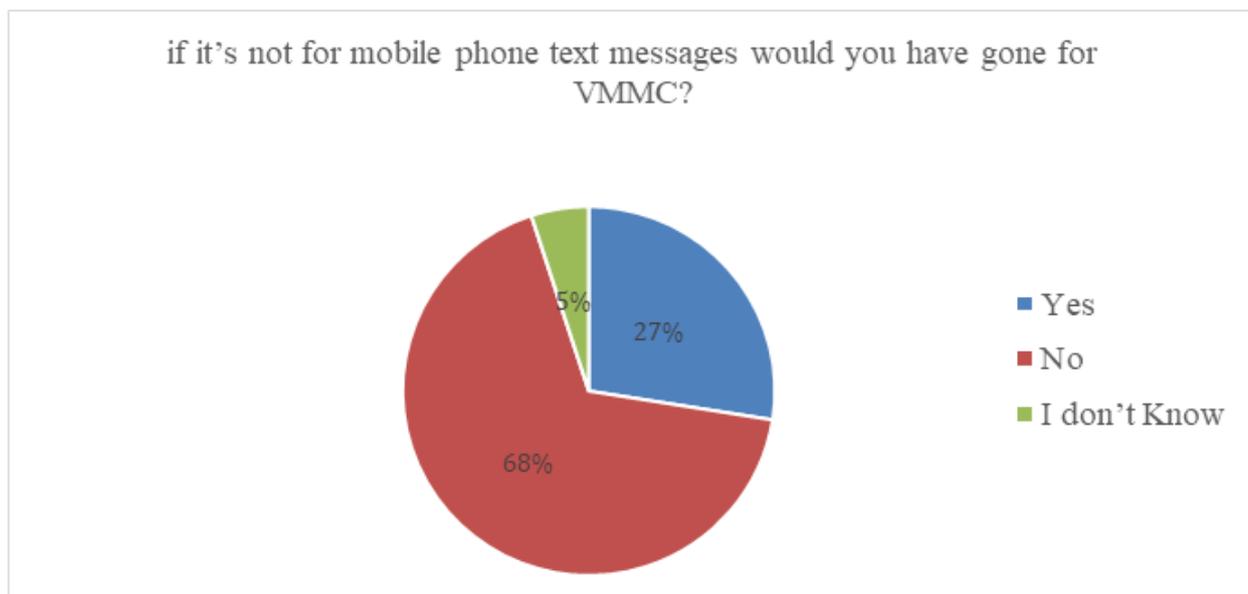


Fig 1 People’s Opinions on how Receiving Text Messages Contributed into Their Opinion to go for VMMC

Speaking to one older participant he said he used to see mobile video in the evening, but he was not persuaded to for the service since videos they were showing were not telling anything about VMMC. The man said, it is text messages that made him decide to go for the service he also suggested that text messages be used for other interventions.

Another man said that he knows men his age was not going for the service because they had to arrive early in the morning as they live far from the VMMC service points, so for text messages to help them being given priority entry was very important and this it easy for many adult men to go for VMMC. “I think if it not for SMS many adult men would not have gone for the service” One participant said.

➤ *How Mobile Phone Text Messages Changed Community Perception on VMMC?*

- *Do you think text messages addressed any challenges with VMMC in your society? How?*

All participants in this study acknowledged the fact that text messages addressed many social challenges which were prohibiting adult men from going for the service. Text messages has been able to tackle all local myths and social norms. For example, the traditional circumcision versus voluntary medical male circumcision and the myths that after being circumcised it is important for the man to go and have sex to prove he is “okay” and the quickest route to do this was to visit a prostitute.



Other myths and misconceptions were limiting people from going for the service and this is because people in the community were not discussing about VMMC. Text messages helped to stimulate discussion in the community and people started to talk about myths and misconception around VMMC. Sharing of text messages also helped people who are not receiving text messages directly from SMS system to be aware of the service and knowing the truth about VMMC.

“We had the perception that adult men may not be able to perform sex as it was before circumcision, this worried both men and women. Text messages helped us to understand the fact that there is no connection between sexual performance and VMMC.” One participant said. People were asking I’ve been having sex without being circumcised, why is it important for me now? Text messages helped people to know why it was important.

