A qualitative study of Influences, Sources of Information and Media Consumption habits on Uptake of Contraceptive Services among people of Reproductive age in Uganda

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Abstract

Background

Uganda has registered an increased investment in family planning (FP) programmes, which has contributed to improvement in knowledge of modern contraceptive methods being nearly universal. However, this has not matched uptake of modern methods and reduction in unmet need of FP. Due to these challenges, a programme on improving awareness, access to and uptake of modern contraceptives is being implemented. We therefore conducted a formative study to determine the influences, key sources and media consumption habits of contraceptive information at the onset of this programme.

Methods

Using a qualitative study design, we conducted thirty-two focus group discussion and twenty-one in-depth interviews involving men and women of reproductive age. We also carried out twenty-one key informant interviews with people involved in FP service delivery. Data was collected in 4 districts where implementation of the program was to take place. Audio recorders were used to collect data and tools translated in local languages. A codebook was developed, transcripts coded in vivo using a computer software Atlas-ti version 7 before analysis. Ethical clearance was obtained from institutional review boards and informed consent sought from all participants.

Results

Three themes emerged from the data; influences to contraceptive uptake, sources of contraceptive information and media consumption habits. From the study, most married people with children mentioned health workers as influences while adolescents reported their peers and friends to be their main influence. Religious leaders and mothers in law were reported to mainly discourage people from taking up modern contraceptive methods. Key sources of information were health workers followed by radio. Television, mobile vans mounted with megaphones were other sources of information. Radio was majorly among male whereas television was a source common among female living in urban settings. For media consumption habits, participants advocated for messages in a language free of vulgar words that would interest men. In conclusion, health workers, religious leaders and mothers determine uptake of contraceptive services. The study recommends the consideration of the role of these influences at design of FP program interventions as well as more involvement of health workers in sensitization of communities about contraceptive methods.

Background

Uganda has one of Africa's fastest growing populations with an annual growth rate of 3% and a total fertility rate of 5.4 births per woman [1–3]. Uganda's population is largely young, nearly half being

children 0–14 years, 20.6% aged 15–24 years, 28.6% aged 25–64 years and only 2.7% of the population being 65 years or older [4]. Increased use of modern methods of contraceptive is an effective way of addressing effects of unintended child birth and total fertility rate [5]. With increased investment in Family Planning (FP) programs[6], the country registered a decline of 27% in total fertility rate (TFR) over the last 28 years. The decline in TFR from 7.4 to 5.4 was mainly observed in the urban settings where an increase in contraceptive use and a reduction in maternal mortality ratio have also occurred [7, 8].

Knowledge of contraceptives in Uganda is nearly universal, according to 2016 Demographic and Health Survey (UDHS), with 99% of both men and women having heard of at least one modern method of contraception [9]. However, factors such as median age at sexual debut and age at first marriage have been slow to change, especially in rural settings. Values for sexual and reproductive health indicators have not matched the set targets in Uganda's FP costed implementation plan 2015–2020 [10]. Relatedly, modern contraceptive use among married women increased by only 9% between 2011 to 2016, with significant unmet need of 28% [7].

The large variations and limited change in modern contraceptive indicators have been due to positive and negative influences, as well as the methods used to communicate on health information to communities [11–14]. To improve family planning indicators several media channels have been utilised [15–17]. However there was need to study variation in the media consumption habits. This study assessed who influences contraceptive uptake, key sources of information and media consumption habits at the start of FP programmes being implemented in selected regions of Uganda to address the high fertility rate challenge.

Marie Stopes International (MSI) on behalf of the Ministry of Health (MoH), is leading a consortium of Family Health International FHI360, Population Media Centre (PMC), Reach A Hand Uganda (RAHU) and Makerere University School of Public Health (MakSPH) to implement a five-year programme titled "Reducing High Fertility Rates and Improving Sexual Reproductive Health Outcomes in Uganda (RISE)". The RISE programme is funded by UK Aid and aims to increase awareness, access to and uptake of high quality FP services and strengthening the Public and Private sector capacity in FP service provision. This program implemented in seven of the eleven UDHS 2011 regions in 75 districts. The programme enforces social behavioural communication change (SBCC) for contraceptive uptake of which serial radio dramas is one of channel being used. During the first year of implementation, a formative study was conducted with the aims of determining key influences of contraceptive uptake, sources of information and media consumption habits in the programme areas.

Methods

Design and study area

We used a qualitative study design utilizing a Formative Research approach to aid decision-making during the planning, design, and production of RISE SBCC intervention materials [18]. Focus group

discussions (FGDs), Key informant interviews (KIIs) and in-depth interviews (IDIs) were conducted with participants of reproductive age as the primary intended beneficiaries of RISE SBCC.

Four of the seven regions were selected for this study to represent RISE implementation regions. The selection of the seven RISE regions was based on an earlier desk review that highlighted underserved regions or those with poor FP indicators. The regions are Karamoja, Eastern, East central (currently divided into Bugisu, Bukede and Teso), Central 1 (currently known as South Buganda), Central 2 (currently known as North Buganda), Western (currently divided into Bunyoro and Tooro) and West Nile. From these, the districts of Moroto in Karamoja, Mbale from Eastern (Bugisu) Mubende from Central 2 and Kibaale for Western (Bunyoro) were purposively selected. Mubende and Kibaale provided a semblance of rural districts while Mbale is semi-urban district. Moroto represented areas that are remote with challenges of FP service delivery and unique cultural settings.

