ORIGINAL RESEARCH ARTICLE

Reasons for Intrauterine Device Use, Discontinuation and Non-Use in Malawi: A Qualitative Study of Women and their Partners

Amy G. Bryant[1], Gloria Hamela[2], Ann Gottert[3], Gretchen S. Stuart[1] and Gift Kamanga[2,4],*

Department of Obstetrics and Gynecology, University of North Carolina at Chapel Hill, Chapel Hill, NC[1]; UNC Project, Lilongwe, Malawi[2], Department of Health Behavior and Health Sciences, Gillings School of Public Health University of North Carolina at Chapel Hill Chapel Hill, NC[3]; Department of Health Policy and Management Gillings School of Public Health University of North Carolina at Chapel Hill Chapel Hill, NC[4].

For Correspondence: E-mail: amy_bryant@med.unc.edu*; Phone: +(919) 843-5633

Abstract

The copper intrauterine device (IUD) is a safe, long-acting, and effective method of contraception that is under-utilized in many countries, including Malawi. A unique cohort of women who had enrolled in a trial of postpartum IUD use one year earlier gave insights into reasons for using, discontinuing, or not using the IUD. We conducted in-depth interviews with 18 women one year after they participated in a pilot study of a randomized controlled trial of postpartum IUD insertion, and 10 of their male partners. Women and their partners expressed a strong desire for family planning, and perceived numerous benefits of the IUD. However, fear of the IUD was common among successful users and non-users alike. This fear arose from rumours from friends and neighbors who were non-users. How women and their partners responded to this fear affected IUD adoption and continuation. Key themes included (1) Trust in information received from health care providers versus rumours from community members; (2) Partner involvement in IUD decision-making; and (3) Experience with side effects from short-term hormonal contraceptive methods. Broad community education about the IUD's benefits and safety, and proactive counseling to address couples' specific fears, may be needed to increase uptake of the method. *(Afr J Reprod Health 2015; 19[4]: 50-57).*

Keywords: Intrauterine Device, IUD, Africa, Malawi, Sub-Saharan Africa, Qualitative Research

Résumé

Le dispositif intra-utérin de cuivre (DIU) est une méthode de contraception efficace de longue durée d'action non dangereuse, qui est sous-utilisée dans de nombreux pays, dont le Malawi. Une cohorte unique de femmes qui étaient inscrites dans un procès de l'utilisation du DIU post-partum un an plus tôt ont donné un aperçu de raisons pour l'utilisation, l'arrêt, ou de ne pas utiliser le DIU. Nous avons mené des entrevues en profondeur auprès des 18 femmes un an après leur participation à une étude pilote d'un essai contrôlé randomisé d'insertion d'un DIU post-partum, et 10 de leurs partenaires masculins. Les femmes et leurs partenaires ont exprimé un fort désir pour la planification familiale, et de nombreux avantages perçus du DIU. Cependant, la peur du DIU était courante chez les utilisateurs qui ont eu de succès ainsi que chez les non-utilisateurs. Cette crainte provenait de rumeurs de la part des 'amis et des voisins qui étaient des non-utilisateurs. Comment les femmes et leurs partenaires ont répondu à cette peur a affecté l'adoption et le maintien d'un DIU. Les principaux thèmes inclus (1) La confiance dans les informations reçues des fournisseurs de soins de santé par rapport aux rumeurs de membres de la communauté; (2) Participation des partenaires dans la prise de décision du DIU; et (3) L'expérience des effets secondaires de méthodes contraceptives hormonales à court terme. Une sensibilisation généralisée dans la communauté sur les avantages des DIU et la sécurité, et des orientations proactives pour répondre aux craintes spécifiques des couples, peuvent être nécessaires pour augmenter l'intérêt porté à la méthode *(Afr J Reprod Health 2015; 19[4]: 50-57).*

Mots-clés: dispositif intra-utérin, DIU, Afrique, Malawi, Afrique sub-saharienne, recherche qualitative.

