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Social norms, intersectionality and sexual and reproductive health and rights in low and middle income countries

Edited by
Paul Mukisa Wako Bukuluk, Beniamino Cislaghi and Rebecka Lundgren

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Social norms, intersectionality and sexual and reproductive health and rights in low and middle income countries

Topic editors

Paul Mukisa Wako Bukuluki – Makerere University, Uganda
Beniamino Cislaghi – University of London, United Kingdom
Rebecka Lundgren – University of California, United States

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Sexual and Reproductive Health: How Can Situational Judgment Tests Help Assess the Norm and Identify Target Groups? A Field Study in Sierra Leone

Lisa Selma Moussaoui[1], Erin Law[2], Nancy Claxton[3], Sofia Itämäki[2], Ahmada Siogope[2], Hannele Virtanen[2], Olivier Desrichard[1] and Consortium Sierra Leone Red Cross Society[4]*

[1]Research Group in Health Psychology, Faculty of Psychology and Education, Université de Genève, Geneva, Switzerland, [2]Finnish Red Cross, Helsinki, Finland, [3]Nadulpan, Crestview, FL, United States, [4]Sierra Leone Red Cross, Freetown, Sierra Leone

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Beniamino Cislaghi, University of London, United Kingdom

Reviewed by:
John Mark R. Asio, Gordon College, Philippines
Ana María Ruiz-Ruano García, University of Granada, Spain

***Correspondence:**
Lisa Selma Moussaoui
lisa.moussaoui@unige.ch

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Sexual and reproductive health is a challenge worldwide, and much progress is needed to reach the relevant UN Sustainable Development Goals. This paper presents cross-sectional data collected in Sierra Leone on sexual and gender-based violence (SGBV), family planning (FP), child, early and forced marriage (CEFM), and female genital mutilation (FGM) using an innovative method of measurement: situational judgment tests (SJTs), as a subset of questions within a larger survey tool. For the SJTs, respondents saw hypothetical scenarios on these themes and had to indicate how they would react. The objective is to give an impression of beliefs and norms on specific behaviors, which provide insights for social and behavior change interventions. Data was collected by enumerators traveling to villages randomly selected in six districts of the country. The sample is composed of 566 respondents. Results show that FGM in particular seem to be a priority topic, in comparison to the other topics for which the norms seem to be stronger against those practices. Age differences emerged and suggest priority groups to be targeted (e.g., on the topic of female genital mutilation, younger female respondents, and older male respondents gave the lowest coded responses which reflected to less appropriate behavior in our coding). In terms of validity of the measurement methods, situational judgment test answers correlated positively with other items in the survey, but the magnitude of the association is often small, and sometimes not significant. Thus, more studies are needed to further explore the validity of this measure by comparing against a reference value. Using SJTs could complement other data collection tools to perform community assessment, and orient the direction of the program in its planning phase.

Keywords: gender-based violence, family-planning, child early and forced marriage, female genital mutilation and cutting, social norms, low- and middle-income countries, community assessment, situational judgment tests

INTRODUCTION

Sexual and reproductive health is a challenge worldwide and is a foundation of many of the UN Sustainable Development Goals. While the target 3.7 of Goal 3 Good Health and Well-being is "By 2030, ensure universal access to sexual and reproductive healthcare services, including for family planning […]," the proportion of women of reproductive age who have their family planning (FP) needs met is around 77 percent globally, and only 56 percent in sub-Saharan Africa in 2021 (United Nations, 2021). A similar discrepancy exists between the current situation and the targets 5.3 of Goal 5 Gender Equality, "Eliminate all harmful practices, such as child, early and forced marriage, and female genital mutilation (FGM)," and target 5.2 "Eliminate all forms of violence against all women and girls in the public and private spheres […]." The document "Progress toward the Sustainable Development Goals" (United Nations, 2021) reports a dramatic situation. Estimates for the period 2000–2018 show that one in three women have been subjected to physical violence by an intimate partner, sexual violence, or both at least once in their lifetime. Child marriage declined by 15% from 2010 to 2020 but is expected to increase in the coming years due to the COVID-19 pandemic. FGM is still occurring in 31 countries. Nine out of 10 girls and women from 15 to 49 years have been mutilated in some places. Data from the Demographic and Health Survey 2019 in Sierra Leone show that those issues are pressing in this country: half of women age 25–49 gave birth for the first time before 20 years old (median = 19.5 years), and the proportion of current teenage childbearing is 21% [Statistics Sierra Leone (Stats SL) and ICF, 2020]. In terms of FP, 46% of married women having a demand (spacing births or limiting births), and more than half of those consider their needs unmet. According to the same survey, the percentage of women having experienced physical violence is 61%, and among ever-married women, the perpetrator of violence was often the partner. Similarly for sexual violence, experienced by 7% of the respondents, the most common perpetrator is the current or former partner. Female genital cutting concerns 83% of women between 15 and 49, which were mostly circumcised before 15 years old. Thus, more needs to be done in the field of sexual and reproductive health in Sierra Leone. The question is, how can we effectively tackle the challenges related to sexual and reproductive health?

Social and behavior change interventions are a way to modify the behavior behind the challenges mentioned above (World Health Organization, 2011; Collumbien et al., 2012; Brown et al., 2013; Spring et al., 2016; Cislaghi et al., 2019). In order to effectively change behavior, interventions need to target the correct drivers of behavior. For example, Huber et al. (2014) demonstrated that a tailored intervention targeting factors previously identified *via* a survey in the population was more effective to promote the uptake of the behavior (consumption of fluoride-free water in rural Ethiopia) compared to a traditional information intervention because in the target group the barriers to behavior were perceived costs and not a lack of information on the problem. Thus, data on what the target group believes and what the norms are is crucial to building effective social and behavior change interventions instead of relying on intuition (Wilson and Juarez, 2015), and to allow interventions to go further than only supplying information and education to raise awareness (World Health Organization, 2011).

Specifically, evidence-based effective interventions seem to be missing on the sexual and reproductive health topics targeted in this paper. For example, Berg and Denison (2012) conducted a systematic review on interventions to reduce the occurrence of FGM or "cutting" as referenced in fieldwork and concluded that interventions could have positive effects on attitudes, but not on the practice of FGM. In addition, a review by Lee-Rife et al. (2012) highlights that information is missing on the mechanism through which prevention programs carried out in low-income countries impact (or fail to impact) child marriage.

This study provides field data collected in Sierra Leone on several topics related to sexual and reproductive health. The topics considered are sexual and gender-based violence (SGBV), FP, child, early and forced marriage (CEFM), and FGM. The survey's objective was to provide a picture of the norms related to those topics among the population, both men and women of various ages. Knowing what the perceptions related to sexual and reproductive health are allows us to identify the target groups (e.g., who needs to be convinced to change), who is supporting of healthy behaviors (i.e., who could have a role in the program as peer supporters) and what are the (false)-beliefs, values, and perceptions of the population that need to be addressed to build effective interventions.

A number of existing studies examined the questions of beliefs in the communities and norms related to those thematics. Steinhaus et al. (2019) studied social norms related to child marriage among decision-makers of young girls in Malawi. They showed that despite a low median age of marriage in the country, the perception of what others expect, measured with the agreement to the sentence "Most people in this community expect girls to marry before the age of 18," was around 50%, that is, lower than it could have been expected. In South Sudan, Scott et al. (2013) assessed men's and women's attitudes toward sexual relationships and reproductive health. Respondents indicated their level of agreement with propositions, such as "it is a woman's responsibility to avoid getting pregnant" or "it would be outrageous for a wife to ask her husband to use a condom." The results suggest that gender inequitable norms are majoritarian and that this is the case among both sexes. Similarly, Nalukwago et al. (2019) assessed perceptions of gender norms in Uganda and showed that on average both adolescent girls and boys share gender norms, for example, 56% of girls and 58% of boys agree/partly agree that a woman should tolerate violence to keep the family together, and 64% of girls and 66% of boys considering that it is a woman's responsibility to avoid getting pregnant. This study also show that norms are associated with sexual behaviors of the adolescents (e.g., contraception use). In the Philippines, a study showed that the level of awareness among students on several topics, such as family planning, prevention of abortion, maternal and child health, and prevention of reproductive tract infections varies, with some topics (e.g., that infertility can result from

reproductive tract infection, and knowledge about some methods of family planning) having a mean level around 3 on a scale from 1 to 5, suggesting a need to intervene (Asio, 2019).

Existing studies mainly used Likert scale agreement with statements to measure norms and perceptions related to sexual and reproductive health. However, authors discussed the idea that the Likert scale is not necessarily optimal. For example, elements of the format, such as the ascending or descending order of the response options, influence the answers (e.g., Chyung et al., 2018). Acquiescence bias has also been highlighted about Likert scales, and authors suggested that semantic differential scales reduced the bias (Friborg et al., 2006). More specific to our study, Flaskerud (2012) reported several cases where participants of non-western origin had difficulties choosing one option among the scale and instead answered "yes" or "no" to each degree of the scale. In addition, other researchers identified cultural differences in the style of answering Likert scales (Lipnevich et al., 2011; He and van de Vijver, 2013). In this study, we use hypothetical scenarios, also called Situational Judgment Tests (SJTs), to grasp the norms and beliefs related to sexual and reproductive health in Sierra Leone.

Situational Judgment Tests have been chiefly used in education and occupational psychology (for school admissions and employee selection notably) to measure attributes, such as leadership and interpersonal skills (Christian et al., 2010). A scenario is presented to the person, and they have to indicate their typical response among the response possibilities. Arguments for SJTs are that they are less prone to bias associated with self-report (Lipnevich et al., 2013), such as "faking" or the practice of respondents trying to give an answer that they suspect the enumerator will think is the best choice. To our knowledge, the only application of SJTs to health behaviors is a paper by Heininger et al. (2021) on hand-hygiene competence. However, it remains a measure of skills, while in our study, we are interested in measuring the respondent perception of what they would do in a situation. We were also aiming to find a tool that would help us to specifically identify some of the underlying norms in a community disaggregated by age, sex, and other factors to help us understand where barriers existed and how to best address these in our health promotion work. The way the SJTs used in this study were developed is explained in detail in **Appendix A**.

The SJT tool was integrated into a household survey being used as a baseline survey for the BRIDGE project in Sierra Leone. The BRIDGE project is implemented by Sierra Leone Red Cross and supported by Finnish Red Cross and Icelandic Red Cross in six districts—Bo, Bonthe, Kenema, Kono, Moyamba, and Pujehun.

The paper has two goals: Report descriptive data on norms associated with SGBV, FP, CEFM, and FGM among different population groups (e.g., sex, age, and disability), which will benefit practitioners and policymakers by providing insights to build interventions. The second goal is to validate the use of SJTs in measuring hypothetical intentions/norms by comparing with other data, such as knowledge (e.g., for FP SJT: knowledge of a place where to obtain a method of family planning) and related behaviors (e.g., for SGBV SJT: self-report action when being witness of violence). Developing a new measurement method for norms and beliefs would help future interventions tailored to the target population-specific needs.

MATERIALS AND METHODS

Research Design and Data Gathering Procedure

The study is a cross-sectional survey, conducted in Sierra Leone. Thirty villages were randomly selected from 62 villages where the project would be implemented in six districts, with five villages being selected from each district. Per each of the six districts, four enumerators were trained in the survey and assigned a team leader who was also present at the training. Team leaders and enumerators went to one village per day. Each enumerator was asked to collect at least five surveys per day. Teams traveled within their district for 5 days.

Among the villages, households were randomly selected, and potential respondents were visited in their homes to see if they were willing to participate. The data was collected using KoBo Toolbox software, all enumerators used their own smartphones loaded with the tested survey.

Ethics

Potential respondents were informed of the institutional affiliation of the enumerator (the Sierra Leone Red Cross). In accordance with the Declaration of Helsinki, the enumerator made clear that participation is voluntary and that participants could refuse to answer any questions and end the survey at any time. No information bearing the name or identity of the person was collected, and participants were informed that the answers to all questions would remain strictly confidential. Participants were asked if they agreed to participate. The enumerator proceeded if they agreed for the interview to begin; otherwise, the experimenter thanked the person for their time and moved to interview the next person.

Data were collected as part of regular program monitoring; thus, ethics approval was not sought by the organization implementing the program and leading the monitoring and evaluation.

Population and Sampling

The sample is composed of 566 responses. The minimum age is 18, and the maximum is 100, with the average at 38 years old ($SD = 14$; mode = 35). 56.4% are female, 43.3% male, and for 0.4%, the information is missing. The respondents are from various country districts: 17% from Bo, 17.7% from Bonthe, 12.5% from Kenema, 17.5% from Kono, 17.7% from Moyamba, and 17.7% from Pujehun.

Instrument

The household survey covered basic demographic questions—including those enabling disaggregation by sex, age, and disability

as well as questions on health, water, sanitation, and hygiene, disaster preparedness, and livelihoods.

Disability Measure

The level of disability was measured with the Washington Group Short Set of Disability Questions. The items measure difficulty seeing, even if wearing glasses; difficulty hearing, even if using a hearing aid; difficulty walking or climbing steps; difficulty remembering or concentrating; difficulty with self-case, such as washing all over or dressing; and difficulty communicating (understanding or being understood). For each item, response options range from "no, no difficulty"/"yes, some difficulty"/"yes, a lot of difficulty"/"cannot do at all." Several severity cutoff are suggested by Mont (2006), ranging from the broadest definition to a disability to the most limited definition. For this research, we set the cutoff at having one domain or less with difficulties vs. more than one domain with difficulties.

Situational Judgment Tests

Both project staff at national and regional levels and locally recruited enumerators reviewed the SJTs. Together they agreed upon basic changes either to improve interpretation of the question in local languages or to make the options more relevant to context, for example, using foods regularly available and consumed in the nutrition SJT (not presented in this paper).

Enumerator training included a review of all SJTs. Enumerators had to translate the questions, written in English, into their local languages in real time. The Sierra Leone team focused on ensuring consistency of understanding and delivery by enumerators. During the training, each SJT was rehearsed first as a role play in front of the entire group, followed by discussion between all enumerators on how to capture the questions and responses. Enumerators then rehearsed each question in partnered role play with team leaders observing and mentoring. Where issues with meaning, context, and language were identified changes were made directly into the Kobo Toolbox survey and then re-tested with the enumerators.

Ten[1] SJTs were presented to respondents: three SJTs were about FGM (two for female respondents, one for male respondents), three SJTs were related to CEFM, two related to FP-adolescent pregnancy, and two about SGBV. Skip logic was programmed in the survey tool in Kobo Toolbox to ensure SJTs were fed appropriately to either male of female participants. Due to time limitations related to travel logistics and security and the overall length of the survey with other questions from the baseline survey, skip logic was also introduced to ensure that each respondent only received a smaller subset of the 10 possible SJTs rather than all of them. Skip logic was not based on a respondents answer to any question, but rather on the order in which they were interviewed by the enumerator that day. So while the first person an enumerator interviews in a village may receive an SJT on a particular topic, a subsequent person interviewed in that same village would receive an SJT on a different topic. This leads to different respondent sample size for each SJTs.

The response options contain one action that is the most appropriate for the question asked in that situation (coded to have the highest value, that is, 5), one or two actions that are somewhat appropriate (coded to an intermediate value, between 2 and 4), and one or two actions that would be inappropriate for the question asked in that situation (coded to the lowest value, that is, 1). Each response option is intended to be logically possible for the specific scenario. Respondents were instructed to choose the option that is closest to what they would do. SJTs and the response options and coding are presented in **Table 1**.

Validation Items

Self-Report Reaction to Violence (for SGBV SJTs)

Two items measured the self-reported reaction to violence: "If you saw or heard someone being sexually violent against another person, what immediate action could you take?," no response option was read aloud, but the response given by the participant was classified by the enumerator in one of the following options: *Get the person being hurt to safety; Get help immediately; Speak up to bring attention to the violence; Make it clear to the inflictor that violence is unacceptable and must stop immediately; Talk to someone else in the home or community that can help; Other (please specify); Do not know*. Except for the "Do not know" answer, all responses mentioned by the participant were summed to compose its score for this question. The average score for this item is 1.52 ($SD = 0.87$).

The second item measuring reaction to violence is: "If a person tells you they are being hurt by violence, what can you do to help the person?." Similarly, the response given by participants were coded by the enumerator in one of the following categories: *Listen to the person and show empathy; Comfort the person; Take the person to a safe place; Know the community resources and support system; If it involves a child, report the violence to a helping source in the community, Other; Do not know*. The score was computed by summing all responses except "Do not know." Average score for this item is 1.56 ($SD = 0.83$).

Knowledge of Where to Obtain Contraception (for FP SJTs)

One item measured the knowledge about where to obtain contraception: "Do you know of a place where you could obtain a method of child spacing/family planning"? No response option was read aloud by the enumerator. They recorded the responses given by participants in one of the following possibilities: *Hospital; Public Health Unit; Health Centre, Community Health Center, Marie Stopes; Community Health Worker/Pharmacy; Shop; Friend/relative; Other* (*please specify*). If at least one place was mentioned, response is coded as 1, while if the respondent could not mention a place where to

[1]This study is part of a larger research project. The survey contained items relative to nutrition, water and hygiene, mosquito net usage, and disasters preparedness, and climate change adaptation.

TABLE 1 | Description of the situational judgment tests (SJTs) and their response options.

Sexual and gender-based violence SJTs

SGBV1: Imagine that your boyfriend, Patrick, has recently gotten an excellent job in the capital city with a reliable organization. Your sick mother is very pleased and tells you that the whole family will be well cared for once you marry him. The stress Patrick is feeling is quite high and he sometimes takes it on you with slaps to your face or punching you in the back. Which of the following are you most likely to do?

Tell Patrick you no longer will be his girlfriend (5)	Tell Patrick he must stop hitting you or you will not marry him (4)	Tell your mother that he is abusive so she will tell him to stop (3)	Hit Patrick back in the hopes that he will stop (2)	Put up with his abuse and hope it gets better (1)

SGBV2: Imagine that you see a man beating his wife at the market, shouting that she throws away his money. She is crouched down and protecting her head while the crowd watches him hit her with a strip of leather. Her small child is crying and pulling at his father to stop but he just pushes him away. The man is older and the wife is about your age. Which of the following are you lost likely to do?

Comfort the child in the hopes that the father will realize what he is doing and stop (6)	Call the police or guards to stop it (5)	Tell the man you will report them to the police if he does not stop (4)	Shout at the man to stop (3)	Stand and watch in the hopes that someone does something (2)	Leave them to their business and walk on (1)

Family planning SJTs

FP1: Imagine that your oldest brother, Musa, is planning to marry one of your friends, Fatmata. Fatmata said she wants to wait to have babies until she has finished school. She wants to use contraceptives and asks you what she should do. Which of the following are you most likely to do?

Tell Fatmata that she should get contraceptive pamphlets from the clinic and talk with Musa about the options they have as a couple (6)	Tell Fatmata to tell Musa that she does not want to have babies right away and he should respect that. Tell her that you will tell Musa that he should respect women (5)	Tell Fatmata to just quietly go to the clinic and get the injectable that will keep the babies from coming for 3 months at a time. Musa does not need to know (4)	Tell Fatmata to abstain from sex (3)	Tell Fatmata that you plan to tell your and her father and mother that she plans to use contraceptives. It is her duty to have babies (2)	Tell Fatmata to just urinate or douche with vinegar after sex to keep from becoming pregnant (1)

FP2: Imagine that your boyfriend, Samuel, wants to have sex. He says that he knows that he will marry you when he finishes school, so it is your duty to have sex with him now, to ensure that he loses his virginity to you. You tell him that you will do so but only if you both use contraceptives. Your boyfriend says that he knows that you cannot get pregnant the first time and a condom is not necessary because you cannot have an STI if you are both virgins. Which of the following would you be most likely to do?

Tell Samuel that you will only have sex if he wears a condom and you use another form of protection (5)	Tell Samuel that his knowledge of reproductive health is poor and you will both go to clinic to get the accurate information (4)	Tell Samuel that you will not have sex before marriage (3)	Tell Samuel that you are not so sure that what he says is true, but you trust him and will do as he asks (2)	Tell Samuel that you agree that having sex the first time is safe, so you are happy to do so (1)

Adolescent pregnancy—child early and forced marriage SJTs

AP-CEFM1: Imagine that you are 16 years old, the oldest girl in your family and your mother is 16 years your senior. People say you look like sisters more than like mother and daughter. Your mother cannot read well because she left school when she fell pregnant with you. You want to stay in school which vexes her. She tells you to just make a baby with Momodu and start your life—it was a good enough life for her. Which of the following would you be most likely to do?

You tell your mother that you want to go to university and get a good job (5)	You tell your mother that you do not want to have babies when you are not married (4)	You tell your mother that you do not like Momodu enough to make babies with him (3)	You tell your mother that you will consider this, but you secretly plan on staying in school (2)	You tell your mother that you do not want babies at all just to anger her (1)

AP-CEFM2: Imagine that you are in your third year of secondary school and you want to continue studying to become a solicitor. Your mother says that women make for bad solicitors because they are too emotional and she cannot wait so long for you to either leave the house or start earning money to help the family. Your friends are all getting married or are married and pregnant with their first babies. You just learned from your teacher how many years of school is required to become a solicitor and the fees for law school. You are discouraged. Which of the following would you be most likely to do?

Ask the teacher for help in finding scholarships to help you attend university (5)	Tell your mother how much money solicitors can earn and that by ensuring that you get into law school and graduate, you will be able to support her for life (4)	Stay in school and choose another career that requires less formal education (3)	Give up your plan to go to law school and quit school for a job that will pay money now (2)	Give up your plan to go to law school and quit school to get married to your boyfriend (1)

(Continued)

TABLE 1 | Continued

Sexual and gender-based violence SJTs

AP-CEFM3: Imagine that your father has informed you that he cannot afford to feed so many mouths in the house. As the oldest daughter, he has found a husband for you to marry to remove some of the financial strain and for you to do your duty to the family. The man that your father has chosen is much older than you, has many children from his previous wife who dies 2 years ago and was cruel to his wife. Which of the following would you be most likely to do?

Tell your father that you refuse to marry and that you will stay in school so that you will 1 day have a good-paying job (5)	Tell your father that the man was cruel to his previous wife and hope that your father shows you mercy and chooses another man for you to marry (4)	Tell your father that you will not marry him and will go to the capital city to find work and send money home (3)	Tell your father that you will marry the man only if your father allows you to get the stick to keep from getting pregnant (2)	Tell your father that you will do as he asks and you agree to marry the man (1)

Female genital mutilation SJTs

FGM1: Imagine that your mother was cut when she was eleven. She has always said that she would keep you, her own daughter from having to endure cutting. Your grandmother has said that she is upset that her own granddaughter remains uncut and has asked you to undergo circumcision to honor her. Which of the following would you be most likely to do?

Tell your grandmother that she is very brave but that you will not be cut (5)	Tell your grandmother that you cannot disobey your mother (4)	Tell your grandmother that she is very brave but that you are afraid (3)	Tell your grandmother that you will do it but that you will choose the type of circumcision and the circumciser (2)	Tell your grandmother that you will submit to being cut (1)

FGM2: Imagine that you were cut when you were 12 years old. You still feel pain when you bleed each month and you have a difficult time making good friends, finding that you are anxious and find it hard to trust people. You can still see your grandmother between your legs when she hurt you so. You are talking with a small group of women about when they have children—whether they will allow their daughters to be cut. One of the women says that she will "definitely cut" her daughter, saying it is tradition and that since she was cut, her daughters must also be cut. Which of the following would you be most likely to do?

Explain the physical and psychosocial problems that many girls and women suffer from cutting and explain that you, too, still suffer these effects (5)	Explain the physical and psychosocial problems that many girls and women suffer from cutting but do not mention that you also suffer these (4)	Disagree with the woman publicly, saying that it is barbarian (3)	Agree with the woman publicly just to get her to stop talking about it (2)	Agree that traditions are strong around cutting and that women should suffer to maintain these customs (1)

FGM3: Imagine that you are a man in your early 30s who is eager to get married and start a family. Your father tells you that a good woman is one who has been cut and whose purity is assured for your wedding night. He tells you that a good woman is cut to receive you on your wedding night and you will know no other man has been able to take what is rightfully yours. You know that your girlfriend has not been cut as severely as your father thinks is proper for a woman. Which of the following would you be most likely to do?

Tell your father that you do not care about these matters—times are changing and traditions must change so that women are no longer expected to be cut (5)	Tell your father that you are sure that her purity is secured and change the topic (4)	Tell your father that your girlfriend was not cut as severely as your father indicates and ask what you should do (3)	Tell your father that you will find a woman to marry who has been cut in such a way to ensure purity (2)	Tell your father that you will ask your girlfriend to undergo a more severe cutting so that you can marry her (1)

obtain FP, they received the score of 0. Average score for this item is 0.95 ($SD = 0.22$).

Statistical Treatment/Analysis

Descriptives of Stigma-Sensitive Norms on the Four Topics (SGBV, FP/AP, CEFM, and FGM), General Overview, and Crossed by Characteristics (Age/Gender/Handicap)

Statistical differences are tested with nonparametric rank tests (Field, 2018; Gibbons and Chakraborti, 2020; two tails tests, significance threshold < 0.05), respectively for disability and gender (two groups- > Mann–Whitney test), and age (more than two groups- > Kruskal–Wallis) because answers to the SJTs are not an interval measurement. For some SJTs, the number of participants in the category "with more than one domain with difficulties" was much lower than in the group "one domain or less with difficulties." Analysis on disability was not performed if there were less than 10 respondents in each group.

Validation of SJTs Answers With Other Types of Data

Construct validity of SJT is tested with Spearman's rank correlation by assessing the association between the SJT's answers and other measures in the survey that are judged relevant

according to the topic of the SJT. Unfortunately, for some SJTs (those on FGM in particular), there was no "objective" measure to do such analysis. They are thus not included in this part of the paper.

RESULTS

Descriptives of Stigma-Sensitive Norms on the Four Topics (SGBV, FP/AP, CEFM, and FGM), General Overview and Crossed by Characteristics (Age/Gender/Handicap)

Sexual and Gender-Based Violence SJTs

> **SGBV1—Imagine that your boyfriend, Patrick, has recently gotten an excellent job in the capital city with a reliable organization. Your sick mother is very pleased and tells you that the whole family will be well cared for once you marry him. The stress Patrick is feeling is quite high and he sometimes takes it on you with slaps to your face or punching you in the back.**

Responses to the SJT SGBV1 ($N = 115$) were the following: 29.6% of respondents chose the answer "Tell Patrick you no longer will be his girlfriend" (coded 5). A similar share of respondents chose answers "Tell Patrick he must stop hitting you or you will not marry him" (27.8%, coded 4) and "Tell your mother that he is abusive so she will tell him to stop" (30.4%, coded 3). Very few respondents choose the answer "Hit Patrick back in the hopes that he will stop" (5.2%, coded 2) or the answer "Put up with his abuse and hope it gets better" (6.9%, coded 1).