Study methods, selection of study participants and data collection

We conducted 32 FGDs with 259 participants from all the districts. Eight FGDs were conducted per district. The FGDs were disaggregated by age, sex and marital status, from different sub-counties. Slightly more than a half of the participants were women. Fifty percent had completed primary education as their highest level of education. The median age was 23years for both women and men. Nearly all had formal education either at primary or secondary level with more than half being married.

In addition, 21 in depth interviews with purposively selected women, stratified into those who were using any modern contraceptive at the time of the study (current contraceptive users), those who were not using (non-current contraceptive users), and those who had switched methods more than once (Switchers). From these categories, it was anticipated to generate information on why people either used, did not use or had switched from one modern method to another. They represented categories of intended users required to explore their experience with contraceptive use. A half of the participants were contraceptive non-users while 8(33.3%) had switched methods of contraceptive. Nearly all were married and all had attained primary level of education.

Twenty KIIs, 5 per district were conducted with district health officials (DHO), health workers (HWs)/service providers, village health team (VHT) members, community leaders and Local council leaders (LCs). The sex of the KI interviewed was equally distributed. On average, women were older than men (50.7 vs 43.2 years). District health team health workers and VHTs each contributed a fifth of KII participants and two fifth were Local Councils leader. Nearly all were married and had attained at least primary level education. Details of all conducted interviews are seen in Table 1.

Table 1
Summary of all interviews conducted per district

Data collection method	FGDs	IDIs- women only	KIIs
Total Number	32	21	20
Number Per district	8	5	5
Participants' summary	Disaggregated by age, sex, marital status. Participants from at least 4 sub-counties.	Stratified into modern contraceptive current users, non-current users, and switchers.	District Health Team, Health workers, Village health teams, local council leaders and or community leaders.

Interviews were mainly conducted in the local language or language preferred by the respondent. Specific interview guides were written to guide each type of data collection. The tools were designed to explore themes related to the overall study objectives which included establishing the attitudes, barriers, key influences, key sources of information for contraceptive uptake and media consumption habit in the project areas. All qualitative data were audio recorded and notes taken. At the end of each field day, these data were backed up on the study computer to minimize risks of loss. We recruited 16 qualitative experienced research assistants who were determined basing on the qualitative research experience and the commonly spoken language in the respective study areas. These were trained on concepts of the areas of the study, study objectives, procedures, tools, use of qualitative software Atlas TI Version 7, and research ethics and tools pretested. Research assistants worked with VHTs and Local community leaders to recruit community participants. Health workers involved in family planning provision where selected due to their expertise in working with contraceptive clients. Key informants included Village health teams and community leaders due to their involvement in health activities and mobilising community to receive services, district Health teams since they head health services in the districts, Secretary for women and district health educators based on their involvement in family planning activities.

Informed consent was sought from each study participant before we engaged them in to participate. Adolescents aged 15-17years who were neither married, pregnant nor ever given birth, provided assent alongside parental/guardian consent. Adolescents who were pregnant or had given birth or married were treated as emancipated minors as per the national ethical guideline [19, 20].

Data management and analysis

Audio recordings, and notes were translated, and transcribed. Audio files and transcripts were stored on a password-protected hard drive for safety. An initial codebook was developed after a debrief meeting from a few transcripts of each category. The codes and transcripts were entered into a computer software Atlas-ti version 7 for further analysis. Two independent qualitative analysts coded the same transcripts using the codebook earlier developed. Coded transcripts from the two research teams were compared, and the text in the different coded transcripts was harmonized. Another independent analyst was

available in case of interceder disagreement. Using thematic latent content analysis [22], we generated a matrix of code counts, made comparisons between the characteristics of the study participants as well as the methods. The codes, condensed categories, and themes that emerged from the data form sections of the study findings described into 3 priority themes: a) influences to contraceptive uptake, b) key sources of information and c) media consumption habits.

The analysis for influences was guided by model as shown in Fig. 1, that was adapted from Bronfenbrenner's socio-ecological model (SEM). This socio-ecological model postulates that human beings create environments in which they live and therefore to understand humans, we need to understand society as a whole and the changing environment in which they live. The model display nesting circles with the individual at the centre followed by interpersonal, organisational community then public policy.

The individual's knowledge and skills helps the person to understand more about contraceptive methods hence influencing their decision making. Interpersonal level focuses on how people's relationship with family and friends impacts decisions on contraceptive uptake. At organisational level, a person's decision relating to contraceptive method uptake will come from varying sectors like religion. In the model, community level relates to cultural values and norms that affect the contraceptive methods status of a person. Lastly is public policy, the governing bodies' in-charge family planning services. They develop guides and laws related to contraceptives uptake [23].

Therefore, from our study analysis we explored these influences at the different levels of SEM as indicated in Fig. 1.