- *Does anyone else have some thoughts on mobile phones text messages and VMMC?*

“Information which were communicated through text messages can hardly be communicated by any other means, for example after being circumcised I received text message informing me that I am supposed to abstain for six weeks. Before that we had a perception that we can resume sex as soon as we are feeling good post circumcision” “knowing that we are supposed to abstain for six weeks is important but it is not easy to abstain for six weeks, the good thing with text messages is that they were telling us why it is important to abstain”

Text messages changed the way people were thinking about the service, particularly adult men. Before text messages parents were sending their children for circumcision they were not thinking of VMMC as something important for adult men. “It is text messages that helped us to know that it is important for us to get circumcised, I think it was important for adult than it was for children because they are not at risk as we are”

Before text messages women were not supporting their adult partner to go for VMMC. Responding to benefits communicated through text messages women started to support their partners because they were aware of the fact that VMMC is important not only for men who are going for circumcision but also for them.

Text messages also helped to change the perception that when someone is circumcised cannot get HIV. Since VMMC was promoted as protective measure against HIV people were thinking that when they are circumcised they cannot get HIV. “I was so disappointed to know that circumcision decrease the chance only and 100% protection, in my opinion communicating this fact was very important”. It is evident that if this information was not communicated circumcision would have caused increased HIV infections than decreasing infections.

### *C. Chapter Summary*

The study, in which the effectiveness of mobile phone text messages in increasing uptake of voluntary medical male circumcision were being accessed, has proved that mobile phone text messages are effective especially in interventions where issues that needs to be communicated cannot be shared through mass media. The focus telephone focus group discussion and interviews provided an insight into the participants’ views on VMMC text message. Discussions helped to measure other issues related to effectiveness of communication like memorability, ability to prompt actions. In this study interviews were of great important since it provided researcher with crucial insights into individuals’ interpretations and perceptions of text messages in relation to VMMC. The collection of data form of a telephone focus group discussion helped participants to freely talk without fear of being known. The qualitative nature of the survey enabled the collection and analysis of data on a large scale

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS**

#### *A. Introduction to the chapter*

This chapter provides a discussion of the findings obtained from content analysis, Interviews and focus group discussion during data collection phases. The chapter will highlight a number of parallels that can be drawn between mobile phone text messages and VMMC service uptake.

Here the findings of the study are correlated with each of the three research questions presented in chapter one. After a brief review of the questions and the researcher's predictions as far as possible outcomes, results are discussed, including interpretations that attempt to provide logical explanations. Interpretations of the data are offered together with a comparison of empirical findings to the relevant literature.

This chapter also provides a set of broad conclusions and demonstrate how the aims and objectives, as introduced in Chapter 1, have been addressed throughout the thesis. Contributions to the field of studies and recommendations for future research are presented and discussed.

#### *B. Discussion*

Findings from this study proves that there is a close relationship between behavior change and service uptake. It is evident that text messages helped in increasing knowledge about VMMC and the knowledge gain helped people in Shinyanga to change their attitude toward the service. It is also true that socially constructed realities. People had their own society had its own definition of the service, notions, or connotations that were assigned to the service. Constructed realities were natural and obvious to members of the society but those realities were not representing the reality (Gergen 1985). Most of them were myths and misconceptions which were later on cleared by text messages.

Since all aspects of humanity are created, maintained and destroyed in our interactions with media and others through time (Watzlawick, 1984) Text messages about VMMC which were sent contributed in destroying socially constructed realities about voluntary medical male circumcision.

Referring to The Health-Belief Model (Rosenstock, Strecher, & Becker, 1988) this research has proved that beliefs are the core of health behavior. People in Shinyanga had their own beliefs that VMMC is not important for them, there is a bad intention behind the service they developed their own understanding of the service and this limited them from going for the service. It is evident that beliefs explain why some people engage in preventive health behaviors like voluntary medical male circumcision and others do not. Text messages which were sent helped in increasing awareness about the service and it is through this awareness where people changed beliefs and decided to go for the service.

