Beyond knowledge acquisition: multilevel factors influencing family planning utilization among women in conservative communities in Rural Burundi

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Abstract

Background

With a fertility rate of 5.5 children per woman, Burundi has been ranked as fourth highest country with the highest fertility rate in the world. Family planning is known to allow couples to achieve the desired family size, appropriate space birth and the limitation of pregnancies. Also, family planning can contribute to mitigating some health issues such as unintended pregnancies and abortions all of which, are often associated with multi-parity. In conservative community in rural Burundi, knowledge on family planning is high and such services are free yet utilisation is low. Employing a mixed methods, this study first quantifies contraceptive prevalence and second, explore the contextual multilevel factors associated with low family planning utilisation

Methods

An explanatory sequential mixed study was conducted. Five hundred and thirty women in union were interviewed using structured and pre-tested questionnaire. Next, 11 focus group discussions were held with community members (n=132). The study was conducted in eighteen collines of two health districts of Vyanda and Rumonge in provinces of Bururi and Rumonge respectively. Quantitative data was analysed with SPSS and qualitative data was coded and deductive thematic methods were applied to find themes and codes.

Results

The overall contraceptive prevalence was 22.6%. Injectables (40%), Implants (24.6%), Male condom (10.8%) and pills (6.2%) were the major contraceptive methods utilized by study participants.

Natural contraceptive methods were used by 13.8% of women interviewed.

The reasons for not using modern contraceptive methods were side effects (51%), perceived postpartum (18.8%), religious beliefs (12.9%), partner's opposition (8.4%), partner absenteeism (6.4%) and lack of awareness (2.5%). The qualitative component identified fear of side effects, religious beliefs, cultural barriers, spousal communication gap and refusal of family planning services by health practitioners as factors.

Conclusion

The study suggests that low uptake of family planning can be attributed to perceived or experienced side effects as well as deeply rooted negative beliefs which are reinforced by religious beliefs. Men and religious leaders' involvement in family planning initiatives can positively impact behaviour change and increase family planning acceptance.

Keywords: Family Planning, Contraception, barriers, perceptions, rural Burundi, sub-Saharan Africa

Plain English Summary

In the context of rural Burundi, community members agree that large family are difficult to sustain but contraception coverage remains consistently low. This study explored the factors behind this low utilisation of family planning in two health districts located in Vyanda and Rumonge communes of Burundi. The findings suggest that fear of side effects is the main reason of family planning non-utilization or discontinuation. The culture and religious beliefs also favour large family size and among men, this is conceived as a sign of wealth, power and respect. Lack of spousal communication and unequal gender relations in household also impedes women from contributing decisions on family planning. Therefore, the onus lies on men, whom, have limited understanding of how family planning works to make final decision on initiation.

In improving coverage of family planning in these communities, first, the health system, which serves a primary contact, should be capacitated to provide quality, timely and people-driven family planning services to those who need it. At the community level, use of community health workers to deliver family planning services could significantly increase uptake. Men and religious leaders' involvement in promoting family planning use can contribute to reducing the impact of cultural and religious barriers, increasing uptake to desired levels.

Background

Burundi, a small, landlocked country in East Africa is a home to 11,175,378 individuals [1]. The population density is estimated at 435 people per square kilometre thereby, making Burundi second most populated African nation. [1] Despite the scarcity of cultivable land, 87% of the rural population depend solely on subsistence farming [2]. With a fertility rate of 5.5 children to a woman, Burundi has been classified as among countries with the highest fertility, placing just fourth after Niger, Angola and Mali [3]. High fertility rate has been identified as a major contributor to poor health outcomes such as increased maternal and child morbidity and mortality. Consistently, previous studies have suggested that grand multiparity (parity ≥ 5) is associated with adverse pregnancy outcomes such as caesarean delivery, foetal macrosomia, diabetes mellitus and pregnancy induced hypertension. [4]. Additionally, Hendrik et.al (2014) found that short birth intervals negatively affect perinatal, neonatal and child health by increasing the incidence of preterm birth, low birth weight and perinatal death. [5]

On the other hand, contraceptive use prevents pregnancies and associated risks of miscarriage, stillbirth and postpartum haemorrhage among others [6]. Research suggests that preventing births in mothers with five or more children could reduce maternal deaths by 58% and family planning could prevent around 272,000 maternal deaths in the world every year [7]. Recent evidence suggests that family size could also be a determinant to child nutritional status, morbidity and mortality [8].