Results

Our study results are presented in themes; influences to contraceptive uptake, key sources of information on modern contraceptive patterns and media consumption habits. The major subthemes that emerged from the theme of influences of contraceptive use were individual, interpersonal, organisational and community as indicated in figure 2. These subthemes were developed from codes that included knowledge, personal experiences, friends and peers, Mothers- in law and grandparents, religious leaders, health workers, housing and cultural values. Key sources of information included radios, television and mobilisation vans whereas media consumption pattern themes comprised of language to be used, conform to cultural practices and male involvement.

Influences to contraceptive uptake

Individual influences

Knowledge about contraceptive method

As seen from the first level of SEM, knowledge of contraceptive methods among people of reproductive age was reported to influence the uptake. This came majorly from Kibaale and Moroto districts which are

rural or have scarcity or services respectively. A participant from Kibaale district reported to have switched to short term method due to the knowledge she had received about contraceptive methods. People involved in contraceptive service delivery also mentioned that knowledge gap about contraceptive methods influence people not to seek these services.

"I was using capsules, I heard on the radio that capsules are equivalent to injectaplan, so it helped me to know that if I want to use short term methods, I should use injectaplan, rather than using a long term method. That's why am using it." IDI-contraceptive Switcher, Kibaale district

Personal experience

Across all age categories, the personal experiences and environments in which participants lived influenced their use of contraceptive methods. In Kibaale male participants reported that women who had faced domestic violence from their spouses were forced to use contraceptive methods whereas those who had experienced side effects did not want to use the methods again. Side effects was raised by male participants from almost all study districts as a reason for none use of modern contraceptive methods. It was mentioned that men whose spouses had faced this challenge from previous use feared to use contraceptive methods again. Expert clients who had used contraceptive methods for long acted as role models and cleared the negative perceptions about contraceptive methods.

"Friends, my wife has a group of friends that told her that men beat women a lot and if they give birth to many children then it is worse. They encouraged her to go for family planning to avoid fighting with me." FGD_Male_20-24years, Kibaale district

"If you have earlier used a method and it treated you badly [meaning experienced side effects] then stopped. After giving birth, even though you want to use it, you fear. So, you decide to leave it and give birth again." FGD_ Female_20-24year, Mbale district

Interpersonal influencers

Friends and Peers

As indicated from the model, the way friends and peers relate with an individual influenced the decision on contraceptive methods uptake as unanimously reported by 20 FGDs, 6 IDI and 6 KII participants. Of the FGDs, six were adolescents and the rest for other ages. Discussions held with youth from all the four districts proposed peers and friends having a big contribution on the decisions and knowledge they had about contraceptive methods. Adolescent males stated that female of their age group were the category that were majorly influenced by peers and friends to use contraceptive methods. Besides those that had experienced side effects, adolescent from Kibaale who had used contraceptive methods encouraged their colleagues to use the same methods. In contrast, peers in Moroto district advised each other that contraception was not good and that the young people should give birth to many children like it is in their tradition. In Mubende which is relatively a rural district, adolescents shared information related to sexual issues while at school or in their places of residence. They acknowledged that people of their age lacked

information on sexual health and got recommendation from their friends who had used the methods and not had side effects.

"At school we hear from each other, also in the village, we do talk to each other about health issues." FGD_Male_15-19years, Mubende district

"Our peers in schools and where we reside who have had seminars on the methods and had positive effects also encourage us to use them too." FGD_ Female _15-19years, Mubende district

Focus Group Discussions with older participants (20 years and above) emphasised that peers and friends particularly influenced contraceptive non-use when they had experienced side effects. Across all districts, it was reported that friends of these age groups shared a lot about the side effects faced from contraceptive use which information created fear among intended users.

"Depending on what those that have used it say about how bad contraceptives make them feel, they have unending periods whereby every week they are in their periods. This is the reason I fear it" FGD_Female_20-24years, Kibaale district

Despite all this discouraging information from friends and peers, people in Moroto and Mubende who had friends that successfully used modern contraceptive methods, and had healthier well-spaced and educated children positively influenced colleagues to also utilize these methods. The friends acted as role models who would encourage families that have many children to go for contraceptive services as well as switching to alternative methods in case of side effects. People who were interested in adopting a method went further to seek clarity from health workers who gave them correct information.

"We also get advice from our friends. For example, I have a friend whom I used to admire how she brings up her children, with good plan and nice education. When I approached her, she told me that it's due to family planning. Honestly I had to join and am now happy too when I space my kids." FGD_Female_25-50years, Moroto district

From the IDIs, friends being influencers among users was only reported in Kibaale where the advice was a result of families' financial state being not too good. On the other hand, switchers and non-users reported that the friends mainly told them about side effects which made then switch methods or total abandonment of contraceptive methods. This was further emphasized by KII respondents that friends were mainly sharing information about negative effects of the modern contraceptives which caused their colleagues to shun its use.

Mothers- in law and grandparents

Our data from FGDs and KIs show that parents, mothers-in-law and grandparents are influencers of contraceptive use. From all the districts across all FGD categories, parents especially mothers mainly encouraged their children to use contraceptives. The parent gave this advice in circumstances where their children had husbands who were seen as uncaring, had no land to raise children (grandchildren) and or

with economic difficulties especially in Mbale which was an urban study district. In Moroto, it was reported that some mothers even take their married children to receive contraceptives method after the latter have had many children. At best, grandparents advised the women to use traditional family planning methods like safe days. In contrast, reports from participants of rural study districts showed that some mothers discouraged their married or sexually active children from using contraceptives stating side effects, causes future fertility challenges and advising that they instead produce like how their parents gave birth to them. Also, parents from small families discouraged their children to have few offspring as a way to widen the family.