It is also true that mobile phone text messages facilitated the decision making process. This fact responds to the Common-Sense Model (Leventhal, 1970) people actively engage in problem-solving by developing mental models of health threats, subjective and objective treatment goals, and practices and procedures most likely to achieve those goals. As it was found during data analysis many people were aware of the service and they were ready to go for it but there were many barriers which were limiting them from going for the service, this means that they were looking for good reason to go for the service.

During content analysis it was realized that text messages were developed to promote individual's intentions to go for the service (VMMC) by defining the service and clearing myths and misconceptions. The fact there were some text messages which were developed to communicate benefits proves that text messages were purposely developed to provide its recipient with reasons to why they are supposed to go for the service. As it is explained in chapter two this is clearly linked with the theory of reason action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) which posits that behaviors are directly dependent on intentions (based on the observation that people's attitudes are not always good predictors of actions), and that intentions are influenced by attitudes (emotion/feeling overlaid on beliefs) and subjective norms (perceptions about what others think, and degree to which it matters what others think). Since developed text messages were able to increase knowledge and influence attitude it is evident that communicated messages were effective

Text messages were developed to create motivation. For example, other text messages were communication what people will get if they decide to go for the service one text message consisted of the fact that VMMC provides 60% percent protection against HIV and another message was about the fact that circumcised men reduces the chances of transmitting cervical cancer causing virus to female partner. The Theory of planned behaviour (TPB) (Ajzen, 1985, 1987) proves that there were higher chances for demand creation campaign by using to be successful since text messages were motivating (intention) and providing people with ability (behavioural control) to go for VMMC.

There were many text messages, SMS system is designed to send one text messages per day. In this study this finding had a very significant logic. Text messages were deigned to move recipients from one stage to another as it is clearly explained in Trans-theoretical Model (TTM) (Prochaska & DiClemente, 1982), text messages were designed and sent in a way that they were taking an individual through a series of stages from pre-contemplation (not yet even considering to go for VMMC) to action and maintenance (when people are already circumcised and they are informed that they are supposed to continue abstaining from sex for another six weeks even if they feeling good).



Fig 2 Trans-Theoretical Model

Research findings from group discussion and interviews proves that text messages were not only providing information but they were also providing motivation and helping to address structural barriers which were limiting people from accessing the service. This finding is supporting Information-Motivation-Strategy Model where which assert that provision of any one or two of these elements is insufficient; all elements are essential. An individual may understand the importance to go for the service perfectly but have little interest in carrying it out; or the individual might understand and be highly motivated but experience in surmountable barriers to effecting change. This happened for people who were receiving text messages since even when they were ready to go for the service they were not ready to stand in a long que, However SMS helped them with setting an appoint and thus motivating adult men to go for VMMC.

In health communication, disease prevention and control, the health impact of campaigns is usually measured in the form of increased knowledge and service uptake. Using text messages has proved to be effective since it results from contents analysis, focus groups discussion and interviews proved that there were an increasing knowledge and service uptake not only among SMS recipients but also among other members of the society. Evaluating effectiveness of mobile phone text messages measuring variables like knowledge, attitude and behavior as a means of assessment evaluation (Coffman J. 2002, Bauman A, at al 2006)

The fact that participants were able to recall messages and link received text messages with behavior three years later is also an evidence that the communication initiatives was effective (Evans W, at al, 2009), Things like message recall and recognition, attitudinal correlates of targeted behavior, social norms, intentions to change, and behavior change are often chosen as they are predictive of longer term behavior changes as outlined by theories of behavior change such as the Theory of Planned Behavior (Ajzen I, 1980). Other short term measures of effectiveness of campaign are reactions to campaign materials, likeability or perceived message effectiveness, these are common but less informative in terms of actual campaign effectiveness as they lack a strong theoretical basis (Evans W, at al, 2009).

Campaign exposure is a key outcome examined in most effectiveness assessments studies as various levels of exposure to mobile phone text messages can be linked with varying levels of effectiveness such as a service uptake. The significance of Campaign exposure as an outcome measure, however, is often open to discussion, as quite often it is measured by self-reporting, which may have questionable reliability (Coffman J, at al 2002) Process evaluation may aim to track campaign implementation by examining frequency of message distribution regarding the specific media channel (Coffman J, at al 2002).