Answers on SGBV1 according to age were tested using Kruskal–Wallis test, which shows a non-significant but marginal effect, $H(2) = 5.66$, $p = 0.059$. Results are presented in **Figure 1**. Descriptive results suggest that younger respondents choose more the highest coded choice (i.e., the most appropriate in our coding), while referring to the mother seems more frequent among middle-aged and older participants.

Response on this SJT was not analyzed according to gender because it was presented to female respondents only.

Responses to SGBV1 did not significantly varied according to the disability level, as Mann–Whitney test shows, $U = 833.50$, $z = -0.76$, $p = 0.450$, and $r = -0.07$. Both groups (respondents with one domain or less with difficulties and respondents with more than one domain with difficulties) have a median value = 4.

> **SGBV2—Imagine that you see a man beating his wife at the market, shouting that she throws away his money. She is crouched down and protecting her head while the crowd watches him hit her with a strip of leather. Her small child is crying and pulling at his father to stop but he just pushes him away. The man is older and the wife is about your age.**

Responses to the SJT SGBV2 ($N = 217$) were around a quarter of respondents for each of the four highest coded choices: 20.3% for the answer "Comfort the child in the hope that the

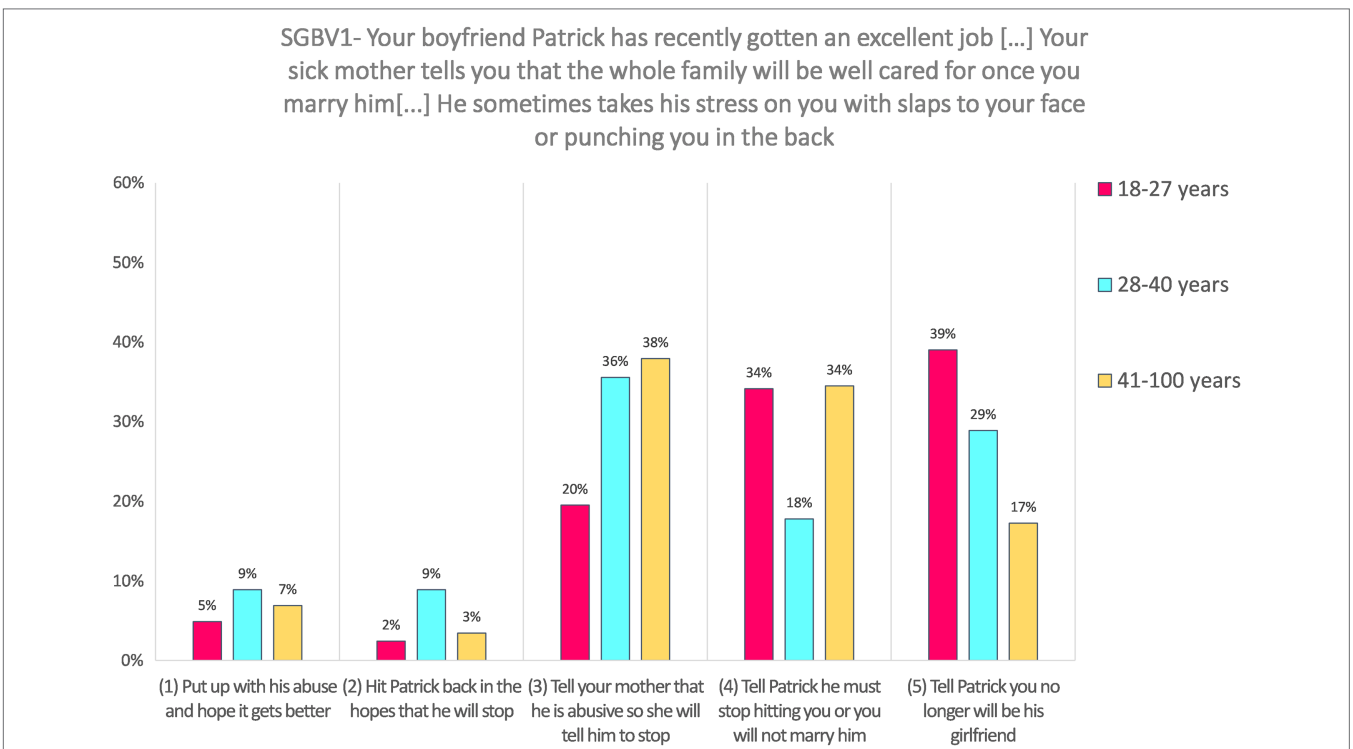

FIGURE 1 | Answers to SGBV1 according to age categories.

father will realize what he is doing and stop" (coded 6); 25.8% "Call the police or guards to stop it" (coded 5); 24.4% "Tell the man you will report them to the police if he does not stop" (coded 4), and 25.3% "Shout at the man to stop" (coded 3). On the other hand, nearly no respondent chose the two lowest ranked answers, "Stand and watch in the hope that someone does something" (2.3%, coded 2), or the answer "Leave them to their business and walk on" (1.8%, coded 1).

Answers on SGBV2 did not differ according to age, $H(2) = 4.32$, $p = 0.115$, neither to according to gender, $U = 5858.00$, $z = 0.15$, $p = 0.881$, and $r = 0.01$. Both male and female respondents have a median value = 4 (i.e., "Tell the man you will report them to the police if he does not stop"). Responses to SGBV2 also did not significantly varied according to the disability level, $U = 4514.00$, $z = 0.295$, $p = 0.768$, and $r = 0.02$. Both groups (respondents with one domain or less with difficulties and respondents with more than one domain with difficulties) have a median value = 4.

Family Planning SJTs

FP1—Imagine that your oldest brother, Musa, is planning to marry one of your friends, Fatmata. Fatmata said she wants to wait to have babies until she has finished school. She wants to use contraceptives and asks you what she should do.

Responses to the SJT FP1 ($N = 235$) were the following: 11.1% of respondents chose the answer "Tell Fatmata that she should get contraceptive pamphlets from the clinic and talk with Musa about the options they have as a couple" (coded 6). Twice more respondents chose the answer "Tell Fatmata to tell Musa that she does not want to have babies right away and he should respect that. Tell her that you will tell Musa that he should respect women" (22.1%, coded 5), and three times more chose the answer "Tell Fatmata to just quietly go to the clinic and get the injectable that will keep the babies from coming for 3 months at a time. Musa does not need to know" (33.6%, coded 4). Around 8.5% chose the answer "Tell Fatmata to abstain from sex" (coded 3), and 21.7% the answer coded 2 "Tell Fatmata that you plan to tell your and her father and mother that she plans to use contraceptives. It is her duty to have babies." A very small percentage (3%) chose the option coded 1, "Tell Fatmata to just urinate or douche with vinegar after sex to keep from becoming pregnant."

Answers on FP1 did not vary according to age $H(2) = 0.08$, $p = 0.963$, neither according to gender, $U = 6437.00$, $z = -0.24$, $p = 0.808$, and $r = -0.02$. Both male and female respondents have a median value = 3 (i.e., "Tell her to just quietly go to the clinic and get the injectable that will keep the babies from coming"). Responses to FP did not significantly vary according to the disability level, although the p-value is close to the significance threshold, $U = 6115.00$, $z = 1.90$, $p = 0.057$, and $r = 0.12$. Both groups (respondents with one domain or less with difficulties and respondents with more than one domain with difficulties) have a median value = 4.

FP2—Imagine that your boyfriend, Samuel, wants to have sex. He says that he knows that he will marry you when he finishes school, so it is your duty to have sex with him now, to ensure that he loses his virginity to you. You tell him that you will do so but only if you both use contraceptives. Your boyfriend says that he knows that you cannot get pregnant the first time and a condom is not necessary because you cannot have an sexually transmitted infection (STI) if you are both virgins.

Responses to the SJT FP2 ($N = 59$) were frequent for the highest coded choice: 35.6% answered "Tell Samuel that you will only have sex if he wears a condom and you use another form of protection" (coded 5). Around 8.5% chose the option "Tell Samuel that his knowledge of reproductive health is poor and you will both go to clinic to get the accurate information" (coded 4). The majority (37.3%) choose the third option, "Tell Samuel that you will not have sex before marriage" (coded 3). Around 13.6% chose the option "Tell Samuel that you are not so sure that what he says is true, but you trust him and will do as he asks" (coded 2), and a small minority answered "Tell Samuel that you agree that having sex the first time is safe, so you are happy to do so" (5.1%, coded 1).

Responses to this SJT were not analyzed according to gender because it was presented to female respondents only, neither according to disability level. Answers on FP2 significantly differed according to age, $H(2) = 7.63$, $p = 0.022$. Pairwise comparisons with adjusted p-values showed that the difference occurred mainly between the oldest and the middle-aged group ($p = 0.032$, $r = 0.41$), the latter ones providing higher-coded answers than the former. The comparison between the youngest and the middle-aged group is not significant, although the effect size is not negligible ($p = 0.126$, $r = -0.31$), neither the comparison between the oldest and the youngest ($p = 1.00$, $r = 0.11$). Results are presented in **Figure 2**.

Adolescent Pregnancy—Child Early and Forced Marriage SJTs

AP-CEFM1—Imagine that you are 16 years old, the oldest girl in your family and your mother is 16 years your senior. People say you look like sisters more than like mother and daughter. Your mother cannot read well because she left school when she fell pregnant with you. You want to stay in school which vexes her. She tells you to just make a baby with Momodu and start your life—it was a good enough life for her.

Responses to the SJT AP-CEFM1 ($N = 79$) were majoritarian for the highest coded choice: 51.9% for the answer "You tell your mother than you want to go to university and get a good job" (coded 5). Around 13.9% chose the option "You tell your mother that you do not want to have babies when you are not married" (coded 4); 10.1% "You tell your mother that you do not like Momodu enough to make babies with him" (coded 3), and 19.0% "You tell your mother that you will consider this, but you secretly plan on staying in school"

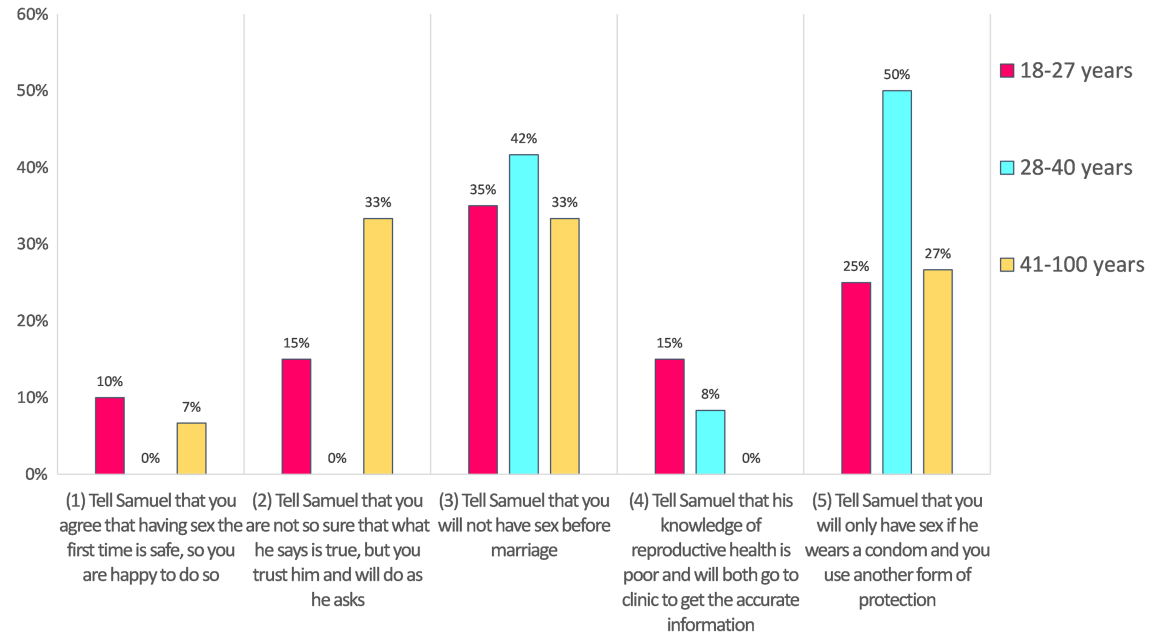

FIGURE 2 | Answers to FP2 according to age categories.

(coded 2). Very few respondents choose the lowest ranked answer, "You tell your mother that you do not want babies at all just to anger her" (5.1%, coded 1).

Answers on AP-CEFM1 did not differ according to age, $H(2) = 2.61$, $p = 0.271$. Response on this SJT was not analyzed according to gender because it was presented to female respondents only. Responses to AP-CEFM1 did not significantly varied according to the disability level, $U = 599.00$, $z = 0.36$, $p = 0.718$, and $r = 0.04$. It is, however, important to note that only 19 respondents to this SJT had difficulties in more than one domain; thus, the statistical power might be low. Respondents with one domain or less with difficulties have a median value of 4.5, while respondents with more than one domain with difficulties have a median value = 5.

> **AP-CEFM2—Imagine that you are in your third year of secondary school and you want to continue studying to become a solicitor. Your mother says that women make for bad solicitors because they are too emotional and she cannot wait so long for you to either leave the house or start earning money to help the family. Your friends are all getting married or are married and pregnant with their first babies. You just learned from your teacher how many years of school is required to become a solicitor and the fees for law school. You are discouraged.**

Responses to the SJT AP-CEFM2 ($N = 55$) were most frequent for the highest coded choice: 41.8% answered, "Ask the teacher for help in finding scholarships to help you attend university" (coded 5). Around 34.5% chose the option "Tell your mother how much money solicitors can earn and that by ensuring that you get into law school and graduate, you will be able to support her for life" (coded 4); 12.7% "Stay in school and choose another career that requires less formal education" (coded 3). Few respondents chose the two lowest coded choices: 7.3% "Give up your plan to go to law school and quit school for a job that will pay money now" (coded 2), and "Give up your plan to go to law school and quit school to get married to your boyfriend" (3.6%, coded 1).

Response on this SJT was not analyzed according to gender because it was presented to female respondents only. Answers on AP-CEFM2 did not differ according to age, $H(2) = 2.24$, $p = 0.327$, neither according to the disability level, $U = 179.50$, $z = -1.30$, $p = 0.193$, and $r = -0.18$. Similarly to AP-CEFM1, the statistical power might be low because only 11 respondents to AP-CEFM2 had difficulties in more than one domain. Both respondents with one domain or less with difficulties and those with more than one domain with difficulties have a median value = 4 (i.e., "Tell your mother how much money solicitors can earn").

> **AP-CEFM3—Imagine that your father has informed you that he cannot afford to feed so many mouths in the house. As the oldest daughter, he has found a husband for you to marry to remove some of the financial strain and for you to do your duty to the**

family. The man that your father has chosen is much older than you, has many children from his previous wife who dies 2 years ago, and was cruel to his wife.

Responses to the SJT AP-CEFM3 ($N = 56$) were most frequent for the middle answer (coded 3) "Tell your father that you will not marry him and will go to the capital city to find work and send money home," 33.9%; followed by the highest coded answer (5) "Tell your father that you refuse to marry and that you will stay in school so that you will 1 day have a good-paying job" chosen by 25% of respondents, and the lowest coded answer (1) "Tell your father that you will do as he asks and you agree to marry the man," chosen by 23.2%. The rest of the respondents choose equally the second lowest response option (2) "Tell your father that you will marry the man only if your father allows you to get the stick to keep from getting pregnant," and the response coded 4 "Tell your father that the man was cruel to his previous wife and hope that your father shows you mercy and chooses another man for you to marry," each chosen by 8.9% of respondents.

Response on this SJT was not analyzed according to gender because it was presented to female respondents only, and neither on disability level. Answers on AP-CEFM3 did not differ according to age, $H(2) = 1.46$, $p = 0.483$.

Female Genital Mutilation SJTs

FGM1—Imagine that your mother was cut when she was 11. She has always said that she would keep you, her own daughter from having to endure cutting. Your grandmother has said that she is upset that her own granddaughter remains uncut and has asked you to undergo circumcision to honor her.

Responses to the SJT FGM1 ($N = 55$) were not very frequent for the highest coded choice: only 12.7% answered "Tell your grandmother that she is very brave but that you will not be cut" (coded 5). A bigger share of respondents (30.9%) chose the option "Tell your grandmother that you cannot disobey your mother" (coded 4). Around 18.2% choose the third option, "Tell your grandmother that she is very brave but that you are afraid" (coded 3). Around 7.3% chose the option "Tell your grandmother that you will do it but that you will choose the type of circumcision and the circumciser" (coded 2), and around a third (30.9%) answered "Tell your grandmother that you will submit to being cut" (coded 1).

Responses to this SJT were not analyzed according to gender because it was presented to female respondents only, neither according to disability level. Answers on FGM1 did not differ according to age, $H(2) = 2.50$, $p = 0.287$.

FGM2—Imagine that you were cut when you were 12 years old. You still feel pain when you bleed each month and you have a difficult time making good friends, finding that you are anxious and find it hard to trust people. You can still see your grandmother between your legs when she hurt you so. You are talking with a small group of women about when they have children—whether they will allow their daughters to be cut. One of the women says that she will "definitely cut" her daughter, saying it is tradition and that since she was cut, her daughters must also be cut.

Responses to the SJT FGM2 ($N = 59$) were not very frequent for the highest coded choice: only 11.9% answered "Explain the physical and psychosocial problems that many girls and women suffer from cutting and explain that you, too, still suffer these effects" (coded 5). No participants chose the fourth option "Explain the physical and psychosocial problems that many girls and women suffer from cutting, but do not mention that you also suffer these" (coded 4). Around 16.9% choose the third option, "Disagree with your friend publicly, saying that it is barbarian" (coded 3). The majority of respondents (42.4%) chose the option "Agree with the friend publicly just to get her to stop talking about it" (coded 2), and nearly a third (28.8%) answered "Agree that traditions are strong around cutting and that women should suffer to maintain these customs" (coded 1).

Responses to this SJT were not analyzed according to gender because it was presented to female respondents only, neither according to disability level. The effect of age is significant, $H(2) = 6.10$, $p = 0.047$. Pairwise comparisons with adjusted p-values showed that the difference occurred mainly between the youngest and the middle-aged group (the latter providing higher-coded answers than the former), although after the adjustment, the p-value is not below the 5% threshold ($p = 0.075$, $r = -0.34$). The difference between the oldest and the middle-aged group is not significant ($p = 0.179$, $r = 0.30$), neither is the comparison between the youngest and the oldest ($p = 1.00$, $r = -0.03$). Results are presented in **Figure 3**.

FGM3—Imagine that you are a man in your early 30s who is eager to get married and start a family. Your father tells you that a good woman is one who has been cut and whose purity is assured for your wedding night. He tells you that a good woman is cut to receive you on your wedding night and you will know no other man has been able to take what is rightfully yours. You know that your girlfriend has not been cut as severely as your father thinks is proper for a woman.

Responses to the SJT FGM3 ($N = 245$) were not very frequent for the three highest coded choices: 18.0% answered "Tell your father that you do not care about these matters—times are changing and traditions must change so that women are no longer expected to be cut" (coded 5); 12.2% choose "Tell your father that you are sure that her purity is secured and change the topic" (coded 4), and 14.3% choose the third option, "Tell your father that your girlfriend was not cut as severely as your father indicates and ask what you should do" (coded 3). Nearly two-thirds of the respondents choose one of the two lowest coded options: 29% choose "Tell your father that you will find a woman to marry who has been cut in such a way to

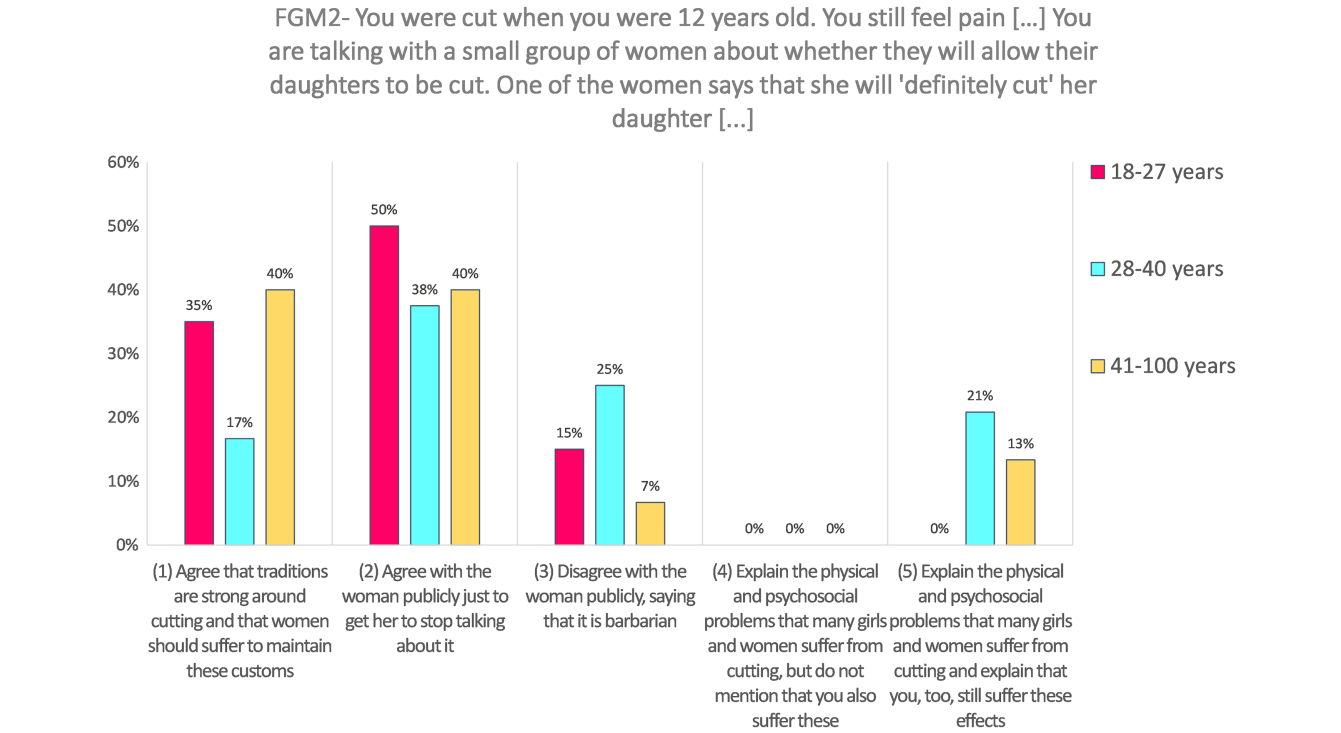

FIGURE 3 | Answers to FGM2 according to age categories.

ensure purity" (coded 2), and 26.5% choose "Tell your father that you will ask your girlfriend to undergo a more severe cutting so that you can marry her" (coded 1).

Response on this SJT was not analyzed according to gender because it was presented to male respondents only. The effect of age is statistically significant, $H(2) = 6.51$, $p = 0.039$. Pairwise comparisons with adjusted p-values showed that the difference occurred mainly between the oldest and the middle-aged group (the latter providing higher-coded answers than the former), although after the adjustment, the p-value is not below the 5% threshold ($p = 0.076$, $r = 0.16$). The difference between the oldest and the youngest group is not significant after the adjustment ($p = 0.143$, $r = 0.17$), neither is the comparison between the youngest and the middle-aged group ($p = 1.00$, $r = 0.02$). Results are presented in **Figure 4**.

Responses to FGM3 did not significantly varied according to the disability level, $U = 6668.00$, $z = 0.688$, $p = 0.491$, and $r = 0.04$. Both groups (respondents with one domain or less with difficulties and respondents with more than one domain with difficulties) have a median value = 2.

Validation of SJTs Answers With Other Types of Data

Sexual and Gender-Based Violence SJTs

For SGBV vignettes, the SJTs answers are compared with self-report of action taken if one saw or heard someone being sexually violent against another person; and self-report of action if a person tells oneself that they are the victim of violence.

SGBV1—Imagine that your boyfriend, Patrick, has recently gotten an excellent job in the capital city with a reliable organization. Your sick mother is very pleased and tells you that the whole family will be well cared for once you marry him. The stress Patrick is feeling is quite high and he sometimes takes it on you with slaps to your face or punching you in the back.

Answers to SGBV1 are positively and significantly correlated with self-report action in case of seeing or hearing someone being sexually violent against another person, $r_s = 0.21$, $p = 0.026$. **Figure 5** illustrates the association between SJT's answer and self-reported action.

On the contrary, answers to SGBV1 are not significantly correlated with self-report action if someone tells they are the victim of violence, $r_s = 0.15$, $p = 0.110$.

SGBV2—Imagine that you see a man beating his wife at the market, shouting that she throws away his money. She is crouched down and protecting her head while the crowd watches him hit her with a strip of leather. Her small child is crying and pulling at his father to stop but he just pushes him away. The man is older and the wife is about your age.

Answers to SGBV2 are positively and significantly correlated with self-report action in case of seeing or hearing someone

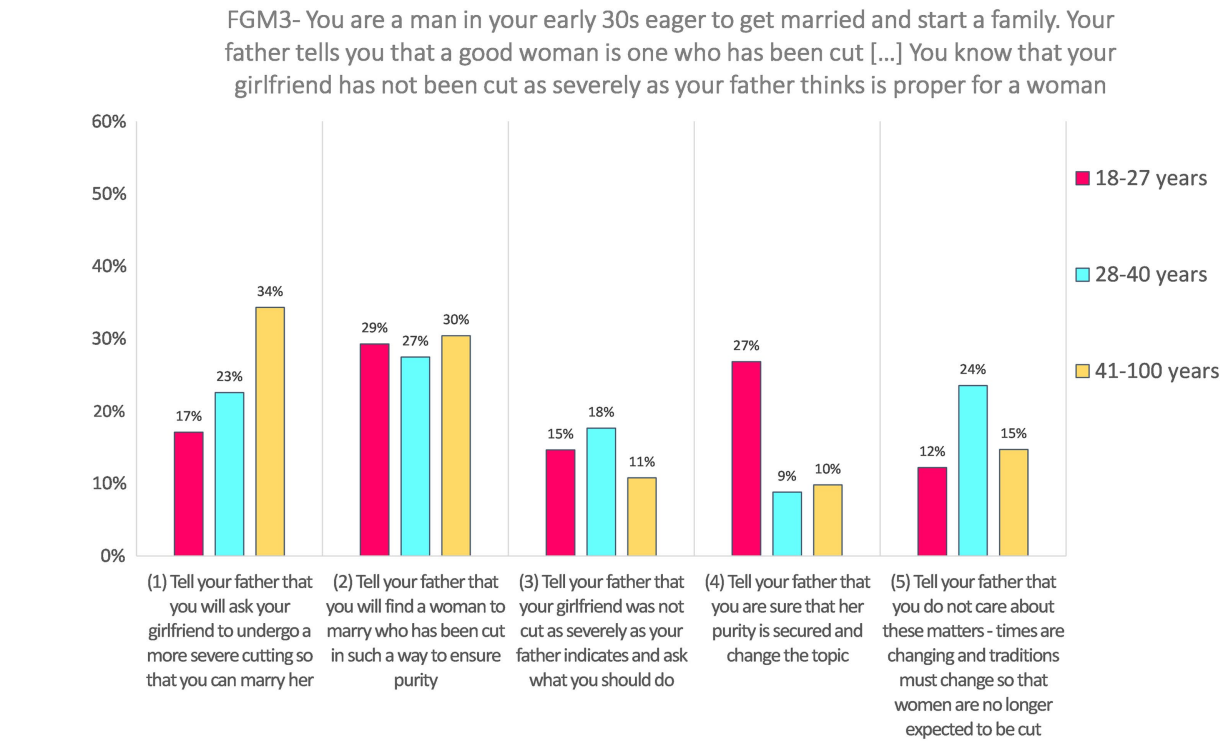

FIGURE 4 | Answers to FGM3 according to age categories.