Moreover, socially, contraceptive use among women is an indicator for autonomy which is also accomplishment of fundamental human rights of decisions on how to use their bodies [9] and in fulfilment of sustainable development goals 3 [10].

Despite that modern contraceptive methods have shown to be effective in spacing births and avoiding unintended pregnancies, its low uptake is still a concern in many parts of the developing world particularly in Sub-Saharan Africa. 21% percent of the 214 million women of childbearing age in developing countries who would like to avoid pregnancy but are not using any modern contraceptive method reside in Sub-Saharan Africa [7]. According to the DHS, only 23% of women in Burundi living with a partner and aged between 15-49 years use modern contraceptive methods of which 30% of these have an unmet need of family planning [3]. Although 97% have comprehensive knowledge on family planning, 40% of women using contraceptives in the last five years discontinued with 33% of women citing side effects as reasons for discontinuation [3].

This finding is consistent with other studies conducted in Sub-Saharan Africa and South Asia. A study conducted in Bangladesh highlights that 47% of women who discontinued oral contraception use reported that the experience of side effects is the main reason of discontinuation [11]. Another study by Mrwebi et al in South Africa has reported on early removal of the implants, owing it to side effects [12].

While Burundi is one of the countries with the least contraceptive prevalence, little research has been conducted from community's perspective to understand the factors driving utilisation especially in communities (collines) with conservative traditional values. Little is known about how the sociocultural space facilitates or hinders the utilisation and continuation of family planning in the context of Burundi.

In this study, we investigate the factors of FP utilisation using an explanatory sequential mixed methods study. Through acquisition of quantitative and qualitative information, we sought to bring an in-depth comprehension of this complexity in this rural conservative setting.

Methods

Study Design

This study employed an explanatory sequential mixed design commencing with quantitative information on a mass scale then using focus group discussions (qualitative methods), we explored and described patterns/relationships that emerged from the quantitative strand. To allow comparison with national figures, we adopted and adapted quantitative questionnaires from the DHS to understand contraceptive prevalence disaggregated by background characteristics. Questionnaires were deployed via an electronic system and administered by appointed enumerators and teams. Due procedures to ensure respondents' rights and privacy were respected.

Data from quantitative phase was analysed and those interesting relationships were further explored using focus-group discussions. These groups comprised of community members, opinion and

religious leaders. Although questions had been preconceived, it was general, and the direction of discussions were driven by study participants. An experienced and trained moderator was appointed and ensured that all respondents were given equal opportunity to speak and their views were respected.

Study Area

The study was conducted in rural districts of Bururi and Rumonge provinces located in South of Burundi, East Africa. Specifically, the study was conducted in 18 collines (districts) of the Vyanda and Rumonge commune (regions). While collines in the Vyanda commune were Mirango, Kabwayi, Migera, Mushishi, Kirungu, Kigutu, and Karirimvya, those in the Rumonge commune were Cabara, Mutambara, Karagara, Gitwe, Gatete, Gashasha, Kanenge, Mayengo, Nyakuguma and Busebwa.

Sampling Strategy

The quantitative phase included a two-stage sampling strategy which comprised of cluster and systematic sampling. During the first stage, all collines, their population were considered as a possible sampling frame. A probability proportion to size (PPS) was applied to select a desired cluster size of 30. The calculated sample size was divided by this number to determine the sampling interval. Enumerators upon arrival at every colline, received household list from the colline administrator. The sampling interval applied to derive the interval of households to be selected systematically. Given the study objectives, the following criteria were applied to ensure enumerators were interviewing the right households:

Inclusion Criteria

1. Household with women aged 15 and 49 also classified as those in reproductive age
2. Head of household and caregiver in the right state of mind to actively respond to questions
3. Households whose head signed off the consent form

Exclusion Criteria

1. Households that did not meet the stated inclusion criteria
2. Households whose women of reproductive age were currently pregnant

Sample Size Calculation

The sample size was calculated based on predetermined methodology of the Demographic Health Survey. Using this rigorous methodology, a sample size of 952 households were selected and distributed equally among the clusters.