### C. Conclusion

The scope of this conclusion is limited to the context in which mobile phone text messages were developed and shared to people living in Shinyanga region to create demand for voluntary medical male circumcision among adult men. Thus, applied to other situations, these conclusions may yield incorrect assumptions. Still, this conclusion is relevant to the process of assessing the effectiveness of mobile phone text messages in increasing uptake voluntary medical male circumcision in Shinyanga.

While this study acknowledges again the effectiveness of mobile phone text messages in increasing uptake of voluntary medical male circumcision, it shows how important it is for text messages to address real challenges and for the text messages to address real challenges baseline assessment is important.

In health intervention communication initiatives are designed and launched to create demand for the service, create awareness and sometime promote positive behavior change, at the end they are supposed to produce certain desirable outcomes and meet specific expectations. However, conditions prevailing in this campaign and strategies that were introduced to increase the uptake of voluntary medical male circumcision affected the outcome in many different ways.

This study showed how contextual characteristics of VMMC service provision, as well as cultural barriers and social perception, affected adult men uptake of the service. However, it is important to recognize that there are other variables beyond mobile phone text messages that contributed into increased uptake of VMMC which were not included within the scope of this research (TV Advertisements, Street banners, radio promotions, education and Health service availability).

The findings of this research add modestly to the body of knowledge of literature on using mobile phone text messages to communicate health issues. Due to its nature (personal) the use of mobile phone text messages is becoming a major means of communication in health communication. Simple facts such as knowing how effective are the text messages when used to create demand for health service over time it can be the basis for more assertive actions supporting or enforcing progressive use of mobile phone text messages in other service demand creation beyond health. Understanding the effectiveness of mobile phone text messages, the process of developing mobile phone text messages and using them to create demand for the service would be an effective way to promote health services and increase health behaviors in developing countries like Tanzania.

#### *D. Recommendations*

The use of mobile phone text messages in health service have been the topic of much discussion in the health communication field, Mass Communication studies, advertising agencies and advertisers but little has been done to study their effectiveness on subscribers and in meeting communication objectives. It is true that our world is more mobile now than ever, Consumers/target audience are always on the move and it is increasingly hard to reach them through traditional channels like TV, Radio and newspapers. Tanzania communication regulatory authority (TCRA) reports proves that there is an increasing penetration of mobile phones to the most rural areas, mobile networks cover more than 75% of the country population. Availability, affordability and ubiquity make the mobile phone text messages an essential platform for health communication.

The increasing use of mobile phones makes it important for researchers to conduct more research on how communicators can use this opportunity in promoting health service. mobile phone has become the new “must have” for any serious “innovative” communication campaign. In Tanzania for example there are more than 29 million mobile phone users (TCRA Report December 2015) All these phones have built-in SMS capability.

Opportunity to get feedback from SMS recipients was misused since the organization (TAYOA) did not use the opportunity to collect feedback via SMS. It seems that interactive SMS campaigns are important in the future research because they allow organizations to engage populations in interactive dialogue, to improve the service and learn from communication initiatives mistakes. TAYOA would have used this interactivity as a feedback mechanism; asking people how useful the campaign has been via SMS

According to study findings it is worth to recommend that, although mobile phone text messages is a new phenomenon in Tanzania already there is a need to have established ethical guidelines to control performance and usage of mobile phone text messages. This is due to the fact that people who receive text messages believe in information they receive and they use it as a reference information even when text messages are not from authenticated sources. To avoid deceptiveness of mobile phone text messages there is a need for providers of SMS services though SMS short codes make sure that they provide subscribers with all important information, including how to unsubscribe and costs (if any) It is also important for the source of SMS to be open e.g. ‘You receiving this message from .....’

It is recommended for program planners and implementers to make sure that they collect baseline data so as to help communicators to measure the change communication campaigns can bring over time. With the SMS campaign we were assessing it was easy to know if changes were happening because routine data collected were giving a clear picture that adult men were not going for the service.

#### ➤ *Recommendations and Suggestions for Further Research*

This study focus was mainly on people who received text messages. It is important for further research to focus on comparing knowledge and attitude between those who received text messages and those who did not. Response from this study focus group discussion, and interviews makes it interesting to involve others from the same community who were not receiving text messages. further studies also should focus on measuring the actual knowledge on issues which were communicated.