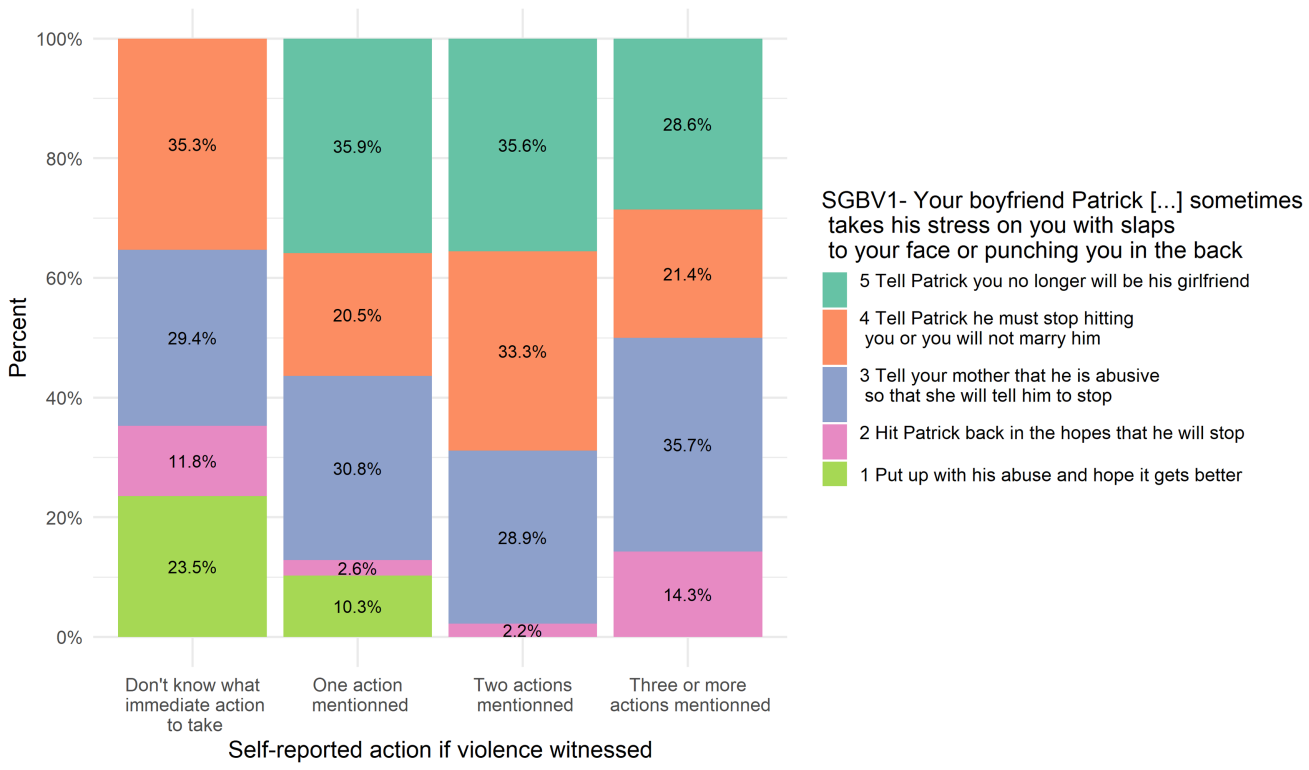

FIGURE 5 | SGBV1 answers put in relation to self-reported action in case of witnessing violence.

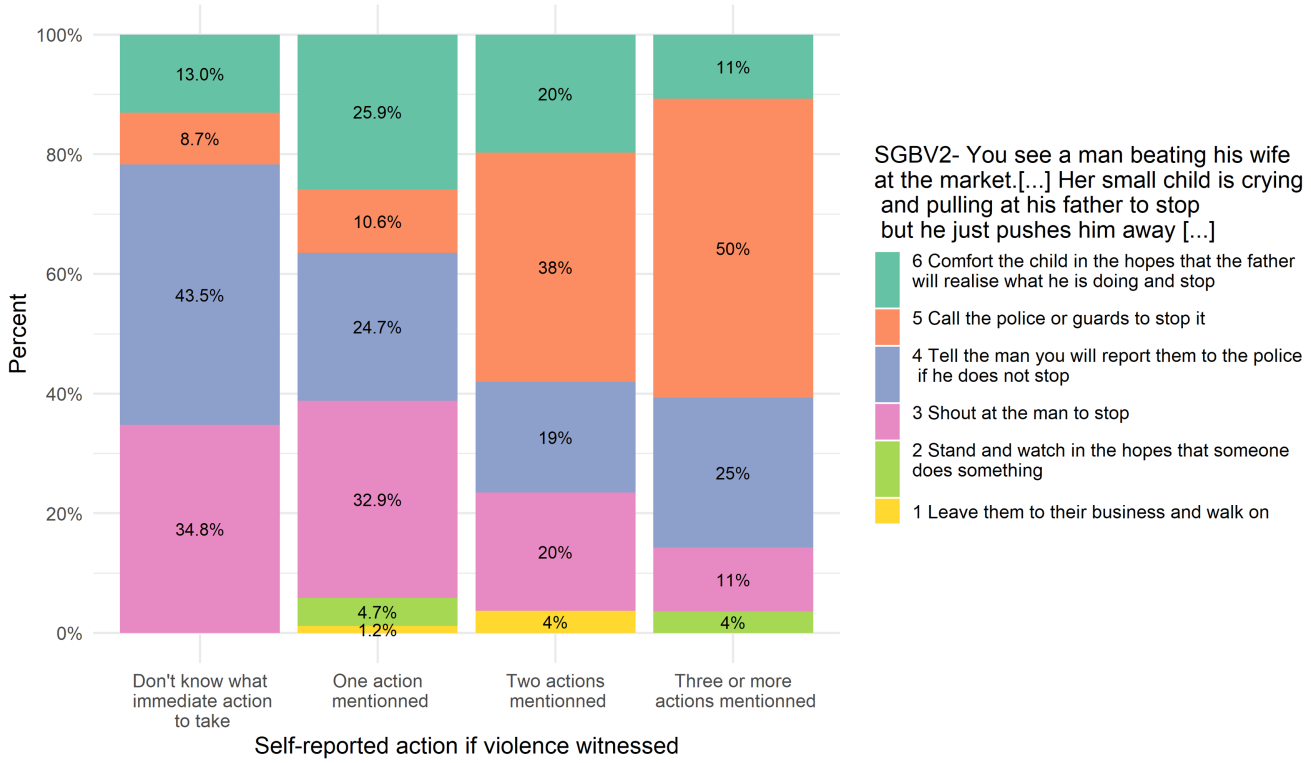

FIGURE 6 | SGBV2 answers put in relation to self-reported action in case of witnessing violence.

being sexually violent against another person, $r_s = 0.17$, $p = 0.012$. **Figure 6** illustrates the association between this SJT's answer and self-reported action. Answers to SGBV2 are not significantly correlated with self-report action if someone tells they are the victim of violence, $r_s = 0.12$, $p = 0.085$.

Family Planning SJTs

> **FP1—Imagine that your oldest brother, Musa, is planning to marry one of your friends, Fatmata. Fatmata said she wants to wait to have babies until she has finished school. She wants to use contraceptives and asks you what she should do.**

Answers to FP1 are correlated with the knowledge of where to obtain a method of child spacing/family planning (i.e., zero places cited vs. one or more) $r_s = 0.23$, $p = 0.007$ (see **Figure 7**). However, it has to be noted that very few people did not know even one place to obtain FP (eight respondents), so the correlation has to be interpreted cautiously.

> **FP2—Imagine that your boyfriend, Samuel, wants to have sex. He says that he knows that he will marry you when he finishes school, so it is your duty to have sex with him now, to ensure that he loses his virginity to you. You tell him that you will do so but only if you both use contraceptives. Your boyfriend says that he knows that you cannot get pregnant the first time and a condom is not necessary because you cannot have an STI if you are both virgins.**

Answers to FP2 are not correlated with the knowledge of where to obtain a method of child spacing/family planning (i.e., zero places cited vs. one or more) $r_s = 0.01$, $p = 0.948$.

DISCUSSION

This study aimed to achieve two things:

1. To describe the norms and beliefs related to several sexual and reproductive health topics using an innovative method of measurement, SJTs. Answers to the SJTs show that there is a margin of progress in terms of norms and beliefs, as the highest coded answer was not always the majoritarian response. FGM in particular seems to be a priority topic, as the answers to SJTs on FGM are worrisome. Relatively to FGM, SJTs on SGBV and CEFM had relatively high level of answers, expressing that the norms are stronger against those practices.

Two SJTs were presented to respondents of both gender (SGBV2 and FP1) but in both cases no significant difference was detected on the responses according to gender. This lack

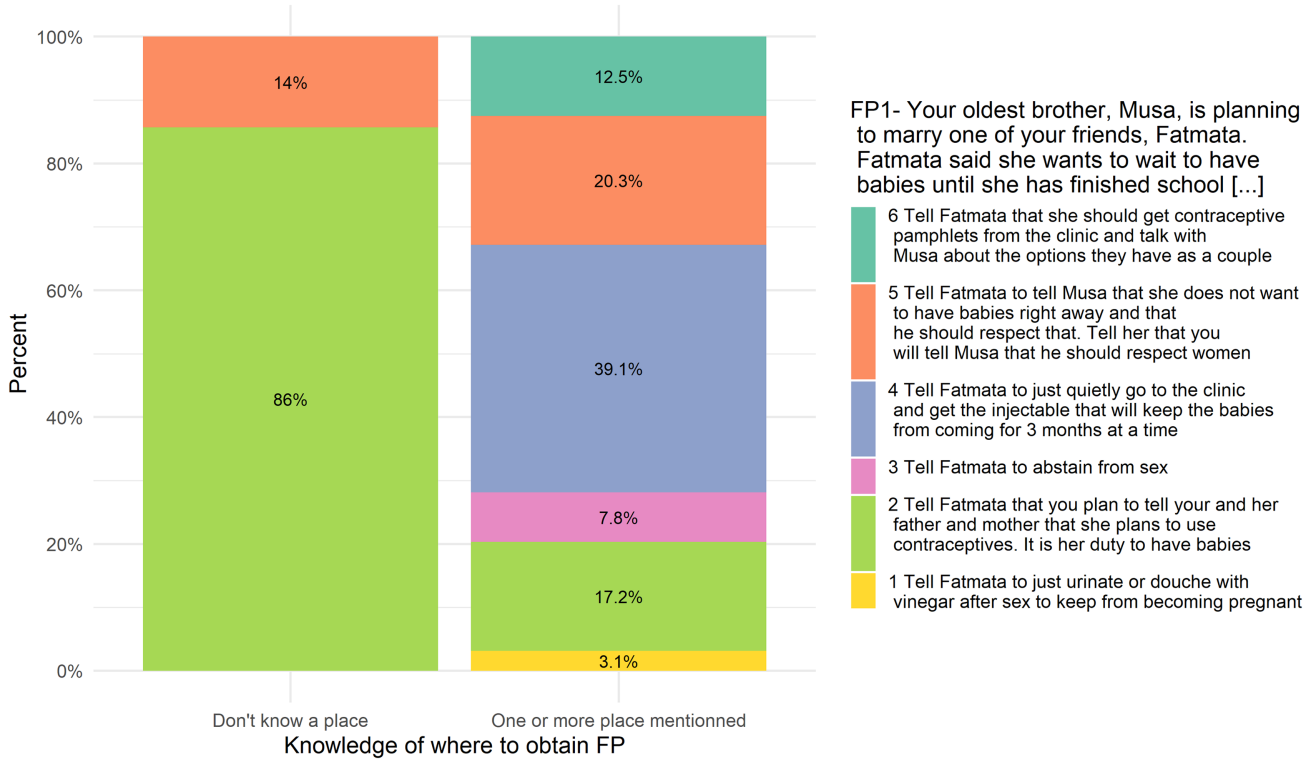

FIGURE 7 | FP1 answers put in relation to self-reported knowledge about obtaining family planning.

of difference might come as surprising; however, other studies showed that gender inequitable norms are often shared by both men and women (e.g., Scott et al., 2013; Nalukwago et al., 2019).

Age effect was sometimes detected but did not always go in the same direction. For FP2 and FGM3, the middle-aged group gave higher-coded answers than the older respondents, and in the same direction (but only marginally significant) on SGBV1 the younger gave higher-coded answers than the oldest group. On the contrary, a reversed-aged effect was found on FGM2, for which younger participants provided lower-coded answers than the middle-aged group. On the topic of FGM, it does suggest that younger female might be a target group for an intervention (based on FGM2 results), while in the case of male it is the older ones that could be targeted (based on FGM3 results).

The association between the answers and disability status was tested when possible, but in many occasions there were less than 10 respondents in the group with more than one domain with difficulties. No significant association was detected with this variable, although low statistical power might limit the ability to draw conclusions. Referring to existing knowledge, studies have shown that persons with disability face barriers in accessing sexual and reproductive health services (for a systematic review in sub-Saharan African countries, see Ganle et al., 2020). More specifically in terms of beliefs, Kassa et al. (2016) measured knowledge–attitudes–practice (KAP) related to sexual and reproductive health of young people with disability in Ethiopia. The authors show that the type of disability is significantly associated with the level of awareness; respondents with hearing or visual impairment had higher levels of awareness than respondents with partial mental impairment. Because in our study, we considered only physical disability, it is possible that different results would have been obtained if the definition of disability had included mental impairment. However, other studies only focusing on physical, visual, or hearing impairment showed a particular vulnerability to sexual violence (Burke et al., 2017) and advocate for the need of future research.

2. Most importantly, this study aimed to also offer practical implications in terms of the current belief or attitude structure around beliefs, attitudes, and behaviors within sexual and reproductive health and rights (SRHR) and be able to develop tailored interventions in each village to specific groups of people. The study was mainly done to ensure that interventions were evidence-based—based on current mindsets and understanding of SRHR behaviors as well as strategies to address unhealthy or unsafe behaviors. The team chose SJTs as a means to specifically pinpoint who was supporting harmful behaviors in which village. While we may see a strong support against child marriage in one village, we may see the opposite belief in an adjacent village. The SJTs were a helpful tool for Sierra Leone Red Cross to ascertain where to focus their efforts for each topic, including with which

target group within a specific community. It is also possible to use SJTs in order to identify who is supportive of the desired behavior and could act as peers in the program. That is powerful information for development teams by ensuring that precious funding in health promotion is more likely to deliver behavior change and thus impact.

Implications

Because we assessed norms toward sexual and reproductive health, methods to change social influence, such as resistance to social pressure and mobilizing social support (Table 6, Kok et al., 2016); methods to change social norms, such as mass media role modeling and mobilizing social networks (Table 10, Kok et al., 2016), and methods to change communities, such as community development and social action (Table 13, Kok et al., 2016) are suggested. Intervening not only at the individual level, but also interpersonal, community, and policy levels would increase the chances of success, as individual behaviors are embedded within a wider context (Veer et al., 2020). Goldmann et al. (2019) provide examples of social norms programs on violence against women prevention and HIV at each level of the ecological model (see their Figure 1, p. 54).

Validity of SJTs answers was assessed by examining the correlation with relevant measures included in the survey. Interestingly, there are positive correlations between those different types of measures, but the magnitude of the association is not big, and for some items not significant. This reveals that SJTs and standard self-report items do not measure exactly the same things. Lacking an objective reference value (e.g., observed behavior), it is difficult to determine which type of measure is best. Given the number of limitations of standard self-report measures mentioned in the introduction (Lipnevich et al., 2011; Flaskerud, 2012; Chyung et al., 2018), we suggest more studies should investigate the validity and usefulness of SJTs to assess beliefs and norms in a community. Scheel et al. (2021) argued that more attention dedicated to validate measures would improve studies' quality.

Situational judgment tests have also the potential to be use for monitoring progress, if used repeatedly. After being used for baseline assessment (as done in the study reported here), the same SJTs could be used again after a social and behavior change intervention. The answers' evolution (or lack of) would indicate if the intervention reached its goal or not in terms of modifying norms and beliefs. To our knowledge, SJTs have not yet been used for this purpose, and validation is needed (e.g., do people "allow" themselves to answer differently to the same vignette when presented the second time? Are there any bias associated with the use of SJTs for monitoring?).

Limitations

The present study has some limitations. Notably, despite an important global sample size (566), the number of response for each SJT was much lower due to skip logic being introduced to the surveys to reduce their overall length for each respondent. This lack of respondents become particularly problematic when testing for interactions with respondents characteristics, as the number of participants in each category dropped sometimes below 10. Thus, future studies need to take into account this sub-division of respondents to ensure a minimum number of responses to perform the analysis. In addition, the fact that some questions were asked only to men or only to women do not allow to compare both groups' norms on the same hypothetical scenario. Future studies could consider asking the same questions to both groups by asking, if the scenario presents a male protagonist, what female respondents think the men in the scenario should do, and vice versa if the protagonist is a female.

Another limitation is the decision to pre-develop the initial SJT tool for the Sierra Leone local team. The rationale was around capacity—in terms of time and knowledge at the field level to develop behavior change monitoring and evaluation tools. The team member presenting the tool had limited time in-country to train enumerator and health team members or to train those teams to support development of SJTs given limited baseline knowledge of developing protocols in behavior change. The team agreed that an initial tool would be developed for the local team to receive training about, and then led in discussions with the guidance and facilitation to edit as needed to ensure that the tool truly reflected the local contexts. It is important to note that when asked to reflect on the SJTs, the participants all felt that the scenarios were realistic to their settings and represented real dilemmas.

Another limitation is that all SJTs were translated in real time by enumerators. The survey was written in English and in the enumerator training practiced in Krio. The Sierra Leone Team disagreed that the survey should be translated into Krio because they were also, when needed, translating the SJTs and other questions into other local languages (including Mende and Kono). This likely affects the standardization of the SJTs being asked, especially with enumerators being asked to explain options for clarity.

CONCLUSION

To conclude, this paper provides pioneer data on norms around sexual and reproductive health issues measured with situational judgment tests, offering a new perspective on those themes and a more targeted approach to assessing and responding to existing beliefs, attitudes, and behaviors around SRHR. FGM is the domain for which the norms seem the most problematic, and age is the factor the most important to consider for tailoring when building social and behavior change interventions.

CONSORTIUM SIERRA LEONE RED CROSS SOCIETY MEMBERS

Kono Branch: Tamba Palallay – Branch manager; Komba Morsay – Field Health Officer; Amara Keita – Coach; Hannah Boima – Volunteer; Saffiatu Sumana – Volunteer; Kai Philip Morsay – Volunteer; Magnus Lahai – Supervisor; Moyamba

Branch: Mohamed Lamin - Branch manager; Sylvester Momodu- Field Health Officer; David Johardy – Volunteer; David Kallon- Volunteer; Massah Pessima – Volunteer; Momodu Mansaray- Volunteer; Rubiatu Nicol – Supervisor; Kenema Branch: Jonathan Kangoma – Branch Manager; Aminata B Musa – Field Health Officer; Thomas Baimba – Coach; Veronica Tengbeh- Coach; Salamatu Vandy – Coach; Sheku Kendebo – Volunteer; Stella Tucker – Supervisor; Bo Branch: Augustine Ellie- Branch Manager; Edward Kemokai – Field Health Officer; Mustapha k Turay – Volunteer; Baindu Sesay – Volunteer; Hassan K Turay – Volunteer; Michael Saidu – Volunteer; Nelson Nyadamoh – Supervisor; Pujehun Branch: Christian Kaipindi – Field Health Officer; Magnus Tiffa – Coach; Mohamed S Kamara – Coach; Abass Koi Fawundu- Coach; Abass Fowai – Volunteer; Momoh Koroma – Volunteer; Samuel Parker – Supervisor.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The participants provided their informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

NC, EL, and HV: conceptualization. LM: formal analysis and visualization. SI, AS, and Consortium: investigation. NC: methodology. Consortium: resources. OD and HV: supervision. LM (lead), NC (supporting), and EL (supporting): writing original draft. NC, EL, HV, OD, and LM: writing–review and editing. All authors contributed to the article and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.866551/full#supplementary-material

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EDITED BY
William Evans,
George Washington University,
United States

REVIEWED BY
Victoria Jennings,
Georgetown University, United States
Marleen Temmerman,
Aga Khan University Hospital, Kenya

*CORRESPONDENCE
Anja Zinke-Allmang
anja.zinke@lshtm.ac.uk

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Use of digital media for family planning information by women and their social networks in Kenya: A qualitative study in peri-urban Nairobi

Anja Zinke-Allmang[1]*, Rahma Hassan[2], Amiya Bhatia[1], Krittika Gorur[3], Amy Shipow[3], Concilia Ogolla[3], Sarah Shirley[4], Kees Keizer[5] and Beniamino Cislaghi[1]

[1]Department of Global Health and Development, London School of Hygiene and Tropical Medicine, London, United Kingdom, [2]Institute for Development Studies, University of Nairobi, Nairobi, Kenya, [3]Busara Center for Behavioral Economics, Nairobi, Kenya, [4]Harvard College, Harvard University, Cambridge, MA, United States, [5]Faculty of Behavioural and Social Sciences, University of Groningen, Groningen, Netherlands

Access to information about family planning (FP) continues to have financial, physical and social barriers among young women living in Kenya. This paper draws on social norms theory to explore how young women and their social networks access FP information on digital media (e.g., WhatsApp, websites). Qualitative phone interviews were conducted with 40 participants – young women, their partners and key influencers – in seven peri-urban wards in Nairobi, Kenya. Data were analyzed using thematic analysis. Findings suggested that young women, their partners and key influencers predominately accessed FP information online through their informal networks, but identified healthcare workers as the most trusted sources of FP information. In digital spaces, participants described being more comfortable sharing FP information as digital spaces allowed for greater privacy and reduced stigma to talk about FP openly. Our findings highlight the importance of digital media in disseminating FP information among young women and their networks, the differences in norms governing the acceptability to talk about FP online vs. in-person and the significance of targeting misinformation about FP in digital media spaces.

KEYWORDS

family planning, digital media, Kenya, gender, social norms

Introduction

Health promotion strategies that use digital media to disseminate information have expanded rapidly in recent years (Volkmer, 2021). Where there is internet and smart phone access, digital media–an umbrella term that describes any methods of digital communication including texts, websites, social media apps, etc.–provides opportunities to remove barriers in accessing accurate sexual and reproductive health information and provides social networks online resources to share family planning (FP) information

(Ochako et al., 2015; United Nations Population Fund, 2017). Previous interventions to improve access to FP information found that targeting the channels in which social networks communicate has been key to address misinformation about FP (Nazzar et al., 1995; Colleran and Mace, 2015; Boydell et al., 2020). Studies in Kenya point to the role of health care providers (Alege et al., 2016) and key influencers, such as close family and friends, as trusted sources of FP information (Hassan et al., 2021a)[1]. As more young people have access to the internet, digital media and technology in Kenya, healthcare providers have turned to digital media to develop new ways of sharing credible FP information with multiple groups, with an emphasis on young people (Zhou et al., 2018).

While FP use in sub–Saharan Africa has remained low, Kenya has had a 12.5% increase in FP use between 2008 (45.5%) and 2014 (58%) (Kenya National Bureau Of Statistics, 2015). Although knowledge on FP in Kenya is high, with 98% of women and 99% of men knowing of any modern FP method in 2014 (Kenya National Bureau Of Statistics, 2015), studies have pointed to problems of accessing FP, inadequate availability of preferred FP methods and lack of accessible FP information as key barriers (Montez, 2011; Engelbert Bain et al., 2021). Concerns on the low prevalence of FP uptake have stimulated both policy and program interventions aimed at enhancing FP access and information through digital media interventions (Welch et al., 2016; Yousef et al., 2021). Evidence shows that the provision of targeted, easily accessible, and accurate information about FP through multiple channels increased the use of modern contraceptives and influenced social norms on its utilization (Oluwasanu et al., 2019; Ahmed and Seid, 2020). For instance, a study in Ethiopia reported increased likelihood of women using FP among those who saw FP messages on television (Ahmed and Seid, 2020) and a cross sectional study in Kenya, Nigeria and Senegal found women who listened to FP messages on radio had higher rates of FP use (Okigbo et al., 2015). However, there is limited research on how women access FP information through digital media in low-income settings, how they would prefer to access FP information and the normative context within digital media that affect discussing and sharing FP information.

Engagement with digital FP information and women's FP decisions are influenced by the social norms related to FP (Costenbader et al., 2019) in their context (Simkhada et al., 2010; Wegs et al., 2016), which may deter women from accessing FP information both in-person and online. Group norms are shaped by the expressed attitudes of group members, which influence others attitudes to conform to group norms (Cislaghi and Shakya, 2018), a phenomenon which has been observed in both digital spaces and in-person groups (Levitan and Verhulst, 2016). Further, the gender composition of digital media spaces may influence women's FP decisions as gender norms are important factors that influence FP use (Cislaghi and Heise, 2020). The influence of digital platforms on FP conversations is crucial to understand as more conversations move online during COVID-19 and with increasing access to technology and internet.