The qualitative phase employed 11 focus groups with an average size of 12. Members of these groups were purposively selected to represent a mix of community representatives and members.

Data Analysis

Quantitative analysis was initially cleaned via quality check for completeness and consistency. The analysis in this paper is based on knowledge of contraceptive methods and current use of contraceptive methods. Women who never had child or wanted another child within 2 years were

excluded in the analysis regarding current use of contraceptive methods. These indicators were analysed quantitatively using IBM software-SPSS Statistic version 20 [13]. Chi-squares were used to assess relationships between outcomes and exposure variables.

For the qualitative analysis, focus group discussions were recorded, transcribed and translated from Kirundi to French then to English. Deductive mechanisms consisting of desired number of children, facilitators and barriers of family planning were employed to detect emerging themes and codes. The generated codes were applied to all transcripts for quotes which were in line to themes.

Ethical Considerations

A signed letter approval was granted for this study by the local health authorities in the Bururi and Rumonge province which is a representative body of the National Ethics committee at the province level. Study participants signed a consent form ahead of interview and careful steps were taken to ensure respondent's rights and privacy were respected at all times.

RESULTS

Socio Demographics Characteristics

A total of 530 women in union at the time of data collection were interviewed from 930 households. The mean age of the respondents was $30.76(\pm 6.872 \text{ SD})$ with a minimum age of 18 years (Table 1). More than half percent of women (51.7%) were between the age of 25 and 34 years. The mean age at the first pregnancy was $20.17(\pm 3.53 \text{ SD})$ years. More than a quarter (26.6%) of women in union has not attended formal education while only 12.3% of those who attended formal education had completed secondary education. The average number of children a woman had was $4.3(\pm 2.4 \text{ SD})$. 216 women (42%) had five or more children. Additionally, 37.7% of women spaced the last two children less than 24 months. 14% of the participants reported that they had ever lost a child less than 5 years old.

Family Planning

In this study, 94.3% of women, reported to know at least one type of contraception with 94.2% knowing at least a source of acquiring contraceptives. Only 22.6% of women who desired to space their next birth more than 2 years were using a contraception method at the time of interview. The most prevalent modern contraceptive method was the injectable accounting for 40%, followed by implants used by 24.6% of women. The male preservative, Intra Uterine Device (IUD), pills and sterilization represented 10.8%, 6.2%, 3.1% and 1.5% respectively. 13.8% of women who adhered to any form of contraception reported to be using natural contraceptive methods. Among women not on any form of contraceptives, the following reasons were cited: side effects (51%), delayed postpartum (18.8%), religious beliefs (12.9%), partner opposition (8.4%), partner absenteeism (6.4%) and lack of awareness about family planning services (2.5%). Among women on modern contraception, 68% reported that they were not informed about eventual side effects at the time they started utilization.

Table1: Socio-demographic and obstetric characteristics

Characteristics	Categories	N	%
Age of mother	18-24	104	19.6
	25-29	136	25.7
	30-34	138	26.0
	35-39	83	15.7
	40-44	46	8.7
	45+	23	4.3

Characteristics	Disaggregation	N	%
Educational level of Women	No formal education	141	26.6
	Uncompleted Primary education	197	37.2
	Completed primary education	49	9.2
	Uncompleted secondary education	91	17.2
	Completed Secondary School	48	9.1
	University education	4	0.8
Parity	≤4	298	58
	5-7	162	31.5
	≥8	54	10.5
Birth interval between the last two children	<24 months	173	37.7
	≥24months	286	62.3

There was a statistically significant negative association between last two children birth intervals and family planning utilisation (p-value <0.01). Those who had longer intervals between the two last births were less likely to adopt any family planning method as spacing had been considered as a natural family planning method.

Findings from Focus-Group Discussions

Desired number of children

Both men and women agreed that it was very hard to sustain a large family in the present socio-economic situation. Most participants suggested that at most four children were ideal to achieve a decent standard of living.