Further studies should include all key players in a communication cycle. For example, in our case this research would have involved The Ministry of health, IntraHealth, community leaders, female partners and target audience, this may help in coming out with another kind of research which will be more objective and representative rather than dealing with only one player in advertising pie.

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## APPENDICES

### APPENDIX I: FOCUS GROUP DISCUSSION

Thank you for agreeing to participate. I am very interested to hear your valuable opinion on effectiveness of mobile phone text messages in uptake of voluntary medical male circumcision in Shinyanga.

#### ➤ *Introduction*

- The purpose of this study is to learn how text messages influenced subscriber's decision to go for VMMC
- The information you give me is completely confidential, and we will not associate your name with anything you say in the focus group
- I would like to tape the focus groups so that we can make sure to capture the thoughts, opinions, and ideas we hear from the group. No names will be attached to the focus groups and the tapes will be destroyed as soon as they are transcribed
- You may refuse to answer any question or withdraw from the study at anytime
- We understand how important it is that this information is kept private and confidential. We will ask participants to respect each other's confidentiality

#### ➤ *The Process*

- We learn from you (positive and negative)
- Not trying to achieve consensus, we're gathering information
- No virtue in long lists: we're looking for priorities
- In this study, we are doing both Interview and focus group discussions. The reason for using both of these tools is that we can get more in-depth information from a smaller group of people in focus groups. This allows us to understand the context behind the answers given in the interview and helps us explore topics in more detail

#### ➤ *Guiding Questions*

- Let's start the discussion by talking about your experience with VMMC.
- What do you remember about receiving text messages on VMMC?
- What are some things that were not good with VMMC?
- Do you think text messages addresses any challenges with VMMC in your society? How?
- How Mobile phone text messages influenced your decision to go for VMMC?
- Do you think if it's not for mobile phone text messages you would have for VMMC?
- What else influenced your decision to go for VMMC?
- Does anyone else have some thoughts on mobile phones text messages and VMMC?

## APPENDIX II: INTERVIEW GUIDE FOR SMS RECIPIENTS

My name is (interviewer name) I am calling from Dar es salaam I got your number from Health Mobile phone text messaging system. Before I proceed I would like to know if you are in the position to answer my questions now. Yes \_\_\_\_\_  
No \_\_\_\_\_

(if No thank him/her and hang-up. If yes continue to questions)

As one of recipient of mobile phone text messages on VMMC, you are invited to participate in a research where we want to know to know if mobile phone text messages contributed in increased uptake of voluntary medical male circumcision among sexually active adult men aged between 19 -49 in Shinyanga region, we also want to learn what was communicated through text messages and learn how text messages recipients changed their perception toward VMMC after receiving text messages.

This study will help us better understand how mobile phone text messages helped people to make decisions about their health. e.g., Is there any direct relationship between mobile text messages and uptake of voluntary medical male circumcision? What kind of mobile phone text messages were communicated? How mobile phone text messages changed community perception of VMMC. The discussion will not take more than an hour and it will be recorded. Information about you will remain confidential.

This study does not involve any type of physical risk; the information you provide will be kept strictly confidential. To protect your privacy, your responses to the interview questions will only be identified with a code number. The decision to participate in this research project is entirely up to you. You may refuse to take part in the study without affecting your relationship with anyone. You may also choose not to answer any question posed. Your decision will not result in any loss or benefits to which you are otherwise entitled.

Interviewer Name: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

### ➤ *Demographic info*

- Age
- Sex
- Level of education
- Marital status
- Residence (region and district)

### ➤ *Interview Guiding Questions*

- Let's start the discussion by talking about your experience with VMMC.
- What do you remember about receiving text messages on VMMC?
- What are some things that were not good with VMMC?
- Do you think text messages addresses any challenges with VMMC in your society? How?
- How Mobile phone text messages influenced your decision to go for VMMC?
- Do you think if its not for mobile phone text messages you would have for VMMC?
- What else influenced your decision to go for VMMC?

