ARTICLE

"PROMOTE THE UPTAKE OF MALE CIRCUMCISION" FOR HIV PREVENTION: A CONCEPT ANALYSIS

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ABSTRACT

Over the past decade, efforts have been made to promote the uptake of male circumcision (MC) in 14 selected high HIV epidemic countries, following reports that MC reduces the risk of female-to-male HIV transmission by about 60 per cent. Despite these efforts, the uptake of MC remains low, partly due to poor and/or subjective understanding of the concept "promote the uptake of MC" in the context of HIV prevention. This study aimed at clarifying the conceptual meaning of "promote the uptake of MC" for HIV prevention in high HIV and low MC prevalent settings. Walker and Avant's eight-step method of concept analysis was used. An integrative review of literature was conducted. An open online search was conducted using Google and Google Scholar, targeting all relevant literature, grey and scientific. Specific databases were also explored, which included PubMed, Science Direct, SCOPUS, and CINAHL. Accessible relevant hard copy literature was also considered. Data were analysed qualitatively and thematically. Findings show that the concept "promote the uptake of MC" has connotations that extend to several contexts, which include culture and religion, biomedical sciences, education, construction, as well as health and medicine. Conceptually, in HIV prevention, it is a process that involves healthcare providers, uncircumcised men and their social environment. The integral components of the process are educative interactions, the provision of MC services and social support. It is recommended that healthcare providers carefully consider this conceptual understanding in their efforts to promote the uptake of MC for HIV prevention.

Keywords: male circumcision; HIV prevention; concept analysis; health

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INTRODUCTION

Male circumcision (MC) remains the oldest and most common surgical procedure dating back to biblical times (Morris et al. 2016; WHO 2009a). The prevalence and practice of the procedure varies immensely across the globe in terms of the reasons for performing the procedure, the significance attached to it, and the art of doing it WHO 2009b, 10; (WHO and UNAIDS 2007, 3–7). More than half of all male circumcisions worldwide are performed for religious and/or cultural reasons (Morris et al. 2016; WHO and UNAIDS 2007, 1, 7, 8).

Lately there has been a growing public health interest in MC as an HIV preventive measure, following evidence that MC reduces heterosexual female-to-male transmission of the virus by about 60 per cent (Auvert et al. 2005). Subsequently, the WHO and UNAIDS formally recommended mass MC as an adjunct HIV preventive measure particularly in countries with low MC and high HIV prevalence (WHO 2007b).

Despite efforts to promote the procedure in these areas, the uptake of MC remains low (WHO 2016, 2). This has been partly attributed to poor and subjective understanding of the concept of MC for HIV prevention among the target population (Katisi and Daniel 2015, 739–754; Rennie et al. 2015, 679). This study aimed at conceptually analysing the meaning of the uptake of MC for HIV prevention in areas of high HIV and low MC settings.

BACKGROUND

The World Health Organization has identified 14 countries in which the MC strategy is likely to yield significant benefits (Grund 2010; WHO 2011a, 2011b). It has been projected that circumcising 80 per cent of the male population in these 14 countries by the year 2015 would avert up to 3.36 million new infections by 2025, leading to a net saving of US$16.51 billion (Njeuhmeli et al. 2011).

To date the majority of these countries are still working towards the 80 per cent target (WHO 2016, 2). However, the effectiveness of these efforts seem to be very minimal as only 56 per cent of the global target of 80 per cent coverage set in 2011 had to have been attained by 2015 (WHO 2016, 2). Furthermore, a 19 per cent fall in the uptake of MC has been recorded between 2014 and 2015 (WHO 2016, 1–2). This has been partly attributed to sociocultural and individual factors that include the subjective understanding of the concept of MC among the target population (Wamai et al. 2015). Plotkin et al. (2013) identify three contexts in which MC is conceptualised: traditional MC, religious MC, and voluntary medical MC. Evidence shows that some people cannot clearly distinguish between MC in these contexts, thereby affecting their turn-up for the medical MC (Rennie et al. 2015, 679). In Botswana, for instance, traditional leaders continued their routine biennial traditional initiation ceremonies because they did not fully recognise the mass MC campaigns (Katisi and Daniel 2015, 739–754). Similarly

in Swaziland, the procedure has been described as being “unSwazi”, implying that it is not consistent with the Swazi culture (Maibvise and Mavundla 2014a, 2014b).

Knowledge of these subjective understandings of MC is crucial in designing universal interventions to promote the uptake of the procedure. This article presents a concept analysis of “promote the uptake of MC”, aimed at clarifying the meaning of this concept among the target population of the MC campaigns. The ultimate aim was to derive a definition of MC that best suits the ongoing MC campaigns for HIV prevention, which is acceptable across all target populations.

METHODOLOGY

Walker and Avant’s (2011) method of concept analysis was used mainly because of its widespread and successful use in similar health-related studies (Walker and Avant 2011, 169). The method consists of eight steps, the first two of which have already been covered, that is, selecting a concept for analysis, and determining the purpose of the analysis. Subsequent steps are directly grounded in the collected data, which are further described below.

Data Source and Inclusion Criteria

For analysis purposes, the selected concept was split into three constituent components: “promote”, “uptake” and “male circumcision”. As many different sources of literature as possible were explored (Walker and Avant 2011, 161), with each of these words as a keyword in the search. Both grey and scientific literature was explored, available physically and/or electronically. This included journal articles, dictionaries, textbooks and publications by governments and non-governmental organisations, press statements, and other websites deemed credible at the researcher’s discretion. Open searches for each of the keywords were performed on Google and Google scholar. Specific databases were also explored, which include PubMed, Science Direct, SCOPUS, and CINAHL. Hard copy literature from relevant organisations or institutions was also considered. No limits were placed on the dates of publication. Analysis was done thematically, following Creswell’s (2014, 197–9) six steps of qualitative data analysis. The analysis was consistent with the subsequent steps of Walker and Avant’s (2011, 161) method, which are (1) identifying all uses of the concept, (2) determining the defining attributes, (3) constructing a model case, (4) constructing a borderline and contrary case,(5) identifying antecedents and consequences, and (6) defining empirical referents.