A female participant in a colline, Gatete described how she would have preferred to practice family planning earlier in her life: “I have five children but I wish I had three because life is very expensive nowadays.”

“I think four children are enough to be brought up and educated properly”. (FGD man, Gitwe colline)

Barriers of Contraceptive use

Fear of side effects

From the findings, fear of contraceptives' side effects was reported as the main reason for underutilisation and discontinuation modern contraceptive methods. Rumours regarding the side effects of family planning which included bleeding, cancer and infertility propagated by other community members had largely contributed to this communal fear. This climate of fear had been used as an avenue exploited by religious leaders and anti-family planning propagandists to make contraceptives unpopular:

"I know one lady who started using modern contraceptive after her second pregnancy. Later on she abandoned to get the third child but failed to conceive." (FGD Woman, Migera colline)

Another female participant said *"I have heard that when you conceive after being on modern contraceptives, you give birth to abnormal baby with congenital malformation."* (FGD woman, Migera colline)

In addition, some participants had shared their personal experience with side effects and how this was conceived by their spouses and the community as a whole. Personal experiences had deeply shaped continuation of family planning and although there was wide community consensus on the adverse effects of family planning, side effects created preconception which encouraged family planning discontinuation as soon as side effects emerged:

"I have used injectable and I experienced continuous bleeding. I went back to the hospital and obtained some medicines and I have since abandoned the modern contraceptives method." (FGD woman, Cabara colline)

"My wife used an implant but experienced side effects and went back to the health Centre to remove it." (FGD man, Gitwe colline)

"We are aware that large family is very hard to sustain but our problem is the side effects which we witness from our neighbours who have used them. If adequate side effect management was in place, our worries would reduce." (FGD man, Gashasha)

"There should be qualified personnel to deliver quality health care to follow those side effects cases closely and inform the people who are coming for family planning services about the side effects that may occur. If the health practitioner cannot give medicines to resolve the side effects issue, the patient will give up the use of family planning methods." (FGD man, Mushishi colline)

At the health system level, participants were concerned about increased fees to treatment of side effects despite receiving the family planning for free. This concern had metamorphosed into a fear which served as a disincentive for not only initiating family planning but also, continuation for those that subscribed:

"If one goes to the health center, she get the contraceptive without payment but when side effects happen, she will need to pay for the treatment." (FGD man, Mayengo colline)

“I know a woman who have used an IUD but experienced side effects. This woman had to pay a lot of money for her treatment and then discouraged other women to consider any modern contraceptive methods.” (FGD man, Mushishi colline)

Religious beliefs

In conservative communities, religion forms an integral section of the life and in the case of deciding the use and continuation of family planning, religion is a major determinant. This influence from religious leaders and conceptualization of family planning as a sin served as a deterrent for most women:

“We are taught that the use of modern contraceptive is sinful because it is to commit abortion. I have been using natural family planning.” (FGD woman, Mayengo colline)

“Our wives are very religious and do not accept to use modern contraceptives because they are taught that the use of modern contraceptive methods is similar to killing a human being in the womb.” (FGD man, Gitwe colline)

“our community health workers always sensitize about family planning but their teachings conflict with church teachings which say that modern family planning is a sin of killing. When it is known that a church follower has adhered to one of those methods, she will be suspended from the church services. That is the reason many individuals have given up the use of modern contraceptive methods.” (FGD man, Kabwayi colline)

Cultural barriers

Culture as expected, was found as a determinant of family planning and this emerged as a theme from the focus group discussions. For some participants they cannot limit the family size when they have only girls on the other hand, they prefer many children because some of their offspring may eventually die and in that case, they hope that at least some will survive and support the family. Other women perceived increased family size of a man as a security to their marriage:

“In Burundian culture, children are wealth for the family. Families tend to be in competition regarding the number of children they can have. Parents may even curse children who do not wish to have many children and discourage them to use family planning methods.” (FGD man, Gashasha colline)

“In Burundian culture we are afraid of having few children. For instance, if we go for vasectomy and death takes all the children, it will not be possible to reproduce again.” (FGD man, Kanenge colline)

“In our community, women with many children think that their husband will not seek extra marital children and therefore do not adhere to family planning methods.” (FGD woman, Kanenge colline)

Spousal communication gap

Both men and women agree that they do not openly discuss the optimal number of children and how family resources could support child upbringing. In addition, men do not participate in family planning sensitization and do not take any responsibility towards family planning.