Mothers-in-law and grandparents specifically advised and forced their daughters-in-law not use modern contraceptive methods. Mothers-in-law are highly respected and feared by their daughters-in-law and have power over their sons. Hence, they majorly wanted the daughters-in-law to have many children for their sons which led some women to use contraceptives stealthily. In Kibaale, a discussion with women aged 20-24years echoed strongly about the threat they got from mothers-in-law some threating to chase them away from the marriage if they did not want to give birth. Some in-laws even related modern contraceptives use to being promiscuous. Only a few FGD respondents reported positive influence on contraceptive use from their in-laws due to the high cost of living.

From Mbale, a nonuser mentioned that grandparents advised their granddaughters to quit contraceptives use due to side effects whereas users from Mubende were advised by their mothers not to stop using family planning as a way to avoid suffering.

"*Mostly, family planning methods are used by the educated people. When you talk to our mothers about family planning, they tell us not to associate ourselves with it as they were able to give birth to us without using the methods. And in case you share with her any side effects of the methods, they say we are to blame for taking up the white man's methods*" FGD_Male_20-24years, Mubende district

Organisational influences

Religious leaders

As different sectors reach individuals, they take upon themselves to either encourage or discourage contraceptive use. From the sector or religion, both Christian and Muslim religious leaders were reported to negatively influence use of modern contraceptives methods especially in rural study districts among all age categories for both male and female. Majority of participants from FGDs mentioned that religious leaders advise people to produce and fill the world since that's what God wants as it is written in the bible. It was further emphasized that faith-based beliefs related contraceptives use to murdering of the unborn babies and regarded it a sin. They preached to their congregation that those who used contraceptives will be punished by God. This message was preached majorly by Catholic, Moslems, some Pentecostals, some Anglicans and other sects. There was a sect that operated in Kibaale and Mubende district that had many followers and barred people from using contraceptives. Most preachers emphasise the myths and side effects of contraceptives as dangers faced by people who use these methods.

"In my religion you are not allowed to kill. So if you use family planning, they regard you to have killed." FGD_Female_20-24years, Mubende district

Natural methods were the only recommended options and lessons on how to use natural methods were given during marriage counselling for those soon to wed. However, male and female FGD participants from Mubende mentioned that a few Pentecostal leaders advised people to use modern contraception and give birth to children they could afford to care for. Similarly, in Kibaale a discussion with female of 20-24years stated that places of worship hosted people who sensitized the congregation about contraceptives use. In addition, a quarter of respondents from FGDs mostly in urban study areas acknowledged that people appreciate the value of using contraceptives compared to the expense of having so many children.

"According to religious beliefs, one is not allowed to use these methods because they are sin in the Catholic faith but they only encourage natural methods like abstinence, use calendar, so some people end up not using these methods" FGD_ Female _20-24years, Moroto district**.**

Across the IDIs and KIIs, participants equally held this view of religious leaders against modern contraceptives with the one exception of a contraceptive user who mentioned that a catholic priest had at one time encouraged them to uptake family planning methods.

"*On Easter, a priest told us that you're over producing, use family planning and educate your children*." IDI contraceptives user, Kibaale district

Health workers

Health workers were reportedly positive influences to people's uptake of contraceptives by participants from all interviews and study areas. However, there was a difference in how health workers influenced different age groups towards modern contraceptives uptake. Age groups of 20-34years for men and women reported health workers as positive influences through offering counselling and advice at health facilities and communities. The counselling was often given to women who came for antenatal, postnatal and immunization services especially those with many children. Health workers also moved in communities to sensitise on contraceptives, provide outreach services, and participated in radio talk shows to health education as a means to sensitize the public on the available contraceptive methods and encourage people to use contraceptive methods. Same reports were given by teenage mothers in Moroto district, with teenage and young fathers reporting to have been counselled and asked to go home and talk to their spouses to use contraceptives and space their children.

"*We get advice from nurses mostly when we come for antenatal services. They tell us that we have to use have family planning methods available in hospital after giving birth*." FGD_ Female _25-50years, Moroto district

In contrast, health workers discouraged adolescents not in marriage or union and those who had never given birth from using contraceptives. Adolescents from Mbale and Mubende districts reported being

denied contraceptives by health workers on account of being young. Other providers asked for money of which the young people did not have since the majority are not in employment. In Mbale, adolescents' further revealed feeling stigmatized when they were asked why at a young age they were already engaged in sexual relations and being asked to be escorted by their parents before receiving contraceptives.

"Yes. Some health workers are kind however others are money minded and charge for every material provided by the facility. So, we know these workers by face and shun away when we find them at the facility" FGD_Female_15-19years, Mubende distict

Participants from IDIs emphasized the role of health workers in contraceptive method uptake. It was mentioned that persons who sought information from health workers after being discouraged by their friends were able to take up contraception after receiving counselling and options of different methods including their side effects. Health workers also reportedly routinely urged male spouses to encourage their wives to turn up for family planning services. However, an individual who wasn't using contraceptives in Kibaale, reported that health workers who were not well trained in FP were not able to give comprehensive guidance and biased clients on the contraceptive methods to be used.