RESULTS

Identifying All Uses of the Concept

The findings show a wide range of uses, definitions, understandings and/or meanings attached to each of the three components of the central concept. A summary of these components are given below.

Definitions and Uses of "Promote"

The word promote originated from the Latin verb "promovere", which means "to move forward". In the English language the term is widely used in a number of contexts, medical and non-medical. In non-medical contexts "promote" is used with reference to ranks in organisations, education, chess and draughts, and marketing (*Collins English Dictionary* 2014; K Dictionaries 2017). In either of these contexts the term carries a connotation of being moved to a higher, better or more powerful position, level or status, or with respect to publicity or popularity. In health and medicine, there is a popular concept of health promotion where "promotion" is a noun derived from "promote", referring to an act of promoting something (*Collins English Dictionary* 2014), in this case health and well-being. There are several theories of health promotion, also referred to as Behaviour Change Theories. Examples include the Health Belief Model (Rosenstock 1974), Pender's Health Promotion Model (Pender, Murdaugh, and Parsons 2011), the Social Cognitive Theory (Bandura 1998), and the Theory of Reasoned Action (Fishbein and Ajzen 2010). These theories concur with the consensus that health can be promoted by enhancing or encouraging favourable behaviour. In this context, therefore, "promote" implies fostering positive behaviour by positively influencing determinants or components of behaviour change.

There are eight main components of behaviour change, which are dealt with in most of these theories (Frost, Zuckerman, and Zuckerman 2008). These are generally structured around strong commitment, the absence of barriers, the ability or skill to perform the required behaviour-change action, the perception of a favourable risk-benefit ratio, societal influence, personal norms, values or standards, emotional reaction to performing the behaviour, and perceived self-efficacy. According to the Health Belief Model, these components can be grouped into three main categories, namely individual perceptions, modifying factors, and the likelihood of action (Glanz, Rimer, and Viswanath 2008, 49). As such, "promote" entails ensuring positive perceptions and a favourable environment (modifying factors), which will enhance the likelihood of taking action, in this case the "uptake" of MC.

Definitions and Uses of "Uptake"

The term "uptake" is a combination of two distinct terms, "up" + "take". "Up" means towards a higher place, value, price or position (*Oxford English Dictionary Online*). It

may also mean "into consideration or attention", "into possession or custody" or "in or into storage" (*Merriam-Webster Dictionary Online* 2017). "Take" means "to gain or receive into possession" or "to assume ownership" (Black 1968, 1625). "Uptake" is therefore defined as the action of taking up, drawing up, accepting, absorbing or making use of something that is available or on offer (*Collins English Dictionary* 2014; *Oxford English Dictionary Online*; *Webster's New World College Dictionary* 2010). With this general meaning, the term has a wide range of uses in different contexts, especially in biomedical sciences, education and learning, and also in building and construction. In biomedical sciences "uptake" refers to the absorption by a tissue of some substance, such as nutrients (food material, minerals, etc.) and its permanent or temporary retention (*American Heritage Stedman's Medical Dictionary* 2002; Biology Online 2005; Farlex Partner Medical Dictionary 2012). In education and learning, uptake means apprehension, understanding, comprehension, or mental grasp (Dictionary.com 2017; *Merriam-Webster Dictionary Online* 2017). In construction, an uptake is a ventilating shaft or pipe, or a passage or pipe for carrying or drawing up smoke or air (*American Heritage Dictionary of the English Language* 2017; *Webster's New World College Dictionary* 2010). It follows, therefore, that "uptake" has a universal connotation of absorption or utilisation of something, in this case male circumcision.

Definitions and Uses of "Male Circumcision" (MC)

The word circumcise originated from the Latin words "*circumcidere*" and "*circumcisus*", both of which means to "cut around" (Ahmed and Ellsworth 2012; *Mosby's Medical* Dictionary 2013; *Oxford English Dictionary Online*). In the English language, circumcision can be defined as "the surgical removal of part or all of the prepuce, also called peritomy" (*American Heritage Stedman's Medical Dictionary* 2002), where the prepuce is defined as "a fold of skin that forms a retractable cover, such as the foreskin of the penis or the fold around the clitoris" (*Mosby's Medical Dictionary* 2013). Circumcision can therefore be categorised as male or female circumcision (Denniston, Hodges, and Milos 1999). Of particular interest in this study is the male circumcision.

Male circumcision can be defined as the surgical removal of all or part of the foreskin of males (*American Heritage Stedman's Medical Dictionary* 2002; *Collins English Dictionary* 2014). The amount or portion of the foreskin that can be removed varies, to a greater extend, depending on the purpose of the procedure. There are many reasons or motives for undergoing circumcision, which include religious, cultural, social and medical (health-related) reasons WHO 2009b, 10; (WHO and UNAIDS 2007, 3–7. The use and understanding of the concept of male circumcision in each of these contexts differ.

In the Jewish and Islamic religions, male circumcision is often performed as a mandatory religious rite in confirmation of their relationship with God as part of their Abrahamic and Mohamed faith respectively. In either religion, the procedure is usually performed ceremoniously at infancy by specifically trained circumcisers, called mohels

in Judaism. Muslims perform the procedure in hospitals and clinics while Jews often do it ceremoniously in home settings (BBC 2009a, 2009b; ReligionFacts 2014; Rizvi et al. 1999; WHO and UNAIDS 2007, 3–4). Culturally, MC is also practiced by some ethnic groups as a rite of passage to adulthood, signifying masculinity, bravery and endurance, characteristic of real men. The procedure is usually performed at puberty by untrained traditional circumcisers in non-clinical settings (WHO 2009b, 11, 14–17; WHO and UNAIDS 2007, 19–21).

