Contemplating Circumcision: The Influence of Social Networks on Decision-Making

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Abstract: This paper presents results from analysis of 64 in-depth interviews with urban men embedded in an experimental quantitative study of demand for medical male circumcision for HIV prevention in Malawi. Despite having expressed genuine interest in circumcision, few study participants (three percent) opted to actually undergo the surgery. The qualitative interviews shed light on the gap between favorable attitudes and actions, demonstrating that a crucial element of the decision-making process is consultation with social networks. Social networks can be a source of scary rumors about circumcisions gone wrong. At the same time, men also receive support and encouragement to undergo the surgery. Feedback from social networks additionally influences how men deal with structural barriers to obtaining a circumcision, such as costs associated with the surgery and healing period. In these ways, reactions from peers affect decisions regarding uptake of circumcision. Another implication of these findings is that this consultation process takes time. Attention to the role of social networks in the adoption of medical male circumcision and allowing for the time needed for consultation is crucial for the success of male circumcision scale-up for HIV prevention.

Key words: Malawi, Africa, male circumcision, social networks, HIV, mixed methods

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1 Introduction

Recent studies showing that medical male circumcision lowers the risk of HIV transmission by up to 60 percent (Auvert et al., 2005; Bailey et al., 2007; Gray et al., 2007; Gray et al., 2012) resulted in a call for scale-up of circumcision in high HIV prevalence countries in Eastern and Southern Africa (WHO & UNAIDS, 2011a). Malawi, the location of this study, is a priority country for the provision of male circumcision services because of the estimated adult HIV prevalence rate of 11 percent and because the majority (78 percent) of adult men are not circumcised (NSO [Malawi] and ICF Macro, 2011). In Malawi, as elsewhere in sub-Saharan Africa, until the recent medical trials, the main reasons for getting a circumcision were religious or cultural; most of the men who are currently circumcised belong to traditionally circumcising ethnic groups and/or identify as Muslim.

There are reasons to be optimistic about the prospects for success of widespread circumcision campaigns. Acceptability studies find that the majority of uncircumcised men (65 percent across 13 countries) express hypothetical willingness to get circumcised (Westercamp & Bailey, 2007). In Malawi, Ngalande, Levy, Kapondo, and Bailey (2006) conducted focus group discussions among men and women and found that male circumcision was "generally acceptable" and many respondents reported that they would welcome the provision of male circumcision services. In a nationwide survey conducted in Malawi in 2010, Bengo et al. (2010) found that 37 percent of uncircumcised men reported being hypothetically willing to be circumcised.

Despite the high levels of reported interest, the number of medical circumcisions being performed in Malawi is quite low. Between 2008 and 2011, an estimated 3,119 medical male circumcisions were performed, only 0.1 percent of the target (WHO & UNAIDS, 2011b).

However, from these data alone it is difficult to determine whether the uptake of adult medical male circumcision is low due to a lack of demand, or because of the limited supply of services. Circumcision services are not currently easily available in Malawi and the government did not outline a national policy for the promotion of circumcision until October 2011 (PlusNews 2012).

This study builds on research on the hypothetical acceptability of adult male circumcision by examining actual demand for circumcision among men offered an opportunity to undergo the surgery. In 2010, an acceptability study was conducted in an urban setting in Malawi among approximately 1,600 uncircumcised men. Roughly 50 percent of the respondents indicated hypothetical willingness for a circumcision, but only 3 percent of the men in the study were actually circumcised at the study's partner clinic within one year of their baseline interview (Chinkhumba, Godlonton, & Thornton, 2012). To identify reasons for the gap between the attitudes and actions of men considering circumcision, we analyze the decision making process described in 64 in-depth interviews with study participants.

This paper is the first to our knowledge that combines quantitative data on *actual* circumcisions with qualitative data on *actual* decision-making, rather than *hypothetical* willingness to perform *hypothetical* actions. This is an important distinction because while hypothetical willingness questions can capture attitudes, they do not perfectly predict actions (Westercamp & Bailey, 2007). Using in-depth interviews embedded within a survey experiment, we were able to examine the decision-making process that mediated between attitudes and actions regarding circumcision.