**APPENDIX III: TEXT MESSAGES WHICH WERE COMMUNICATED**➤ *Target Audience; Men & Boys*

- Habari, Utakuwa ukipokea ujumbe kuhusu tohara bila malipo. Ujumbe huu unaletwa kwako na Wizara ya Afya na ustawi wa jamii kwa kushirikiana na asasi ya TAYOA.
- Elewa kuwa tohara ya mwanaume ni ukataji wa ngozi inayofunika kichwa cha uume. Ni kitendo ambacho kimekuwepo toka zamani kwenye baadhi ya mila na desturi
- Unajua kuwa tohara salama hutolewa na watoa huduma za afya katika mazingira rasmi kama vituo vya afya na vituo vya muda vya huduma? Nenda katahiriwe sasa
- Fahamu kuwa tohara ya mwanaume hupunguza uwezekano wa kupata maambukizi ya Virusi vya UKIMWI (VVU) kwa asilimia hadi 60. Katahiriwe sasa.
- Tohara hupunguza uwezekano wa kupata baadhi ya magonjwa yaenezwayo kwa njia ya ngono kama vile Kaswende. Fanya maamuzi sahihi sasa, Nenda kafanyiwe tohara
- Fahamu kuwa, tohara ya mwanaume inarahisisha usafi wa uume, inasaidia kumkinga mtu dhidi ya saratani ya kichwa cha uume na inarahisisha uvaaji wa kondomu.
- Unafahamu? Kama ukifanyiwa Tohara utapunguza uwezekano wa mwenzi wako wa kike kupata saratani ya mlango wa kizazi? Mkinge mwenzi wako kwa kufanyiwa Tohara
- Ukweli ni kuwa wakati wa tohara unaweza kupata maumivu na kutokwa damu kidogo, hata hivyo watoa huduma hutoa dawa za maumivu na kudhibiti kutokwa na damu.
- Kumbuka, Ukishatahiriwa unapaswa kuendelea kujikinga dhidi ya VVU kwa kutofanya ngono, kuwa mwaminifu kwa mwenzi wako na tumia kondomu kila unapofanya ngono
- Kwa kawaida, huduma ya tohara hujumuisha ushauri nasaha na upimaji wa hiari wa VVU kabla ya tohara. Unashauriwa kuja na mwenzi wako ili mpime pamoja.
- Kwa utaratibu, huduma ya upimaji wa VVU hutolewa bila malipo, Utaongea na mshauri nasaha kabla na baada ya kupima. Utapata majibu ndani ya dakika 20
- Tohara ni muhimu hata kama umeambukizwa VVU. Kama ukipimwa na kukutwa na VVU utapata ushauri nasaha na kupatiwa huduma ya tohara kama kawaida.
- Ukweli ni kuwa tohara ya mwanaume haipunguzi wala kuongeza nguvu za kiume. Tohara hupunguza hatari ya mwanaume kupata maambukizi ya VVU.
- Si kweli kuwa watoa huduma za afya wa kiume pekee ndio wenye uwezo wa kufanya tohara, Tohara inaweza kufanywa na mtoa huduma za afya bila kujali jinsi.
- Sio kweli kwamba tohara inasababisha utasa na kupunguza raha ya ngono. Ukweli ni kuwa tohara haisababishi utasa na wala haipunguzi raha ya ngono.
- Si kweli kwamba, watu wenye umri mkubwa huchelewa kupona vidonda vya tohara. Ukweli ni kuwa kidonda huanza kupona ndani ya siku 7 na huchukua wiki 6 kupona kabisa
- Kwa kawaida, Tohara hufanywa na watoa huduma wa afya kwenye chumba maalumu chenye vifaa safi. Hii husaidia kuzuia uwezekano wa kuambukizwa magonjwa mengine.
- Kumbuka, Baada ya tohara utapumzika kwa dakika 30 kisha utaruhusiwa kurudi nyumbani na utapaswa kurudi tena baada ya siku moja au mbili uangalizi wa awali
- Jua kuwa, Tohara hufanywa ndani ya dakika 30. Kwanza uume husafishwa na kuchomwa sindano ya ganzi kuzuia maumivu. Baada ya tohara uume hufungwa kwa bandeji
- Zingatia kwamba, baada ya tohara unapaswa kutofanya kazi ngumu kwa siku 3 na hakikisha kuwa haufungui bandeji mpaka unaporudi kituo cha huduma ya tohara.
- Hakikisha kwamba, sehemu iliyofanyiwa tohara inatunzwa na kuwa kavu kwa siku 3. kumbuka kuwa mwangalifu ili kutolowanisha eneo lililofungwa bandeji
- Kumbuka, hata baada ya kutolewa bandeji unapaswa kutoweka dawa yoyote kwenye eneo la uume. Ikibidi jisafishe taratibu kwa sabuni ya kawaida na maji safi
- Ukweli ni kuwa, Uvimbe mdogo kwenye uume, kuongezeka hisia za ngono na kutojisikia vizuri ni kawaida baada ya tohara. Hali hii huisha baada ya muda mfupi
- Kuwa makini, ukiwa na maumivu makali, Kuongezeka kwa uvimbe, kutokwa na damu au uchafu katika uume baada ya tohara. Nenda kwenye kituo cha huduma za afya
- Kumbuka, Haupaswi kufanya ngono au kupiga punyeto katika wiki 6 za kwanza baada ya tohara ili kuruhusu kidonda kupona kabisa.
- Zingatia, Iwapo mwanaume aliyefanyiwa tohara atafanya ngono wakati kidonda hakijapona atakuwa kwenye hatari kubwa zaidi ya kupata VVU na magonjwa ya ngono
- Usisahau kwamba, Hata baada ya tohara ni muhimu kutumia kondomu kwa usahihi ili kupunguza hatari ya kupata maambukizi ya VVU.