Village health team members influenced the community members to take up contraceptive methods as they provide information on the contraceptive methods and even supplied some like condoms. They were reported to be highly influential because they move door-to-door and respondents felt gave a personal touch and encouraged communities to ask openly about contraceptives. However, VHTs were reported to have limited knowledge of some contraceptive methods and thus could only offer narrow information.

"The VHTs also help us, they do this on a one-on-one when you visit them. They will give you a range of options that you can use. Condoms, injector plan and others but on individual basis." FGD_ Male_15-19, Mubende district

Housing

The sector of housing influenced people's decision on contraceptive use. In Mbale district which was more urban, challenges with housing influenced women's use of family planning to reduce family size. Focus group participants reported that many property owners were not willing to rent their houses for accommodation to people with many children. Hence the people not owning houses were forced to use contraceptives so that they don't get chased away from the properties they rented.

Community influences

Cultural values

Culture as indicated in SEM, was an influence reported within the Karimojong community. The importance of many children to this community surpasses the decision to use contraceptive methods as reported by male FGD participants across all age groups from Moroto district. It was mentioned that cultural leaders have a strong voice within the community where they impose norms and values by

forcing people not to use contraceptives. In addition, grandparents encouraged their grandchildren to give birth to many children as children are equated to wealth, pride and support to parents as they grow older. The young people were asked to give birth and replace old generation. The cultural practice of paying dowry for women encourages them to disregard contraceptives as the women aim to produce many children as a way of showing appreciation to the husband and to pay back the dowry. Further, parents wanted their families to follow their lineage hence fathers ask their son to have 3-4 wives and produce many children.

"Long ago, in the years of our grandfathers and grandmothers …the order of the day was to produce children, the more children you produce, the more wealth, the more support and pride you get, so that is what we say the cultural aspect. …it is the elders". FGD_ Male _35-49years, Moroto district

Sources of contraceptive information and radio consumption patterns

Sources of contraceptive information

The main sources of information regarding contraception for the communities in all the study sites were radios followed by health workers, televisions and mobile vans mounted with speakers.

Radio

From all the study districts, FGDs from 28 categories said radio was their source of contraceptive information. Though both sexes reported radio, in Moroto district this came from mostly male discussions. Contraceptive information was passed mainly in adverts and health programs where health workers were hosted to sensitise listeners. Also IDI and KII participants supported radio as a major source of contraceptive messages in both rural and urban communities. A key informant remarked:

"It is mostly the radio that can help greatly since that is the most reliable one in our community". KII, Moroto district

Television

Of all the 32 FGDs, 11 mentioned television as a source of contraceptive information and of these seven were female FGDs mainly from Mubende and Mbale which were more urban compared to the other two districts. Though a good source of information, participants noted that few people actually had televisions hence limited access to contraceptive information through this media. Key informant participants including VHTs, DHT and community leaders reported television as a media they have used to disseminate contraceptive information to communities.

"We have been receiving it through television and at times over the radio but these days. We are no longer on radio because we are mainly on TV though not all people have TVs. Few people have them so it's better that they broadcast it on TV and also radios". FGD_ Females _15-19years, Mbale district

Mobile vans

Community mobilisation by use of mobile vans was another source of information for contraceptives. Male and female FGD participants from all study districts reported to have received information from mobile vans. Fifteen of the 32 FGDs where the mobilisations were often organised by non-government organisations. These vans had megaphones which are used to pass on this information. Similar reports were given by community leaders from Kibaale and Moroto as well as users and nonusers from Mbale districts.

Media Consumption habits

Language to be used

Participants reported that language used in the media would impact how much communities listened or watched. Emphasis was put on avoiding language and words that communities considered vulgar or obscene while airing of contraceptive information. This would enable adults to listen and watch even the programs in the presence of children or young people. This was majorly reported in Moroto a remote district where 6 out of 8 FGDs asked for shows not contain language and word that their community considered vulgar. Whereas for other districts only two discussions per study area generated information on language to be used while acting. The younger people however preferred that media messages speaks directly about contraceptives and sexual related issues without hiding information, but still not be obscene

Other respondents mentioned that the language used shouldn't be abusive to the community since people will feel offended. This was also emphasised by community leaders from Kibaale and VHTs from Mbale and Mubende.

"Okay the things I see that can be avoided are obscene words. Because accidentally, that drama might be airing, when there is a young child. In that way she/he will also hear an obscene word. So, they should not be there" KII_ Community leader, Kibaale district

Conform to cultural practices

Study found that community would welcome information and drama that are not contrary to the cultural practices of people where they will be aired. This was echoed in 5FGDs across all study districts. Respondents discouraged indecent dressing of actors and speaking openly about sexual parts which would ago against the traditional practices of most Ugandan communities. Similar submission was given by community leaders and VHTs in all study areas except Mubende.