Theoretical framework

The theory of reasoned action and the theory of planned behavior provide a useful model for understanding the gap between hypothetical willingness and actual behavior (Fishbein &

Ajzen, 2010; Ajzen, 1988; Fishbein & Ajzen, 1975). A simplified version of the model is reproduced in Figure 1 (taken from Fishbein & Ajzen, 2010:22). In this model, whether or not an individual performs a given behavior is determined most immediately by his/her behavioral intention (Box D) and external factors that determine the individual's ability to achieve his/her behavioral goal (Box E). Hypothetical willingness questions are often interpreted as indicators of behavioral intentions (Fishbein & Ajzen, 2010:40-43). As such, identifying a gap between willingness and behavior suggests that structural barriers are the major impediment to action and, therefore, implies that supply-side interventions are the best policy response.

[Figure 1 about here.]

In contrast, data from this study indicate that hypothetical willingness questions measured a respondent's attitude (Box A) about circumcision, an indicator of underlying positive or negative disposition toward the behavior. And, in keeping with the model, study participants needed to assess social norms (Box B) and their control in the face of structural constraints (Box C) before determining their behavioral intentions. Results of the in-depth interviews indicated that respondents relied on their social networks for this decision-making process. They engaged with their family, sexual partners, and most of all their peers to gather information about the circumcision procedure itself, and to collectively evaluate the value of medical male circumcision. Additionally, feedback from friends and family influenced how respondents perceived and dealt with structural barriers to obtaining a circumcision, such as the costs associated with the surgery and healing period. Social networks provided critical input to this decision-making process that ultimately led to the formation of behavioral intentions.

This process of consulting with peers had several consequences. First, the results of consultation depended on the knowledge, attitudes, and experiences of social network members.

While many received encouragement from their peers to undergo the surgery, social networks were also often a source of stories about circumcision gone wrong. Information provided by peers who had undergone a medical circumcision at a clinic was especially valued, although a majority of respondents did not know someone with that experience. Second, the desire for consultation with social networks meant that even respondents with positive attitudes about medical circumcision needed time to determine their behavioral intentions.

These findings have important implications for both academic researchers and policy makers. First, researchers assessing demand for circumcision should note that an expression of hypothetical willingness should not be immediately interpreted as a behavioral intention. Second, policy makers seeking to address a gap between expressed interest in circumcision and uptake of the practice must emphasize demand creation within social networks in addition to addressing structural barriers. Finally, both researchers and policy makers should be cognizant that in the case of new or unfamiliar interventions, such as male circumcision in this setting, decisionmakers need time to consult their networks and form their own behavioral intentions. Future studies and interventions must allow sufficient time for target populations to consult with social networks during their decision-making process.

The paper proceeds as follows: Section 2 describes the data and methods. Section 3 provides information on the study setting and the qualitative sample. Section 4 presents results from the interviews. Finally, Section 5 discusses the findings in relation to future efforts to scale-up medical male circumcision in Malawi and beyond.

2 Data and Methods

The data for this paper come primarily from qualitative in-depth interviews with 64 men ages 18-35, which were conducted as part of a larger quantitative survey experiment. The quantitative survey is described first below, followed by a description of the qualitative data collection.

Quantitative Survey

The quantitative survey consisted of two waves of data collected among a randomly selected sample of men living in Lilongwe, Malawi's capital city. Approximately 1,600 uncircumcised men were interviewed in March 2010. The representative sample was drawn from the catchment area of a small private clinic that partnered with the research team to offer male circumcision services. Approximately one year later, in June 2011, the study team attempted to re-contact all respondents for a follow-up survey and achieved a response rate of approximately 77 percent (Chinkhumba, Godlonton, & Thornton, 2012). The quantitative study included two interventions that were randomly assigned at the end of the baseline interview—vouchers of varying amounts (including free) for male circumcision at the local partner clinic, and in-depth information about male circumcision and HIV randomly given to half of the respondents.

Qualitative Interviews

In-depth interviews were conducted shortly after the quantitative follow-up survey. Participants in the in-depth qualitative interviews were randomly selected from respondents in the quantitative study, stratified on the treatment arms and follow-up circumcision status. If the study team was unable to contact one of the respondents selected for an interview, after three attempts he was removed from the qualitative sample and replaced with another randomly selected respondent from the same group. The overall response rate for the in-depth interviews

was 90 percent; 45 percent of the qualitative sample had been circumcised in the year after the baseline.