In health and medicine, MC is viewed as a surgical intervention that can serve as a curative, preventive, rehabilitative or health-promotive measure (Albero et al. 2012; Maibvise and Mavundla 2013, 144–146; Spilsbury et al. 2003, 156). Psychosocially, MC is associated with a desirable social status (Wambura et al. 2009; Weiss et al. 2008) and enhanced sexual performance (Brito et al. 2017). Evidently, the concept of "male circumcision" has a connotation that extends into each of the five elements of well-being, namely physical, social, psychological, spiritual, and intellectual aspects of mankind. Likewise, the review of literature has also shown that the central concept "promote the uptake of MC" has a similarly wide range of meanings attached to it. From the review, a synthesis of defining characteristics of the central concept was extracted as detailed in the next subsection.

Determine the Defining Attributes

The researcher started with clusters of attributes for each of the three sub-components of the central concept, as extracted from the reviewed literature. From each cluster, essential attributes were further extracted. Table 1 shows the most common attributes of each sub-component and the subsequently extracted essential attributes.

Table 1: Attributes of sub-components of the central concept

Sub-component	Attributes	Essential attributes
Promote	Active involvement; support; contribute to growth or progress; positive influence; cause; trigger; instigate; initiate; individual perceptions; individual characteristics; health-seeking behaviours; holistic perspective; disease prevention; specifically trained personnel; controlled environment; minimise complications; attempt to popularise or sell; financial support; encourage the recognition; to make known vigorously; advertising; advancing or helping; increase the reputation (quality) of; acceptance; health education; counselling; instilling knowledge; instilling insight; instilling the sense of self-efficacy; raising individuals' awareness; advertisements; campaigns; verbal reinforcement or encouragements; personal belief; favourable environment; modifying factors; healthcare practice; social class; service availability; on offer; costs; precisely defining; clarifying; reducing perceived barriers; reassurance, correcting misconceptions and misinformation; giving necessary assistance (developing resources); medically trained circumcisers; environmental constraints; strong commitment; positive attitude; benefits outweigh the risks; perceived self-efficacy; one's knowledge base; peer pressure; guidance from others; cues to action; perceived benefits; modifying factor; towards a more desirable end (outcome); higher rank or position; more powerful (empowerment); favourable publicity; occurrence; positive perceptions; taking action; desired line of thinking	• Active involvement • Initiate • Support • Increase publicity • Increase popularity • Increase utilisation • Disease prevention • Enhance • Facilitate • Positively influence • Healthcare practice or services • Individual perceptions • Favourable risk-benefit ratio • Knowledge • Perceived self-efficacy • Empowerment
Uptake	Take into consideration or possession or ownership; to gain or receive; drawing up; accepting; absorbing; utilising; making use of; incorporating; ability to learn or understand; on offer; available; outcome expectations; new behaviour or action; understanding; comprehension mental grasp; temporary retention; permanent retention (sustainable); leading up (from below)	• Accepting • Taking up • Utilising • On offer • Available • Sustainability • Link

Male circumcision	Surgical removal (partially or totally); foreskin; surgical techniques; pre-operative preparations (holistic); perioperative care by family members and traditional teachers (society, multisectoral); sexual health education; sexuality; men; individual perception and understanding; no stipulated age; indicates masculinity; a real man; self-identity; cultural belonging; culture; religion; hospitals and clinics; non-clinical settings; traditional circumcisers (untrained); risk of complications; disease prevention; trained personnel; controlled environment; minimise pain and other complications (quality); psychosexual well-being; optimum or enhanced social status; peer interactions	• Complete or partial removal • Foreskin • Clinical setting • Trained health professionals • Men • Sexual • Disease prevention (HIV and STIs) • Society or multisectoral involvement

A consolidation of these essential attributes of each sub-component followed by further factor analysis and reduction yielded a narrower set of attributes, which portrayed the central concept as a process that consists of different components. Table 2 illustrates these components and their defining characteristics.

Table 2: Promoting the uptake of MC as a process

Components of the process	Defining characteristics
Healthcare provider	• Trained • Active involvement • Contribute to growth or progress • Initiate growth or progress • Link to services
Men	• Sexually active men • Individual characteristics • Individual knowledge and perceptions • Health-seeking behaviour
Context	• Healthcare practice or services • Disease prevention (HIV and STIs) • Multisectoral involvement
Procedure	• Influencing individual perceptions • Instilling knowledge • Increasing publicity • Increasing popularity • Facilitating access and utilisation of MC services • Enhancing a sustainable social support system
Dynamics	• Knowledge empowerment of clients • Social support of clients • Quality and accessible MC services (building confidence)

Expected outcome	• Positive perceptions about MC • Acceptance of MC • Supportive social system • Perceived self-efficacy • Uptake of MC

From these attributes, key associated concepts of the central concept were derived, along with their defining attributes. Table 3 gives a summary of these concepts and their attributes.

Table 3: Defining attributes of the central concept

Emerging concept	Defining attribute	Associated attribute
Educative interactions	Transforming individuals' mindset (influencing individual perceptions)	• Instilling knowledge • Increasing publicity • Increasing popularity
Service provision	Facilitating access and utilisation of safe MC services	• Enhance health-seeking behaviour • Linking to care • Avail safe MC (clinical setting) • Partners engagements
Social support	Enhancing a sustainable social support system	• Positive modifying factors • Fostering community or family or peer or sexual partner support or encouragements • Cues to action

Based on a further synthesis of these attributes, the definition given below was derived for the central concept.