Introduction

In Malawi, approximately 41% of pregnancies are unintended[1,2]. The copper T380A intrauterine device (IUD) is one of the most effective contraceptive methods available[3]. Promoting this highly effective, safe method of contraception has the potential to decrease the rate of unintended pregnancies, unsafe abortion[4,5], and maternal mortality[6,7]. The IUD is available in Malawi free of charge through the Ministry of Health, but only 0.8% of Malawian women currently use it. Increasing uptake and continuation of the IUD in Malawi requires understanding the factors that influence this use[8]. Evidence from other Sub-Saharan African

countries suggests that factors affecting method choice include individuals' knowledge and beliefs as well as interpersonal, cultural and contextual influences[9,10]. While conducting a randomized controlled trial of postpartum IUD insertion in Lilongwe, Malawi[11] our research team recognized that many women declined to have an IUD placed, despite initially planning to receive one. We conducted a qualitative study to examine in-depth the factors associated with IUD use, discontinuation, and non-use among the women enrolled in the randomized trial one year earlier, and their male partners.

Material and methods

This was a qualitative study of women who had participated in a study of postpartum IUD insertion one year prior, and their partners. We obtained institutional review board approval from both the University of North Carolina and the Malawi National Health Sciences Research Committee. Written informed consent was obtained from each participant. Participants received reimbursement for travel.

Women were recruited for the primary study at the prenatal clinic of the Bwaila Maternity Hospital in Lilongwe, Malawi from October 2010 to February 2011. Nurse educators involved with the study educated groups of women attending prenatal care about the IUD. During the session, the study nurse showed models of the IUD, described the insertion process, and explained the benefits of the IUD. Women were encouraged to ask questions. No men attended these initial sessions. Women expressing interest in using the IUD were invited to learn about the postpartum IUD study. The study nurse reviewed the consent with each woman individually. A few women brought their husbands to the clinic to learn more about the IUD and the study.

Eligibility criteria for the primary study included having no history of cesarean or medical contraindication to using the IUD. Post-delivery eligibility criteria included having an uncomplicated vaginal delivery and no evidence of infection. If post-delivery eligibility criteria were met, the woman was randomized to receive the IUD either immediately postpartum, or at 6 weeks postpartum. Initially 115 women enrolled in the study and 49 were eligible to be randomized, but only 30 women received the IUD as part of the study protocol; the remainder either avoided or declined to have the IUD placed[11]. For this qualitative study, all women who gave permission to be contacted after the study were eligible.

We used criterion-based sampling of women from the primary study to select 3 subgroups of women for this study: women who still had the IUD ("IUD user," n=9), women who had the IUD removed, ("IUD discontinuer," n=3), and women who never received the IUD ("IUD non-user," n=7). Women participated in in-depth interviews on their experiences, including the specific reasons for continuing, discontinuing, or not using the IUD, fertility intentions, and partner role in decision-making. We conducted similar in-depth interviews with male partners of the women enrolled in this qualitative study. We interviewed 4 partners of IUD users, 2 partners of IUD discontinuers, and 4 partners of IUD non-users.

Interviews were conducted in private offices by three experienced qualitative interviewers fluent in both English and Chichewa, the local language. All interviews were audiotaped, translated and transcribed. Each interview was reviewed for accuracy of translation and transcription by one author (GH) who is fluent in both Chichewa and English. A codebook including both topical and emergent codes was developed. Data was coded using Atlas.ti.7.1 (Scientific Software Development, Berlin, Germany) with cross-coding of four interviews to ensure consistency and establish validity between two analysts (AG and AB). Disagreements between coders were resolved through discussion. Recurrent themes were identified based on the initial codes. The 28 total interviews with men and women provided enough information for thematic saturation on most topics.

Results

From February to June 2012, 18 women and 10 partners were contacted and agreed to participate in this study. Women's ages ranged from 22 to 40 years old (mean 28). Most women were not employed outside the home (n=15, 83%), and were married (n=17, 94%). The mean number of children was 2.6. Most wanted one more child in several years; a few wanted no more children. Most women (17 of 18) had used a method of contraception in the past, mostly the injection or oral contraceptive pills. No

demographic information was collected on the men who were interviewed, other than their partners' information.

IUD decision-making

The process of deciding to use the IUD was similar among all participants. Few women had heard about the IUD before they learned about it during prenatal care. Most women who expressed interest in using the method consulted with their partners and reviewed the consent form with them. Partners tended to make the final decision about IUD use. All of the women and many of the men then seemed to hear more about the IUD in the community.