The semi-structured interviews lasted between 45 minutes and 3 hours, and were conducted in Chichewa by male Malawian interviewers. The interview guide contained openended questions on knowledge and opinions of male circumcision and factors considered when deciding whether or not to get circumcised. Interview guide translation from English to Chichewa was done as part of the interviewer training, which facilitated discussion of the interview goals. Four interviewers were retained at the end of the training and piloting period.

Before each interview, respondents were informed of their rights as research participants and gave written informed consent. With additional consent, a digital audio recorder was used to record the interview. All respondents were offered 250 mobile phone airtime units (approximate value of \$1.67) at the end of the survey to thank them for their participation. Ethics board approvals for this study were obtained from the University of Michigan and COMREC, at the University of Malawi College of Medicine.

After completion, the interviews were transcribed into English and each transcript was read to identify common themes in respondents' decision-making processes. The common themes were then used as initial codes and all transcripts were coded using HyperResearch. After detailed coding, the transcripts were read a third time and macro codes indicating the respondent's level of interest in circumcision were assigned based on a holistic assessment of the interview. Finally, to examine the reliability of the coding, a research assistant who had not been involved in the data collection effort also read and assigned macro codes to each interview transcript. Any differences in coding were deliberated and final coding was determined based on a collaborative review of the transcript. All the names used in this paper are pseudonyms to

protect the identity of the respondents. We next turn to describing the setting and sample characteristics.

3 Setting and Sample Characteristics

The setting for this study was a low and middle-income neighborhood, centrally located within Lilongwe. Table 1 presents summary statistics of the qualitative sample, which were collected during the baseline survey in 2010. The mean age of the sample was approximately 25 years old and respondents had completed an average of more than 11 years of school. The sample was ethnically diverse, although it contained almost no Yao participants since only respondents who were uncircumcised at baseline were eligible to participate in the quantitative survey. Similarly, all respondents were Christian, since nearly all Muslims in the area were already circumcised and were thus ineligible. Interview participants spent a median amount of \$120 per month on clothes, medical expenses, food, transportation, and mobile phone airtime. Overall, respondents included in the sample were wealthier and better educated than the average Malawian citizen, as expected in this urban setting.

[Table 1 about here.]

Nearly 90 percent of the interview participants had ever had sex in their lifetime, with an average number of about 2 sexual partners in the year prior to the baseline survey. Among the participants, 48 percent had ever been tested for HIV. Before any information was provided by the research team, almost 60 percent of interview participants reported that circumcised men have a lower risk of contracting HIV than uncircumcised men. Approximately 27 percent had

heard of someone getting circumcised at the study's partner clinic. Importantly, 60 percent reported that they would be willing to get circumcised.

4 Results

The analysis of decision-making processes described in the following sections was motivated by the observed gap between respondents' attitudes and their actual behaviors regarding circumcision. Detailed findings are reviewed in the following four sub-sections: (1) attitudes about circumcision, (2) the role of social networks in the (re)construction of social norms regarding circumcision, (3) the effect of social networks on perceived control over the circumcision decision, and finally, (4) the need for time to conduct social network consultation before forming behavioral intentions.

Attitudes toward circumcision

Before proceeding to an examination of the gap between attitudes and actual behavior, it is important to consider the attitudes themselves. Rather than capturing true positive feelings toward male circumcision, the influence of social desirability may have encouraged survey respondents to overstate their willingness to get circumcised. To assess this possibility we reviewed attitudes about circumcision expressed in the in-depth interviews.

Of the 35 interview participants who had not gotten circumcised, 16 respondents expressed either no interest or outright opposition to the practice. They explained that circumcision was irrelevant in their lives. For example, Joseph said, "*I don't even desire to do it in any way even though it is good and I know its advantage. But for me to go and get it, no, I don't do that.*" He explained that circumcision is fine for younger people, but at his "old" age (Joseph is 30), he felt that circumcision would be too painful and he was not interested. Respondents like Joseph made it clear that regardless of any potential benefits, they did not believe that circumcision was for them. They were unlikely to become circumcised in the near future, regardless of their circumstances or the design of potential interventions that addressed structural barriers to adoption. Their answers were in stark contrast to the decision-making processes described by 19 respondents (54 percent) who were more open to circumcision.

Men who did not get circumcised but were coded as having interest in circumcision explicitly expressed a desire for the surgery, despite the availability of other HIV prevention methods. For many of them, male circumcision was regarded as a partial solution to two main issues with other prevention strategies: limitations of condoms and lack of trust in partners.