Definition of the Central Concept

"Promote the uptake of MC" can be conceptually defined as an advanced process in which a healthcare provider or professional is actively involved in advancing the health of uncircumcised men by (i) transforming their mindsets (perceptions) about MC through educative interactions, (ii) facilitating the availability and accessibility of the MC service, and (iii) maintaining a supportive social environment. This process leads to positive perceptions about MC, acceptance of MC, a supportive social system, perceived self-efficacy, as well as the uptake of MC, where MC refers to the surgical partial or complete removal of the foreskin in men in a clinical setting by trained health professionals for various reasons. Figure 1 illustrates concept of promoting the uptake of MC, followed by a model case to exemplify the concept.

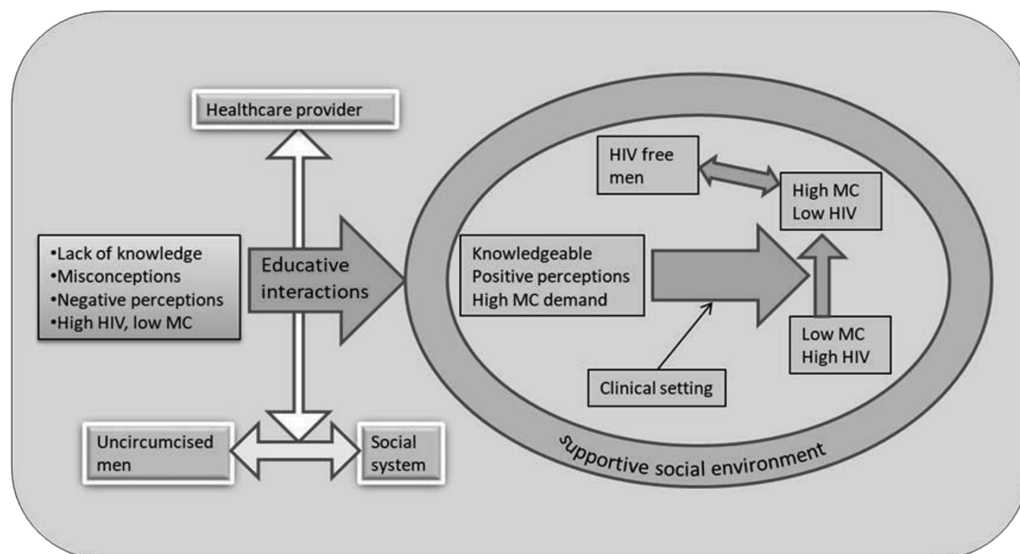

Figure 1: Graphical presentation of the central concept, promote the uptake of MC

A Model Case

A model case is a description or depiction of a real-life situation, experience or event that satisfies or contains all the defining attributes of the concept (Chinn and Kramer 2011, 166; Walker and Avant 2011, 163).

Box 1: Model Case

Tim was a 21-year-old single Swazi man who has just been admitted as a first-year student at the University of Swaziland (UNISWA). As a norm among students in the institution, he also ventured into multiple sexual relations, out of peer pressure. While students were aware of the risk of HIV, no one seemed to consider it a worrisome issue in their multiple sexual relationships. This was mainly because none of them had comprehensive knowledge about this concept. As the semester progressed, they gained more knowledge about HIV and AIDS, day by day, through a university-wide course on HIV and AIDS which is compulsory for all first-year students. This course instilled some significant fear in Tim and his friends as they realised how susceptible they were to HIV infection, and how life-threatening the infection is.

Following these realisations, Tim made a personal commitment to abstain from sex, or otherwise always ensure the use of a condom. However, he never

managed to adhere to that, as he would always get carried away and indulge in sex. Quite often, he would even forget to use the condom, or the condom would slip off, especially when he has had some alcohol with friends. Afterwards, he would always be stressed by the incident. When he discussed this with his peers, he realised that they were also experiencing the same problems. However, though concerned, none of them seemed to have a solution.

Most of the peers had heard from radios and newspapers that MC can reduce the chance of HIV infection by 60 per cent, but never thought of it as necessary. The growing fear of HIV now made them to reconsider these advertisements. From their deliberations, there were mixed feelings about the procedure, with a lot of uncertainties being raised. As a result, none of them developed interest in undergoing the procedure, not even to make further enquiries about it. Fortunately, one day people from Population Service International (PSI) staged an MC campaign on campus where all students, including females, were invited.

The show was well organised, with speakers and motivators from all angles of the mass MC strategy for HIV prevention. The speakers included a representative from NERCHA, who spoke about the epidemiology and impact of HIV and AIDS in the country, a representative from the Ministry of Health, who spoke about the national, regional and global policies relating to male circumcision, an Anatomy and Physiology lecturer from UNISWA Faculty of Health Sciences, who spoke about the pathophysiology of HIV infection, including the involved receptors and the implication of removal of the foreskin, a surgeon from Family Life Association of Swaziland (FLAS), who spoke about MC as a surgical procedure, including pain management and prevention of complications, and an MC activist from PSI, who spoke about other benefits of MC, including improved genital hygiene, reduced risk of STIs including cervical cancer in the female partner, and increased sexual satisfaction for both the male and female partner, among others.

A guy, married with two children, who had been circumcised a year ago, was also given an opportunity to give an account of his personal experience before, during and after circumcision. Other issues which were discussed included the religious and sociocultural aspects of male circumcision in the context of Swaziland. Participants were also given an opportunity to ask any questions regarding the subject. At the end of the show, pamphlets with additional information were distributed. Everyone who attended highly appreciated the information shared.

When Tim got to his residence, he continued to meditate on the gained insights. He was still in a dilemma on whether to undergo the procedure or not. Coincidentally, he received a WhatsApp message from his girlfriend encouraging him to be circumcised. From the pamphlet which he had been given, he also realised that MC services were being offered for free at Mahhala, which was just about a kilometre away from the campus. Tim eventually decided to go for the procedure.

When he got there, he found a number of students also queuing for the procedure. That instilled confidence in him, that his decision was not wrong. The facility was somehow overwhelmed by the increased demand for the procedure, being the only one near the university. However, the queue was moving very fast, and he barely spent 20 minutes waiting since there were many serving points.