"Avoid practising open acting like use of condoms as some people do it practically in shows which is bad. It makes the youth practice it too. You better get a stick and use as a practical object" FGD_ Female_25-50years, Moroto district

Content was another media consumption habit. Respondents felt that appropriate media shows should focus on positive testimonies from known people/figures and ignore people who call in and talk about

myths. The information provided should include the real sources of contraceptive methods and ensure that those service delivery points indeed have the methods when people are referred there. In Moroto, they noted that they needed a show that talks about the side effects of contraceptive methods and how to manage them. This should be comprehensive to allay people's fears. The shows need to be detailed and focus on managing side effects for users. Male FGDs participants from Mbale and Mubende districts of all age categories discouraged the inclusion of political discussions since it did not influence uptake of contraceptive methods.

Male involvement

Focus group discussants showed that people would consume media that attract men to listen or watch so that they can learn the available modern methods of contraception and to support their spouses. This was submitted by mainly women from Mbale and Kibaale districts. These women discussed that many men have limited knowledge about contraceptive methods and that they are not supportive to the women to use modern methods hence content focusing on the former would interest the men to listen to. They should involve them in the characters, especially encouraging older men to plan for families because they reportedly marry younger wives.

"…… should address men too on the importance of family planning so that they are aware of how good family planning is. They will also stop blaming women on issue concerning family planning when loss appetite of sex, grow fat, over bleeding" FGD_Female_25-50years, sMoroto district

Discussion

The findings highlight the influences, sources of contraceptives information and media consumption habits. Our study found several influences at the different levels of SEM that lead to, or discourage people from using family planning methods. As individuals, people's knowledge and experience with contraceptive methods either influenced negatively or positively the use. Health workers were a majorly positive influences especially to older people. Friends and peers caused their colleagues to start the using of these methods whereas culture, mothers-in- laws and grandparents often caused people to follow the traditional norms of having many children. No influence was noted from the public policy level of SEM. The study also identified radios, televisions and mobile vans as major sources of information.

The study revealed that health workers were the major influences and source of information for people to take up modern contraceptive methods especially among older people from both urban and rural settings. This finding is not different from what was reported by a study in Nigeria and Ghana where health workers were the commonest source of family planning information [12, 24]. This may be expected due to their positioning as healthcare givers especially among women of reproductive age during antenatal, postnatal and immunisation. During these periods, emphasis on sensitisation about family planning as part of sexual and reproductive health information is given. In addition, to having more access to communities, WHO recommends health workers to offer family planning methods [11, 25]. However unmarried adolescents indicated some health workers to stigmatise them with questions of

why they are having sex and asking them to be accompanied by an adult for permission to receive services. Furthermore, adolescents mentioned that they were denied information and asked for user fees for these services which are free. Earlier Studies conducted among this age group found cost as a limitation to use of modern contraceptive methods as well as different forms of stigma from health workers [26, 27]. This implies that the country will experience increase in teenage pregnancy, unsafe abortion and adolescent maternal mortality if this age is denied contraceptive free services. Furthermore, to ensure improvement in contraceptives use, FP implementers should ensure that ways to reach adolescents are different from those of adults.

Both male and female participants of all groups agreed to religion majorly discouraging people to use modern contraceptive methods. This finding is congruent with other studies conducted in different parts of Africa where Moslem and Christian faith encourage the congregations to avoid the involvement in use of artificial methods of controlling the number of children a couple brings into the world [28–30]. However, it's also important to acknowledge that even though the spiritual worship messages are negative towards contraceptive use, many people listen to the preaching but go ahead and use these methods since they appreciate the benefits. In addition, the ability to provide for the children and existing financial constraints are another justification for people to use modern contraceptive methods. Similarly, qualitative studies conducted in Tanzania and Nigeria found that ability to take care and provide for the children by those who brought them into this world was justification to use family planning methods [29, 31]. Therefore, it's urged that irrespective of the couple's faith beliefs, adequate reproductive health information should be given for informed choice on family planning use [31].

Though mothers especially from urban settings encouraged their daughters to use family planning methods due to economic challenges and bad marriages especially gender-based violence, mothers-in-law and grandparents were more inclined to traditional customs and norms of having many children. In addition, culture was a strong influence verbalized in Moroto district which is located in the poorest region of the country. It was echoed that a woman's role was only giving birth and those that resorted to use of these methods are often viewed as promiscuous. This finding is not different from what was reported in Ghana where respondents justified the bias of culture as negative influence to not using modern methods of family planning [24]. Due to power the mothers' have over their daughters in law, the latter are forced to continue having children as a way to ensure harmony in family marital relationships. Hence health information and dramas should address the beliefs held by this influencing group.

Though the study did not any influences at public policy level of SEM, this has been reported to have effect on contraceptive use.

Besides health workers, radio was most voiced source of family planning information by both rural and urban people followed by television which was mainly used by urban individuals. According 2016 demographic health survey, it was reported that about 70% received contraceptive methods information from radios followed by 20% from television [7]. Similar sources have been reported in developed countries [17, 32]. This information is often broadcasted in form of talk shows or drama. In addition,

mobilisation vans mounted with megaphones were another key source of information. These vans are driven are driven around the communities while broadcasting family planning information. Megaphones are often used to transfer health information in resources limited setting. In Rwanda megaphones were used in crowded refuge health centers to ensure that information reached all clients whereas during the COVID 19 pandemic, UNICEF supported Uganda's MoH to sensitise communities about the virus by using mobile vans mounted with megaphones [33, 34]. Similarly in the USA when there was an emergency of broken water pipes, megaphones as a method used to pass this information to the community [35]. Therefore program implementers can improve access to contraceptive information by use of radio and megaphones since these are accessible to poor or rural communities.