As found in other studies on HIV prevention (e.g. Tavory and Swidler 2009; Hirsch et al. 2009), many of our respondents felt that condoms were not always desirable, available, or appropriate. Peter described a general dislike of condoms, which is common in Malawi, saying, "A lot of young men hate using condoms because they do not feel anything." Similarly, Watkins, (2004) found a dislike for condoms because they destroyed the "sweetness" and the pleasure of sex. Availability of condoms was also noted as a problem. Several men gave examples of situations where unprotected sex occurred because condoms were not available or were forgotten. Christopher, who was circumcised between the baseline and follow-up surveys, said, "one may use protection against STIs, but you may not always be ready to do that [use a condom]. You may want to have sex when you do not have condoms." Lastly, condom use in marriage was often seen as inappropriate because it implied a lack of trust between partners. Emmanuel explained, "Condom use is also a better method [of protection], but people who are married see it as a problem. This is the case because if you are using that, it's like you are still

untrusting each other." In sum, condoms were not seen as a universal solution to the need for HIV prevention because they were not always desirable, available, or appropriate.

Given the limitations of condoms, the lack of trust in a partner's fidelity became an important theme for why some viewed circumcision as a good option for extra protection against infection. In part, circumcision was attractive because it did not rely on the cooperation of a partner. Daniel, who got circumcised, clearly summarized this point, "*Ah, trusting one another on issues of health? It's like every one of us stays separate from the other. I cannot know the way she is conducting herself there and me here. We are people who when we meet, we chat, and then everybody goes to her home. But on the issue of health, these days it is everybody takes care of their own affairs; you take care of yourself on issues of health." In the quantitative baseline survey, only 30 percent of men in the full sample reported that they believed their primary partner had been faithful to them. This lack of trust meant that being faithful to one partner was not widely valued as an effective prevention method.*

Beliefs about the limitations of condoms, and the risk from partner infidelity, contributed to generally positive attitudes about circumcision among this group of men. We next provide insight into the decision-making process, which helps to explain the gap between these positive attitudes and actions.

Social networks and social norms

One of the most important themes in the interviews was that even respondents who had positive attitudes about circumcision still consulted with their social networks to inform their behavioral intentions towards the surgery. Some respondents discussed circumcision with their families or sexual partners, but information from peers was most important. Victor described the

kinds of discussions he had with his friends about circumcision: "*The first time I had this* discussion with my friends it was like we were giving each other ideas. One would ask a friend whether they would want to get circumcised or not and then reasons were being given. Some would say that they would never get circumcised and others would say that they could go." In these discussions, men collectively evaluated the meaning and value of male circumcision.

Depending on who men consulted to assess norms about the practice, social network exchanges resulted in varying levels of discouragement or encouragement to seek circumcision. Discouragement from social networks often came in the form of stories of circumcisions gone wrong. Many respondents described vivid rumors of worst-case scenarios. The rumors, passed through the social networks of young men, usually described disfiguration or amputation of the penis, and invoked fears of diminished masculinity. Zachariah explained, "My only fears concerned the outcome of poor surgery, which would consequently lead to one being disabled and that would compel the surgeons to completely cut the whole thing off." Edward had a similar fear: "it happens that after they have circumcised you it [the penis] swells. So, it is found that you get destroyed; the entire sex organ gets destroyed." Jonah, who was so afraid that he was coded as having no interest in circumcision, put it plainly during his interview. He pointed at his penis and said, "You know, this is life." These scary stories implicitly conveyed a normative opposition to circumcision. They stressed the cultural significance of men's virility and suggested that, regardless of potential benefits, circumcision was not worth the risk. Moreover, these statements suggested that the decision to get circumcised was not based simply on rational calculations; emotions played an important role. Fear discouraged many men from any further consideration of circumcision despite acknowledgement that fears were often based on

unfounded rumors. Emotional reactions to scary rumors were an especially powerful influence on men without access to countervailing information and normative pressures.

The most compelling encouragement provided through social network exchange came from men with first-hand experience of getting circumcised at a clinic. First-hand information was especially convincing because it provided inspiration in the form of both injunctive norms what one ought to do—and descriptive norms—what others are doing (Fishbein & Ajzen, 2010). These interactions with others who had undergone the surgery helped to dispel some of the fears described above. For example, Andrew sought information from men at his work at the taxi rank (taxi stand) who had gotten circumcised as adults. Hearing their experiences helped him to disregard the rumors he had heard elsewhere. He explained that while considering the horror stories relayed by his friends, he remembered, "*three quarters of the men at [the taxi] rank also got circumcised, and they would be saying that such such a person has been circumcised and such such a person has been circumcised. So I said if they did not die, why should I be the first person to die? So I said no, I will go and I will get circumcised.*" For him, having personal connections with several men who had been circumcised as adults convinced him that it was safe and advisable to get circumcised.