“Women are victims of men who do not understand family planning policies. They spend most of the time in bars and when they come at home, they are drunk and force us into sexual intercourse while we are in our fertile period and we get unplanned pregnancies in that way.” (FGD woman, Karagara colline)

“I could say that there is a lack of communication between husband and wife. Otherwise, if they were communicating effectively, they could convince each other and reach a common understanding on how to achieve family planning.” (FGD woman, Kabwayi colline)

Refusal of family planning services by health practitioners

Some health practitioners who were religious discouraged patients in adopting family planning methods. They advise them to consider only natural methods and emphasize the fact that modern contraceptive methods have many side effects.

“Some medical staff are against modern contraceptive methods because of their side effects. If the health practitioners doubt on those methods, we will be more doubtful about adopting any form of modern contraception methods.” (FGD man, Migera colline)

“I went to the hospital and the nurse did not allow me to start with the injections neither pills before my husband gives his consent. He also advised to reconsider my decision of using modern contraceptives method as it is often harmful.” (FGD woman, Kigutu colline)

Discussion

This mixed-methods study assessed the determinants of modern contraceptives and factors that hindered uptake of contraception among women of reproductive age (15 to 49 years) in rural collines of Vyanda and Rumonge districts of Burundi. The ideal number of children for most of the respondents were four. This was consistent with the recent Burundian demographic health survey (BDHS) which reported the ideal number children to be 3.9 for women in childbearing aged 15 to 49 years [3]. In addition, the current study found that modern contraceptive methods knowledge was high with 94.3% of respondents able to cite at least one modern contraceptive method while utilization was low (22.6%). This confirms the BDHS finding which suggested that 97% of men and women know at least one contraceptive method but only 29% of women were using any form of contraceptive method at the time of the survey [3].

To understand the increased gap between the knowledge and the utilization of contraceptive methods, a qualitative study involving focus group discussions with men, women, community and church leaders was undertaken. The study identified five barriers to contraceptive use which help to explain the low utilization rate. Firstly, is the fear of side effects and its management which is not handled appropriately by the health system structures. Secondly, religious beliefs represent, and influence of religious actors significantly impede uptake of modern contraceptives in conservative communities in

rural Burundi. Thirdly, presence of cultural norms and strong adherence at the household and communities contributed to low utilization of family planning methods. Next, the lack of communication between spouses to have common understanding and take decision towards family planning strategies also served as a barrier. Finally, some health practitioners refused to give or discourage utilization of modern contraceptive methods, citing reasons of religion and/or side effects.

This study highlights key lessons that should be considered for future program interventions. An important finding is related to comments by participants that the non-utilization of modern contraceptive methods was attributed to the fear of perceived side effects more than religious beliefs. After harmful experiences with modern contraceptives, women often choose to discontinue utilization. Negative health incidents are shared with social networks which, as a result heighten the worries of side effects, serving as a deterrent for others to adopt modern family planning methods. These findings are consistent with those found in similar contexts in Africa [14, 15].

In addition to side effects, propaganda espoused by religious leaders that contraceptives are sinful were found as barrier. In instances when side effects presented, these leaders interpreted it as a punishment from God and only discontinuing it would be the way to relief and freedom. Other studies found similar findings and as discontinuation of any methods were linked to perceived comfort, often times such false narratives were accepted as truth [16, 17]

Furthermore, the discussions brought light to the fact that spousal miscommunication and non-involvement of male in family planning awareness program hinder the success of family planning interventions. This is underlined by cultural norms in favour of large families and patriarchal society where family planning decisions must be approved by men considered as head of the family but the latter has limited knowledge in the subject matter as family planning is known to be a “women thing”. Patriarchy in rural communities especially in sub-Saharan Africa have always been a determinant of reproductive decisions including family planning. This has become a political issue which remains unattended even at national and international levels [18, 19]. In our communities, men who accepted family planning could not own up and defend their decision publicly as it was seen as a sign of weakness and contravention to the cultural norms which strongly upheld increased household size as a wealth and power.