The COVID-19 pandemic reduced access to FP services for women and drew further attention to how FP information can be accessed through digital media. With the shift of resources and attention to the pandemic, governments deprioritized FP funding, limiting accessibility to FP methods and information at health facilities (John et al., 2021; United Nations Population Fund, 2021). Research conducted by the United Nations Population Fund (UNFPA) predicts that more than 47 million women could lose access to contraception leading to 7 million unintended pregnancies as a result of the COVID-19 crisis (United Nations Population Fund, 2020). This gap in access to FP services disproportionally affects young people, who experience unique barriers to accessing FP methods and information (Prata et al., 2013; Engelbert Bain et al., 2021; Hassan et al., 2021a). In another study, we found that women in peri-urban Nairobi faced additional challenges accessing FP information and services during the pandemic and relied on digital media to reach their social networks to discuss FP and to seek information online (Hassan et al., 2021a).

Mobile phone ownership and digital media use has risen among young people since 2010 as access to the internet has increased in Kenya (Communications Authority Of Kenya, 2019). While the expansion of technology and adoption of mobile phones globally provide opportunities to reach more people and deliver health care services, new inequities have arisen as a result. Low-income areas with less access to technology, like smartphones, and internet connectivity have encountered new barriers to accessing FP information online (SIMElab, 2020). In informal settlements in Kenya, access to information is further constrained due to the poor infrastructure and internet connection in the area (Gichuna et al., 2020). Young women living in low-income peri-urban settings disproportionally experience barriers to accessing FP methods and information, which has been further entrenched by the COVID-19 pandemic (Hassan et al., 2021b).

There is limited research on preferred avenues of accessing FP information online among young women and their key influencers in low-resource settings, which is critical to address the challenges of unmet need of FP as well as removing barriers to FP information. Data for this study come from a larger study on the potential of online networks to initiate social norms change on offline networks, where the initial analyses of these data suggest that COVID-19 changed the normative influence of FP and limited access to women's social network and affected how they negotiated FP use within homes (Hassan et al., 2021a). Further, we found that women consult various key influencers

1 Zinke-Allmang, A., Bhatia, A., Gorur, K., Hassan, R., Shipow, A., Ogolla, C., et al. (2021). *The Role of Partners, Parents and Friends in Shaping Young Women's Reproductive Choices in Peri-Urban Nairobi: A Qualitative Study*. Under review.

in their social networks based on the information they need or the choices they are making in relation to FP (See footnote 1). To contribute to the literature on the opportunities and limits of using digital media to improve access to FP information, this paper draws on social norms theory to explore how young women living in peri-urban wards in Nairobi use and navigate digital media spaces to find FP information. To explore the normative influence of digital media on young women's attitudes and behaviors in accessing FP information online, we present why women prefer to use different sources of information and from whom they prefer to and do find information about FP on digital media.

Methods

Study design

Qualitative interviews were part of the formative phase of a mixed methods study to design and test a digital media intervention to examine how an online digital media intervention influences social norms around FP use among young women.

Study sites and participants

We conducted 40 in-depth interviews in peri-urban wards within Nairobi, Kenya with women age 18–25 years, their partners and their key influencers to understand social norms supporting or condoning accessing information about FP and seeking FP services. Peri-urban wards were purposively selected based on whether they had health centers and FP services operational at the time of data collection so referrals to health services functioning during the COVID-19 pandemic could be provided to participants if requested.

All participants were sampled from a panel of 66,407 participants the Busara Center for Behavioral Economics recruited between 2014 and 2020. Due to safety considerations of remote data collection during COVID-19, women had to have their own (not shared) smartphone to participate in the study and were briefed to use a safe word if the interview were no longer private. Key influencers and partners were purposively selected based on similar sociodemographics to what women described during interviews, but were not related to the women who were interviewed due to safety concerns related to conducting interviews during the early stages of the COVID-19 pandemic. 41/89 women, 23/27 partners and 23/25 key influencers contacted were eligible to participate. Of these, 8 women, 11 partners, 7 key influencers declined to participate in the interviews due to work conflicts, illness and discomfort with the study topic. Our final sample included 16 women (W) between 18 and 25 years of age, 10 male partners (P) and 14 key influencers (KI), who women identified as people they would get advice about FP from, of whom 4 were men (M) and 10 were women (F).

The median age of among women interviewed was 23 years. Most women were unemployed (9/16) and had some secondary education or higher. More than half of the women interviewed were using contraception. Partners had a median age of 27.5 years, most of whom had secondary or university education (8/10) and were employed (7/10). Key influencers had a median age of 32 years, most of whom were partnered (11/14), had 3-4 children (6/14) and were employed (11/14).

Data collection

We developed a semi-structured qualitative interview guide that consisted of three sections: a vignette to explore social norms and attitudes around FP and identify people in women's social networks who supported and opposed FP; questions about women and their key influencers use of digital media to access and share information on FP; and questions about how COVID-19 affected access to and use of FP. This instrument was piloted with participants with similar characteristics prior to data collection. This paper focuses on participant's use of digital media platforms to access FP information through formal and informal networks online, social norms and sanctions of accessing and using FP, and the effects of COVID-19. We define formal networks as community stakeholders or systems that provide FP methods or information (eg, healthcare workers) and informal networks as individuals that have personal relationships with participants and do not work formally in the field of healthcare or FP (eg, friend, partner). Women, partners and their key influencers were asked to reflect on their own experiences and those of other women in their community.

Data collectors were recruited who were familiar with the local context and had experience with qualitative interviewing. Prior to data collection, researchers completed a 3 day training for this study. Data collection was phone-based and took place in November 2020 during the COVID-19 pandemic. Researchers assessed eligibility, explained the study design and scheduled a phone interview time by phone and information about the study was also sent *via* WhatsApp. Consent was audio recorded and was iteratively checked-in throughout interviews through safe words and check-ins about privacy and comfort. Interviews among women were conducted by female interviewers and male participants were interviewed by either male or female researchers. Interviews were conducted in either English or Swahili, depending on the participant's preference. Participants were sent phone credit and a list of local resources and health facilities following the interview. A Busara researcher who had not conducted the interview translated and transcribed the interview and a random selection of transcripts were checked for quality. The research team held daily debriefs

with the researchers to discuss issues and themes arising in the interviews.

Data analysis

We developed a codebook using deductive and inductive methods (Azungah, 2018). A thematic analyses was conducted. We first coded transcripts by both using the codes in the codebook and remaining open to emerging new codes. Coders met regularly to discuss codes and themes arising from the data that were integrated in the codebook. To identify different ways young women and their social networks use digital media to seek and share FP information through their informal and formal networks, for this paper, we focused on themes that described 1) how women and their networks navigate digital media spaces to find and share FP information and 2) the norms and barriers experienced when accessing FP information through digital media.

Ethical approval

This study received approval from the ethics committees in Strathmore University, Nairobi (ref SU-IERC0898/20) and the London School of Hygiene and Tropical Medicine (ref 22480).

Results

Most women and their key influencers reported using digital media regularly, especially social media apps such as Facebook and WhatsApp. Participants described social media apps as "private", "secure" and cost-effective ways of connecting with social networks in lieu of being able to connect in-person, especially during COVID-19 lockdowns. Social media channels provided avenues to access information about FP from various sources, where young women, their partners and key influencers found most of their information through casual online conversations or through social media posts about FP in both private and group conversations. First, we found that informal networks were common ways young women, their partners and key influencers shared and found FP information through friends and family over private messages. Second, participants trusted information from formal healthcare providers to provide accurate information about FP, which were mainly accessed through community groups on social media. Third, women, their partners and key influencers navigated digital media group spaces differently depending on the gender of group members, which influenced how comfortable they felt sharing information or experiences with others online.

Using online media to access and discuss FP information online with informal networks

Participants described that digital media spaces offered a unique opportunity to access FP information online easily regardless of location, allowing for flexible access during working, care or other hours of duties: "*If you set up a WhatsApp group and share information, you can just log in and read them [messages with FP information] and spread them around when you have time*" (KI35_F). FP information was most commonly shared within social networks because it would be beneficial to inform friend's or family's FP choices in accessible ways, "*we can exchange ideas and information on family planning and benefit from each other*" (KI27_F). Some participants found the online discussions with individuals or small groups were useful spaces to access FP information through private or discrete channels: "*[On WhatsApp] I am the only one who can access [the message about FP information] unlike in Facebook where people read it especially if it is posted on the wall*" (P21). These conversations created a space where participants could discuss FP information to assess "*if [FP] is appropriate or not [to use]" (*KI29_F). Women also sought to validate whether the information they had received was accurate by *"asking if [other women] too had heard the same things [about FP methods]*" (W2). Communicating online with informal networks allowed for discreet ways to share FP information that otherwise might not be shared by speaking face to face, "*There are things I may want to share with you but I cannot in-person because I will feel shy but with WhatsApp or Messenger, one is very comfortable sharing*" (KI35_F). Digital media channels were useful tools for women to communicate with their informal networks individually or in small groups to receive and share FP information privately and securely, providing more opportunities for information on FP to be shared.

Despite appreciating how useful digital media were in accessing FP information, participants did not feel comfortable sharing FP information through digital media channels as they anticipated negative reactions about posting FP information from others online, "*I will be [comfortable] only if I have a positive response [talking to women online about FP]*" (P26). Several partners described feeling uncomfortable talking about FP online, since most FP methods are used by women and they lacked the lived experiences to talk about the methods, "*You know I am a guy, how do I start telling ladies about such*" (P19). Other men felt uncomfortable sharing or discussing FP information online with their male friends since starting such a conversation about FP is not common in-person, "*How can I start talking about family planning with my friends? So I rarely share*" (P26). In contrast, women found it more comfortable to speak to other women online, where online conversations offered new avenues of discussion about FP among women.

In addition to texting and WhatsApp groups, many participants accessed FP information through online groups created specifically for other social purposes, such as a women's community group or a sports group. Participants described recreational groups as spaces to access a variety of topics on health and FP, where one participant described that even groups that mostly meet in-person will share information through digital channels: "*We have a chama [group] for women and we communicate [about FP] via WhatsApp*" (KI33_F). Participants who are part of such groups felt more comfortable to share FP information, as they knew the others in the online group and knew that it was an effective way to share reliable FP information widely, "*When I get to share that [FP] information with them, they are more likely to share with other people*" (P23). These online groups provided a way to share accurate information on FP "*to create awareness*" (KI40_M) about the benefits of FP "*so as to inform those who fear to talk about this conversation*" (P20). While most participants connected with their informal social networks to access information on FP through social media channels, many participants preferred to receive FP information from credible sources such as healthcare providers.

Accessing FP information online through formal healthcare sources

While the majority of participants still accessed information about FP through in-person health settings, such as hospitals or clinics, some described noticing and reading FP information indirectly through information advertised through posters or other printed media at healthcare settings which they trusted: "*In hospitals as we queue some social health workers advise us [about FP]. Also, the posters around hospitals and on roads [advise about FP]*" (W12). Participants would often use other health related visits at healthcare settings to access FP information, such as through "*the clinic, when taking the child*" (W10) or at regular visits: "*[I access FP information] from the hospitals when I visit every three months*" (KI28_F). Clinics were also identified as spaces that provide frequent in-person FP information sessions, where community members could be "*informed and given condoms to distribute and share in [the] area*" (KI35_F). Visiting clinics and hospitals in-person were useful not only for receiving credible information about family planning, but also for receiving the necessary family planning methods: "*I use pills and I ask questions from the doctor in the hospital in case I experience any side effects*" (W4). Healthcare centers and clinics provide clear spaces in which information on FP is reliable, a reputation of credibility which extends into posting information on online platforms.

Healthcare workers were perceived by participants as the most credible source of online FP information, "*[I] prefer people from health centers...not just any person [but] someone who has trained about family planning and is well knowledgeable*" (W7). Participants preferred to access information from healthcare providers online as they risked receiving misinformation about FP from other sources as, "*there are many myths [about FP] from people*" (KI36_F). Many participants identified examples of misinformation regarding FP messages online, in particular related to side effects of FP use: "*Most people think that using family planning especially if you haven't had children will have effects on you and that can make one fail to bear children*" (KI27_F). However, most participants described that they would only avoid sharing information on FP if they deem it to be false or "*[if] it is a lie*" (P25). Other participants described difficulties in challenging misinformation about FP: "*They say such kinds of things and even if you go telling them about family planning, they already have a formed opinion that you cannot tell them anything*" (KI35_F). Despite the misinformation that participants encountered both in-person and online from social networks, they also found that social networks gave advice to connect with healthcare workers for credible FP information,

> "*The advice that I saw is that one shouldn't just use any family planning method that they come across instead they should go for the best that suits them and that you can find out which is the best by visiting a health expert for consultation and advice on family planning.*" (P21)

While healthcare providers were valued as credible sources to provide FP information, they were primarily reached through in-person interactions which became challenging during COVID-19 lockdowns, pushing participants to find information from sources within reach, "*I read [about FP] through social media since going to the hospital is not easy right now*" (KI34_M). Participants often sought out credible online counterparts to hospitals and clinics, such as clinical websites "*because there are professionals posting and writing*" (KI37_F). Another participant mentioned finding FP information through a youth Facebook group where nurses and doctors disseminated direct information about FP, which was accessible during the COVID-19 pandemic. However, many participants said that due to the financial impacts of COVID-19, they had more limited access to the internet: "*Where I worked I used to have access to a wifi-connection for free. Now I have to buy bundles and so it's very expensive sometimes*" (KI37_F). Despite finding in-person FP information delivered by healthcare providers or other FP organizations valuable, participants struggled to access this advice during the pandemic and more often sought FP information through medical websites or their informal networks.

Navigating digital media spaces to share FP information

Although many participants were comfortable accessing FP information in online spaces since *"it's [FP information] all over, it's very normal*" (KI33_F), experiences using digital media to seek or share FP information varied based on the perceived membership of the social network or online forum. Most participants felt more comfortable speaking with women online than with men or strangers since they anticipated most other women were using or had used FP, "*I will be comfortable [speaking to women online about FP] because they all use it*" (KI37_F). Women found speaking with other women online the most comfortable, since this offered space for mutual learning about FP information and to learn about other women's experiences:

> *"She is my fellow woman. It could be she has passed through the same things as I am. We could be having different experiences and different doctors. This means we could be sharing different experiences, and information which we have heard from our doctors. She could be having different information from me which I can exchange. I could also share with her something she doesn't know*." (W4)

Many women said that it was important to inform other women about their FP options as a matter of improving the lives of women in their communities: "*Not speaking out [about FP information] will be leaving out the women with no knowledge. Society has to progress*" (W12). However, men felt less comfortable speaking with women online, because women are the predominant users of FP methods and have lived experiences: "*You can always share information with anyone, but then it's women who have more knowledge on family planning*" (P19). While men felt less comfortable talking to women about FP online, women were comfortable finding and sharing FP information with women they don't know online in similar ways they might share FP information among their personal social network.

Women and their key influencers were overall less comfortable speaking to men than women online since FP is mainly seen as a women's issue, "*Many [men] will not understand as it's a woman thing*" (KI37_F). Participants anticipated that men would have less experience using FP, "*family planning is mostly done by the women. Only few men agree to use family planning*" (KI29_F), and anticipated more negative responses about discussing FP from men online than from women or strangers: "*They [men online] would start throwing insults at me*" (P24). Women in particular felt uncomfortable speaking to men online because they did not feel safe to do, anticipating unwanted sexual advances online, "*Men are very hard to deal with because when you post something they will not take it seriously, maybe just a few of them will. Instead they will just want to meet up with you*" (W6). Others anticipated men reacting to FP information with negative attitudes and misconceptions toward FP that would make it difficult to interact with them online, *"They would not support me because they say women who use family planning are 'not sweet'"* (W7), referring to the misconception that sexual intercourse with women who use FP is less enjoyable or pleasurable. Despite anticipating negative reactions and attitudes toward FP from men, women described the importance of still interacting with men to spread accurate information on FP to better the lives of other women and reduce violence due to misconceptions around FP:

> *"Men are the main perpetrators against women in this community. If you don't teach men [about FP] they will always say the information we pass to women is toxic and it may bring domestic violence, so it's wise to teach both genders*." (W12)

Some men described talking to other men online as a positive experience since they would be able to connect about various topics including FP, "*Men have courage, so we will ask each other deep questions*" (P22). Similar to women's experiences speaking to other women, men found this comfort speaking among other men online due to similar experiences, "*because we are the same gender and the experiences are the same*" (P20). A few participants said connecting with men online about FP is important "*so that they [men] do not leave the family planning issues to women alone*" (KI39_M).

Group conversations in digital media spaces also provided opportunities for conversations with strangers online. Anonymity in online group conversations also increases comfort to talk about FP online openly, "*These are people I do not know so I would be comfortable speaking to them online. I wouldn't want it to be people I know*" (P19). There was a certain protection in anonymity in speaking to strangers, where participants might change how they discuss FP information based on reception from others:

> *"Online is okay because we don't meet, I can tell you anything because you can't meet me and we don't know each other or where I come from. I limit myself when we meet face-to-face as I could be considerate of how you feel or facial expression."* (KI36_F)

Some participants described not being sure "where to start" a conversation about FP and were concerned that "*you can be liked or disliked at equal measures*" (P20) or judged based on the quality or accuracy of information posted since "*some [people online] just want to measure your intelligence*" (P22). However, some participants were still willing to connect with strangers online since "*they will give me any advice I might need on family planning*" (W9). Although there is concern that strangers online might react poorly to FP information being shared, participants were still keen to share information for the purpose of spreading good information about FP among others.

Discussion

This qualitative study drew on data from 40 interviews with women, their partners and key influencers living in peri-urban Nairobi. All participants had access to a personal smartphone and we explored how young women and their social networks access and share FP information through digital media. We find that participants used digital media platforms to access FP information through both informal (e.g., WhatsApp groups with friends and family) and more formal (e.g., information posted on social media by a FP organization) sources online. There were important overlaps between in-person and online sharing of information and participants described visiting health providers in-person as a valuable way to seek advice on FP. Further we found evidence that participants specifically valued accessing credible FP information from gender homogenous online communities for a sense of safety to discuss and share FP information. Online groups with gender differences changed the normative context and shaped the level of online engagement to share FP information freely.

Digital media platforms, specifically social media platforms (e.g., WhatsApp, Facebook), are increasingly becoming a common way of communicating and provide flexible methods of accessing FP information at various stages throughout the FP use cycle. Although participants in our study had access to smartphones, they did not have reliable or consistent access to the internet due to financial strain during COVID-19. Young women and their networks were aware that others in their communities would not have such access to digital media and technology due to differences in incomes and financial responsibilities. However, for those who had some access to digital media during COVID-19, this meant that even in the context of large disruptions in in-person service delivery, people were not cut off from needed sexual and reproductive health information and even reach more people with accurate information on FP through digital media platforms. Our findings reveal that women and their social networks preferred to access information from healthcare providers online compared to information from their peers and found that this was an acceptable way of accessing trusted information when in-person services were not accessible during COVID-19.

Increasing the availability of FP information through multiple channels is critical to reach wider audiences that may not have access to in-person services and address unmet FP needs, which has been linked to lack of credible and trusted sources of FP information among women (Sedgh et al., 2016). Mass media programmes have been effective in reaching wide audiences through common channels such as TV or radio, but have been linked to missing key groups due to issues with when programming is aired and accessible (Volkmer, 2021). We found that digital platforms provide flexibility in how and when FP information is accessed, accommodating groups that are seeking trusted FP information, but face physical barriers to tune in to a program at a specific time or finding time or resources to get to a clinic. Our findings show that participants are interested in receiving and sharing FP information through digital platforms, which removes various known physical barriers to accessing FP information in sub-Saharan Africa (Bearinger et al., 2007). Our findings show young women and their networks were looking to share FP information within their online networks, which may move from offline to online spaces through informal conversations with friends and family. Although our findings did not uncover specifically what channels and digital media spaces participants accessed to actively find FP information, our findings did support other literature that young women and their networks trusted healthcare providers most to provide credible FP information.

Our findings also support other research that young women mainly find FP information through their social networks, which extended into digital spaces. We found that participants preferred to speak to their social networks about FP in-person, likely due to the possible sanctions and negative reactions from their community about accessing information on or using FP, but also discussed FP *via* WhatsApp. We also found that information received in-person was then shared digitally with others, typically through private individual or group conversations. Group conversations with informal social networks on social media platforms, such as WhatsApp and Facebook, were important spaces for young women to access FP information that normalized sharing FP information (Castle and Silva, 2019). Women in peri-urban areas navigate a complex normative context where speaking openly about FP can result in negative sanctions, such as gossip or bringing shame upon a woman or her family (Zinke-Allmang et al.). The value of secrecy in accessing FP information has been noted in other research (Mitchell et al., 2014; Brittain et al., 2018) (See footnote 1): in this context, digital platforms provide discrete spaces to share and validate FP information and where anonymity, privacy and secrecy are key aspects that promoted sharing FP information online (Cartwright et al., 2019). Participants identified online platforms as safe spaces because their identities were not known by others, a finding that is in line with other studies that highlight the value of anonymity on digital media platforms to avoid sanctions around accessing FP information (Mitchell et al., 2014). However, our findings reveal that participants' preferences in how to access FP information differed as some were comfortable connecting with their social ties openly while others preferred remaining anonymous in online groups.

Understanding the complex processes of cultural and gender dynamics that hinder access to information, especially in online settings, is critical to support women seeking to access FP methods and addressing unmet need in Kenya. While our findings reflect that women prefer to access and share FP information based on familiarity and social ties, others report

that women's choice of health information is largely influenced by the trust they have in the source (Das and Sarkar, 2014) (See footnote 1). While mass media campaigns are the most common ways of disseminating FP information, they have been criticized for missing key groups and using digital platforms that are one-way in nature, such as TV or radio (Castle and Silva, 2019). In particular, our findings highlight the importance of targeting and engaging men and partners in FP discussions as they were not comfortable communicating online about FP despite valuing the dissemination of accurate FP information online, a similar pattern to other studies on men discussing FP in-person (Kabagenyi et al., 2014; Kriel et al., 2019). In contrast, women found community among other women online through common experiences using FP, enhancing access to FP information and safe avenues for sharing FP information. This discordance, between women's comfort in discussing FP online with other women and men's discomfort discussing FP experiences with other men, influences the dynamics between women and their partners when making decisions about FP use. This finding highlights the importance of including FP information in digital media spaces that are targeted toward men and of adopting appropriate strategies to engage men in FP conversations to reduce barriers women face in accessing FP information and methods (Potasse and Yaya, 2021).

In Kenya, there are inequities in accessing and navigating digital spaces resulting in a digital divide between those who have access to technology and data (such as phones or laptops) and those who are not able to access digital spaces due to other factors such as wealth or digital literacy (World Bank, 2019; Yousef et al., 2021). The digital divide has been exacerbated during COVID-19 (Beaunoyer et al., 2020), where studies have found that those living in peri-urban or low-income settings face difficult choices between accessing technology to stay connected to social networks remotely and meeting other daily needs, such as purchasing food (Hassan et al., 2021a). However, we found those able to access and navigate digital media spaces faced other barriers such as social stigma in accessing and sharing information on FP. Yet, despite norms and stigma in speaking about FP openly, we found that young women and their social networks were willing to find and share information on FP primarily through social media apps that they already use and were open to engaging with others to increase awareness of FP. While access to technology and the internet improves, studies highlight how advances in technology could remove other barriers to accessing FP information online, such as the ability to send voice-notes rather than texting to overcome literacy (Castle and Silva, 2019).

Online spaces present opportunities for broader diffusion of accurate information on FP from formal sources of information such as healthcare workers, as well as reducing stigma to access FP information from trusted sources (Makenzius et al., 2019). However, the ability for misinformation about FP to spread quickly in digital media channels is of great concern as research has found misinformation as one of the biggest barriers for FP uptake (Diamond-Smith et al., 2012; Ochako et al., 2015; Mwaisaka et al., 2020). While misinformation may travel along other methods of communication, such as in-person or by phone call, there is potential for misinformation to spread virally, intentionally or not, on digital media channels. Our findings indicate that some people were aware of and could identify FP misinformation online, and others sought healthcare provider's websites to minimize their contact with misinformation. However not all digital media users can recognize or fact-check suspected misinformation and has been the subject of research into methods to combat "fake-news" or misinformation online (De Beer and Matthee, 2021). Women and their key influencers described actively avoiding any sharing of misinformation online to improve informed choices on FP use in their networks. Further, we found that online spaces provided multiple means to validate information before sharing it further within networks that presents an opportunity for trusted sources to challenge misconceptions and myths about FP in online settings. While norms which sanction the use of FP may prevent conversations about FP in-person, social media groups provide online spaces where it may be more acceptable to receive and share information about FP.

This study has several limitations. While our findings provide insights into the ways in which young women and their key influencers use digital media to access and share information on FP, the findings in this paper cannot be generalized and do not represent the experiences of all young women and key influencers living in these wards. The screening process prior to the phone-based interviews also ensured that participants were comfortable to speak about FP and thus our findings do not reflect on the attitudes and norms held by participants who were not comfortable speaking about FP by phone living in peri-urban Nairobi wards. One of the inclusion criteria for this study was ownership of a smartphone and we therefore do not capture the barriers women without smartphones face. Given the challenge of collecting data physically during the COVID-19 pandemic, phone interviews were used and may have caused reluctance for participants to talk about FP or had them present what they thought were socially desirable answers. Using phone interviews however was appropriate for this study as it enabled us to reach participants despite the restrictions of movement during COVID-19. Finally, we could not ascertain whether concerns of misinformation were specifically linked to digital media or a general issue of accessing FP information.

Our findings have several implications for interventions and further research on access to FP information in this context. With a growing number of young people using digital media, FP organizations should leverage digital media channels to reach young people with youth-friendly FP content that is supported by trusted healthcare providers. Such services could complement in-person health services, or encourage young people to seek health services. While formal sources of FP information have predominantly remained physical and offline, FP programmes should seek to develop and test innovative

strategies to disseminate FP information in digital spaces. Digital media research has focused on how information is disseminated through online platforms and the potential of digital information to shift behavior, where future research should focus on exploring processes through which individuals seek FP information online and their preferences of how to access trusted FP information. Further studies could focus on how social norms around sharing and accessing sensitive information online shift from online to offline settings, and test digital interventions to improve access to FP information.

Data availability statement

The datasets generated and analysed for this study are not currently publicly available due to the sensitive nature of the qualitative data that can be linked back to individuals. They are available from the author on reasonable request.

Ethics statement

This study was conducted in accordance with the Declaration of Helsinki. Permission to conduct this study was obtained from Strathmore University, Nairobi (ref SU-IERC0898/20) and the London School of Hygiene and Tropical Medicine (ref 22480). Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements. Participants provided verbal consent prior to interviews and identifying information was removed from transcripts prior to analysis.