Similarly, encouragement from friends convinced Victor to get circumcised: "*I consulted my friends. So it looked like 70 percent of the friends I consulted had all been circumcised, so they convinced me by telling me that there was nothing to be afraid of and that it was good.*" For these respondents and others like them, knowing someone who had been circumcised at a clinic enabled them to overcome their fears and provided normative support for a decision to become circumcised. They convinced themselves that circumcision was a good option because others like them had made the same decision.

The quantitative survey data provide supportive evidence that first-hand encouragement was important not just among the in-depth interview respondents, but also in the full study sample. At the baseline, 19 percent of the full sample of respondents had heard of someone who had gotten circumcised at the study's partner clinic, most often, one of the respondent's friends. In the baseline survey, there was an association ($\chi^2 = 64$, p<0.001) between knowing someone who had gotten circumcised and hypothetical willingness to get circumcised. Even more important, as shown in Figure 2, those who reported at baseline that they had heard of someone getting circumcised at the partner clinic were more likely to have contemplated getting circumcised, more likely to have contacted the clinic for information on circumcision, and more likely to have obtained the circumcision surgery as of the follow-up survey one year later. All of the differences shown in Figure 2 are statistically significant at the $\alpha = 0.05$ level.

[Figure 2 about here.]

The associations shown in Figure 2, combined with the descriptions of decision-making processes in the in-depth interviews provide strong evidence for the role of social networks in uptake of medical male circumcision. The interview responses indicated that men, even those who expressed willingness, consulted with their peers to obtain additional information and to assess social norms about circumcision.

Social networks and perceived control

In addition to facilitating the construction and dissemination of social norms regarding circumcision, social networks also influenced respondents' perceived control or perceived ability to obtain a circumcision (Box C in Figure 1). Cost was one of the most commonly mentioned structural barriers to circumcision in this study, and included the fee for the procedure and the

opportunity cost of time away from work for the healing period. We found that social networks influenced respondents' perceived control in two ways. First, as discussed above, peers were a source of information on the circumcision process, including costs and quality of service provision. In that way, social networks directly affected how feasible it seemed to obtain the surgery. Second, through their stories about the process, social network members influenced the salience of potential barriers to getting circumcised. The level of encouragement or discouragement from social networks altered respondents' motivation to overcome structural barriers to undergoing the procedure and thereby indirectly affected the perceived importance of those constraints. These findings are consistent with previous studies that have claimed that the importance of cost as a barrier to obtaining a circumcision varied by the level of normative support for the procedure (Westercamp & Bailey, 2007).

Many respondents relied on their social networks to learn detailed information about the circumcision procedure, and what they were told affected their perceived control. Juma said, "*I* asked them [his friends] about how much they thought I would be required to pay at the hospital, some said two thousand kwacha and others said one thousand five hundred kwacha." Juma considered this input about the cost of the procedure when deciding whether he wanted to get circumcised. Gift talked to his friends about circumcision and the information they conveyed about the process discouraged him from getting the surgery: "What terrified me most was what they were saying that one can stay even for a month before the wound can completely get healed." For Juma and Gift, as well as many others, the details about circumcision obtained from their social networks were used to assess the feasibility of getting circumcised. In that way, information from their social networks, whether accurate or not, directly influenced their perceived control over the circumcision decision.

The second avenue for the influence of social networks on perceived control was more indirect. The level of encouragement or discouragement from social networks influenced respondents' motivation to overcome structural barriers and thereby affected the perceived importance of those barriers. This indirect effect is best illustrated with a pair of examples.