Overall, men were very involved in decisions about family planning. Men either solely decided how many more children to have, or it was done jointly. There was high concordance between women and partners about limiting family size. Both partners and women mentioned wanting to protect the children they have. Men often stressed low financial resources as a reason for spacing or stopping childbearing.

Almost all women mentioned multiple benefits of the IUD, which included being long-lasting, reversible, and convenient. Women often mentioned that the lack of hormones in the IUD would lead to fewer side effects than hormonal methods and allow them to have natural periods. In particular, women who had experienced continuous menses on the injection were pleased with the ability to have regular menses with the IUD. Men also mentioned these benefits, particularly if their partner had previously experienced side effects from other methods.

Regardless of whether they were using the IUD, a pervasive theme that affected decision-making was fear. Almost all of the women expressed specific fears about the IUD. Fears were mostly instilled by rumors they heard about the IUD from relatives or friends who were non-users. The following two users expressed this:

> *IUD user, age 30, mother of 2:* The beliefs about the *loop** that the people in my area have are that, the thing looks to be long, so they feel it can hurt them, and again what they hear about how it is inserted, they take it and insert in here [pointing at genitalia] so they can hurt you. So I can say maybe the fear is in the two things…
>
> Interviewer: Have you ever discussed with anyone regarding any family planning method?
>
> IUD user, age 40, mother of 5: Yes, like for me when I had the loop inserted, I was able to tell my friends that there is a family planning method; but some were still commenting that hey, we fear that thing. So I was still encouraging them that no, it just looks like that but when you have it inserted in you, you don't feel heavy or experience any change in your body, you just stay the way you used to be.
>
> Interviewer: What is it that they said made them fear?
>
> IUD user: They said it is fearful to have that thing in your body.
>
> [* *Loop*=IUD. We keep this vernacular term in the quotations cited in this report.

The most common rumors were that the IUD can leave the uterus, migrate to the heart and cause death, and that the IUD impedes sex.

> *IUD non-user, age 39, mother of 4:* …people say that they put it in the genitals, here, yah? so maybe it will pass right through in the abdomen… so how do you remove it? These were my thoughts… and the husband will want to pass there also [during sexual intercourse] so is that possible? Can it not be pushed up and then it goes somewhere else?

A few women and/or their partners believed that the insertion procedure involved an operation. Fear was often reinforced by what was read in the consent form for the original study, which contained basic information on rare risks of IUD insertion, including uterine perforation, expulsion, and pregnancy. Reasons identified for using, discontinuing, or not using the IUD

We identified three key themes to explain the reasons women chose to use, discontinue, or decline the IUD. The themes revolved around their response to fear and rumors related to the IUD.

Theme 1: ***Trust in information received from health care providers versus rumors from community members.***

Women who chose to use the IUD and were still using it tended to trust and engage with their health care providers more than non-users. Doing so appeared to allow them to receive more complete information about the IUD and counteract rumors. In particular, IUD users described hearing specific information about how the IUD works, seeing a sample IUD, and understanding insertion. Many IUD users wanted to tell their peers about the IUD to help correct misconceptions. For example, they stressed that they weren't experiencing any problems with the IUD, and that the insertion process is quick and easy.

In contrast, non-users reported believing the negative rumors they heard about the IUD, and appeared to avoid further contact with providers. Similarly, the three women who had the IUD removed heard rumors post-insertion, and did not consult health care providers about their concerns. Initially in the interviews, two of these three women described health reasons (vaginal ulcers; abdominal pain) for removing the IUD. However their partners expressed that rumors were the main reason for removal. None of the women interviewed described seeking out information from IUD users (Table 1).

Theme 2: Partner involvement in IUD decision-making

Among IUD users, all except one woman stated that their partners were involved in and supportive of using the IUD. Partners encouraged wives to seek more information from their health care provider when they expressed fear about the IUD. Two partners of IUD users had proactively gone to the health center with their wives to seek more information about the IUD.