- Una swali? tatizo au unataka kujua zaidi kuhusu tohara? Piga simu bila malipo kwenda namba 117 kila siku kuanzia saa 6 mchana hadi saa 6 usiku
- **Kumbuka, Tohara inayoshauriwa kisayansi na kisheria ni ile inayofanywa kwa wanaume. Tohara kwa wanawake haikubaliki, ni ukatili na ni kinyume cha sheria**

➤ *Target Audience; Women*

- Habari, Utakuwa ukipokea ujumbe kuhusu tohara bila malipo. Ujumbe huu unaletwa kwako na Wizara ya Afya na ustawi wa jamii kwa kushirikiana na asasi ya TAYOA.
- Elewa kuwa tohara ya mwanaume ni ukataji wa ngozi inayofunika kichwa cha uume. Ni kitendo ambacho kimekuwepo toka zamani kwenye baadhi ya mila na desturi
- Fahamu kuwa tohara ya mwanaume hupunguza uwezekano wa kupata maambukizi ya Virusi vya UKIMWI (VVU) kwa asilimia 60. Jadili na mwenzi wako akafanyiwe tohara.
- Tohara salama hutolewa na watoa huduma za afya katika vituo vya huduma za afya na vituo vya muda vya huduma ya Tohara
- Tohara hupunguza uwezekano wa kupata baadhi ya magonjwa yaenezwayo kwa njia ya ngono kama vile Kaswende. Mshauri mwenzi wako ili akatahiriwe
- Kama mwenzi wako akitahiriwa itarahisisha usafi wa uume, inasaidia kumkinga mtu dhidi ya saratani ya kichwa cha uume na inarahisisha uvaaji wa kondomu.
- Unajua kuwa Kama mwenzi wako atafanyiwa tohara atakuwa amepunguza uwezekano wa wewe kupata saratani ya mlango wa kizazi? TOHARA YA MWANAUME NI MUHIMU KWAKO PIA
- Tohara haisaidii kupunguza uwezekano wa maambukizi kutoka kwa mwanaume aliyeambukizwa VVU kwenda kwa mwenzi wake. Hivyo ni muhimu kutumia kondomu
- Kumbuka, Mwenzi wako wa kiume alietahiriwa anaweza kupata maambukizi ya VVU iwapo atashiriki tabia hatari kama kutotumia kondomu au kuwa na wapenzi wengi.
- Unajua kuwa huduma ya tohara ya mwanaume hujumuisha ushauri nasaha na upimaji wa hiari wa VVU? Jadili na mwenzi wako ili mpime pamoja kabla ya tohara
- TAARIFA, Huduma ya upimaji wa VVU hutolewa bila malipo, mtapata nafasi ya kuongea na mshauri kabla na baada ya kupima. Majibu hutolewa ndani ya muda mfupi
- Ukweli ni kuwa tohara ya mwanaume haipunguzi wala kuongeza nguvu za kiume. Tohara hupunguza hatari ya mwanaume kupata maambukizi ya VVU.
- Si kweli kuwa watoa huduma za afya wa kiume pekee ndio wenye uwezo wa kufanya tohara, Tohara inaweza kufanywa na mtoa huduma za afya bila kujali jinsi.
- Sio kweli kwamba tohara inasababisha utasa na kupunguza raha ya ngono. Ukweli ni kuwa tohara haisababishi utasa na wala haipunguzi raha ya ngono.