Tim was highly impressed by the efficiency of the services. Moreover, he did not feel any significant pain during the procedure, contrary to what he had anticipated. From that day forth, Tim became an MC advocate to his colleagues who were scared of the potentially unbearable pain of the procedure, among other possible complications.

This case illustrates the different ways used to make MC known and popular among the at-risk population. Ways of positively influencing their perceptions were also demonstrated as well as the provision of efficient MC services.

In addition to the model case, borderline and contrary cases were also constructed to further clarify the defining attributes.

Borderline Case

Borderline cases are those cases that contain most but not all of the defining attributes of the concept being studied. They may also contain all the attributes but may be substantially inconsistent in one way or the other from the concept under study, thus helping to clarify the consistence of the model case (Walker and Avant 2011, 164). Box 2 illustrates a borderline case for the concept under analysis.

Box 2: Borderline Case

Denis is a 16-year-old Kikuyu boy from central Kenya. The Kikuyu people practice MC as a mandatory rite of passage of teenage boys into adulthood. However, each individual decide on a date when he feels ready. Denis' family had been quite supportive in preparing him psychologically for the procedure. His grandmother had also been preparing for him ritual baths for spiritual protection.

On the scheduled day for assembling, Denis joined other teenagers from the village who were also going for the same procedure, under the name of initiation ceremony. The initiates are assembled in the initiation school, a couple of days before the actual procedure for them to be oriented to the process by the traditional circumcisers, and to further prepare them psychologically. Despite all these efforts, Denis was still a bit anxious and not very much ready for the procedure. However, he had to conceal all these feelings and act stoically and tolerate all the pain of

this anaesthesia-free procedure in demonstration of his manhood. This is what was expected of all the initiates, or else they would be a disgrace to their families.

The procedure was performed early in the morning by different traditional circumcisers. After the procedure the penis was bound tightly with sisal leaves, and the initiates were kept in seclusion for about a month and a half to allow the wound to heal. During that time they were also given sex education and guidance concerning marriage and relationships with women. Promiscuity was discouraged, and emphasis was placed on the ideal roles of a "real" man as the head of the family. It was a pleasure for Denis to meet again with his family about six weeks down the line, healthy and with a renewed mind and status.

While Denis was in a setting that promoted his uptake of MC, the setting compelled him to undergo the procedure rather than influencing his understanding of the necessity of the procedure in order to make his own informed decision. In addition, the procedure was performed by untrained traditional circumcisers in a non-clinical setting, which may increase the risk of complications, though none has been reported in this case.

Contrary Case

A contrary case is a clear example of what the concept is not, despite having some similarities with the concept (Chinn and Kramer 2011, 170; Walker and Avant 2011, 166). Box 3 illustrates an example of a contrary case.

Box 3: Contrary Case

The death and deformity caused by male circumcision in Africa cannot be ignored.

This week 200 000 festivalgoers are gathering in Mutoto, Uganda, where they will enjoy the music, dancing, party atmosphere and the traditional ritual circumcision without anaesthetic of at least 1 000 teenage boys. Males from participating tribes are told that if they do not volunteer they will be captured and circumcised by force. One MP said the chilling words: "If you know of any Mugisu who is dodging the circumcision, show him to us and you will get UGX500 000 (£115 or R1 150) as a reward." The Ugandan Tourist Board is marketing this as a major tourist attraction, with the blessing of President Museveni. This comes just two weeks after a mob in neighbouring Kenya reportedly abducted at least 12 men from different tribes and forcibly circumcised them in the street. Dozens more were said to be camping outside the police station for protection. No one has yet been arrested for the assaults.

> Every year across sub-Saharan Africa, hundreds of thousands of boys and young men submit to initiation ceremonies. The specifics vary, but typically youths will spend weeks living near-naked in temporary shelters with minimal sleep, food and water. After the operation the penis is bound tightly with sisal leaves.
>
> The human devastation left in the wake of these traditions is horrifying. A recent report by South Africa's Commission for the Promotion and Protection of the Rights of Cultural, Religious and Linguistic Communities calculated that in the Eastern Cape and Limpopo provinces alone at least 419 boys have died since 2008, and more than 456 000 initiates have been hospitalised with complications.
>
> Deaths commonly occur through dehydration, blood loss, shock-induced heart failure or septicaemia. And there are estimated to be two total penile amputations for every death. Countless numbers of participants are left with permanent scarring or deformity. Urologists describe seeing patients whose penises have become so infected and gangrenous that they literally drop off.
>
> Adapted from: The Guardian 2014
>
> This article is portraying the negative aspects of MC, leading to its negative publicity and popularity that are contrary to the intentions of this model. Men are being forced to undergo the procedure, rather than them making their own decisions. The procedure is being performed by untrained circumcisers in non-clinical settings, leading to many complications. This will further reduce the uptake of MC.

In addition to the defining attributes and illustrative cases, antecedents and consequences of the central concept were also identified to shed more light about the concept.

Antecedents of Promoting the Uptake of MC

Before moving to promote the uptake of MC for HIV prevention, the following should prevail as antecedents to prompt the move: a low prevalence of MC among the sexually active population, a high burden of HIV and AIDS, and a low uptake of MC relative to set targets. Further, successful promotion of MC would require a commitment by the relevant authorities, sufficient resources (human and materialistic), as well as an enabling policy environment. This will translate into consequences of the central concept.

Consequences of Promoting the Uptake of MC

A successful occurrence of the central concept will eventuate in the following as its consequences: knowledgeable men about MC and HIV and AIDS issues, positive perceptions about MC as an HIV-prevention measure, an increased demand for MC,

as well as enhanced MC services delivery. As outcome indicators for these anticipated consequences, the empirical referents are defined below.