Author contributions

BC, KK, and AB were responsible for the conceptualization and design of the original study with contributions from AZ-A, RH, AS, CO, and KG. AS, CO, and KG were responsible for the overall supervision of the study. RH, AB, AZ-A, KG, and BC were responsible for data quality. AZ-A, AS, and KG were responsible for data analysis and interpretation. AZ-A, SS, and RH drafted the manuscript. All authors read, reviewed and approved the final manuscript.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

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EDITED BY
Shiwei Duan,
Zhejiang University City College, China

REVIEWED BY
Katie McQuaid,
University of Leeds, United Kingdom
Llsa Fiore,
Lesley University, United States

*CORRESPONDENCE
Aloysious Nnyombi
nnyombi3@gmail.com

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How social norms contribute to physical violence among ever-partnered women in Uganda: A qualitative study

Aloysious Nnyombi[1]*, Paul Bukuluki[2], Samuel Besigwa[3], Jane Ocaya-Irama[4], Charity Namara[4] and Beniamino Cislaghi[5]

[1]Department of Social and Cultural Anthropology, University of Vienna, Vienna, Austria, [2]School of Social Sciences, Makerere University, Kampala, Uganda, [3]University of Stirling, Stirling, United Kingdom, [4]Oxfam Novib in Uganda, Kampala, Uganda, [5]Department of Global Health and Development, London School of Hygiene and Tropical Medicine, London, United Kingdom

This paper contributes to the literature that studies how social norms sustain undesirable behavior. It establishes how norms contribute to intimate partner physical violence against women. First, norms organize physical violence as a domestic and private matter. Second, they organize physical violence as a constituent part of women's lives, thereby normalizing women's experience of abuse. Third, norms define appropriate boundaries within which male partners perpetrate violence. The findings draw essential information for social change interventions that target improvement in women's and girls' wellbeing. For social and behavioral programmes to change harmful norms, they have to deconstruct physical violence as a private matter, advance the de-normalization of physical violence, and dismantle acceptable boundaries within which violence happens.

KEYWORDS

social norms, gender norms, violence against women and girls, physical violence, women's wellbeing

Introduction

Intimate Partner Violence (IPV) is a global public health and human rights concern. It is in the form of physical, sexual or emotional abuse. About 30% of women aged 15 and over experience physical and or sexual IPV during their lifetime. The prevalence is slightly higher in East Sub-Saharan Africa at 38.8% (Devries et al., 2013; Abramsky et al., 2018). In Uganda, the lifetime prevalence of physical or sexual IPV among ever-partnered women is 56%. Intimate partner physical violence among women stands at 45%, with slapping or having something thrown being the most frequent acts of physical abuse. Women that do not earn are more likely (20%) to report severe physical violence than those that earn (15%). Women who attended or attained primary education are more likely to be physically abused than those with university education (19% compared to 1%). Women with severe disabilities are more likely (61%) to have experienced physical violence than those without severe disabilities [43%] (Uganda Bureau of Statistics, 2021).

The Uganda government has made significant strides toward the protection of rights of women at risk or those experiencing IPV. The government has ratified and

domesticated international and regional instruments through the Uganda Gender Policy (2007), The National Policy on Elimination of Gender-Based Violence in Uganda (2019), and the Uganda Domestic Violence Act (2010). The government has also implemented countrywide economic support programmes, namely the Women Entrepreneurship Programme, to address IPV risk factors. In addition, development partners are supporting efforts meant to address IPV. These are implementing safe and healthy relationship programmes for couples, family-based programmes, creating protective environments, strengthening economic support and providing survivor-centered services (Niolon et al., 2017). Recently, there has been growing interest in social norm-shifting programmes aimed at changing norms that drive IPV (Abramsky et al., 2018).

While social norms literature is multi-faceted (Legros and Cislaghi, 2019), much empirical research follows the theory advanced by Cialdini et al. (1990) that looks at social norms as people's beliefs about (1) what other people do (descriptive norms); and (2) what other people in the group approve of (injunctive norms). Norms are salient and often talked about—either praising those who conform or castigating those who do not. They help determine a collective understanding of acceptable attitudes and behaviors (Cislaghi and Heise, 2016). Moreover, norms can positively and negatively influence people's health: for example, push men to perpetrate IPV (because everyone does it) or protect them from perpetrating IPV (because friends would disapprove).

For social norms to exist, there must be a reference group of people whose behaviors and opinions matter to the person performing the behavior. These differ for the type of "behavior, situation and person considered" and for different norms (Bicchieri and Noah, 2017, p. 8). The reference group is located in physical proximity or distant from an individual (Alexander-Scott et al., 2016). These maintain norms through social approval or disapproval of one's actions, also called positive and negative sanctions (Cislaghi and Heise, 2016).

There is a burgeoning body of scholarship on norm-shifting interventions, for example, the SASA programme designed by Raising Voices and pilot tested in Kampala, Uganda. Such interventions are deliberate at catalyzing community-led change in norms and behaviors (Starmann et al., 2018). They cause social change through organized diffusion of positive reciprocal expectations. Programmes work with influencers who hold onto and practice positive behavioral expectations and have the skill and experience with the challenging process of exploring and questioning deeply held social beliefs. These persons support their networks to discuss negative reciprocal expectations around IPV and explore alternative behavioral expectations. As a result, there is the adoption of new social expectations on gender equality and violence, which brings about coordinated behavior change among several community members (Cislaghi et al., 2019).

Despite the expanding body of work, mainly on diagnosing, measuring and changing social norms (Cislaghi and Heise, 2016; Bicchieri, 2017; Legros and Cislaghi, 2019), there remains limited empirical evidence on how social norms shape abusive gender relations among intimate partners. This paper uses data from a study on "social norms and violence against women and girls in Uganda" to address this gap. The theoretical argument that social norms distribute inequitable power relations, shape women and girl's unequal access to freedoms, build social acceptance of physical violence and entrench constructions of aggressive and dominant masculinities (Lundgren et al., 2018; Heise et al., 2019), present a critical framework that supports us in delineating essential pathways through which social norms contribute to physical violence among ever-partnered women.

Methods

Data used to write this paper was collected under the study titled: "Formative Research on Social Norms and Violence against Women and Girls in Uganda." The study sought to diagnose social norms that promote violence against women and girls and establish how these influence unequal gender relations. OXFAM NOVIB in Uganda and Uganda Women's Network (UWONET) under the "ENOUGH: Together We Can End Violence against Women and Girls" campaign commissioned the study. Applied Research Bureau, a consultancy firm, designed and conducted the study. OXFAM and UWONET reviewed study documents and organized validation processes.

The study utilized a qualitative research design to diagnose existing social norms that influence physical, sexual, economic and bride price-related violence and collect nuances, specific contexts, complex relations and meanings assigned to these norms (Alexander-Scott et al., 2016; Cislaghi et al., 2016). This paper reports on norms that influence intimate partner physical violence.

Data was collected in the seven districts of Lira, Arua, Isingiro, Kabarole, Kamuli, Kotido, and Kampala. Regional representation criteria informed the final selection of study districts. Focus Group Discussions (FGDs) and In-depth Interviews (IDIs) were used to collect data on intimate partner physical violence. Each method targeted a separate group of ever-partnered adults (25 and above) and young (18–24 years) women and men. We conducted 14 sex-separate FGDs with adults and four sex-separate FGDs with young people in intimate relationships.

The FGDs included a vignette of a hypothetical scenario where the husband slaps and kicks the wife after confronting him about engaging in an extra-marital relationship. The intention was to stimulate participants thinking about physical violence's beliefs and expectations. The researchers developed the vignette and finalized it following pilot testing.

TABLE 1 Study participants.

	Arua		Isingiro		Kabarole		Kamuli		Kotido		Kampala		Lira	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
FGD with adults (25+ years)	1 female	1 male	1 male	1 female	1 female	1 male	1 male	1 female	1 female	1 male	1 male	1 female	1 female	1 male
FGD with young people (18–24 years)					1 female			1 male	1 female					1 male
IDIs with survivors	1	1	1	1	1	1	1	1	1	1	1	1	1	1

In addition, we conducted fourteen (14) IDIs with female survivors of IPV, including three living with a disability and 29 IDIs (16 women and 13 men) with local leaders, staff from non-government organizations, a Member of Parliament and the central government (see Table 1).

Data analysis

The data analysis process commenced during data collection when the researchers noted ideas and issues emerging from the interviews. After data collection, we familiarized ourselves with the data regarding its depth and breadth. This process started with verbatim transcription of the audio-recorded data. After data transcription, we repeatedly read the data, actively searching for meanings, patterns and themes to prepare for coding. We identified the codes and then matched them with data extracts demonstrating that code. After coding and collating all the data, the focus moved beyond codes to themes. We sorted the different codes into potential themes and collated all the relevant coded data extracts within the identified themes. Subsequently, we described and provided explanatory accounts of the coded data.

Ethical considerations

We conducted the study according to the ethical and safety recommendations for intervention research on violence against women (WHO, 2016). Makerere School of Social Sciences Ethics Committee and the Uganda National Council of Science and Technology approved the study protocol, tools and procedures. All researchers were trained in research ethics and passed the Research, Ethics and Compliance curriculum. Also, we trained researchers on how to safely refer women requesting assistance to available local services and sources of support. Participation was voluntary, and ongoing informed consent was obtained from all study participants to ensure ongoing, voluntary participation and continued safety. Participants were discouraged from sharing intimate personal details about their experiences with violence; anyone who wanted to discuss such experiences was given a list of local GBV services and offered the opportunity to speak with someone immediately. We protected the participants' confidentiality and privacy by anonymising the data. We did not use the participants' names and limited information about the participants' location.

Results

We present results as follows: (1) descriptive norms (what most people in a group do) that influence physical intimate partner physical violence (2) injunctive norms (what other

people in the group approve of) that influence physical intimate partner physical violence. To understand mechanisms through which norms contribute to intimate partner physical violence, we report on nuances, specific contexts and meanings assigned to each norm identified.

Descriptive norms

Husbands beat their wives under given circumstances

One of the descriptive norms identified is that "husbands beat their wives under given circumstances." Men sanction this norm when women fail or delay fulfilling their ascribed gender roles. Discussions with some older men show that the intention is to discipline or instill discipline. They argued that this form of discipline is within acceptable limits and expected to achieve a given outcome—a woman recognizing her mistake and meeting the different gender expectations. They added that this differentiates what they engage in from the mainstream acts of physical abuse.

> What happens in a home is controlled. We discipline our wives. We do not beat to hurt but to discipline. We have to punish them so that they get to the correct path. When she bleeds or breaks her hand, that is not disciplining; you have now started to hurt the mother of your children (Male adult, Kamuli district).

The decision to "discipline" is often not one-off. It instead happens after a series of demands for one to change. It could also be from the continued commentary from the husband's close network on the spouse's behavior that contrasts the set gendered expectations. The husband then decides to "discipline" the woman for bringing shame to him.

> It is never an easy decision. Your friends could keep talking about your wife and how she behaves like a young girl who does not know what is expected of her. So it reaches a stage when you can longer freely interact with your friends. So it is wise to beat her so that she changes (Male adult, Kampala district).

The act of "disciplining" is expected to happen within the homestead, even when transgression of gendered expectations occurs in a public space. It is expected that the husband expresses his dissatisfaction with the wife's behavior in their bedroom and punishes her in the same space. Discussions with older women revealed that the bedroom is the ideal place for this to happen.

> Often we do not stay alone as husband and wife; you have relatives that come to stay, you have your children, and your parents may stay with you. So, when my husband beats me in our bedroom, I will be very okay. No one will get to know what happened; they continue perceiving me in the same way as they did before, not as someone who is beaten or wrongs her husband (Female adult, Kamuli district).

Some ever-partnered men in rural and urban locations believed that wife-beating is shameful. They argued that men that do it lose respect among their friends, family and community. Some male perpetrators deny engaging in the act or provide justifications for their actions, especially if the spouse's family intervenes. He could blame the woman for engaging in immoral behavior (e.g., extra-marital affairs, theft) to gain sympathy.

Some young and older men in urban areas opined that there is no ground on which wife-beating is acceptable. They did acknowledge that this could happen however advised that men should desist from engaging in such acts. Some noted that there are alternatives to wife-beating that men can engage in that do not cause physical harm.

> It is not a good thing at all, and there is no reason one should give for engaging in it. Therefore, I advise my fellow men not to beat their wives (Male adult, Kampala).

Some ever-partnered women and men believed that wife-beating is a physical gesture that shows that the husband loves and cares for the wife. They added that husbands that choose to beat their wives are interested in maintaining the relationship. These point out the spouse's wrongdoings and punish them. The intention is to discourage further engagement in similar behavior.

> If a loved child did something terrible, wouldn't you punish her? You do it because you love her; that is the same thing we do when our lovely wives do something wrong. We do it because we love them (Male adult, Isingiro district).
>
> I know they are laughing, but we all know that when a man does not beat you, you start questioning whether he is interested in you, you do something wrong, but he keeps quiet. So it could be that person does not love you, and he is planning to leave you soon (Female adult, Arua district).

No one should intervene when a husband beats his wife

The other descriptive norm that influences physical intimate partner violence is "no one should intervene when a husband beats the wife." Discussions with ever partnered women and men reveal that wife-beating is a private matter (between husband and wife) that does not call for the intervention of the "outsiders." When a woman perceives her experience as violent and unfair, the expectation is that she seeks an audience with the spouse to talk about and resolve the matter at hand. She does not have to ask for the intervention of the "outsiders,"

and neither are "outsiders" expected to intervene in a "small" matter, as one of the adult male participants referred to wife-beating, "a rather small matter that does not require another person's intervention."

When individuals or groups intervene in the matter, husbands blame spouses for inviting "outsiders," even when they are unaware of the individuals or groups' intention to intervene. Survivors of physical abuse reported that this results in repeated and more violent perpetration of abuse.

> Whenever the chairpersons (local leaders) would come to talk about what was happening to me, that man would complain that they wanted to destroy our relationship. He would also blame me, that I was the one who asked the chairman to confront him, yet I was not the one. And then he would beat me, much more than he ever did (Survivor of physical violence, Kabarole district).

However, interviews with women and men show that elders from the man and woman's families can intervene when the physical violence persists. Nonetheless, their role is limited to the reconciling of the two parties.

> When a man beats you today, the other day and the other week, your family can call on his family, and they talk to the man to see that this does not happen again (Adult woman, Lira district).

Discussions with women and men revealed that law enforcement officers often intervene in such matters when notified. It is common for men to provide an audience to the officers out of the fear of imprisonment. However, often their role is limited to reconciliation. The spouse must pay the medical bill when the woman requires medical attention. That said, some officers do not intervene. They argue that the case does not have legal implications, and the husband and wife can reach a peaceful agreement.

> If it were between you and your husband, the officer would say, "you go back to your husband's home; this is something that you must address with your husband" (Adult woman, Isingiro district).

Men that pay the bride price own and control their spouses

The other descriptive norm reported is that "men that pay the bride price own and control their spouses." Discussion with adult and young women and men show that payment of bride price symbolizes a transfer of rights and responsibilities, mainly control and ownership, from the woman's family to the spouse. They explained that control and ownership involve ensuring her wellbeing, approving decisions, and disciplining her when she transgresses gender expectations.

> Women belong to the man. Therefore, when a woman's family receives the bride-wealth, the woman becomes his property (Interview with a cultural leader, Arua district).

Women who decide to leave the relationship have to return bride-wealth. In the districts of Isingiro, Kabarole and Kotido, older women reported that this influences women's decision to stay in abusive relationships. Often, the family is unwilling to return the items; in other instances, they are not in a position to purchase similar items.

> You get to think of the things they brought, cattle, and our fathers cannot allow us to give them back, so you stay with that man (Adult woman, Kotido district).
>
> In our culture, someone brings cows, not 1 or 2 but about 5. So when you want to separate from the man, he will ask you for his cows. Truthfully where you will get them (Adult women, Isingiro district).

However, interviews with adult men in urban centres revealed that not all men expect the woman's family to return bride-wealth. They rather see separation as an opportunity for a fresh beginning.

> I was fed up with her. The moment she left, I was relieved. Some asked that I ask for my cows, but I no longer cared about that (Adult male, Isingiro district).

Experience of physical violence is a domestic matter that should not be shared

The other descriptive norm identified was "experience of physical violence is a domestic matter that should not be shared." Ever partnered women and men reported that such experiences are not shared since they bring shame to the family. Some participants recited proverbs that expound on why such experiences should not be shared to emphasize the importance of upholding this norm.

> Family matters are usually considered private. They always say, "A woman should not tell the whole world what they are going through" (Survivor of Violence, Kampala district).

Nonetheless, some women transcend this behavioral expectation as they share their experiences with persons they can confide in. Others report their experience to law enforcement officers. Notably, the persons with whom the experience is shared often reiterate that this is a domestic matter

that should not have been shared in the first place and asks the woman to handle the issue with the spouse.

> I did talk to a few people in our community about my marriage issues, that is, my mother and some other old lady who happened to be my neighbor. However, she told me I should not discuss such matters with anyone. So I did cry and suffered in silence (Survivor of Violence, Arua district).

Some persons that survivors confide in blame them for their situation, especially when the cause of the abuse was the failure to complete gender roles. Some, especially family members, could choose to visit the husband and apologize on behalf of the family for the wife's inability to perform her role.

> If you are beaten for being "big-headed," they will send you back to your marital home, claiming that you were in the wrong. They will even come home and apologize to the man (Adult woman, Kampala district).

Participants noted that husbands that get to find out that the spouse talked to someone physically assault their partners. The intention is to force her into keeping silent about her experience.

> Whenever my neighbor talked to my husband about what I had told her, he would become more aggressive. He would severely beat me up. I then decided to keep quiet; I could not tell anyone (Survivor of Violence, Arua district).

Discussions with adult men show that husbands who choose to share their experience with perpetrating abuse draw sympathy from some community members. They think that men never disclose what is happening in their lives and only do so in extreme cases. In addition, adult women noted that men that disclose such experiences blame their spouses for pushing them into perpetrating abuse.

However, adult women and men noted that there are circumstances where it is acceptable for women to share their experiences. For example, when physical abuse persists or when this results in life-threatening harm. That said, they can only share their experience with elders from the woman's and man's families.

Injunctive norms

A wife should tolerate physical violence perpetrated by the husband

One of the injunctive norms reported is "a wife should tolerate physical violence perpetrated by the husband." Ever partnered adult women noted that tolerance is a comment on how well a paternal aunt prepared the woman for marriage. Paternal aunts encourage women to be strong and brave as they experience physical abuse. As a result, women who endure abuse can raise their children with their partners and preserve family honor.

Interviews with survivors of physical abuse revealed that women who share their experiences are made aware of the behavioral expectation of being tolerant. Also, they are comforted that the spouse will change his ways soon, providing a sense of hope that builds resilience to the abusive experience.

> I talked to my mother about the situation I was going through. She advised me to stay in the marriage and care for the children. I also talked to the chairman (local leader), and he said the same, stay in the marriage. I was abused, I was tortured, but I was strong (Survivor of violence, Kamuli district).

Discussions with adult women show that some women eventually leave abusive relationships, although blamed and ridiculed for their decision. Those that leave their children behind are labeled irresponsible.

> I did leave that relationship; I could not tolerate it anymore. The problem was that I left my children with the man. My mother kept on blaming me for that. She told me that that man would marry soon and the woman would not treat the children well (Survivor of violence, Kampala district).

Interviews with adult men and women revealed that some male parents of abused women warmly welcome them back to their households and stand by them when other family members criticize or blame them for what happened.

> Truthfully my father was happy that I finally decided to come home. One day he found my brother blaming me for what happened, and he asked him never to think of me that way (Survivor of violence, Kampala district).

> When I learned my child was mistreated, I asked her to return home. She took some time to decide to, but she finally did (Adult male, Lira district).

Women have to behave in a way that upholds men's domination

Another injunctive norm identified was that "women have to behave in a way that upholds men's domination." Interviews with adult women and men show that women should be respectful and obedient toward their husbands. They should manifest this in their daily interactions. Disrespectful and

disobedient women are punished by beating or being asked to return to their parents' homes.

> When I ask her, she responds arrogantly, and you know what comes next: a beating. Then, finally, you slap her once or twice because of disrespect (Adult male, Kamuli district).

Men and women perform different roles

Another injunctive norm identified is that "men and women perform different roles"—communities ridicule and name-call women and men that fail to complete their roles. Notably, husbands beat up wives, complaining about their failure to meet their roles. Also, wives that fail to complete their ascribed roles are punished, sometimes through beating.

Discussions show that there are changes in the manifestation of this norm. For example, women's entry into the job market has relegated some roles to house-helps. Nonetheless, they have retained the supervision of these roles.

> Many families now have maids, so the maids deal with things like preparing warm water, but still, it is my responsibility to see that she boils the water; if she does not, my husband shall blame me, not her (Adult woman, Kampala district).

Reporting physical abuse to the police casts an evil spell on the family

Another injunctive norm identified is that "reporting physical abuse to police casts an evil spell onto the family." Adult women mainly described the evil spell in terms of the hard times that the children and their mother would endure when the breadwinner was in prison.

> She told me that if I reported my husband and he got imprisoned, I would have brought a curse on my kids and family, and she advised me not to do it. She asked, who would provide for the children? (Survivor of violence, Kampala district).

Discussions with adult women revealed that women that report physical abuse experience discrimination from their peers and families. When they seek support, peers and family members remind them that they had the breadwinner arrested. Again, they are told that the only support that can be provided is for children; this could only be gotten if they are out of her care.

> I did report him to the police, and he was imprisoned. It reached a time when I needed help, but whomever I reached out to, refused to offer support. Instead, they told me I was to blame for what was happening (Survivor of violence, Isingiro district).

Discussions with law enforcement officers revealed that some women choose to withdraw the case when they realize they shall lose out on their source of support. As a result, women keep in abusive relationships and harden men perpetrating abuse, given that they cannot be held accountable for their actions.

Discussion

We found evidence of descriptive and injunctive social norms that sustain physical violence against women in intimate relationships. The findings build on earlier evidence, in low-and-middle-income countries, on behaviors typical or approved of in contexts of physical violence (Allen and Raghallaigh, 2013; Carlie and Trott, 2017).

The social norms identified have both a direct and indirect relation to the practice of physical violence. A direct relation between norm and the practice happens "in situations where a norm and behavior are matched" (Cislaghi and Heise, 2018, p. 6). The relationship is indirect when the norm does not explicitly relate to the practice but contributes to the shared behavioral expectation of perpetrating physical violence. Examples of such norms drawn from this study include men and women performing different roles; men who pay the bride price, own and control their spouses; and reporting physical abuse to the police casts an evil spell on the family.

Findings show that social norms build a local discourse on physical violence against women in intimate relationships. The discourse organizes physical violence as a domestic and private matter, which contrasts with the feminist discourse that argues for attending to violence against women as a public concern (MacKinnon, 2006; Krizsán et al., 2007). The norms construct physical violence as a private concern attended to by intimate partners or, in exceptional circumstances, a matter to be handled by the family. The implication is that norms define persons and institutions where matters of physical violence are reported and resolved, which places state institutions and actors at the margins as communities do not recognize their role in addressing women's experiences of violence. When women reach out to the state actors, they advise them to return to their private spaces. The decision is embedded in social norms and not the existing legal options provided by the Uganda Domestic Violence Act (2010).

These realities present evidence of some mechanisms through which a culture of silence on women's experiences is built or strengthened. Treating violence as a domestic and private matter pushes discussions on the perpetration of physical violence out of the public realm (McAlister et al., 2021). The informal rules and threats of punishment that the norms present force women to keep their experiences to themselves. The culture of silence also extends to groups within the community that norms do not recognize as competent in intervening in cases of physical violence. Findings suggest that the behavioral rules

that maintain a culture of silence are primarily enacted when a man's gender capital (dignity and respect in the community) are threatened.

The local discourse also organizes physical violence as a constituent of women's life worlds. It constructs violence as an everyday practice (Tolman et al., 2003; Messerschmidt, 2012)—-"husbands beat their wives under given circumstances," "a wife should tolerate physical violence perpetrated by the husband." In this context, physical violence means love and care, which presents moral justifications for men's perpetration of violence, which then constructs violence as a practice to achieve a greater good within society. Consequently, there is men's limited accountability for their violent behaviors. Women and girls are responsible for ensuring that men do not victimize them. Those victimized are blamed for their limited attention to the various informal rules that the social norms present.

The local discourse also defines appropriate boundaries for physical violence and associated practices. For example, although generally, physical violence is treated as a private matter, the informal rules allow one to report a case of violence to state authorities once her experience goes beyond what is considered appropriate. In addition, even though the family is one of the spaces where cases of violence are reported, the informal rules limit their role to reconciling the two parties and restoring the gender order.

We found evidence that women (and men) think of contesting particular social norms. However, the norms rule out specific pathways for which this person can opt (Chambers, 2005). For example, women often think of reporting the spouse to law enforcement agencies, but they choose not to because norms describe the act as one that brings about an evil spell. Some women exercise their agency to challenge the existing norms. However, this causes a change in the manifestation of the norm, not the meaning attached to the social norm. For example, women join the labor market. Nonetheless, retain the responsibility of supervising housework done by the house help.

Conclusions

As an increasing body of work in LMIC focuses on improving social and behavioral change programming, there have been advances in the understanding of what works in supporting communities to achieve change in harmful norms, especially those affecting women's and girls' wellbeing. As such, there is a good understanding of practical strategies that social norm change interventions must adopt to achieve normative changes. To further strengthen the effectiveness of these strategies, we see it essential to understand the different ways social norms contribute to negative behaviors affecting women and girls. This offers programmers practical action areas to be attentive to if they are to cause normative change. We identify three pathways through which social norms contribute to intimate partner physical violence: (i) norms organize physical violence as a domestic and private matter, (ii) norms organize physical violence as a constituent part of women's lives, and (iii) norms define appropriate boundaries within which male partners perpetrate violence. We believe that social norm-shifting interventions that deconstruct physical violence as a private matter, advance the de-normalization of physical violence and dismantle acceptable boundaries within which violence happens can cause tremendous achievements in addressing physical violence among ever-partnered women.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

Ethics statement

The study protocol was reviewed and approved by Makerere School of Social Sciences Ethics Committee and the Uganda National Council of Science and Technology. Written informed consent to participate in this study was provided by the participants.