Our work suggests that family planning uptake could be increased in conservative rural communities via overall health systems strengthening including health workers’ capacity to administer family planning methods with dignity and without blemish. Communication of side effects at the onset of utilisation is key, as such, health staff especially those at primary healthcare should be well-trained to advise accordingly. Out-of-pocket payments associated with management of side effects are hindering factors, therefore implementing interventions to reduce the burden of payment could be critical and essential to uptake and continuation of family planning methods.

Accessibility to family planning in this setting is key and evidence from elsewhere has shown the importance of using community health workers in delivering family planning to the doorstep of people. A study conducted by Stanback J et al, proved that in addition to pills and condoms, community health workers in Uganda could effectively provide injectables services including side effects counselling hence community health workers can deliver perfect complement to contraceptive

service delivered in the formal health system [21]. Successful uptake of family planning in Ethiopia, Malawi and Rwanda all underscores the distinct contribution of health extension workers and overall health system strengthening strategy [22].

Involvement of men and religious leaders should be involved in Family planning awareness initiatives. An assessment of a male motivator project in Malawi provided evidence that men involvement in family planning program and increased spousal communication promote contraceptive uptake [20]. Besides, religion plays an important role in most of sub-Saharan African culture and religious beliefs influence people's decision making by shaping their ideas, views and thoughts, therefore incorporating that into family planning could yield positive impacts [23]. Sunday A. et al shared the evidence of Nigerian urban Reproductive Health Initiative which suggests that there is a significant association between contraceptive uptake and exposure to family planning messages delivered by religious leaders [23].

Limitation of the study

Studies that employ responses from retrospective activities could result in recall bias. Recall bias could result in either overestimating or underestimating results presented here. To reduce the impact of recall bias, an exploratory approach in the form of focus group discussion was undertaken to validate and explain results from the quantitative research strand. Focus group discussions, if not moderated effectively could bring about differences in power dynamics among participants which, could result in unequal contribution from study participants, thereby skewing results to only powerful and vocal participants. This could have been our case, however, the employment of an experienced focus group facilitator for all the sessions, to a larger extent, averted all possibilities of this bias.

Conclusion

This study emphasizes that the knowledge of contraceptive methods and the desire to limit the family size do not translate in contraceptive uptake in the context of rural Burundi. The multifaceted impediments to increased contraceptive utilization must be considered by policy makers and program implementers in order to develop tailored interventions that are more likely to yield best results. To make strides towards universal access to family planning, government and partners should tackle the issue of side effect management and promote community-based family planning approach. The latter may include religious leaders' engagement to share scriptural messages in favour of family planning during mass campaign as it is anticipated that they can influence behaviour change of their followers. Capacity building and equipment to community health workers to provide effective family planning counselling, address community misbeliefs around family planning and deliver some modern contraceptive methods could be an effective strategy worth the investment.

Declarations

Acronym

DHS
FGD
FP
IUD

Meaning

Demographic Health Survey
Focus Group Discussion
Family Planning
Intra Uterine Device

PPS	Probability Proportion to size
SD	Standard Deviation
SPSS	Statistical Product and Service Solutions

Ethics approval and consent to participate

A signed approval was obtained for this study from the local ethics committee and health authorities in the Bururi and Rumonge province after presentation of a study protocol and questionnaires. The study was also internally commissioned and approved by senior management of the organisation after review of the study protocol and questionnaires. Study participants also signed a consent form ahead of interview and child anthropometric measurements.

Consent for publication

Not Applicable

Availability of data and materials

The data used for analysis in this manuscript are available from the Research, Monitoring and Evaluation Department of VHW. Data is restricted but available from the authors upon reasonable request.

Competing interests

The authors declare no competing interests

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Authors' contributions

SH and ENO conceptualised the study. SH supervised data collection, analysed both qualitative and quantitative and wrote first draft of the manuscript. ENO reviewed the first draft, provided technical comments and made edits when necessary. All authors read and approved the final manuscript.

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Declarations

Ethics approval and consent to participate