Defining Empirical Referents

Empirical referents are "classes or categories of actual phenomena that by their existence or presence demonstrate the occurrence of the concept itself" (Walker and Avant 2011, 168). Table 4 shows the empirical referents of the central concept in this study and the related defining attributes.

Table 4: Empirical referents of the central concept

Defining attribute	Empirical referents
Transforming individuals' mindset (influencing individual perceptions)	• More advertisements of MC and its benefits appear in public media (newspapers, radio and television) • More mass MC campaigns staged countrywide • MC issues integrated into school curricula at different levels • The at-risk population verbalises or reports acknowledgement and appreciation of MC as an overall beneficial procedure
Facilitating access and utilisation of safe MC services	• Demand for MC services statistically increases in MC service centres • MC services readily available and accessible for all those who need them • More MC service centres established • Shorter waiting queues in MC service centres despite increased demand • Expanded integration of MC services into existing healthcare delivery systems • More healthcare workers recruited in MC service centres. • More MC procedures performed in clinical settings by appropriately qualified healthcare personnel • Fewer or no MC-related complications reported
Enhancing a sustainable social support system	• MC services target women and religious or traditional leaders • Women and religious or traditional leaders participate in MC related activities

Defining the empirical referents is the last and final step in the concept analysis (Walker and Avant 2011, 168). The next section presents a discussion of the presented results.

DISCUSSION

The researchers acknowledge that a conceptual meaning of any concept is dynamic, time transient and context dependent. As such, it is virtually impossible to claim that a concept is mature and sufficiently developed (Chinn and Kramer 2011, 163). Furthermore, there are many different possible methods of concept analysis (Hupcey

et al. 1996; Nuopponen 2010), and it is inarguable that repeating this concept analysis using a different method will certainly yield different results, which could be better or worse than the current ones. Unfortunately in literature there is no guide on the choice of the best method of analysis for any given purpose.

Walker and Avant's (2011) method was not without shortfalls. The method emphasises the "word" expression of a concept as the unit for analysis or examination. There is no provision or guidelines to interpret or extract meanings embedded in a pictorial or graphic expression of the concepts, yet there were many such illustrations of MC, for example, ancient rock paintings. The method also emphasise considering all sources and/or uses of the concept. This resulted in large quantities of information, given that the central concept had three sub-components, and the concept of MC alone traces back to time immemorial. Selecting and/or organising such literature all remained at the discretion of the researcher without any specific guide to follow. Walker and Avant (2011, 171) acknowledge this limitation by stating that while they attempt to give guidelines, the actual intellectual work is for the researcher.

Notwithstanding these shortfalls of the method, Walker and Avant's (2011, 159–169) method successfully guided the researcher through the process. The intense qualitative and intellectual exploration of a wide range of literature allowed the researcher to acquire the much needed insights and awareness about the phenomenon under investigation. Deductive and inductive logical reasoning strategies were applied to ensure that the deepest and authentic insights about the concept of interest are extracted.

LIMITATIONS

The concept analysis was based on an integrated review of literature. This implies that undocumented insights about the concept were not captured. It is believed, however, that the subject of MC has been extensively researched and documented, such that the chances of having additional, unique, undocumented and relevant information are slim. In addition, the inclusion of grey literature may have subjected the concept analysis to reduced credibility. The researcher, however, made an effort to use own skills to ascertain credibility of identified literature before considering it.

CONCLUSION

Based on the findings of this study, it can be concluded that, conceptually, "promote the uptake of MC" is a process that involves healthcare providers, uncircumcised men and their social environment. The integral components of the process are educative interactions to transform mindsets, MC service provision as well as social support. It is acknowledged, though, that the concept analysis is never a "finished product" given the dynamic nature of ideas, the words which express them, as well as the analysts themselves (Walker and Avant 2011, 158). Thus, the stated definition is best applicable in the stated context at this particular moment.

RECOMMENDATION

It is recommended that healthcare providers in the areas of clinical practice, education, administration and research adopt the derived definition of MC in their service delivery. Further and ongoing research on the subject, using different approaches or methods, is also recommended.

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REFERENCES

Ahmed, A., and P. Ellsworth. 2012. "To Circ or Not: A Reappraisal." *Urologic Nursing* 32 (1): 10–19.

Albero, G., X. Castellsagué, A. R. Giuliano, and F. X. Bosch. 2012. "Male Circumcision and Genital Human Papillomavirus: A Systematic Review and Meta-Analysis." *Sexually Transmitted Diseases* 39 (2): 104–13. https://doi.org/10.1097/OLQ.0b013e3182387abd.

American Heritage Dictionary of the English Language Online. 2017, s.v. "uptake." Accessed 22 April 2017. https://www.ahdictionary.com/word/search.html?q=uptake.

American Heritage Stedman's Medical Dictionary, 6th ed. (2002), s.vv. "circumcision", "uptake." Boston: Houghton Mifflin Harcourt.

Auvert B., D. Taljaard, E. Lagarde, J. Sobngwi-Tambekou, R. Sitta, and A. Puren. 2005. "Randomized, Controlled Intervention Trial of Male Circumcision for Reduction of HIV Infection Risk: The ANRS 1265 Trial." *PLoS Medicine* 2 (11): e298. https://doi.org/10.1371/journal.pmed.0020298.

Bandura, A. 1998. "Health Promotion from the Perspective of Social Cognitive Theory." *Psychology and Health* 13 (4): 623–649. https://doi.org/10.1080/08870449808407422.

BBC. 2009a. "Religion: Circumcision of Boys: Islam and Male Circumcision." http://www.bbc.co.uk/religion/religions/islam/islamethics/malecircumcision.shtml (accessed 28 April 2017).

BBC. 2009b. "Religion: Circumcision: Judaism and Circumcision." http://www.bbc.co.uk/religion/religions/judaism/jewishethics/circumcision_1.shtml (accessed 28 April 2017).