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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EDITED BY
Kath Woodward,
The Open University,
United Kingdom

REVIEWED BY
Anjali Dutt,
University of Cincinnati,
United States
Lan Anh Thi Do,
Pham Ngoc Thach University of Medicine,
Vietnam

*CORRESPONDENCE
Furqan Ahmed
ahmedf@leibniz-bips.de

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Understanding community resistance to sexuality education and exploring prospective implementation strategies in Pakistan: A content and network analysis of qualitative data

Furqan Ahmed[1,2]*, Janina Schumacher[1], Ghufran Ahmad[3] and Tilman Brand[1]

[1]Department of Prevention and Evaluation, Leibniz Institute of Prevention Research and Epidemiology, Bremen, Germany, [2]Health Sciences Bremen, University of Bremen, Bremen, Germany, [3]NUST Business School (NBS), National University of Sciences and Technology (NUST), Islamabad, Pakistan

Providing comprehensive sexuality education (CSE) in schools is a work in progress in many countries throughout the world. In some countries, the journey is just beginning; in others, investments in this field have been made for many years. It is and has been difficult in Pakistan to implement and promote reproductive health, women's empowerment, and CSE. In Pakistan, previous implementation efforts revealed the critical role of community influencers in propagating misleading information about the initiatives, inciting organized community resistance, and provoking backlash. This paper looked at several aspects of community resistance, as well as approaches for overcoming the resistance for increasing community engagement in the implementation of CSE in Islamabad, Pakistan. To analyze community perceptions of CSE implementation in Islamabad, the community readiness assessment (CRA) questionnaire was adapted. Questions and prompts for discussion included leadership, current initiatives, community knowledge, resource availability, community support, and implementation strategies. A total of 35 in-depth interviews were conducted. Data was analyzed and interpreted using qualitative content analysis to explore community perspectives that contribute to resistance around CSE, as well as implementation options. Using inter-code relationship data, network analysis was conducted to provide a graphical representation of the analyzed qualitative data. The study reveals community resistance to CSE being implemented in schools. Misconceptions, a lack of awareness, a lack of priority, and the lack of dedicated resources are just a few of the primary implementation challenges to consider when implementing CSE in practice. Network analysis identified, based on modularity class, five distinct clusters of highly connected nodes/codes: non-governmental organizations (NGOs), misconceptions, resources and policy, strategies and community support, and personal social and health education (PSHE) and current efforts. In conservative environments and when confronted with resistance, innovative marketing and rebranding are critical for priority setting

and community engagement, especially when developing curriculum and implementing CSE. Some of the suggested strategies for implementation include community sensitization through strategic awareness campaigns, involving already established infrastructure and NGOs, endorsement by all major stakeholders, particularly decision-makers, and the use of creative digital platforms for better dissemination.

KEYWORDS

sexuality education, community resistance, social norms, adolescent health, network analysis, community readiness

Introduction

Adolescent sexual and reproductive health (SRH) education and promotion was advocated by the International Conference on Population and Development in 1994 (Fincher, 1994). Unfortunately, due to misconceptions, organized community resistance and implementation obstacles progress has been slow (UNESCO, 2015). According to United Nations Educational, Scientific, and Cultural Organization's (UNESCO) 2021 global status report on comprehensive sexuality education (CSE), countries around the world are at various stages of progression (UNESCO, 2021a,b,c). This journey must continually respond to emerging health and well-being challenges, and the unique requirements of children and adolescents. This includes ensuring that CSE is mandated by law and policy with committed funding for expanding coverage (Ahmed et al., 2021; UNESCO, 2021a,b,c). This can only be accomplished by prioritizing content and delivery quality through curricular reforms and investments in teacher training. As many countries continue on their path to CSE, monitoring progress is critical (UNESCO, 2021a,b,c). This includes improving the use of recommended indicators and incorporating diverse viewpoints, such as those of parents, teachers, learners, and community influencers (Chandra-Mouli et al., 2018b; Ahmed et al., 2020a, 2021; UNESCO, 2021a,b,c).

Challenges during puberty

Participants in a survey conducted in Pakistan identified the specific health issues they face during puberty and also provided indirect insights into how a lack of open discussion about SRH causes them to experience unnecessary shock, pain, and guilt as they navigate natural physiological changes (Kamran et al., 2019). For example, the majority of girls stated that they were shocked when they started menstruation since they had not been informed that this would occur (Kamran et al., 2019). In the absence of formal CSE, adolescents rely on unreliable sources of information to make decisions about their sexuality (Ali et al., 2006; Talpur and Khowaja, 2012; Iqbal et al., 2017). In addition to exposing children to harm, misinformation, mistreatment, and exploitation, adolescents may also develop mental health issues, according to the findings of a Karachi-based study (Ali et al., 2006; Iqbal et al., 2017).

Marriage, early marriage, and fertility

In recent years, the singulate mean age at marriage (estimate of average years lived before marriage) for women and men has climbed to around 23 and 27 years, respectively (Kamran et al., 2019; National Institute of Population Studies (NIPS) and ICF, 2019). Despite this, 14% of adolescent females and 3% of adolescent males between the ages of 15 and 19 are married. Moreover, between the ages of 15 and 19, around one-fifth of females have begun childbearing. Additionally, adolescent mothers in Pakistan give birth to 44 children for every 1,000 live births. They are three times more likely than older mothers to be anemic and to have a lower pre-pregnancy body mass index. Additionally, they are three times as likely to miscarriage than older moms (Shah et al., 2011). Additionally, their babies have a greater chance of preterm delivery and low birth weight, as well as an increased risk of dying during childbirth (Shah et al., 2011).

Planned parenthood and contraception

Around 97% of married women between the ages of 15 and 29 in Pakistan have heard of at least one method of contraception (Kamran et al., 2019; National Institute of Population Studies (NIPS) and ICF, 2019). Women's levels of knowledge increase with age, from almost 91% of those aged 15–19 to nearly 98% of those aged 25–29. However, only 22% of married women between the ages of 15 and 29 use contraception to plan their families. Contraceptive usage among married women between the ages of 15 and 29 rises with age, is higher among those with a higher level of education and income, and varies depending on the region in which they reside. Additionally, 17.9% of married women between the ages of 15 and 19 report unmet contraception needs (Kamran et al., 2019; National Institute of Population Studies (NIPS) and ICF, 2019).

Adolescent reproductive health rights

A recent cross-sectional survey reveals that adolescents, parents, and caregivers in Lahore, Pakistan, have a poor understanding of adolescents' SRH rights (Iqbal et al., 2017). Pakistan ranked 151st out of 153 countries in the World Economic Forum's 2020 report on gender parity (World Economic Forum, 2021). Females in Pakistan have less financial independence and almost no decision-making power compared to men (UNESCO; World Economic Forum, 2021). In addition, there is a high prevalence of child marriage, and there is little acknowledgement that young girls need education on their sexuality and reproductive health rights (Kamran et al., 2019; National Institute of Population Studies (NIPS) and ICF, 2019).

Adolescent boys and girls are typically aware of human rights, but they are more expressive about their rights as adolescents, according to the results of a qualitative study (Kamran et al., 2019). Girls spoke more frequently about their right to education and marriage consent, while boys discussed their right to employment (Kamran et al., 2019). However, just a limited percentage of adolescents listed the right to be free from child labor, harassment, and assault, and none mentioned the right to be safe from domestic abuse (Kamran et al., 2019). It is vital to raise adolescents' understanding of their rights, the law, and the institutions of justice.

Gender-based violence, child abuse, and cyberbullying

A 2018 international survey on men and gender equality in Pakistan revealed that over 59% of women had suffered some sort of violence, while about half of men (50%) had perpetrated violence (Kamran et al., 2018). Over 10% of both men and women reported having been abused as children (Kamran et al., 2019; National Institute of Population Studies (NIPS) and ICF, 2019). In addition, the study uncovered a high degree of intergenerational transmission of violence among respondents. The practice of honor killing, marriage as a means of resolving disputes (vani), and bridal exchange (watta satta) are all examples of destructive customs and traditions that exist in Pakistan and are detrimental to women and girls. Moreover, emotional violence is rampant. Financial issues, infertility, a husband assaulting the children, and a wife's unwillingness to participate in sexual intercourse are the most often claimed reasons for verbal domestic violence. Pakistan, like many other regions, has a problem with the underreporting of physical, sexual, and other types of violence, especially by female victims.

According to Sahil foundation records, child abuse was recorded in 3,445 instances in 2017, 3,832 instances in 2018, 2,846 instances in 2019, and 2,960 incidences during 2020 (Ahmed et al., 2020b). In nearly two-thirds of these cases, the perpetrators were acquaintances or family members of the victims. There is a significant data gap since there are no accessible data registries for monitoring and reporting the number of child abuse incidents in Pakistan. These statistics are derived through monitoring a range of national and regional newspapers. Due to social stigma associated with child abuse, underreporting is also a critical concern (Ahmed et al., 2020b). Strategies like sex offender management and school-based education programs may help prevent such heinous acts, and CSE programs effectively reduce child abuse, teenage pregnancy, and sexually transmitted diseases (Finkelhor, 2009; Kirby et al., 2011).

According to the results of a qualitative study on cyberbullying, the overwhelming majority of respondents said that men are more likely to engage in cyberbullying since they have better access to internet and mobile devices (Kamran et al., 2019). It is likely that girls will be deceived by fake accounts or harassed by ex-boyfriends who threaten to post their personal photographs on social media. If girls do not get sufficient support from their parents, they may be subjected to additional restrictions on their movement and use of mobile phones, physical abuse, expulsion from school, and even forced marriage (Kamran et al., 2019). With such a high percentage of adolescents using social media sites, it is crucial to raise knowledge about these networks and how to use them safely.

Implementation challenges and socio-ecological model

According to a 2014 report by UNESCO, there are few instances of scaled-up CSE intervention programs. There is a substantial gap in school-based CSE, as well as its exclusion from official educational curriculum, which poses a substantial barrier to progress in these fields (UNESCO; Sokal and Rohlf, 2015). Pakistan provides a challenging environment in which to implement and promote reproductive health, women's empowerment, and CSE, as is the case in many conservative societies (Shaikh and Ochani, 2018; Chandra-Mouli et al., 2018b). It is a taboo to discuss adolescent SRH and, like in many other countries, there is a widespread belief that sexual education may lead to undesirable behaviors (Svanemyr et al., 2015; Shaikh and Ochani, 2018; Chandra-Mouli et al., 2018b). Moreover, according to UNESCO, "there is less clarity on how to implement (CSE) and scale it up in varied environments," particularly when community resistance is observed (UNESCO, 2015).

School-based CSE plays a crucial role in reaching out to a wide number of stakeholders while imparting age-appropriate and developmentally relevant information using a systematic, spiral approach that builds on prior content and sexuality concepts (Herat et al., 2018; Montgomery and Knerr, 2021). According to literature, a substantial proportion of Pakistan's youth favor the implementation of CSE (Ali et al., 2006; Shaikh et al., 2017; Shaikh and Ochani, 2018). Compared to this, support from community influencers, decision-makers, and gatekeepers is notably low, and a culture of silence around CSE is often seen (Chandra-Mouli et al., 2018b). While community engagement and the development of strategies to counter widespread resistance to CSE have been

emphasized, such interventions are rare in Pakistan (Svanemyr et al., 2015; Chandra-Mouli et al., 2018a, 2018b; Ahmed et al., 2021). Two non-governmental organizations (NGOs), Aahung and Rutgers, sought to address the challenge of resistance in school-based and out-of-school adolescent SRH interventions in Pakistan by using a participatory approach to design life skills-based curriculum (Chandra-Mouli et al., 2018b; Rutgers, n.d.). They were successful in drawing attention to the critical role of community influencers and gatekeepers in disseminating disinformation about the projects, inciting organized community resistance, and generating an outpouring of resistance (Chandra-Mouli et al., 2018b). Aahung also conducted a mapping exercise to identify the most influential decision-makers in the lives of adolescents. This study suggested many levels of influence within an adolescent's context, which must be recognized in order to sensitize and engage influencers in order to approach adolescents with CSE effectively. This includes political and religious authorities (societal tier), community leaders (community tier), school administrators and teachers (organizational tier), and parents and peers (interpersonal tier; Chandra-Mouli et al., 2018b). These influencers and gatekeepers have an impact on adolescent access to CSE and reproductive health.

Study setting: Islamabad

Our research was conducted in Islamabad, capital city of Pakistan. According to the 2017 census, Islamabad has a population of over 2 million with 0.3 million households (Pakistan Bureau of Statistics, 2017). The city contains 367 primary (grades 1–5), 162 middle (grades 6–8), 250 high (grades 9 and 10), and 75 higher secondary (grades 11 and 12) schools (Ministry of Education, 2009). Literacy rate is 88%, the highest in the country (ICT Administration, n.d.). Literature reveals that Islamabad and Rawalpindi (adjoining cities) provide a similar picture in terms of adolescent reproductive health concerns addressed in previous sections. A survey conducted in Rawalpindi revealed that 48.6% of females only have enough understanding about puberty and menstruation (Mansoor et al., 2021). In addition, urban women were almost four times more likely to have appropriate understanding of puberty and menstruation, whereas working women were nearly 16 times more likely to have adequate understanding. Another study conducted in Islamabad and Rawalpindi on the perceptions of parents and teachers about CSE revealed that 76.1 percent of parents and 64.4 percent of teachers supported the implementation of age-appropriate CSE in schools (Nadeem et al., 2021). But the majority of teachers and families considered that CSE was incompatible with Islamic values and culture. The majority of respondents favored the prevention of bullying and sexual assault, but subjects such as birth control received the least support. Nearly half of the parents said that they had never had a conversation with their children about their sexual health with their children. Therefore, this paper investigates several aspects of community resistance and identifies strategies for community engagement and resistance management for successful CSE implementation in schools in Islamabad.

Materials and methods

Research team

FA (Male) interviewed the respondents online. FA and TB had prior expertise in collecting and analyzing qualitative research data (Siddiqi et al., 2016; Bradby et al., 2020). At the time of data collection, FA was a doctoral fellow at the Leibniz Institute of Prevention Research and Epidemiology (BIPS).

Data collection

Community readiness is a critical factor for the successful implementation of community-based health programs (Edwards et al., 2000; Stith et al., 2006; Oetting et al., 2014). The concept of community readiness in preventive health programs is based on increasing this readiness to have better participation and inclusion in health interventions (Stith et al., 2006). Several tools to assess community readiness have been developed, but the community readiness model (CRM) is the one that has widely been used in health promotion, suicide prevention, HIV/AIDS prevention, and programs aiming to improve physical activity uptake (Edwards et al., 2000; Stith et al., 2006; Peercy et al., 2010; Oetting et al., 2014; Gansefort et al., 2018; Ahmed et al., 2021). The community readiness assessment (CRA) questionnaire was modified to assess perceptions on CSE implementation (Ahmed et al., 2021). Themes such as leadership, current efforts, community knowledge, resource availability, community support, and implementation strategies were among the questions for discussion. The semi-structured interview questionnaire included both open-ended and close-ended rating questions that were written down while writing field notes. The interview questionnaire is provided in Supplementary File as Questionnaire 1. The data was collected and recorded online from April to July 2020. This study received ethics approval from the Pakistan Health Research Council, and all respondents gave their informed consent verbally and in writing through email prior to the interviews.

Key respondents and recruitment

According to Mouli et al. (Svanemyr et al., 2015; Chandra-Mouli et al., 2018b), there are many levels of the community that impact adolescents' access to sexuality education in Pakistan. These levels, which correspond to the ecological framework, are divided into five categories: society, community, organizational, interpersonal, and individual (Chandra-Mouli et al., 2018b). Except for the individual level, we classified key respondents from Islamabad for each level because our focus was on gatekeepers and influencers.

Respondents were recruited in each level based on existing research about stakeholders who play an important role in influencing choices about the implementation of health interventions, particularly SRH (Svanemyr et al., 2015; Chandra-Mouli et al., 2018b; Ahmed et al., 2021). Potential respondents were identified through online searches of institutions involved in sexuality education and/or policy-making. Searches were also done to find people of the community who may serve as gatekeepers for sexuality education. Snowballing was also utilized to find and recruit new respondents. Purposive sampling was used to identify the key respondents. Five to six respondents were recruited for each level of the community, as advised by the CRM handbook (Oetting et al., 2014). An invitation to participate in the study was emailed to the respondents, along with a participant information sheet and a Supplementary Factsheet about CSE. Informed written consent was received through email prior to the interview. The interviewer used the fact sheet to describe the CSE and its important aspects to the respondents during the interview. All interviews were recorded and transcribed by a professional transcribing service. Preliminary results of the analysis were shared with the participants during subsequent focus group discussions, not reported for this manuscript. There were no repeat interviews and respondent recruitment was predicated on including key stakeholders. Purposive sampling approach for recruitment aimed at to represent perspectives of multiple stakeholder groups. The number of interviews per stakeholder group was determined using the CRM guidelines rather than a data saturation assessment. (Oetting et al., 2014; Ahmed et al., 2021).

Rapport building and snowballing

It was anticipated that the study's topic would be difficult to talk about and some steps were taken to build rapport with respondents (Weller, 2017; Nadeem et al., 2021). When the online call began, the interviewer went over the factsheet and the study's goal once again. Participants were given time to settle before the recording began. Prior to the recording, they were reminded of the importance of confidentiality/anonymity, and informed that anything communicated will be used solely for research purposes, to further reinforce trust. We were only able to identify and contact 15 possible respondents through internet searches with only 10 responses. Finding potential study participants through internet searches was difficult. Therefore, respondents were asked to recommend participants after the recording had stopped. A total of 28 candidates were recommended and 25 responded.

Qualitative content analysis

Qualitative content analysis allows to generate inferences from verbal, visual, or written data in an inter-subjective and systematic manner (Bengtsson, 2016). This method was used to analyze and interpret the interview data to explore community views that contribute to resistance around sexuality and to explore implementation strategies. The dataset was coded and maintained using MAXQDA Analytics Pro 2020. To create the initial coding system, an open coding procedure was combined with an inductive manifest analysis approach (Bengtsson, 2016). During the decontextualization stage, FA described and defined each code. JS checked the coding method and segments independently for reliability and trustworthiness after removing the uncoded data segments (Bengtsson, 2016). During the recontextualization stage, the coded segments and system were changed through mutual consensus. The two researchers also produced summaries for each code. The research group then analyzed the summaries of all codes to identify homogeneous group of codes that could be used to triangulate the data for interpretation during the categorization stage (Bengtsson, 2016). After developing the categories, the findings were drafted during the compilation stage (Bengtsson, 2016). To report the findings and develop the manuscript, Consolidated Criteria for Reporting Qualitative Research (COREQ) was used (Tong et al., 2007). Supplementary Table 2 contains the COREQ checklist.

Network analysis of inter-code relationship

Using code relation data produced by MAXQDA Analytics Pro 2020, the number of times the same interview segment was coded for multiple codes was used to explore the links across codes (Pokorny et al., 2018). This is essentially code overlap for the same interview segments, and we used it to examine how participants spoke about various themes linked to the topic and how interrelated these topics were based on the coding overlap (Pokorny et al., 2018). However, as the code relation statistics fall short of reflecting the complexities of inter-code relationship, network analysis was employed (Pokorny et al., 2018). The inter-code relationship statistics only show the relation of two codes and are based on the frequency of overlap. In comparison, network analysis, for the same statistics, shows intricate interrelationships between all codes that go beyond inter-code relationship matrices. Although both represent relations between pairs of codes, the network graph provides the relation between a given pair of codes in context, and in relation to all the other codes in the network (Pokorny et al., 2018). Each code was treated as a node for the network and undirected edges were used to depict inter-code relationship (Pokorny et al., 2018). Pearson correlation coefficients were computed to determine the strength of the inter-code relationship. Stata 16.0 was used to compute Pearson correlation coefficients and Gephi 0.9.2 for network analysis. The absolute value of Pearson correlation coefficient was used as the weight of the undirected edges to represent the strength of association between nodes/codes (Pokorny et al., 2018). The average weighted degree, which takes into account the weight of all edges connected to a node, is used to determine the size of each node (Jackson,

2010; Powell and Hopkins, 2015; Pokorny et al., 2018). The nodes' color was determined by modularity class, splitting the network into clusters of highly connected nodes (Jackson, 2010; Powell and Hopkins, 2015; Pokorny et al., 2018). Modularity resolution may be changed to detect a varied number of clusters; raising the resolution decreases the number of clusters and vice versa. We set the modularity resolution to 1.

Results

Descriptive statistics

During the categorization phase, five main categories were identified. Supplementary Table 3 contains a portion of the quotes for each code with respondent information and position in the transcript. Figure 1 shows the coding system and categories based on the content analysis. The codes are referred according to the Figure 1 classification in the following sub-sections. Descriptive statistics of the coded segments are provided in Supplementary Table 4. Table 1 shows the respondent shows the respondent category, biological sex, interview duration, and respondent age descriptive statistics.

Availability of resources

There are almost no resources available, so greater support, especially from the government, is necessary. Most community members are unwilling to pay for CSE; however, they may be willing if they understand its importance. Leadership is also financially unsupportive towards CSE. Most funding comes from international donor agencies and goes to NGOs working on such issues (Code 1.1. Financial Resources). The community has access to some information in the form of brochures and media. However, only a fraction of people is reached, and the material on internet is unreliable. Accessible information focuses on sexual abuse and violence rather than CSE (Code 1.2. Information Availability). There are only a few specialists/experts in the community, and even fewer who are skilled in CSE. Some experts act as consultants for NGOs, particularly in adolescent health (Code 1.3. Experts).

Respondent 12, Female, Health Department, Age 36, Pos. 80: "I think that a lot of private NGO's are being funded on this topic. Yes. There is a lot of international funding available and I think this would continue, but then again I think a lot are not aware of the opportunities available about the resources available. But yes, there is no national level funding on such things, mostly international."

Awareness and resistance

Specific understanding is lacking, and numerous misconceptions prevail. Some community members, particularly those who took biology in high school, may be familiar with reproduction concepts. Community must deal with several other challenges, including socio-economic and other health-related concerns. Leadership's low priority is mainly due to a lack of awareness and prevalence of sexuality-related stereotypes resulting in poor or non-existent allocation of resources (Code 2.1. Lack of awareness and priority).

Respondent 34, Female, Social Media Influencer, Age 38, Pos. 84: "Since they (community) do not know it's an issue (sexual health), they do not think it's an issue."

Religion and cultural traditions have a major role in resistance and opposition. Generally, conservatives are opposed to CSE, and religious leaders are particularly vocal in their resistance (Code 2.2. Resistance from conservatives). They exercise authority and influence over community members, decision-making and priority setting. There are religious and cultural dimensions that contribute to the culture of silence. Although some teachers and parents might discuss it, the broader public may be apprehensive to do so. The perspectives of male and female community members are also at odds. Men, with a contemptuous attitude toward gender issues, dominate decision-making and organizational control. Females consider menstruation as a stigma and often take their menstruating daughters out of school (Code 2.3. Taboo and silence).

Respondent 13, Male, Doctor, Age 35, Pos. 66: "I mean God, people talk America is the most liberal society, where you can voice out opinion. No, you do not know the power of clergy in Pakistan. They can block the road, they can formulate this issue with blasphemy, for their interest, they can manipulate and extrapolate things to a very hazardous level, in a very toxic manner. They can block the roads; they can start violence and agitation… So definitely they can start agitation, here can be lockdown and violent protests."

Numerous myths and misconceptions circulate regarding CSE. People do not believe that it is beneficial or desirable for their children (Code 2.4. Misconceptions). A common misconception is that CSE will lead to sexual intercourse at an earlier age. If such topics are discussed openly, there may be resistance ranging from verbal abuse to physical assault (Code 2.5. Dangerous consequences).

The initiatives or projects carried out by NGOs and the government face difficulty in dissemination. Normally, organizations publicize their activities but for CSE there may be opposition especially from religious extremists, making it difficult to raise awareness about current activities. Therefore, for some projects, consultation sessions with stakeholders are held at the ministry, to which some religious scholars are invited to get their support (Code 2.6. Dissemination of efforts). The community-based approach is becoming increasingly popular due to better community engagement. However, the community and the implementers/practitioners of health programs are disengaged (Code 2.7. Disconnect with the community). Some community members believe that CSE is a westernized concept and population appears to be resistant to western influences leading to resistance (Code 2.8. Western concept).

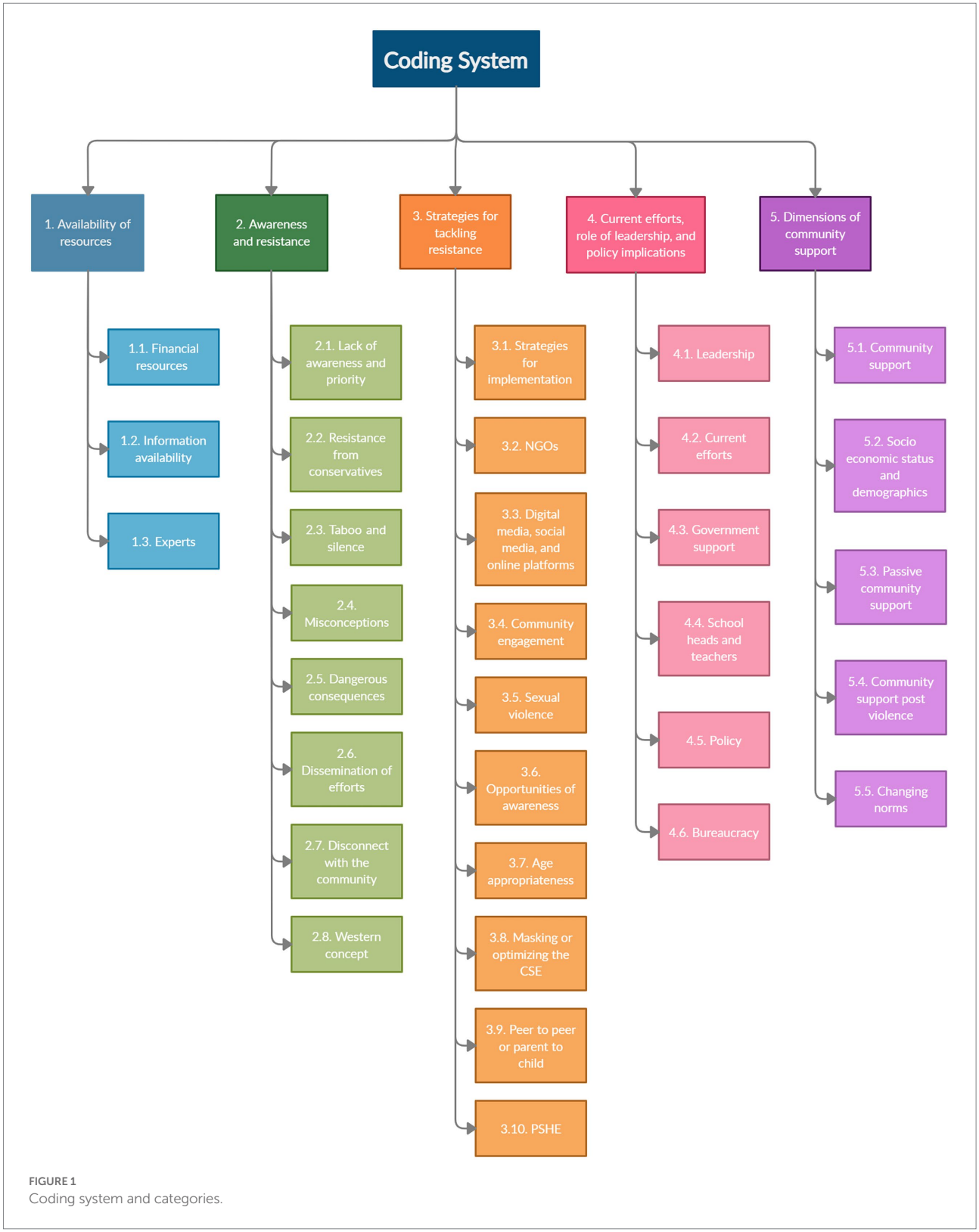

FIGURE 1
Coding system and categories.