When partners were not as involved, fear appeared to drive IUD non-use. Two non-users did not ask their partners. The partners of two non-users asked them to avoid the insertion after reviewing the consent form. For three other non-users, the woman stated that her partner told her not to have it inserted, but the partner reported she was fearful of insertion, and therefore did not have it placed even though he had given permission. None of these partners accompanied the woman to any of her visits regarding IUD insertion. A number of partners regretted not being more involved, saying that they should have sought more information at the health center (Table 2).

Theme 3: ***Experience with side effects from short-term hormonal contraceptive methods*****.**

Another common theme that emerged among IUD users was that they had experienced side effects in the past using short-term hormonal contraceptive methods. Common problems included leg swelling, continuous menses, and weight loss. Partners also expressed a concern about previous side effects that their wives had experienced, with many wanting to "find a solution." Such problems led many women and couples to highly value the lack of hormones in the IUD, which appeared to outweigh their fears. In contrast, non-users and discontinuers had not experienced as many problems with previous contraceptive methods. For them, the perceived benefits of the IUD did not appear to outweigh their fear of the method (Table 3).

Discussion

In this study we identified three major themes that either facilitated or discouraged IUD use: trusting in information given by health care providers versus believing rumors in the community, partner involvement in IUD decision-making, and having experienced side effects with previously-used short-term methods of contraception. Addressing all of these themes could lead to increased uptake of IUDs in Malawi.

For example, based on our findings, emphasizing the non-hormonal benefits of the IUD might allow the IUD appeal to a broader audience. Women who had experienced side effects with hormonal methods seemed more open to trying a new method. Women and their partners had a strong initial interest in the method, appreciating that it is long-acting, effective, hormone-free, and would preserve normal menses.

Unsurprisingly, we also found that partners are extremely important in decisions regarding family planning. Most women still using the IUD after one year had strong partner support for using the method. Our findings are consistent with prior research, which has shown that inter-spousal communication and joint decision-making regarding contraception increases use of modern family planning methods[12,13]. Engaging male partners in broader educational efforts to promote IUD use, such as mass media or

Table 1: Quotes Illustrating Trust in Information Received from Health Care Providers versus Rumors from Community Members

IUD user, age 26, mother of 2: The doctor, the nurse….they are ones who give the good counseling. They know everything! They explain the advantages of the thing… in well understood terms so much so that should you need to choose … they explain so well so that you should be satisfied! They talk of the very truth as opposed to what one had heard maybe outside - from other people.
Interviewer: Do you know of anyone who has used loop*? ***IUD user, age 27, mother of 1:*** I don't know of anyone. ***Interviewer*:** Before you chose loop as a method did you know that there was a method of loop? ***IUD user****:* Hearing, yes. Only hearing about it. But, the instrument that they use, it was that I had never seen it. And I saw it the time I was expecting when came for antenatal. ***Partner of same IUD user:*** I have discussed with my wife about this method, and she asked me, when she was told at the hospital after they explained to her …She explained to me about the advantages of loop and how we can follow it. When I listened to about the method, I agreed that she can go and start to follow that method until we have plans to have another child.
IUD user, age 40, mother of 5: People's thoughts are just many. Some think it can rush to the heart. But for me with the way I learned, we were actually explained by nurses. They told us that the loop has got its place; it stays where they place it. There is no way it can trespass and go to the heart. It stays where it has been put.
IUD non-user, age 29, mother of 4: It is because of the fear I read in the file, the consent form. ***Interviewer***: Did you ask the nurse what it meant? ***IUD non-user:*** Not at all! I did not even bother to come here again. ***Interviewer***: Okay, is there anyone who assisted you in your decision not to take part? ***IUD non-user****:* Yea, like the friends I explained to they told me never to use it. It rushes to the heart and again when you are menstruating you have to watchfully check it because it gets expelled. Some said it rushes to the heart and you die fast.

* *Loop*=IUD. We keep this vernacular term in the quotations cited in this report

community outreach initiatives, may facilitate uptake of the method[14]. Messages could also include testimony from male motivators[15] to emphasize that many couples use and trust the IUD. The third theme identified, trusting information received from health care providers versus believing rumors from community members, is the most challenging to address. Despite initial education from health care providers regarding the safety and benefits of the IUD, many participants chose to believe rumors they heard in the community. Other researchers have documented that fear of side effects based on rumors heard in the community is a major barrier to contraceptive use, particularly for the IUD[16-22].