The details of Francis' experience were instructive. For Francis, perceived control was undermined by fear instilled by social network rumors of pain and potential damage. At first, Francis had decided that circumcision was a good option for him and went to the study partner clinic to get circumcised. He arrived at the clinic during a lunch break and was told to return later in the afternoon. After leaving the clinic he discussed his plans with a group of friends who reacted with cautionary tales emphasizing the time out of work for the healing period. He explained, "so when I came here and explained that to my friends they said, 'it's not like when they have just done that [surgery] then the same day you will be walking here and there, to and from... No, you stay while laying down for one week.' So that's when I started thinking deeply... I depend on piece works to eat. Now, what will I do if am going to spend a week laying down?" The reaction from his peers caused Francis to focus on the recovery period and to rethink his intentions. In other words, the feedback from his social network caused Francis to re-evaluate his perceived control and to determine that the opportunity costs were too great. He did not make returning to the clinic and priority and he had not gotten circumcised by the time of the followup survey one year later.

Jeremiah's experience provides a contrasting example. Initially he had reservations about circumcision, but after watching his friend go through the process he became highly motivated to get circumcised. Because his confidence had been boosted by his friend's experience, Jeremiah decided to get circumcised at the same clinic his friend had attended rather than the study's

partner clinic, even though that meant that he would have to pay full price for the procedure. While Jeremiah was wealthier than the average man in our sample, he still had to sacrifice to cover the cost of the circumcision. He explained that he used money usually allocated to his lunch and his transport to cover the cost of his circumcision: "*Like lunch money*. *I had problems with lunch because I could not take money allocated for household use to be buying lunch; that would be bringing in more problems. Sometimes I could also go to work on foot because some of the money I used could also be used for transport.*" Like most men in the study, Jeremiah did not want to use money normally allotted for household consumption for his circumcision, but nonetheless he found a way to pay for the procedure. The encouragement he received from his social network persuaded him to make an effort to reduce the cost barrier to circumcision and increase his control over the behavioral choice. In sum, interactions with his peers affected how he reacted to a potential obstacle and thereby affected his perceived control.

Feedback from social networks, combined with men's own attitudes about medical circumcision, affected how they evaluated the cost of the procedure and how much they were willing to prioritize circumcision over other resource needs. Perceived control depended not only on an objective assessment of the respondent's resources, but also on whether respondents thought that their social networks would support prioritizing the use of resources for circumcision.

Social network consultation takes time

A final important result of the consultation process was that men required time to assimilate and contemplate all available information regarding circumcision and eventually determine whether circumcision was a good choice for them. Opting to get circumcised as an

adult is an emotion-laden decision. Also, respondents often needed time to reconcile conflicting information received from various social network members. Sometimes inconclusive results of consultations led to never forming a final behavioral intention and never getting circumcised. Overall, consultation was a time consuming process.

Juma described a long consultation process during which he sought information and advice from a variety of sources. When he first heard about circumcision for HIV prevention he turned to his friends for more information. His friends responded with scary rumors about botched circumcisions, but Juma was not satisfied with their level of knowledge so he continued searching for more information. He explained, "*And then I asked another person, then another one, and again another one. Then I said, I think the other one was telling me lies. Then I said this one is telling the truth, just like this one is also saying the truth. I said to myself that I was still going to get the real answer.*" Juma had to invest considerable effort in combing his networks for information that he deemed trustworthy.

Likewise, Solomon needed time to contemplate the practice of circumcision and consult his social network before forming his behavioral intention. When asked what came to his mind when he received the voucher for a circumcision, Solomon responded, "*since it was [my] first time [learning about circumcision], it was something very confusing to me...*" When consulting his social network, Solomon heard rumors about failed healing processes resulting in the loss of the penis. He also heard that men who are circumcised have increased sexual pleasure. Overall, he explained that he was unable to obtain adequate explanations from his social networks so that he could weigh all of the potential risks and benefits of the procedure. He said, "We people should know what the real truth is, the one that happens... So that we should be encouraged or not... We lack counseling so that we may know what the real truth is." After investing time in consulting his social networks, Solomon felt normative ambivalence and a lack of motivation for circumcision, which ultimately resulted in behavioral inertia.

Thomas, who got circumcised, remarked that he had wanted a circumcision for 1.5 years before the arrival of the research team and explained his period of inaction by saying, "when you people are doing research there is need for you to tell the people things 'zogwira mtima' [that touch their heart]. We people have difficultly to understand what we knew a long time ago to be changed within a matter of a day; it is something difficult." Later he continued, "Because when you are putting into the mind of a person something that you are saying is good, you have to oppose something that he knows before you tell him, you see that? Or what their parents told them, yeah." Thomas highlighted the fact that when adult male medical circumcision was introduced as an HIV prevention strategy, circumcision suddenly became a relevant option for men who previously thought that circumcision did not apply to them. The new messages conflicted with prior norms regarding circumcision, learned from older generations, as a practice that was conducted only on young Yao or Muslim boys. He explained that it takes time for people to collectively reconstruct social norms and evaluate a new behavioral practice.