- Si kweli kuwa watu wenye umri mkubwa huchelewa kupona baada ya tohara. Ukweli ni kuwa kidonda huanza kupona ndani ya siku 7 na huchukua wiki 6 kupona kabisa
- Kumbuka kwamba, Baada ya tohara mwenzi wako atapumzika kwa dakika 30 kisha ataruhusiwa kuondoka na atapaswa kurudi baada ya siku moja au mbili kwa uangalizi
- Fahamu, Baada ya tohara mwanaume anapaswa kutofanya kazi ngumu kwa siku 3 na kuhakikisha kuwa hafungui bandeji mpaka anaporudi kituo cha huduma ya tohara.
- Hakikisha eneo lililofanyiwa tohara linatunzwa na kuwa kavu kwa siku 3. Saidia uangalizi wakati wa kuoga ili kutolowanisha eneo lililofungwa bandeji
- Kumbuka kuwa, hata baada ya kutolewa bandeji mwenzi wako hapaswi kupaka dawa yoyote ile. Ikibidi ajisafishe taratibu kwa sabuni ya kawaida na maji safi
- Fahamu kuwa, Mwenzi wako hashauriwi kufanya ngono katika wiki sita za kwanza baada ya tohara. Ili kuruhusu kidonda kupona kabisa.
- Endelea kuwa mwaminifu kwa mwenzi wako katika kipindi cha wiki 6 baada ya Tohara. Kufanya ngono wakati huu kunaweza kurahisisha maambukizi ya VVU
- Iwapo mmoja wenu ana VVU, kuna uwezekano mkubwa wa kumuambukiza mwenzi wake iwapo mtafanya ngono kabla ya kidonda kupona kabisa. Chukua tahadhari
- Hata baada ya wiki 6 za mwanzo mnapaswa kuendelea kuwa waaminifu au kutumia kondomu kwa usahihi mara zote ili kupunguza hatari ya kupata maambukizi ya VVU.
- Una swali? tatizo au unataka kujua zaidi kuhusu tohara ya mwanaume? Piga simu bila malipo kwenda namba 117 kila siku kuanzia saa 6 mchana hadi saa 6 usiku
- **Kumbuka, Tohara inayoshauriwa kisayansi na kisheria ni ile inayofanywa kwa wanaume. Ukeketaji haukubaliki, ni ukatili na ni kinyume cha sheria**

➤ *Reminders*

- Kuanzia Kesho tar 30.04.2014 huduma ya TOHARA itakuwa ikitolewa bila malipo katika zahanati/kituo karibu na unapoishi. Tafadhali fika bila kukosa
- Unakumbuka kuhusu uwepo wa huduma ya TOHARA LEO? Watu wenye ujumbe huu na wale wenye umri wa miaka 20 na zaidi watapewa kipaumbele. Tafadhali fika bila kukosa.
- Kwa sasa huduma ya tohara inaendelea kutolewa bila malipo kwenye kituo cha afya karibu na unapoishi. Tafadhali fika bila kukosa



Fig 3 Young Boys Escorted with Their Mothers Waiting for VMMC Service in One of the Service Provision Site in Shinyanga (Before Mobile Phone Text Messages)



Fig 4 Adult Men Waiting for VMMC Service after Receiving Text Messages in Their Mobile Phones