Developing strategies to overcome the rumors and fear surrounding IUD use could likely lead to higher uptake. In contrast to the many women participants knew who used oral and injectable contraceptives, only a small number of participants in the study knew anyone who had used the IUD. Suspicion of new and unfamiliar health care interventions is common, and we found this to be true in our study. Addressing fears and rumors could lead to increased use and familiarity, allowing an intervention can become more acceptable to the population[23-26]. Health care providers could help promote IUD use by providing accurate information tailored to counteract rumors and misconceptions about the method. These messages could target potential IUD users who exhibit more trust in health care providers. Health care providers could also allay couples' fears through individualized encounters. Pro-active, follow-up counseling with couples could address specific concerns, adequately explain the risks of the IUD, and put risks into context[18]. Providing specific information about how and where the IUD is placed, and how it functions during sex may also help couples decide to use it. Strengths of this study include gaining insight into the experiences of women who had used the IUD, or had the opportunity to use the IUD, for a full year. Including partners' perspectives also enhances this study. We asked women and their partners not just about their intentions for family planning or IUD use, but about their actual experiences with the IUD. By asking about fertility intentions, experience with other methods, and the decision-making process, we gained a broad understanding of IUD use in this cohort.

Limitations of this study include the social desirability bias inherent in self-report of reproductive health information. We minimized this bias by having highly-trained Malawian staff conduct the interviews in private offices in the local language. We also chose to use in-depth individual interviews as opposed to focus group discussions. The group of women with the IUD removed was smaller than

Table 2: Quotes Illustrating Partner Involvement in IUD Decision-Making

IUD user, age 34, mother of 2: … My partner had a role. The role on the part of the choice of loop*, … After I had made a choice, like I have explained earlier on that for me to reach this decision, I had already discussed with my partner after consultation, we made a choice that we wanted this method. … And since then, my partner usually asks, "How are you feeling? What is happening?" …Also, he was happy with it because he consented to come to this clinic… For him to hear also the process of how loop works, so when he heard, he agreed to it, he accepted it.
Interviewer*:** How did she start explaining to you? ***Partner of IUD user, father of 2: She said "when I went to the clinic I have found a family planning method." So since we once used a family planning method before, she said I found a method. It seems it might help us better than the pills. Yea! Slowly we started discussing after she informed me. Actually there was a time when I escorted her to the clinic, that time I met a worker, one of you.
IUD non-user, age 26, mother of 2: Yea, so when I went home after my last antenatal visit, I told him that I have participated in a loop study at the antenatal, and I want to have the loop and he refused. I asked him why have you not allowed me? He did not respond at all. *[Later segment*] ***Interviewer**:* Alright, do you have any concerns about loop as a family planning method? ***IUD non-user:*** Of course the concerns are there. ***Interviewer*:** What concerns? ***IUD non-user:*** Concerns that…they say if you have it comes out. Another concern some say when you have loop it rushes to the heart and you die. Yea that is my concern; that if you have it inserted you might experience the same. ***Partner of same non-user:*** ***Interviewer**:* For what reasons was it not placed? ***Partner of non-user:*** It is because firstly she did not inform me earlier, secondly because she listened to friends that loop is dangerous; it made her not to have it. Her heart said aah, this is a bad method. ***Interviewer**:* What would have happened if she informed you in good time? ***Partner of non-user:*** Well, I would have asked from other people about the information regarding the method. You can ask nurses or doctors about the method. If they explain better that the method is good then one can choose it. But the lay people we just terrify one another yet the method might just be good. Yea, so because of lack of knowledge we call the method bad.
Interviewer: You told me earlier that when you were told about loop, because of other problems, you delivered at home, were there any other problems that made you not use loop?
IUD non-user, age 39, mother of 4: There were no other reasons, but after I told [my partner], he said, "Do not have it inserted, because this is something that you have never tried before and it might bring you problems and you will not be fine! You should just go and have any other method." Then I said, "Fine!"
Partner of same non-user: Eeh, so when she explained to me, I told her that, "You will choose the method that you will like best, as I have told you- because if I deny you, I would not be fair. In the future when you experience any problem whether getting ill or whatever, you will feel that it is because I had forced you…Then she said that her friends told her that, " This method, the thing is inserted, and [it] needs to be checked frequently! When you forget and the thing gets inside, they say that one can die! … and so …when she heard that a person can die, she was filled with fear.