In fact, the distinguishing feature of most of the respondents who did undergo circumcision was that they had already taken the time to contemplate the pros and cons of circumcision and consult their social networks before the arrival of the research team. They had already made the decision that they wanted to be circumcised. Out of the 29 interview respondents who were circumcised during the research project, 21 of them stated clearly that they knew before their first survey interview that they wanted a circumcision. When the research team arrived, therefore, and offered a substantial discount on the price of circumcision, many of them were eager to take advantage of the opportunity.

Steven, who got circumcised, hypothesized that others did not undergo the procedure because they needed time to digest the new information. He said,

> "Like for me I feel that the goodness was that that thing found me when I already had the thought, you see? Yeah, so when the person [researcher] came and gave me the voucher, it was like he was just adding onto the thought that I already had. But let's suppose the way you came, you have just come and you have found me in other thoughts and you are introducing another topic that is not in my head." A bit later he continued, "That's why maybe those people did not go. But I see that we people who went maybe we already had those thoughts, yeah."

In sum, it took time to decide whether getting circumcised it was a good choice. The majority of respondents who got circumcised were those who had decided before the arrival of the research team that they wanted a circumcision. Their responses reinforce the finding that men needed time to shape their own beliefs and their perceptions of others' beliefs about the practice. Consultation with social networks played an important role in the process of forming behavioral intentions. Those with genuine interest in circumcision invested time in evaluating social norms and control before making a decision about the procedure.

5 Discussion

The results described in this paper come from in-depth interviews with a sub-sample of men in a survey experiment designed to investigate prospects for scaling-up male circumcision for HIV prevention in urban Malawi. The longitudinal and experimental design of this study allowed us to measure actual uptake of adult male circumcision, rather than hypothetical acceptability. The quantitative results indicate that while approximately half of the survey respondents reported in

the baseline survey that they would be willing to get circumcised, only 3 percent of them actually did get circumcised in the year after the baseline survey.

The in-depth interviews provide insights that help to explain the gap between expressed attitudes and actions. We found, first, that about half of the respondents expressed no real interest in circumcision, corresponding with the fifty percent who reported in the quantitative survey that they would not be willing to get circumcised. Among the other half of the respondents, those who did not get circumcised continued to express genuine interest in undergoing circumcision. Many of them demonstrated their motivations by describing the flaws in other HIV prevention methods. These men had positive attitudes about circumcision, but a positive attitude was not a good indicator of behavioral intentions.

Even among those with genuine interest, very few managed to get the circumcisions that they claimed they were willing to undergo. Respondents explained that medical male circumcision was a relatively new and uncommon practice in Malawi. As such, many men thought of circumcision as a practice of others, and had never contemplated the possibility of being circumcised themselves. Men needed time to consult with their social networks to gather additional information from peers and to collectively evaluate the practice. In the language of the theory of reasoned action (Fishbein & Ajzen, 2010), respondents consulted with their social networks to assess norms and control before ultimately determining their behavioral intentions. This meant that social networks influenced uptake of circumcision. Respondents who knew someone who had been circumcised at the study's partner clinic were significantly more likely to contemplate getting circumcised, to take action to learn more information about circumcision, and to actually get the circumcision surgery. On the other hand, it was difficult to prioritize

circumcision enough to overcome fears and structural barriers when the practice was questioned or discouraged in social network exchange.

Existing literature on health behavior innovations indicates that social networks play an important role in the dissemination of information, the joint evaluation of new ideas and behaviors, and the assertion of social pressures that encourage or discourage particular actions (Bongaarts & Watkins, 1996; Montgomery & Casterline, 1996; Agadjanian, 2001; Behrman, Kohler, & Watkins, 2002; Avogo & Agadjanian, 2008; Godlonton & Thornton, 2012; Oster and Thornton, 2012). As has been noted in studies of new contraceptive techniques (Rutenberg and Watkins, 1997), our findings indicate that the circumcision advice of "experts," such as youth advisors, clinic personnel, and the research team, was valued and seriously considered, but it was not a substitute for informal conversations with peers. Social networks were used to obtain information on the circumcision process from people whose experience and social circumstances were familiar, and who were perceived as less likely to be promoting an agenda.