Of the media consumption habits the audience appreciated messages that attracted men. Since men in the study area have limited knowledge on family planning, there is a need to have the media focus more on attracting their attention to contraceptive methods awareness and use. Low male involvement in family planning has been reported to go as below as 5% and one of the major reasons given is that contraceptives is woman's affair [36]. Research has found that family planning implementers often ignore the role of men in family planning yet this gender is a major determinant of family size[37]. Hence having men participating media will improve their involvement in child spacing decision.

Conclusions

The study revealed that majority of religious leaders have negative influence about contraceptive methods, with only a few encouraging congregations on modern methods uptake. Though adolescent users encouraged their colleagues who were sexually active to uptake contraceptives, older people mainly shared negative information that discouraged their peers and friends from taking up these modern methods. Mothers' in law and grandparents majorly wanted their children not to consider contraceptives but give birth too many children without thinking of spacing them since this was in line with their culture beliefs. Health workers were reported as positive influence to married or people in union and a major source of information however they discouraged and stigmatised adolescents who sought contraceptive service from health facilities. Participants from rural and urban areas reported radio as a key source of information in addition to television which was mainly for urban female. For media consumption habits, participants appreciated information that attracted men and that illustrated positive messages about family planning.

We recommend programme implementers to identify and work with religious leaders who are positive to uptake of modern methods. These can act as change agents to their colleagues. In addition, SBCC message should be designed in such a way that they encourage people to seek contraceptive information from qualified health workers as a way to reduce misinformation from peers and friends. Supporting satisfied users by equipping them with correct contraceptive information so that they can conduct peer to peer counselling. Furthermore, Community outreach activities should emphasise changing people myths about contraceptive methods. Health workers and VHTs with support from programmers can conduct FP outreaches in communities with limited media access as a way to increase access to correct health

information. Inter personnel communication model may be a good strategy where VHTs involved in FP activities can have face to face interaction with dissatisfied users to address their concerns since these clients share a lot of negative experience with their peers and friends. Implementers of family planning activities should pay attention to training of health workers and VHTs as well as changing their attitude towards provision of contraceptive methods to sexually active adolescents. In addition, local radio stations should be encouraged to invite health workers to give talks on modern contraceptive methods. Intervention and message on contraceptive methods targeting men should be passed through radio since men reported this as their main source of information. Media about contraceptive methods should have messages focusing on men as a way to improve on male involvement. Interventions targeting urban female should be broadcasted through television since they may have wide access to televisions.

Abbreviations

DHO-District Health Officials

DFID-Department for International Development

FGDs-Focus group discussions

FP- Family Planning

HWs-health workers

IDIs In-depth interviews

KIIs-Key informant interviews

LCs-Local council

mCPR- Modern Contraceptive Prevalence Rate

MMR –Maternal Mortality Ratio

MoH-Ministry of Health

RISE- Reducing High Fertility rates and Improving Sexual Reproductive Health Outcomes

SBCC- Social Behavioural Communication Change

SEM Socio-ecological model

TFR-Total Fertility Rate ‘

UBOS- Uganda Bureau of Statistics

UDHS-Uganda Demographic Health Survey

UNCST- Uganda National Council for Science and Technology

VHT- Village Health Team

Declarations

Ethics approval and consent to participate

Informed consent was obtained from each study participant before we engaged them in to participate. The study was approved by institutional review board at the Makerere University School of Public Health and the Uganda National Council of Science and Technology (UNCST), protocol number 683. All methods were conducted in accordance with guidelines and regulations of these approval boards.

Consent for publication

Not applicable

Availability of data and materials

The data that support the findings of this study are available from the corresponding author, who is the Study Coordinator, Makerere University School of Public Health, RISE Project, upon reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

CN: Data collection Coordination, Conceptualisation, analysis, writing initial draft, collating feedback, editing and review of final version. **LA:** Data collection lead, Conceptualisation, writing initial draft, collating feedback, editing and review of final version. **SS:** Validation, investigation, writing draft, Review and editing. **AM:** Review of manuscript, investigation, and literature for the manuscript **NMT:** validation, review of initial manuscript. **FEM**: Review. **RT:** validation, investigation, writing draft, Review and editing. **AG:** Review and editing. **CS:** Review and administration. **CVH:** Validation, investigation, writing draft, Review and editing. **MN:** Validation, investigation, writing draft, Review and editing. **PD:** Manuscript review and project administration