Table 3: Quotes Illustrating Experience with Side Effects from Short-Term Hormonal Contraceptive Methods.

***IUD user, age 27, mother of 2*:** With the injection I had the problem of painful legs. So I said this time I should use family planning with loop*, to see what problems I have or maybe I cannot find any problems.
***IUD user, age 30, mother of 2*:** [With the injection] I was just having continuous menses and I felt it was going to give me a problem. It was better I go for loop because I heard that loop has no medicines. That is when I chose it because I heard it has no other medicines. I felt there wouldn't be a problem, no ill health, it cannot interact with breastfeeding, and the baby will be breastfeeding enough milk.
***Partner of an IUD user, father of 3*:** I would say that what I saw and why I chose the loop method was that she would not experience any problem, my wife, as opposed to what my friends meet … the wives of my friends [using other methods]…. My elder brother, his wife, there was a swelling in the uterus. So when she went to the hospital, she was told that, "the method you are using as a contraceptive is incompatible with your body." Eya, so after I had heard about it, we have been searching that, ha, the injection, or the pill…maybe the same would happen just like the swellings… yah it is possible. Maybe the loop method would be good, according to what they counseled.

anticipated and thematic saturation may not have been reached for reasons that women discontinued the IUD. However, we obtained valuable information from this sub-group that contributed to the overall analysis of the results. As with any qualitative study, our results may not be generalizable, but contribute to

a more in-depth understanding of IUD use in Malawi and other countries facing similar challenges.

Conclusion

Increasing copper IUD use in Malawi may require a multi-pronged effort. Specifically, our results suggest that widespread education that engages male partners and highlights the non-hormonal features of the copper IUD could be valuable. Additionally, targeting potential users who tend to trust health care providers with proactive, individualized counseling could be useful. These sessions could provide accurate information that specifically counteracts misconceptions widely-held in the community. Reaching a larger audience could help normalize IUD use, helping reduce its tendency to induce fear and rumors[27]. As more women adopt the IUD within communities, the presence of more satisfied users who can counteract rumors may be reassuring and enable more women to adopt the method.

Contribution of authors

Amy Bryant conceived the project and wrote the manuscript. Gloria Hamela, BSoc, MSc.[b] Contributed to the development of the interview guides, oversaw the qualitative interviews, and ensured quality of translation. Ann Gottert, PhD.[c] performed the qualitative analysis and contributed to the writing of the manuscript. Gretchen S. Stuart, MD, MPHTM[a] provided mentorship and guidance in the development of the project and contributed to the manuscript. Gift Kamanga, CO, MSc, DLSHTM[b, d]provided assistance in the development of the interview guides, training of the interviewers, and writing of the manuscript.

Acknowledgements

The authors would like to thank Jullita Malava, Patricia Wiyo, Cecilia Massa, Grace Phiri, and UNC Project for all of their contributions to this research study.

Competing Interests

None of the authors have competing interests to declare.

Funding

This project was completed with funding from an Anonymous Donor.