Biology Online, 2005, s.v. "uptake." http://www.biology-online.org/dictionary/Uptake (accessed 20 April 2017).

Black, H. C. 1968. *Black's Law Dictionary: Definitions of the Terms and Phrases of American and English Jurisprudence, Ancient and Modern. Revised.* 4th ed. Minnesota: St. Paul, Minn. West Publishing Company.

Brito, M. O., S. Khosla, S. Pananookooln, P. J. Fleming, L. Lerebours, Y. Donastorg, and R. C. Bailey. 2017. "Sexual Pleasure and Function, Coital Trauma, and Sex Behaviors after Voluntary Medical Male Circumcision among Men in the Dominican Republic." *Journal of Sexual Medicine* 14 (4): 526–534. https://doi.org/10.1016/j.jsxm.2017.01.020.

Chinn, P. L., and M. K. Kramer. 2011. *Integrated Theory and Knowledge Development in Nursing*. 7th ed. Mosby: Elsevier.

Collins English Dictionary, 12th ed. (2014), s.vv. "circumcision", "promote", "uptake." New York: HarperCollins.

Creswell, J. W. 2014. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. 4th ed. Los Angeles: Sage.

Denniston, G. C., F. M. Hodges, and M. F. Milos, eds. 1999. *Male and Female Circumcision: Medical, Legal, and Ethical Considerations in Pediatric Practice*. New York: Kluwer Academic/Plenum Publishers. https://doi.org/10.1007/b102182.

Dictionary.com. 2017, s.v. "uptake." Accessed 23 April 2017. http://www.dictionary.com/browse/uptake?s=t.

Farlex Partner Medical Dictionary. 2012, s.v. "uptake." Accessed 22 April 2017. http://medical-dictionary.thefreedictionary.com/uptake.

Fishbein, M., and I. Ajzen. 2010. *Predicting and Changing Behavior: The Reasoned Action Approach*. New York: Taylor and Francis.

Frost, R., M. Zuckerman, and E. Zuckerman. 2008. "Health Promotion Theories and Models for Program Planning and Implementation." Accessed 20 April 2017. http://www.infosihat.gov.my/infosihat/artikelHP/bahanrujukan/HE_DAN_PERANCANGAN/PDF/Health%20Promotion%20Planning01.pdf.

Glanz, K., B. K. Rimer, and K. Viswanath, eds. 2008. *Health Behavior and Health Education: Theory, Research, and Practice*. 4th ed. San Francisco: Jossey-Bass.

Grund, J. 2010. "A Progress Report on the Promotion of Adult Male Circumcision as an HIV Prevention Strategy." *VAX* 8 (1). Accessed 3 May 2014. http://www.vaxreport.org/Back-Issues/Pages/ACutAbovetheRest.aspx.

Hupcey, J. E., J. M. Morse, E. R. Lenz, and M. C. Tasón. 1996. "Wilsonian Methods of Concept Analysis: A Critique." *Scholarly Inquiry for Nursing Practice* 10 (3): 185–210.

Katisi, M., and M. Daniel. 2015. "Safe Male Circumcision in Botswana: Tension between Traditional Practices and Biomedical Marketing." *Global Public Health: An International Journal for Research, Policy and Practice* 10 (5–6): 739–756. https://doi.org/10.1080/17441692.2015.1028424.

K Dictionaries. 2017, s.v. "promote." Accessed 19 April 2017. http://kdictionaries-online.com/#&&DictionaryEntry=Promote&SearchMode=Entry.

Maibvise, C., and T. R. Mavundla. 2013. "Medical Reasons for Performing Adult Male Circumcisions in Swaziland." *African Journal of Nursing and Midwifery* 15 (1): 139–148.

Maibvise, C., and T. R. Mavundla. 2014a. "Reasons for the Low Uptake of Adult Male Circumcision for the Prevention of HIV Transmission in Swaziland." *African Journal of AIDS Research* 13 (3): 281–289. https://doi.org/10.2989/16085906.2014.952652.

Maibvise, C., and T. R. Mavundla. 2014b. "The Influence of Religion on Perception of Circumcision in Swaziland." *African Journal of Nursing and Midwifery* 16 (1): 103–115.

Merriam-Webster Dictionary Online. 2017, s.vv. "up", "uptake." Accessed 22 April 2017. https://www.merriam-webster.com/dictionary/.

Morris, B. J., R. G. Wamai, E. B. Henebeng, A. A. R. Tobian, J. D. Klausner, J. Banerjee, and C. A. Hankins. 2016. "Estimation of Country-specific and Global Prevalence of Male Circumcision." *Population Health Metrics* 14 (4): 1–13. https://doi.org/10.1186/s12963-016-0073-5.

Mosby's Medical Dictionary, 9th ed. (2013), s.vv. "circumcision", "prepuce." St. Louis: Mosby Elsevier.

Njeuhmeli, E., S. Forsythe, J. Reed, M. Opuni, L. Bollinger, N. Heard, D. Castor, J. Stover, T. Farley, V. Menon, and C. Hankins. 2011. "Voluntary Medical Male Circumcision: Modeling the Impact and Cost of Expanding Male Circumcision for HIV Prevention in Eastern and Southern Africa." *PLoS Medicine* 8 (11): e1001132. https://doi.org/10.1371/journal.pmed.1001132.

Nuopponen, A. 2010. "Methods of Concept Analysis: A Comparative Study, Part 1 of 3." *LSP Journal* 1 (1): 4–12.

Oxford English Dictionary Online, s.vv. "circumcision", "promote", "up", "uptake." Accessed 15 October 2016, 15 April 2017. https://en.oxforddictionaries.com/definition/.

Pender, N. J., C. Murdaugh, and M. A. Parsons. 2011. *Health Promotion in Nursing Practice*. 6th ed. Boston: Pearson.