Respondent 8, Female, Teacher Rural, Age 23, Pos. 30: "Because they feel (community) a lot of the efforts that have happened, they have been very removed from the people themselves … they are talking in a language that is not very accessible to the students or whoever is listening."

Strategies for tackling resistance

Some strategies to deal with resistance to CSE were suggested; the topic should be discussed in a sensitive manner, with evidence, and in line with the cultural/religious

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TABLE 1 Respondent category, biological sex, interview duration, and age descriptive statistics.

Socio ecological tier	Respondent category	Frequency	Percent	Cumulative percentage	
Society	Education Department	1	2.9	11.4	
	Political activist	2	5.7	68.6	
	Health Department	4	11.4	28.6	
Community	Social Media Influencer	2	5.7	77.1	
	News channel	1	2.9	45.7	
	Doctor	2	5.7	8.6	
	Religious Scholar	1	2.9	71.4	
	Community Leader	1	2.9	2.9	
Organizational	NGO	5	14.3	42.9	
	Teacher/Rural	4	11.4	88.6	
	Teacher/Urban	4	11.4	100	
	Head of School	2	5.7	17.1	
Interpersonal	Parent	6	17.1	62.9	
Total respondents		35	100	100	
Biological sex					
Female		20	57.1	57.1	
Male		15	42.9	100	
		Mean	Median	Minimum	Maximum
Interview duration		30.8	29.5	17.5	50.5
Age		31.8	30	23	59

sensitivities, and leaders should be involved and given awareness to garner their support (Code 3.1. Strategies for implementation). Some NGOs are working with communities to raise awareness about the issue on the internet by sharing educational content (Code 3.2. NGOs). However, NGOs face difficulty in obtaining NOCs (no objection certificate; Code 3.2. NGOs).

The internet has provided community members access to a lot of information. The digital media platforms, particularly social media, can be used to raise awareness about the issue. Sexual education issues are widely discussed on social media, and social media influencers are playing an important role in raising awareness (Code 3.3. Digital media, social media, and online platforms). Leadership and influencers can play a critical role in engaging community through digital platforms (Code 3.4. Community engagement).

Respondent 1, Female, NGO Employee, Age 27, Pos. 145: "So once that's shared (content related to CSE), imagine it being shared a million times all over the internet, all over social media. And I would say that forwarding messages, such as in your phone, like WhatsApp and other message hubs, they are a source of connection to parents …… It's a huge you could say platform, where something like this can be shared."

There is a lot of sexual violence and a lack of support to prevent or mitigate it. Community members are concerned about their children's safety and may empathize with the problem. This awareness is also attributed to the initiatives on social media and digital platforms. So, community engagement can be further strengthened by emphasizing children's safety (Code 3.5. Sexual violence). The media, when used in a positive and strategic manner, can help raise awareness (Code 3.6. Opportunities for awareness).

Respondent 7, Female, NGO employee, Age 30, Pos. 118: "I feel like it (CSE) just needs to be sold to them (community) in a way where they feel like it's personal and it's beneficial for them, and it's not a Western idea or an outsider concept that's not relevant to them. It has to be adapted in a way and presented to them…. where it feels personal and very relevant to them."

Many people appear to be unaware of the content's age-appropriateness leading to many misconceptions, hence, educating about it may be beneficial in overcoming resistance (Code 3.7. Age-appropriateness). It is crucial to sell the topic. Thus, it is important to use acceptable terminology while keeping in mind the local sensitivities, i.e., rebranding for increased acceptability (Code 3.8. Masking or optimizing CSE). Because children trust other students and are hesitant to discuss taboo topics with their parents, peer-to-peer learning can be easier for them. However, it may spread incorrect and potentially harmful information. Parent-to-child learning can also be advantageous for breaking the stigma (Code 3.9. Peer-to-peer or parent-to-child). Some local private schools provide an optional subject, Personal Social & Health Education (PSHE), that covers some aspects of CSE, but very few teachers have the necessary training to deliver the content (Code 3.10. PSHE).

Respondent 18, Female, Teacher Urban, Age 30, Pos. 5: "Keeping this particular fact in mind, private schools have recently started introducing different modules that cover health education, sex education as well. I used to teach pre-O levels in a private

school, in Froebel's and they had recently implemented a subject called PSHE, Personal Social Health Education. I believe it's also compulsory in the United Kingdom. They had brought actual people who had background in development to help them develop a curriculum for it. There was a very big readiness for it, and they wanted to introduce it to children from grade six onwards, which essentially when you are 11–12 years old. I saw that happening at private schools where a discussion, led by teachers, was initiated for this purpose."

Current efforts, role of leadership, and policy implications

The national political leadership appears reluctant to implement CSE. The support level varies depending on the leaders; local community leadership is more supportive than political leadership. Due to religious concerns and the societal stigma, leadership is hesitant to openly endorse and advocate the cause. However, leaders have a critical role in implementing CSE due to their influence. Since leaders have close ties to the community, they must avoid any controversy, particularly one that could be interpreted negatively, such as sexuality. Therefore, they are either indifferent or opposed as their support might not be positively received in the community (Code 4.1. Leadership).

Respondent 18, Female, Teacher Urban, Age 30, Pos. 31: "I think they are (leadership) politically correct in a lot of places, but they do not really like to get their hands dirty."

A few organizations and individuals are working to raise awareness. Sexual assault and rape are addressed by these organizations, but CSE is usually ignored. Menstrual hygiene, gender issues, contraception, reproductive health, STDs, maternity, and child health are some of the issues NGOs are working on. The National Ministry of Health Coordination and Regulations is also collaborating with NGOs on some programs concentrating on SRH care delivery (Code 4.2. Current efforts).

Government and NGOs collaborate on a range of important issues. As the community engages with these issues, leadership at the Ministry of Health is supportive and certain projects are being implemented, particularly on child abuse, violence, and menstrual hygiene. Due to a lack of community engagement, there is a divide between community leaders and policymakers. The responses were contradictory regarding funding. Some participants stated they do so, but it is not for prevention but to curtail the problem. Furthermore, some stated that the government is making attempts by allocating funds while others argue that no attempt is being made. However, the government's major focus and priority is on other health and prevention issues (SRH care delivery) leaving CSE with a low priority (Code 4.3. Government support).

Respondent 28, Female, Health Department, Age 26, Pos. 65: "So yes. If you talk about the government, then yes, the government has taken up the initiative of starting up the sexual and reproductive health program across the nation. And most of the interventions of regarding this will be incorporated into the universal health coverage benefit package. That gives an idea of the sustainability of the project, as well as the implementation of the services. So, there is commitment from the political, as well as the healthcare providers."

Teachers and the community have a close association. Teachers are likely to be supportive of CSE because they have a strong relationship with children and are aware of the negative consequences of a lack of CSE. Spreading awareness in schools is effective, and teachers and school owners may significantly impact CSE implementation. Private schools put in more effort than public schools, but lack of teacher training is a critical obstacle. Teachers also emphasized the importance of developing sexuality content based on the cultural context (Code 4.4. School heads and teachers).

Generally, there is lack of health issues related legislation and policy formulation is needed to increase community's awareness about the seriousness of the issue. Most policies are dedicated to child abuse and violence, which has gained national attention after the Zainab and Kasur cases of child abuse. However, there are no policies or laws governing CSE, but policymakers may be interested (Code 4.5. Policy). For each municipality, there are area education officers (AEO) who must be onboard prior to any implementation. Due to the risk of stigma, AEO may not get directly involved, but they can help NGOs and get community members involved. If the AEO is a woman, there is a good chance she will give such initiatives a higher priority. District management and the deputy commissioner are also involved in various social issues, although they are not directly interested in CSE (Code 4.6. Bureaucracy).

Respondent 5, Female, Teacher Rural, Age 23, Pos. 52: "For schools, the only party who can make sure that these kinds of seminars are conducted is the area education officer (AEO). For every district there's a separate AEO…. If an AEO is against situations (initiatives) like these they will make sure that the school principals do not let any seminar be conducted in their schools. The AEO does have that kind of power and authority over the principals. Yeah, that's the only approval you need…. recently we had an interview with our AEO. She wanted us to get some NGO on board…. she did not reach out to the NGO herself; she put us to the task. That's usually the way they go…. I do not think they (AEO) want direct involvement with an NGO like that."

Dimensions of community support

Support is influenced by several factors. Female leaders are more likely to endorse CSE because they may understand and relate to the cause. Media influencers, entertainers, and leaders lend their support to social media initiatives (Code 5.1. Community support). In terms of sexual education, the perceptions vary based on socio-economic status, age, education, and culture. The issues are increasingly debated on university campuses, in academic circles and in private schools. Sexual

education takes a back seat in the poor and middle classes because they must prioritize basic education. In terms of CSE perceptions, there is also a distinction between private and public schools (Code 5.2. Socio-economic status and demographics).

Employee, Age 27, Pos. 4: "It depends on what kind of schools you want the implementation to be in…. So, there are private schools, there are public schools and then there are government schools. In government schools, I would say it would be a tough decision to make, because again lower income people are able to afford this. Middle income families are able to afford government and public schools. But again, government schools have that ideology, you know, that I've heard that their syllabus has not even changed over the years since they have started the curriculum. So, kind of changing that perspective about teachers and students there (government schools), even their parents, it will be pretty hard."

Many people, particularly on Facebook and Twitter, use social media to passively support divisive but important causes like sexuality education, but this is mostly due to its trendy character (Code 5.3. Passive community support). Understanding the difference between bad and good touch, according to the community, is important for children's safety, protection, and avoiding abuse incidents. When an incidence of child abuse is reported, community support for child-protection programs increases. The Zainab and Kasur cases of child abuse, for example, sparked a national debate on the subject but most forms of support are reactive rather than proactive. However, the internet and digital channels can be a platform for dissemination of information (Code 5.4. Community support post violence). If given the chance, many young people would like to participate in active working groups. However, the elderly and maybe grownups may demonstrate their opposition. (Code 5.5. Changing norms).

Respondent 11, Female, Teacher Urban, Age 42, Pos. 11: "Yeah. Because in the past few years, we had some child abuse cases that the case of Zainab and other ones. After that, I think the awareness is there, and they are people who think that this is important, but at the same time, it is considered to be inappropriate to discuss anything related to adolescent health or sex education in Pakistan. So, they (community) just doing it in a very different way, posting videos. And that would include all the age groups. I came across the videos, and they have several slogans for very young girls, particularly. And in terms of for adults, what I've seen is more with the domestic abuse and other kinds of abuse."

Network analysis

Supplementary Tables 5, 6 contain the descriptive statistics for inter-code relationships and the Pearson correlation coefficient matrix, respectively. The network for the inter-code relationship is shown in Figure 2. Due to the large number of undirected edges, detecting relevant linkages was difficult. As a result, Figure 2 only shows statistically significant relationships at the 1% level. The modularity resolution was set to 1, resulting in the identification of five unique clusters of interconnected nodes/codes. The clusters of nodes/codes identified were: NGOs, misconceptions, resources and policy, strategies and community support, and PSHE and current efforts (Figure 2). The size of nodes is based on average weighted degree implying that larger nodes are better connected and correlated within the network. The shade of the edges represents the strength of correlation between the connected pair of nodes/codes, the darker the shade, the stronger the correlation. Figure 1 depicts the nodes that connect distinct clusters, as well as the connections within each cluster, which are of key importance.

Cluster 4 (Strategies and community support) is the only cluster that is not linked to any other cluster, indicating that it does not have statistically significant correlations with any other clusters. Between dissemination of efforts and bureaucracy, PSHE and masking/optimizing the CSE, western concept and socio-economic status and demographics, and misconceptions with western concept were found to be much more correlated with each other as compared to other codes. The network also implies that the most important nodes in the network were financial resources, NGOs, PSHE, and misconceptions, and that implementers should prioritize engaging with or addressing these while focusing on CSE activities. Five codes were excluded from the network analysis as they did not have any linkages at the 1% significance level (Code 2.7. Disconnect with the community, Code 3.4. Community Engagement, Code 3.6. Opportunities for Awareness, Code 3.9. Peer to Peer or Parent to child, Code 5.1. Community Support).

Discussion

The results of the study indicate that the community is resistant to CSE implementation. Misconceptions, lack of awareness and priority, and absence of dedicated resources are a few of the key implementation challenges. While implementing such programs and attempting to establish a counter-narrative and a case for CSE in the Pakistani context, some strategies can be advantageous.

There are a few initiatives underway, but they are failing to gain traction due to widespread misunderstandings. Only a few members of the community agree that such education is crucial for adolescents and children, and that schools are the ideal setting in which to provide it. Although teachers are reluctant and unsure about teaching CSE, one of the reasons for this is a lack of adequate training. Due to the leadership's and community's low priority on the issue, there may not be enough funds. Moreover, without a firm priority and adequate resources, teacher training for adopting CSE in schools is not possible (Ahmed et al., 2021; Keogh et al., 2021).

Increased awareness, community engagement, resolving misconceptions, and rebranding CSE in the local context should be the starting point for establishing prioritization for CSE. However, there is strong opposition from the community and religious clerics which can be addressed by increased engagement and confidence-building initiatives. While several

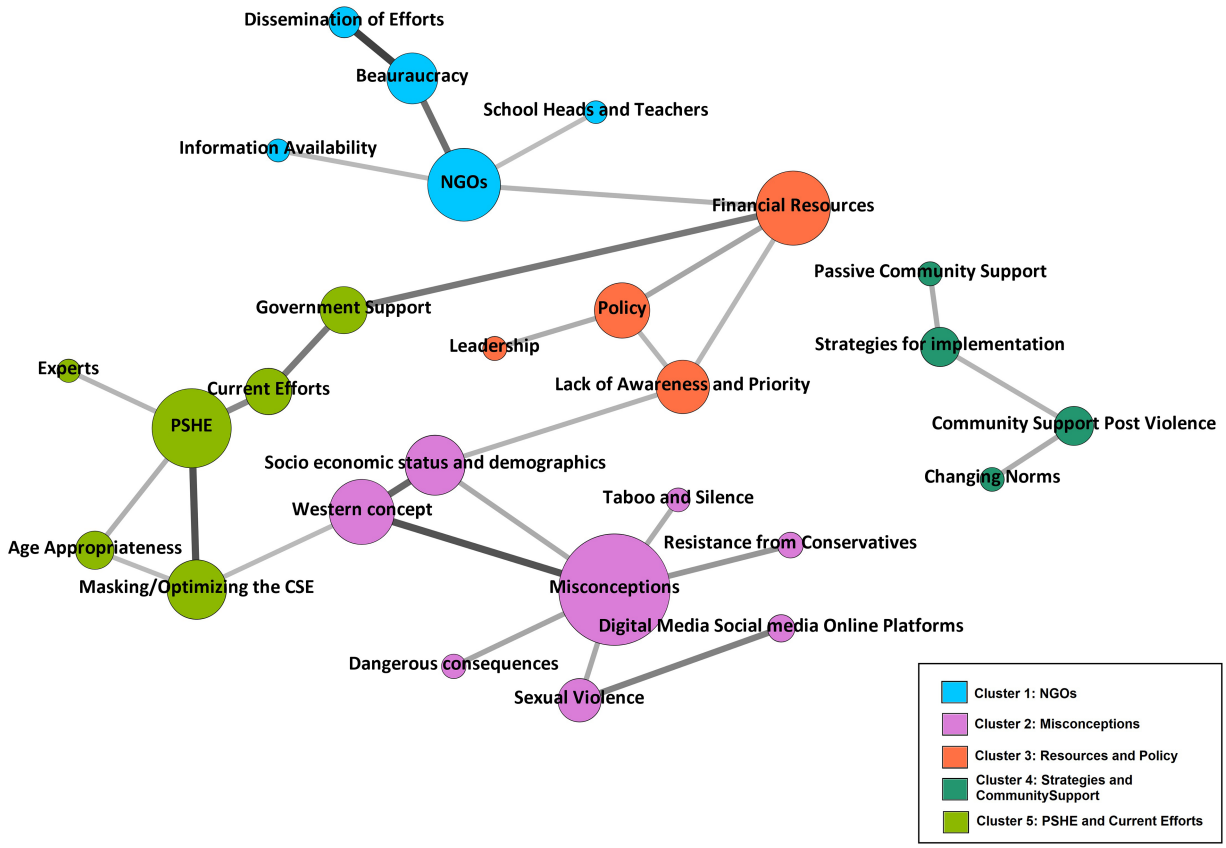

FIGURE 2
Network analysis and clusters.

NGOs are working on such challenges, they are unable to disseminate their programs to the public (Chandra-Mouli et al., 2018a, 2018b). For long-term planning and execution of programs aimed at SRH, meaningful stakeholder participation is crucial (Svanemyr et al., 2015). NGOs and government institutions are collaborating on a variety of health programs focusing on reproductive and sexual health. NGOs may provide established infrastructure, network, knowledge, and expertise for future initiatives and health programs that currently have community and stakeholder partnerships in existence. Digital platforms and social media give an opportunity to raise awareness and engage communities on such topics, but there is a lack of research on how to utilize these technologies.

Recently, sexual violence has been discussed extensively on social media. Even the leadership has given sexual violence a higher priority after multiple incidences were highlighted nationally [Alert, 2019; NA passes Zainab Alert Bill after amendments by Senate, n.d., Response and Recovery Act, 2019]. However, the support is reactive, passive, and inconsistent. Nonetheless, the community supports such issues and shows lower resistance. Therefore, such incidents can be strategically utilized for increased awareness and community support. PSHE is taught in some elite private schools but not in public schools (Curriculum | www.pshe-association.org.uk). Teachers also identified a severe deficit in their training to teach CSE and PSHE, which must be addressed to improve school implementation.

Although the political and religious leadership seems to be opposed to CSE, their support is critical due to their influence in the community. Leadership support was also emphasized in a recent UNESCO CSE report suggesting that having leadership on board is critical for determining priorities and sustaining such initiatives (UNESCO, 2021a,b,c). When executing programs, bureaucracy and government agencies are important stakeholder, and no effort can be implemented without their endorsement. NGOs work with the government on certain health issues, yet they face obstacles such as obtaining NOCs and setbacks such as the termination of an agreement in Punjab to implement CSE in 2010 (Svanemyr et al., 2015).

Our study has several strengths and limitations. Since a wide range of stakeholders were involved in the study, an in-depth perspective on CSE implementation was gathered. The qualitative methodology yielded rich data on resistance aspects and potential ways forward. The CRA questionnaire helped capture information on leadership, policy issues, present initiatives, topic awareness, and resources. The qualitative methodology provides in-depth insights, perspectives, and opinions, of respondents but it can be difficult to maintain rigor, researchers' personal bias, generalizability, and reproducibility. To address this, two coders

coded the data to improve rigor and minimize personal bias, while discussion among the research team throughout the categorization stage resulted in triangulating the findings. To ensure rigor, some portion of the interview data and coding system is also provided as Supplementary Table 3. For writing the manuscript, the COREQ guidelines were followed for standardization (Tong et al., 2007). Since the respondents were all from Islamabad, there are geographical limitations to the findings' generalizability.

With the use of network analysis to visually represent qualitative data, we were able to increase the transparency and rigor of the evidence used to support the research findings, interpretation, and conclusions (Pokorny et al., 2018). Furthermore, because the measures derived from the inter-code relations and network analysis are data-driven, others will be able to duplicate the graphs using the same data (Pokorny et al., 2018). The correlations between dissemination of efforts and bureaucracy, PSHE and masking/optimizing the CSE, western concept and socio-economic status and demographics, and misconceptions with western concept were much stronger. The strong correlations between codes, depicted in the network analysis, and linking it to the qualitative findings, the network analysis complements the qualitative conclusions, as explained further. As revealed by the qualitative findings, the bureaucracy is participating in measures to engage the community through disseminating information to increase support through health ministry programs. PSHE is also taught in some schools and, as an established platform, it could be useful in implementing or integrating CSE through schools. Misconceptions and resistance to CSE, as well as labeling it as a Western agenda, are extremely widespread; qualitative data and network analysis show that these are significantly linked to the socioeconomic status and demographics of the community members. The network analysis also shows that financial resources, NGOs, PSHE, and misconceptions were the most important nodes in the network, and that implementers should prioritize engaging with or addressing these while considering school based implementation.

Even though community support and conversations regarding sexuality have evolved over time in Pakistan, the support is passive and largely online. In terms of support, demographics and socio-economic status also have an influence, which should be considered for designing interventions. To develop content and interventions, the target audience's norms, perceptions, acceptability, and understanding of sexuality should be thoroughly analyzed. Efforts should be made to rebrand CSE for broader community support and engagement. Since the word sexuality has a negative connotation in the community, rebranding and marketing could be advantageous; prior attempts in Pakistan have resulted in improved support (Svanemyr et al., 2015).

Recommendations

- Communities' access to information about CSE is limited, owing to widespread misunderstandings. Future efforts should focus on raising awareness by addressing misconceptions and introducing CSE content while highlighting its spiral and age-appropriate approach.
- Participatory methodologies should be used to include diverse stakeholders, including religious clergy, to generate context-specific material while keeping religious and cultural sensitivities in mind. Indigenously generated material may be better equipped to deal with resistance.
- Due to their extensive expertise and well-established community penetration, previously existing networks, partnerships, and infrastructure, such as NGOs operating actively in communities, should be considered when planning an intervention.
- The internet and online social media platforms such as Facebook, Twitter, Instagram, and YouTube, among others, provide a unique and untapped opportunity to reach and engage community members to raise awareness and readiness for CSE implementation, and influencer marketing may be useful in this regard.
- PSHE is taught in certain private schools, this may provide an opportunity to connect the previously existing curriculum and teachers teaching them to broaden and incorporate CSE contents.
- As indicated by the network analysis bureaucracy, PSHE, masking/optimizing the CSE, western concept, socioeconomic status, and misconceptions are the most important aspects of CSE and must be considered when implementing or planning a community-based intervention.

Conclusion

Innovative marketing and rebranding are essential for priority setting and community engagement in conservative settings and when confronted with resistance, especially for CSE development and implementation. The results suggest that a lack of awareness and knowledge, and widespread misconceptions about CSE are the primary causes of resistance. Community sensitization through strategic awareness campaigns, involving already established infrastructure and NGOs, endorsement by major stakeholders and decision-makers, and using digital platforms for better dissemination are some of the suggested strategies for implementation.

Author's note

As with every research, it is beneficial to understand the research team's positionality and, as a result, our perspective on the findings. The first and third authors were bilingual Pakistani males proficient in English and Urdu. The first author, who is presently based in Germany as a doctoral researcher and has a background in public health with an emphasis on adolescent SRH, led the data collection and analysis processes. With a background in economics and a PhD from the United States, the third author is based in Pakistan and teaches at a university. The second and fourth authors are both white

Germans who are bilingual (English/German). The second author is a woman who works as an early-stage researcher and has a background in public health. A senior researcher male with a background in social epidemiology and gender studies is the fourth researcher. All authors contributed to the interpretation of the study's findings and implications (details in author contribution section). It is possible; nevertheless, our ethno-racial backgrounds influence how we view the findings. To avoid speaking for the data and remain impartial, especially while analyzing qualitative data, the data was separately assessed by two researchers (more details in methods section). All of the researchers collaborated as a team, holding regular meetings to ensure that the study was directed by their collective cultural experience and skills. This was a collaborative team project that ensured the study was sensitive to and appropriate for the context in which it was carried out with careful diverse stakeholder involvement and perspectives (see section participant details). With the researchers' diverse ethno-racial backgrounds (Pakistani/German), it was also able to confront the epistemological debate of insider and outsider perspective. Overall, the research team positions itself in favor of CSE implementation in schools due to the evidence base showing CSE's positive impacts on the well-being of children and adolescents.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving human participants were reviewed and approved by Pakistan Health Research Council (PHRC) (Reference number: No.4-87/NBC-453/20/1815). The patients/participants provided their written informed consent to participate in this study.

Author contributions

FA and TB: conceptualization, methodology, resources, and project administration. FA and GA: software and visualization. FA: validation. FA, JS, GA, and TB: formal analysis. FA: investigation and data curation. FA, JS, and TB: writing--original draft preparation. TB: supervision. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

Supplementary material

The Supplementary material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.864465/full#supplementary-material

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EDITED BY
Paul Mukisa Wako Bukuluki,
Makerere University, Uganda

REVIEWED BY
Bart Van Den Borne,
Maastricht University, Netherlands
Zahroh Shaluhiyah,
Faculty of Public Health Diponegoro University Semarang, Indonesia

*CORRESPONDENCE
Ifunanya Clara Agu
ifunanya.agu.pg82641@unn.edu.ng

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Gender norms and ideologies about adolescent sexuality: A mixed-method study of adolescents in communities, south-eastern, Nigeria

Ifunanya Clara Agu[1]*, Chinyere Ojiugo Mbachu[1,2], Uchenna Ezenwaka[1,3], Irene Eze[1,4], Nkoli Ezumah[1] and Obinna Onwujekwe[1,3]

[1]Health Policy Research Group, University of Nigeria, Enugu Campus, Enugu, Nigeria, [2]Department of Community Medicine, University of Nigeria, Enugu Campus, Enugu, Nigeria, [3]Department of Health Administration and Management, University of Nigeria, Enugu Campus, Enugu, Nigeria, [4]Department of Community Medicine, Ebonyi State University, Abakaliki, Nigeria

Background: Sexual and reproductive health choices and behaviors of adolescents are shaped by gender norms and ideologies which are grounded in cultural beliefs. This study examined the perspectives of adolescents about the influence of gender norms and ideologies on sexuality.

Methods: A cross-sectional study was undertaken in three urban and three rural communities in south-eastern Nigeria using quantitative and qualitative research methods. A modified cluster sampling procedure was used to select respondents. Data were collected from 1,057 adolescents and twelve focus group discussions with unmarried adolescents aged 13 to 18 years. For the quantitative data, univariate, bivariate and probit regression analyses were performed using Stata while the thematic framework approach was used to analyze qualitative data.