Reference

1. National Statistical Office (NSO) and ICF Macro. 2011. *Malawi Demographic and Health Survey 2010.* Zomba, Malawi, and Calverton, Maryland, USA: NSO and ICF Macro.
2. Family Planning Worldwide: 2008 Data Sheet. Population Reference Bureau, 2008. (Accessed November 23, 2009,at http://www.prb.org/Datafinder/Topic/Bar.aspx?sort= v&order=d&variable=154.)
3. Trussell J, ed. Contraceptive efficacy. In: Hatcher, RA, Trussell J, Nelson AL, Cates W, Stewart FH, Kowal D, editors. Contraceptive Technology 19th revised edition. New York: Ardent Media.2007.
4. Bertrand JT, Carolina Population Center. The EP, Knowles JC, Magnani RJ. Handbook of indicators for family planning program evaluation. Chapel Hill, N.C.: The EVALUATION Project, Carolina Population Center; 1994.
5. Blumenthal PD, Voedisch A, Gemzell-Danielsson K. Strategies to prevent unintended pregnancy: increasing use of long-acting reversible contraception. Hum Reprod Update 2011;17:121-37.
6. United Nations Population Fund: World Contraceptive Use 2007. at http://www.un.org/esa/population/publications/contraceptive2007/ contraceptive_ 2007_ table.pdf)
7. Malawi Demographic and Health Survey 2000. Zomba, Malawi, Calverton, Maryland, USA: National Statistics Office ORC Macro; 2001.
8. Bradley JE, Alam ME, Shabnam F, Beattie TS. Blood, men and tears: keeping IUDs in place in Bangladesh. Culture, health & sexuality 2009;11:543-58.
9. Konje JC, Oladini F, Otolorin EO, Ladipo OO. Factors determining the choice of contraceptive methods at the Family Planning Clinic, University College Hospital, Ibadan, Nigeria. Br J Fam Plann 1998;24:107-10.
10. Todd CS, Stibich MA, Laher F, et al. Influence of Culture on Contraceptive Utilization Among HIV-Positive Women in Brazil, Kenya, and South Africa. AIDS Behav 2010.
11. Bryant AG, Kamanga G, Stuart GS, Haddad LB, Meguid T, Mhango C. Immediate postpartum versus 6-week postpartum intrauterine device insertion: a feasibility study of a randomized controlled trial. African journal of reproductive health 2013;17:72-9.
12. Becker S. Couples and reproductive health: a review of couple studies. Studies in family planning 1996;27:291-306.
13. Sternberg P, Hubley J. Evaluating men's involvement as a strategy in sexual and reproductive health promotion. Health promotion international 2004;19:389-96.
14. Meekers D, Van Rossem R, Silva M, Koleros A. The reach and effect of radio communication campaigns on condom use in Malawi. Studies in family planning 2007;38:113-20.
15. Shattuck D, Kerner B, Gilles K, Hartmann M, Ng'ombe T, Guest G. Encouraging contraceptive uptake by motivating men to communicate about family planning: the Malawi Male Motivator project. American journal of public health 2011;101:1089-95.
16. The ACQUIRE Project. Revitalizing underutilized family planning methods: Using communications and

community engagement to stimulate demand for the IUD in Uganda. Acquiring Knowledge: The ACQUIRE Project/EngenderHealth; 2008.
17. Anderson FW, Mutchnick I, Kwawukume EY, et al. Who will be there when women deliver? Assuring retention of obstetric providers. Obstetrics and gynecology 2007;110:1012-6.
18. Diamond-Smith N, Campbell M, Madan S. Misinformation and fear of side-effects of family planning. Cult Health Sex 2012;14:421-33.
19. Melngailis I EM. Marketing and communication strategies for "revitalizing" the IUD. IUD Toolkit2006.
20. Morse JE, Rowen TS, Steinauer J, Byamugisha J, Kakaire O. A qualitative assessment of Ugandan women's perceptions and knowledge of contraception. International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics 2014;124:30-3.
21. Osei I, Birungi H, Addico G, Askew I, Gyapong JO. What happened to the IUD in Ghana? African journal of reproductive health 2005;9:76-91.
22. Pollack A, G P, J R. Intrauterine devices (IUDs) in developing countries: Assessing opportunities for expanding access and use. . Assessment prepared for the Hewlett Foundation Population Program; 2006.
23. Montgomery CM, Gafos M, Lees S, et al. Re-framing microbicide acceptability: findings from the MDP301 trial. Cult Health Sex 2010;12:649-62.
24. Sundari Ravindran TK, Berer M, Cottingham J, World Health Organization. Beyond acceptability : users' perspectives on contraception. London: Reproductive Health Matters; 1997.
25. Sullivan TM, Bertrand JT, Rice J, Shelton JD. Skewed contraceptive method mix: why it happens, why it matters. Journal of biosocial science 2006;38:501-21.
26. Nalwadda G, Mirembe F, Byamugisha J, Faxelid E. Persistent high fertility in Uganda: young people recount obstacles and enabling factors to use of contraceptives. BMC public health 2010;10:530.
27. Paz Soldan VA. How family planning ideas are spread within social groups in rural Malawi. Studies in family planning 2004;35:275-90