Plotkin, M., D. Castor, H. Mziray, J. Küver, E. Mpuya, P. J. Luvanda, A. Hellar, K. Curran, M. Lukobo-Durell, T. A. Ashengo, and H. Mahler. 2013. "'Man, What Took You so Long?' Social and Individual Factors Affecting Adult Attendance at Voluntary Medical Male Circumcision Services in Tanzania." *Global Health, Science and Practice* 1 (1): 108–116. https://doi.org/10.9745/GHSP-D-12-00037.

ReligionFacts. 2014. "Circumcision in Judaism: What does Judaism Teach about Circumcision?" Accessed 22 March 2015. http://www.religionfacts.com/circumcision.

Rennie, S., B. Perry, A. Corneli, A. Chilungo, and E. Umar. 2015. "Perceptions of Voluntary Medical Male Circumcision among Circumcising and Non-circumcising Communities in Malawi." *Global Public Health: An International Journal for Research, Policy and Practice* 10 (5–6): 679–691. https://doi.org/10.1080/17441692.2015.1004737.

Rizvi, S. A., S. A. Naqvi, M. Hussain, and A. S. Hasan. 1999. "Religious Circumcision: A Muslim View." *BJU International* 83 (S1): 13–16. https://doi.org/10.1046/j.1464-410x.1999.0830s1013.x.

Rosenstock, I. M. 1974. "The Health Belief Model and Preventive Health Behavior." *Health Education and Behaviour* 2 (4): 354–89. https://doi.org/10.1177/109019817400200405.

Spilsbury, K., J. B. Semmens, Z. S. Wisniewski, and C. D. J. Holman. 2003. "Circumcision for Phimosis and Other Medical Indications in Western Australian Boys." *Medical Journal of Australia* 178 (4): 155–158.

The Guardian. 2014. "The Death and Deformity Caused by Male Circumcision in Africa Can't be Ignored." Accessed 10 May 2017. https://www.theguardian.com/commentisfree/2014/aug/25/male-circumcision-ceremonies-death-deformity-africa.

Walker, L. O., and K. C. Avant. 2011. *Strategies for Theory Construction in Nursing.* 5th ed. Upper Saddle River: Pearson/Prentice Hall.

Wamai, R. G., B. J. Morris, R. C. Bailey, J. D. Klausner, and M. N. Boedicker. 2015. "Male Circumcision for Protection against HIV Infection in sub-Saharan Africa: The Evidence in Favour Justifies the Implementation Now in Progress." *Global Public Health: An International Journal for Research, Policy and Practice* 10 (5–6): 639–666. https://doi.org/10.1080/17441692.2014.989532.

Wambura, W., J. Mwanga, J. Mosha, G. Mshana, F. Mosha, and J. Changalucha. 2009. "Situation Analysis for Male Circumcision in Tanzania. Final Report." Accessed 17 May 2012. http://www.malecircumcision.org/programs/documents/TanzaniaMaleCircumcisionSituationAnalysis_September_09.pdf.

Webster's New World College Dictionary, 4th ed. (2010), s.v. "uptake." San Diego: Webster's New World.

Weiss, H. A., M. L. Plummer, J. Changalucha, G. Mshana, Z. S. Shigongo, J. Todd, D. Wight, R. J. Hayes, and D. A. Ross. 2008. "Circumcision among Adolescent Boys in Rural Northwestern Tanzania." *Tropical Medicine and International Health* 13 (8): 1054–61. https://doi.org/10.1111/j.1365-3156.2008.02107.x.

WHO (World Health Organization). 2007a. *Information Package on Male Circumcision and HIV Prevention – Insert 2: Global Map of Male Circumcision Prevalence at Country Level*. Accessed 31 December 2016. http://www.who.int/hiv/mediacentre/infopack_en_2.pdf.

WHO (World Health Organization). 2007b. *WHO and UNAIDS announce recommendations from expert consultation on male circumcision for HIV prevention.* Accessed 17 June 2017. http://www.who.int/mediacentre/news/releases/2007/pr10/en/index.html.

WHO (World Health Organization). 2009a. *Country Experiences in the Scale-Up of Male Circumcision in the Eastern and Southern Africa Region: Two Years and Counting.* Accessed 3 April 2017. http://www.who.int/hiv/pub/malecircumcision/cntry_experiences_se_africa_06.09.09.pdf.

WHO (World Health Organization). 2009b. *Traditional Male Circumcision among Young People: A Public Health Perspective in the Context of HIV Prevention*. Geneva: WHO Press. Accessed 17 August 2015. http://www.malecircumcision.org/programs/documents/TMC_final_web.pdf.

WHO (World Health Organization). 2011a. "Political Declaration on HIV and AIDS: Intensifying Our Efforts to Eliminate HIV and AIDS," Resolution adopted by the General Assembly [without reference to a Main Committee (A/65/L.77)], A/RES/65/277, United Nations General Assembly, 65th Session Agenda 10, 8 July.

WHO (World Health Organization). 2011b. "Progress in Scaling up Voluntary Medical Male Circumcision for HIV Prevention in East and Southern Africa January–December 2011." Accessed 14 July 2014. http://www.malecircumcision.org/country_updates/documents/FINAL%20VMMC%20Progress%20Report%20Jan-Dec%202011%20WHO.pdf.

WHO (World Health Organization). 2016. "Voluntary Medical Male Circumcision for HIV Prevention in 14 Priority Countries in East and Southern Africa." Accessed 8 April 2017. http://apps.who.int/iris/bitstream/10665/246174/1/WHO-HIV-2016.14-eng.pdf.

WHO and UNAIDS. 2007: Male Circumcision: Global Trends and Determinants of Prevalence, Safety and Acceptability. Geneva: WHO Press. Accessed 20 April 2017. http://whqlibdoc.who.int/publications/2007/9789241596169_eng.pdf.