Also consistent with existing studies (Agadjanian, 2002), respondents' social networks were gendered, meaning that men mostly interacted with other men, and this influenced the type of information that was exchanged. Stories conveyed during the in-depth interviews indicated that information shared among male peers was often weighted heavily toward scary rumors about circumcisions resulting in disfiguration or amputation of the penis, playing off of fears of physically diminished masculinity. Although recognized as factually suspect, the rumors evoked an emotional response from many men that prevented them from making circumcision a priority. On the other hand, some respondents received convincing encouragement from male peers who had already undergone circumcision and who shared first-hand knowledge about the process and

provided normative support for the procedure. Some respondents used the encouragement from peers as motivation to overcome both their fears and the structural barriers.

It is important to note that the decision-making process and the role of social networks described by these Malawian men may be specific to the context where adult male medical circumcision is relatively rare. National efforts to promote circumcision have been limited thus far. In other settings, male circumcision for HIV prevention has been introduced with extensive community mobilization efforts and campaigns. For example, in the township of Orange Farm, South Africa, an intensive pilot intervention introduced a center for medical male circumcision and within two years almost 40 percent of previously uncircumcised men over the age of 15 had undergone circumcision (Lissouba et al., 2010). In Kenya, more than 230,000 circumcisions have been performed in target communities since the launch of a national program in late 2008 (Herman-Roloff et al., 2011).

Large-scale community mobilization campaigns likely alter the availability of information on circumcision and the contents of social network exchange about the practice. Expert advice on the process and benefits of circumcision becomes readily accessible. Perhaps even more important, after the initial rollout in the target sites, men would have easy access to first-hand accounts of medical circumcision from their peers. With widespread uptake of circumcision, it is probable that the social norms regarding the meaning and value of circumcision would begin to emphasize its benefits and broad appeal. Men in our sample were discouraged from investing resources in circumcision because information from their social networks instilled doubt as to whether it was a good choice. In the sites where there has been rapid uptake of circumcision, a shared belief in the benefits of the practice would make it easier for men to prioritize the investment of time and resources in the procedure.

In addition to recognizing that the setting for this study is a low-uptake environment, it is also important to note that the results are representative of young men in urban Malawi, but they cannot be generalized to more rural areas of the country. As urban dwellers, these men have more access to healthcare services, more access to media, and higher educational attainment than their rural counterparts. In addition, they live in more socially heterogeneous communities and they may be more removed from the customs and influence of their elders. Further research on decision-making regarding adult male medical circumcision in a variety of settings is needed.

The findings from the qualitative component of this study highlight the importance of social networks in the uptake of medical male circumcision. Future efforts to scale-up provision of circumcision for HIV prevention should be aware that most men will require time to collect input from their social networks in addition to information from health experts before deciding whether they want to undergo the surgery. Moreover, social networks could be used as a tool of information dissemination, especially by encouraging men who have undergone the surgery to share their experiences with their peers.

We find that there is genuine interest in circumcision for HIV prevention among a substantial portion of the participants in this study in urban Malawi. Successful interventions will need to tap into this latent demand. If the supply of circumcision services can be expanded and uptake of circumcision increased, shifting social norms regarding the practice may help reduce many of the stumbling blocks in the decision-making process, including the structural barriers that now prevent men with moderate levels of interest in circumcision from choosing to undergo the surgery.

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		Mean (std. deviation)
Demographics:	Age	25.39 (5.25)
	Years of education	11.08 (2.58)
<u>Ethnicity:</u>	Chewa	0.266
	Lomwe	0.172
	Ngoni	0.328
	Tumbuka	0.109
	Yao	0.031
	Other	0.094
Religion:	Christian	1
Wealth:	Median monthly expenditures (USD)	120.0 (93.36)
Health and	Ever had sex	0.921
Sexual Behavior:	Number of sexual partners in past year	1.794 (2.63)
	Ever used a condom	0.790
	Ever been tested for HIV	0.484
Circumcision:	Believes circumcised men have lower risk of HIV	0.578
	Heard of someone circumcised at partner clinic	0.266
	Willing to be circumcised	0.609
Sample size (n)		64

Table 1: Characteristics of the Qualitative Interview Sample



Figure 1: Theory of Reasoned Action (Fishbein & Ajzen, 2010)