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Figures

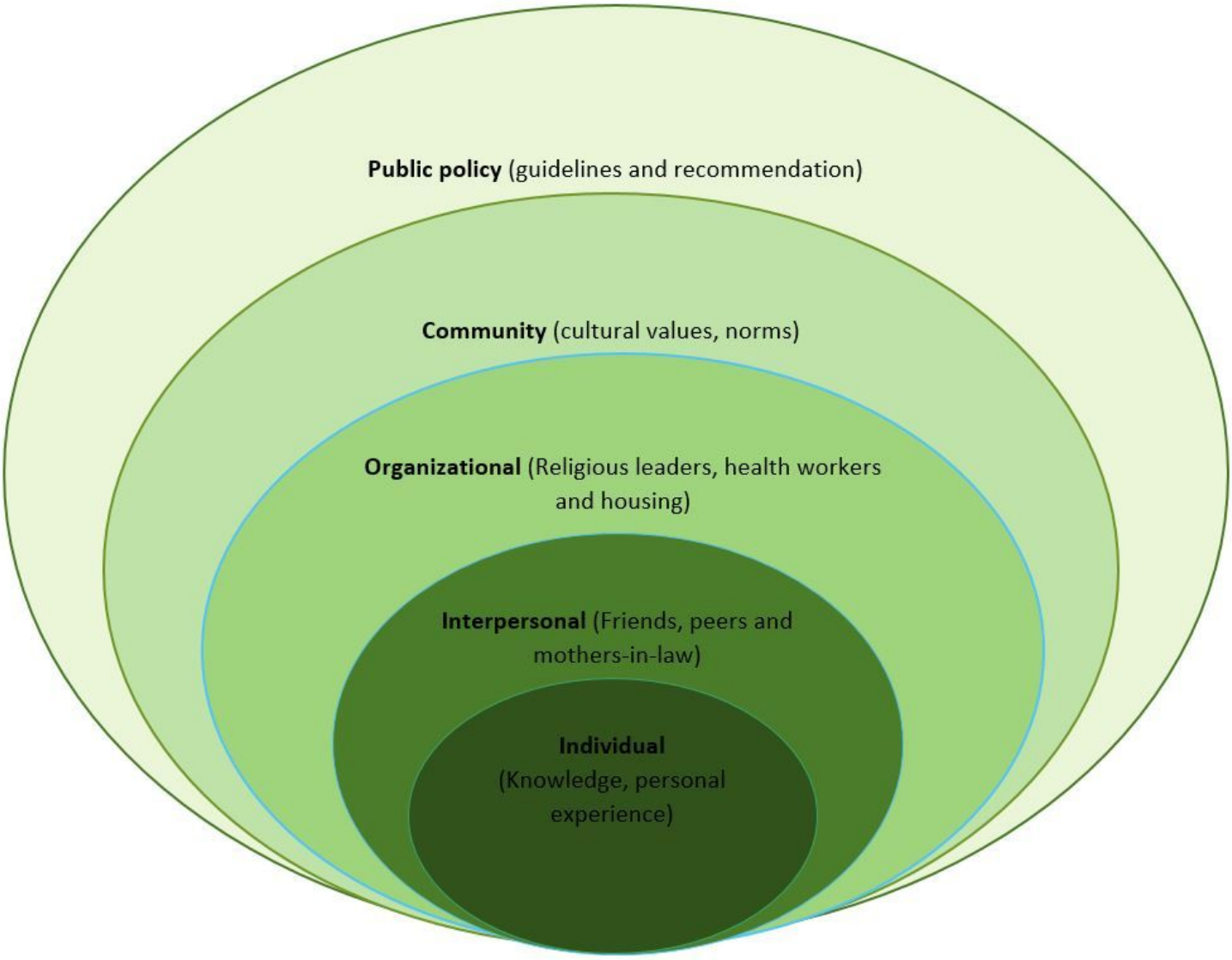

Figure 1

Study model as adapted from Bronfenbrenner socio-ecological model.

Codes	Sub-category	Category	Theme
I heard on the radio that capsules are equivalent to injectaplan, so it helped me to know that if I want to use short term methods, I should use injectaplan, rather than using a long term method	Knowledge about contraceptive method	Individual	Influences to contraceptive uptake
If you have earlier used a method and it treated you badly then stopped. After giving birth, even though you want to use it, you fear	Personal experience		
At school we hear from each other, also in the village *Our peers in schools and where we reside who have had seminars on the methods and had positive effects also encourage us*	Friends and peers	Interpersonal	
When you talk to our mothers about family planning, they tell us not to associate ourselves with it	Mothers- in law and grandparents		
In my religion you are not allowed to kill. So if you use family planning, they regard you to have killed *According to religious beliefs, one is not allowed to use these methods because they are sin*	Religious leaders	organisational	
We get advice from nurses mostly when we come for antenatal services *Some health workers are kind however others are money minded and charge for every material provided by the facility*	Health workers		
Now days the landlords ask you for the number of children you have when you go and rent a house	Housing		
the more children you produce, the more wealth, the more support and pride you get, so that is what we say the cultural aspect	Cultural values	Community	
It is mostly the radio that can help greatly		Radio	Sources of contraceptive information
we are mainly on TV though not all people have TVs		Television	
But there is when a van comes and goes through announcing that family planning on such a day		Mobile vans	
Okay the things I see that can be avoided are obscene words		Language to be used	Media Consumption habits
Avoid practising open acting like use of condoms as some people do it practically in shows which is bad		Conform to cultural practices	
should address men too on the importance of family planning so that they are aware of how good family planning is		Male involvement	

Figure 2

Summary of results