Results: The dominant beliefs among adolescents are that: it is wrong for unmarried adolescents to have sex (86.4%); unmarried adolescents should abstain from sex (89.3%); consent should be obtained before sexual intercourse (89.1%); it is a girl's responsibility to ensure she does not get pregnant (66.5%), and sex should be initiated by boys (69.6%). Gender (boy or girl) was a predictor of belief in premarital abstinence (t-value = −3.88), belief that premarital sexual intercourse is acceptable provided contraceptive is used (t-value = 3.49, CI 1.14–0.49), belief that premarital sexual intercourse is wrong (t-value = −2.24) and, belief that sex should be initiated by boys only (t-value = −4.37). Adolescent boys were less likely to believe in pre-marital abstinence and less likely to believe that pre-marital sex among adolescents is wrong compared to girls. They were also more likely to believe adolescents can have sex provided contraceptive is used compared to girls. Qualitative findings revealed adolescents' beliefs that girls feel shy initiating sex and that boys experience more urge for sex hence, boys were perceived to be responsible for initiating sex. Both boys and girls experience pressure to have sex however, boys were described to experience more pressure from peers to have sex.

Peer-to-peer communication, quest for material possessions and low socioeconomic conditions contribute to peer pressure to engage in sex.

Conclusion: Adolescents' beliefs about sexuality underline the need to contextualize interventions to address these norms and ideologies.

KEYWORDS

adolescent, gender, norms, ideology, sexuality

Introduction

Adolescents in sub-Sahara Africa account for 23% of the region's total population and over 30 million of them are living in Nigeria (Esiet, nd; UNICEF, 2019). Some adolescents engage in behavioral experimentation and risk-taking such as premarital sexual intercourse, unprotected sexual intercourse and other risky behaviors' that predispose them to unwanted teenage pregnancy, unsafe abortions and sexually-transmitted infections (Liang et al., 2019). The most recent demographic and health survey (DHS) in Nigeria highlighted that sexual debut occurred at 15 years for 8.6% of girls and 2.4% of boys, and 23% of sexually active adolescents in the survey engaged in unprotected sexual intercourse (National Population Commission ICF, 2019). Also, 19% of adolescent girls in the survey had already begun childbearing. Furthermore, the contraceptive prevalence rate was lowest among adolescents (15–19 years) when compared to other age categories (National Population Commission ICF, 2019). Moreover, some adolescent boys reported they had paid for sex in the 6 months preceding the survey and none of these boys used a condom in the last sexual encounter (NDHS, 2019).

A vast proportion of adolescents reach sexual maturity before attaining the social skills, and the mental and emotional maturity required to comprehend the consequences of sexual activity (Isiugo-Abanihe et al., 2015). Hence, their vulnerability to sexual and reproductive health (SRH) risks. Many preventable and life-threatening SRH problems are acquired during adolescence as they begin to explore their sexuality (Isiugo-Abanihe et al., 2015). In some cultures, sexuality remains a myth or enigma for adolescents, and limited discussions about sexuality or sex-related matters affect their perceptions of sexuality (Kar et al., 2015; Mbachu et al., 2020a). Although sexuality is a natural component of human nature that influences one's thoughts, sexual orientation, feelings and physical health, adolescents need to acquire managerial skills for this powerful developmental force. Human sexuality encompasses an individual's sexual interest including sexual fantasies, attitudes and values related to sex and sexual orientation (Lumen learning courses, nd; Center for Young Women's Health, 2018). Sexual orientation involves having erotic or sexual feelings for people of the same gender, a different gender, or more than one gender. However, the focus of this study is sexual orientation toward a different gender that involves a male and a female.

Although dating relationships are mostly perceived as the primary avenue for sexual exploration among adolescents, sexuality could be expressed in several ways in different relationship contexts. Sexuality could be expressed in non-dating relationships, individually, in casual encounters, through hugging, holding hands and among others (Ott, 2010). Sexual behavioral practices are believed to be determined by biological components however, some authors affirm that sexual behavior is largely molded by the environment (Kar et al., 2015; Lumen learning courses, nd; Challa et al., 2018). Beliefs and norms about sexuality prevail in society, and among adolescents, and these could influence adolescents' SRH choices. Beliefs broadly refer to a person's values, principles, assumptions, and expectations (Cole, 2019). In society, social norms are informal rules that govern behavior in groups and societies (Bicchieri et al., 2018). Norms are customary or accepted standards and ideologies, which provide a set of values and beliefs that guide attitudes and behaviors. Ideologies and norms play a powerful role in shaping thoughts, actions, interactions, and they are also instrumental in organizing the functioning of a given society (Bicchieri et al., 2018; Cole, 2019; Barrett et al., 2021).

At an early age, young people adopt and act on expected societal roles and norms about sexuality and relationships (Vu et al., 2017). Traditional gender roles pose restricted sexuality in most females as they are commonly perceived as subordinate to males, nurtured to be obedient and take a passive submissive role in any sexual relationship whereas, males are fostered to be masculine in gender, demonstrating autonomous, brave assertive and dominating characteristics (Lawoyin and Kanthula, 2010; Macia et al., 2011; Muralidharan et al., 2015; Ninsiima et al., 2018; Lewis et al., 2021; Zimmerman et al., 2021). Some studies have shown that subscribing to these conventional gender norms, and beliefs, adolescents experience difficulty engaging in successful and satisfying relationships which could further predispose them to indulge in some risky sexual behaviors (Capurchande et al., 2016; Casique, 2019; Lewis et al., 2021). This indicates that gender norms and ideologies play a

significant role in understanding adolescent sexual attitudes and behaviors.

Adolescents' approach toward ideologies and gender norms about sexuality could either favor or limit them from expressing their sexual desires. Research has shown that because of the strong ideologies and norms that encourage women/girls to be submissive and remain virgins until they are married, it may be difficult for them to negotiate safe sex or access treatment services when necessary as they may be subjected to stigma (Little and McGivern, 2014). In some cultures, males are believed to be more sexually active than females and research confirm that women think about sexual intercourse on an average of 10 times per day compared to 19 times per day for men (Fisher et al., 2011). As previously described, some studies have focused on understanding social and environmental influences of adolescents' sexuality (Kar et al., 2015; Challa et al., 2018), while some others reported differences between men's and women's sexuality (Fisher et al., 2011; Little and McGivern, 2014).

Studies examining socio-cultural notions of sexuality and sexual relationships in Nigeria have shown that these notions are shaped by deep-seated patriarchal norms and religious beliefs in male superiority (Odimegwu et al., 2010; Abayomi and Olabode, 2013; Fakunmoju et al., 2016). Moreover, the entrenchment of male dominance in sexual (and other social) relationships is mediated by patriarchal ideologies, including perceptions of male privilege, that are embedded in religious beliefs (Amusan et al., 2017; Ajayi et al., 2022). Although it is argued that these notions may facilitate unsafe sexual practices and sustain the cultural devaluation of women among adolescents (Izugbara, 2005), there is paucity of empirical studies on this topic among adolescents in Nigeria.

Considering adolescents' vulnerability to sexuality-related SRH issues, an understanding of their notions of gender norms and beliefs about their sexuality is the paramount and first step for strategic intervention(s). Moreover, gender norms and beliefs may vary in urban and rural areas seeing that geographic locations may be reflective of cultural differences (Rakauskas et al., 2009). However, there is scarcity of evidence to support or refute geographic differences in sexual norms among adolescents and young people.

We undertook a study in Ebonyi State, Nigeria, to identify the prevailing ideologies and gender norms about adolescent sexuality. This was part of a wider study that examined the situation and determinants of adolescents' SRH in urban and rural areas in the State. This paper, however, focuses on the perspectives of adolescents alone. This knowledge could contribute to underlining the need for comprehensive sexuality education interventions that are contextualized to address gender norms and ideologies among adolescents.

Materials and methods

Study setting and design

This study was carried out in three urban and three rural communities in Ebonyi State, south-east Nigeria. The state has over 6 million inhabitants with a fertility rate of 5.4% (NDHS, 2019). More than 40% of Ebonyi state's total population are under the age of 15 years (USAID Health Policy Plus., 2017).

The study sites were spread across six local government areas (LGAs) that were selected from the three senatorial zones in the state. In each senatorial zone, two (2) LGAs were purposively selected for the study to reflect the state governments' prioritization of adolescent health interventions. The six study communities were also selected purposively. These selected LGAs and communities were prioritized by the State government for interventions and the key stakeholders also listed them as having the highest abortion and unwanted teenage pregnancy rates in the State.

This was an exploratory cross-sectional study of adolescents. We employed a mixed-method convergent parallel design in which quantitative and qualitative research methods were used simultaneously to obtain complementary information. The quantitative method involved head of household and adolescent interviewer-administered surveys, while the qualitative method employed focus group discussions.

Study participants and sampling

The study was carried out among in-school and out-of-school unmarried adolescent boys and girls aged 13 to 18 years who were living in the selected urban and rural study areas. The quantitative study population were unmarried adolescents aged 13 to 18 years and residing in selected households in the study communities. To achieve a 5% precision at 95% confidence interval for a population >100,000 a minimum sample size of 400 was determined (Glenn, 1992). This was doubled to enable subgroup analysis of data and increased to over 1,000 for robustness and to account for incomplete responses and errors. Participants were selected through a modified cluster sampling technique. A cluster was defined as an autonomous community being governed by a traditional ruler. Households were consecutively selected using the nearest public facility identified from the main entrance as the starting point. In selected households, all eligible adolescents were invited to participate in the study.

For the qualitative study, out-of-school adolescents in apprentice workshops were purposively selected from a subset of respondents (older adolescents aged 15–18 years) who appeared to be informed during the study survey. The in-school adolescents were randomly selected from public secondary schools in each study community. Then, they were

all invited to participate in focus group discussions (FGDs). A detailed description of eligibility criteria and participant selection procedure can also be found in a previously published manuscripts (Mbachu et al., 2020a,b).

Ethical consideration

Ethical clearance was obtained before community entry from the Health Research Ethics Committee of University of Nigeria Teaching Hospital with reference number NHREC/05/01/2008B-FWA00002458-IRB00002323 and also approval from the Research and Ethics Committee of Ebonyi State Ministry of Health. Informed written consents were obtained from parents/guardians of adolescents aged 13 to 18 years whereas those aged 18 years gave consent for themselves. In addition to parental consent, informed consent was sought from all (including adolescents aged 13 to 18 years) eligible participants having informed them of the purpose of the research project, their rights as participants, potential risks and benefits of participation, and measures to ensure confidentiality of information. Documentation of informed consent or assent was through signature or thumbprint, in the case of low literacy, of all eligible participants and/or their parents/guardians, where applicable.

Data collection

The quantitative data was collected from 1,057 adolescents from selected households. The adolescent questionnaire was adapted from the WHO illustrative questionnaire for interview surveys with young people (Cleland, 2001). The household questionnaire was specifically designed for this study to collect information on household expenditure patterns from the head of households. The questionnaires were pre-tested in a contingent state among heads of households and in-school and out-of-school adolescent boys and girls, respectively. Data were collected for 10 days by fifty-four research assistants who were recruited and trained for 5 days to be able to administer paper and electronic copies (SurveyCTO) of the questionnaire and to be familiar with the study questions. Each pair of research assistant administered both paper and electronic copies of the questionnaire concurrently through a face-to-face interviewer-administered approach. Information on the completed paper-questionnaire were individually matched with the corresponding electronic-questionnaire. These information were double-checked before and after uploading data to the server.

To collect qualitative data, one focus group discussion for boys and another for girls were conducted in each community. Hence twelve focus group discussions comprising six groups for boys and girls, respectively were conducted in the six selected communities using a pre-tested interview guide. The discussions were conducted according to participants' language preferences either in English or Igbo language. Permission to audio record each discussion was sought before the discussion. In each FGD, a moderator and a note-taker facilitated the discussion comprising of 8 to 10 participants. Written consent was obtained from each participant before discussion and parental consent was also obtained for participants <18 years. The purpose of the study was clearly stated, roles and rights of participants were provided and confidentiality of their information assured before obtaining consent. Each FGD discussion lasted for about 60–70 min on average.

Data analysis

A total of 1,045 questionnaires that were completely and correctly filled were analyzed (response rate of 95%). Data were analyzed using Stata software. Descriptive analysis was performed and weighted proportions were reported for categorical variables. The test for association of variables was performed, Chi-square (χ^2) and p-values were reported for the multi-way tables. The frequency and proportion were carried out to show unconditional differences in gender norms and beliefs about adolescent sexuality, socioeconomic and demographic characteristics such as age, gender, schooling, place of residence (urban or rural) and wealth index.

Binominal logistic regression analysis was performed to identify socioeconomic and demographic predictors of gender norms and ideologies about sexuality. The analysis was extended by isolating specific determinants of gender norms and gender ideologies about sexuality, while taking into consideration, variations across individual socio-economic and demographic characteristics under a regression framework. The primary aim is to understand if there is an interaction between the independent variables and the different outcome variables of interest. Our multivariate regression model can be specified parsimoniously as:

$$Y_i = \beta_0 + \beta_1 X_i + \mu_i \quad (1)$$

Where Y_i, the outcome variable for individual i, which is a dummy variable that uses the value of 1 if an individual respondent agrees to a given gender norm or gender ideology and 0 disagree. X_i is a vector of control variables for individual i, this includes gender, schooling, place of residence (urban or rural), work status and wealth index. The error term, μ_i, is taken to be normally distributed.

The outcomes of interest for gender ideologies include; belief that it is wrong for unmarried adolescents to have sex; belief in premarital abstinence; belief that adolescents can have sex provided they use contraceptives; and belief that consent should be obtained from the sexual partner before sexual intercourse.

FIGURE 1
Coding scheme for gender norms and ideologies about adolescent sexuality.

The outcomes of interest for gender norms were; belief that a boy has to force a girl to have sex; belief that sex should be initiated by boys only or by either gender (boy and girl); and belief that it is the girl's responsibility to ensure she does not get pregnant following sexual intercourse. Statistical significance was set at $p \leq 0.05$ and a confidence level of 95%.

The household wealth index was calculated using per capita household consumption patterns based on food and non-food expenditure for 1 year. The per capita household consumption was used to classify households into socio-economic quintiles, Q1 to Q5, where Q1 refers to poorest households and Q5 richest households. All the quantitative materials including the datasets can be found in the repository, UK Data Service 10.5255/UKDA-SN-854374 (Mbachu et al., 2020b,c).

The audio files were transcribed verbatim and translated into English where necessary. All transcripts were anonymously coded and data were kept in a password, protected laptop. A thematic framework approach was used to analyze the data. Two independent researchers were given the richest transcript to read several times and gain full insight into the text pattern. Texts were double coded and checked for differences and similarities while discrepancies were resolved. In initial coding, emerging themes and discrepancies were reviewed by the research team leading to a final coding framework. Then, the final coding framework was used to manually code all the transcripts including the one that was used to generate themes. The thematic areas in the final coding framework are shown in Figure 1.

Quality of data and findings

In order to minimize researchers' bias and ensure more disciplined subjectivity in qualitative data collection and analysis, the following were done, (i) FGDs were moderated by experienced qualitative researchers who received additional training on how to maintain a neutral stance during the discussions; (ii) researchers were trained to document (and report) any personal biases and nuances in their field notes after each FGD; (iii) the initial themes were generated deductively by two independent researchers; (iv) each transcript was coded by two independent researchers; (v) discrepancies in the generation of themes and coding of transcripts were resolved through consensus.

Results

Demographic and socio-economic characteristics of the participants

Among 1,045 survey participants, 50.7% were from urban areas while 49.3% were from rural areas. There were 57.2% girls and 42.8% boys in the survey. Their mean age was 15.4 years (CI, 15.3–15.5). Fourteen-year-olds constituted the highest number of adolescents in the survey (20.9%), while seventeen-year-olds were the least in number (12.9%). The majority (92.4%), of the adolescents, were currently in school at the time of the survey. Slightly half (51%) of the adolescents reported that they do work for payment. The wealth index distribution of adolescents into quintiles is also shown in Table 1. Q1 represents the number and percent of adolescents in the poorest household quintile while Q5 represents those in the richest household quintile.

Adolescents' ideologies about their sexuality

The findings showed that 86.4% of adolescents in the survey believed it is wrong for unmarried adolescents to have sex; 89.3% believed that unmarried boys and girls should abstain from sex; 18.4% believed it is alright for adolescents to have sex provided they use contraceptives, and 89.1% believed that consent should be gotten from a partner before sexual intercourse. The analysis of gender norms about adolescent sexuality shows that 10% of adolescents in the survey believed that a boy has to force a girl to have sex; 66.5% of adolescents believed that it is a girl's responsibility to ensure that she does not get pregnant after sexual intercourse. Their opinions about who should initiate sexual intercourse show that the majority of them, 69.6%, think that sex should be initiated by boys, and 19.5% think that sex could be initiated by either the boy or the girl (Table 2).

Place of residence and sex/gender had statistically significant correlations with belief in abstinence, ($p < 0.001$). Adolescent girls than boys, and those who reside in urban areas as compared to rural dwellers are more likely to believe that boys and girls should abstain from sex until they marry. Those who

TABLE 1 Demographic characteristics of surveyed adolescents.

Variables ($N = 1,045$)	Frequency (n)	Weighted percent (%)
Place of residence		
Urban	551	50.7
Rural	494	49.3
Gender		
Female	598	57.2
Male	447	42.8
Age in single years		
13	180	17.4
14	219	20.9
15	162	15.5
16	151	14.5
17	136	12.9
18	197	18.8
Schooling status		
In-school	966	92.4
Out-of-school	79	7.6
Work status (working for pay)		
Working for pay	543	51.96
Not working for pay	502	48.0
Wealth index		
Q1	224	21.9
Q2	211	20.6
Q3	214	20.0
Q4	198	18.8
Q5	197	18.6

TABLE 2 Ideologies and gender norms about adolescent sexuality.

Variables ($N = 1,045$)	Frequency (n)	Percent (%)
Ideologies about adolescent sexuality and sexual behaviors		
Believes it is wrong for unmarried adolescents to have sex	902	86.4
Believes boys and girls should abstain from sex until they marry	934	89.3
Believes consent should be obtained from the sexual partner before intercourse	195	18.4
Believes it is alright for adolescents to have sex provided they use contraceptives	931	89.1
Gender norms about adolescent sexuality and sexual behaviors		
Believes a boy has to force a girl to have sex with him	108	10
Believes sex should be initiated by boys only	728	69.6
Believes sex could be initiated by either the boy or the girl	202	19.5
Believes it is the girls' responsibility to ensure she does not get pregnant	696	66.5

work for payment as compared to those who do not work to receive income are more likely to believe that boys and girls should abstain from sex until they marry. Sex/gender, schooling and work status also had significant correlations with respondents' belief that sex is permitted among adolescents as long as contraceptives are used, ($p \leq 0.01$). Boys and out of school adolescents are more likely to believe that sex is permitted among adolescents as long as contraceptives are used as compared to girls and in-school adolescents, respectively. Wealth index correlated significantly with belief that unmarried adolescents engaging in premarital sex are wrong ($p = 0.02$) (Table 3).

Gender norms about adolescent sexuality

Statistically, a significant association was observed between the place of residence and the belief that girls should be forced to have sex, ($p < 0.001$), and that girls are responsible for ensuring the use of contraceptives during sexual intercourse ($p = 0.01$). Sex/gender was found to have a significant correlation with respondents' beliefs that sex should be initiated by boys only ($p < 0.001$). Work status has a significant correlation with respondents' beliefs that sex should be initiated the boy or the girl ($p < 0.001$). Wealth index correlated with belief that sex could be initiated by either the boy or the girl, ($p = 0.02$) (Table 4).

The multivariate analysis of adolescents' ideologies about sexuality and sexual behaviors is presented in Table 5. The dependent variables were the belief that it is wrong for unmarried adolescents to have sex; belief in premarital abstinence; belief that adolescents can have sex provided they use contraceptives; and belief that consent should be obtained from the sexual partner before sexual intercourse. Predictors of respondents' belief that it is wrong for unmarried adolescents to have sex include sex/gender (t-value = 1.97, CI 0.00–0.39) and work status (t-value = −2.24). Sex/Gender was also found to predict respondents' belief in abstinence from pre-marital sex (t-value 3.89, CI−0.63 to −0.21), and their belief that adolescents can have sex provided contraceptive is used (t-value = 3.52). Boys were less likely to believe in pre-marital abstinence and to believe that pre-marital sex among adolescents is wrong when compared to girls. They were also more likely to believe that adolescents can have sex provided contraceptive is used compared to girls. Place of residence and working status were also found to predict respondents' believe in

TABLE 3 Socio-demographic disaggregation of ideologies about adolescent sexuality.

	N	Believes it is wrong for unmarried adolescents to have sex *n* (%)	Believes boys and girls should abstain from sex until they marry *n* (%)	Believes it is alright for adolescents to have sex provided they use contraceptives *n* (%)	Believes consent should be obtained from the sexual partner before intercourse *n* (%)
Place of residence					
Rural	494	415 (84)	423 (85.6)	98 (19.8)	434 (87.8)
Urban	551	487 (88.6)	511 (92.8)	97 (17.1)	497 (90.2)
χ^2 (*p*-value)		2.43 (0.09)	**8.15 (<0.001)***	2.30 (0.10)	0.86 (0.42)
Sex/Gender					
Female	598	529 (88.4)	555 (92.7)	91 (15)	545 (91)
Male	447	373 (83.6)	379 (84.5)	104 (22.9)	386 (86.4)
χ^2 (*p*-value)		2.58 (0.08)	**8.88 (<0.001)***	**5.31 (0.01)***	**5.31 (0.01)***
Schooling					
In-school	79	835 (86.5)	865 (89.4)	168 (17.1)	859 (89)
Out-of-school	966	67 (85)	69 (87.2)	27 (33.9)	72 (90.9)
χ^2 (*p*-value)		0.33(0.72)	0.50 (0.60)	**6.85 (0.01)***	1.43 (0.24)
Work status					
Working for pay	543	416 (89.50)	427 (85.06)	109 (21.71)	449 (89.44)
Not working for pay	502	486 (89.50)	507 (93.37)	86 (15.84)	482 (88.77)
χ^2 (*p*-value)		**10.54 (0.005)***	**20.57 (0.000)***	**6.24 (0.04)***	0.20 (0.91)
Wealth index					
Q1 (poorest)	224	186 (83)	194 (86.6)	41 (18.3)	195 (87)
Q2	211	183 (86.7)	191 (90.5)	35 (16.6)	189 (89.6)
Q3	214	179 (83.4)	190 (88.8)	51 (23.8)	186 (86.9)
Q4	198	167 (84.3)	178 (89.9)	34 (17.2)	177 (89.4)
Q5 (richest)	197	186 (94.4)	180 (91.4)	34 (17.3)	183 (92.9)
χ^2 (*p*-value)		**18.17 (0.02)***	8.68 (0.37)	7.45 (0.49)	6.34 (0.61)
Total	1,045	902 (86.4)	934 (89.3)	195 (18.4)	931 (89.1)

*p-value < 0.05. The bold values indicates the statistical significant which is set at *p-value ≤ 0.05.

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TABLE 4 Socio-demographic disaggregation of gender norms about adolescent sexuality.

	N	Believes a boy has to force a girl to have sex with him *n* (%)	Believes sex should be initiated by boys only *n* (%)	Believes sex could be initiated by either the boy or the girl *n* (%)	Believes it is the girls' responsibility to ensure she does not get pregnant *n* (%)
Place of residence					
Rural	494	32 (6.5)	334 (67.6)	108 (21.9)	309 (62.5)
Urban	551	76 (13.5)	394 (71.6)	94 (17.2)	387 (70.3)
χ^2 (*p*-value)		**7.26 (<0.001)***	1.98 (0.16)	3.59 (0.06)	**4.57 (0.01)***
Sex/Gender					
Female	598	63 (10.2)	445 (74.4)	105 (17.7)	415 (69.3)
Male	447	45 (9.9)	283 (63.3)	97 (21.9)	281 (62.7)
χ^2 (*p*-value)		0.06 (0.94)	**15.01 (<0.001)***	2.79(0.09)	2.83(0.06)
Schooling					
In-school	79	100 (10.1)	671 (69.4)	187 (19.5)	643 (66.4)
Out-of-school	966	8 (9.8)	57 (72)	15 (19.2)	53 (67)
χ^2 (*p*-value)		3.04 (0.05)	0.23 (0.63)	0.01 (0.95)	0.46 (0.63)
Work status					
Working for pay	543	52 (10/36)	352 (92.39)	107 (88.43)	331 (65.94)
Not working for pay	502	56 (10.31)	376 (92.84)	95 (68.84)	365 (67.22)
χ^2 (*p*-value)		1.85 (0.40)	0.06 (0.61)	**14.41 (<0.001)***	3.57 (0.17)
Wealth index					
Q1 (poorest)	224	21 (9.4)	154 (68.7)	54 (24.1)	137 (61.2)
Q2	211	18 (8.5)	151 (71.6)	27 (12.8)	149 (70.6)
Q3	214	34 (15.9)	153 (71.5)	36 (16.8)	136 (63.5)
Q4	198	18 (9.1)	143 (72.2)	39 (19.7)	135 (68.2)
Q5 (richest)	197	17 (8.6)	126 (63.9)	46 (23.3)	139 (70.6)
χ^2 (*p*-value)		11.90 (0.15)	4.43 (0.35)	**11.97 (0.02)***	11.6 (0.17)
Total	1,045	108 (10)	728 (69.6)	202 (19.5)	696 (66.5)

*p-value < 0.05. The bold values indicates the statistical significant which is set at *p-value ≤ 0.05.

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premarital abstinence. In-school adolescents (t-value $= -3.52$) compared to out of school adolescents are less likely to believe that adolescents can have sex provided contraceptive is used (Table 5).

Regarding predictors of gender norms about adolescent sexuality and sexual behaviors, the dependent variables were belief that a boy has to force a girl to have sex; belief that sex should be initiated by boys only or by either gender (boy and girl); and belief that it is the girl's responsibility to ensure she does not get pregnant following sexual intercourse. Compared to adolescents in rural areas, those in urban areas were more likely to believe that a boy has to force a girl to have sex ($t = 3.90$, CI, 0.21–0.65). Respondents' believes that sex should be initiated by the boy alone was predicted by their sex/gender ($t = -4.37$). Adolescent boys in the survey were less likely to believe that sex should be initiated by boys alone, compared to girls. Working for pay ($t = 3.65$) increases the likelihood of believes that sex could be initiated by either the boy or the girl (Table 6).

Qualitative findings

Discussion topics

(A) Pre-marital virginity
(B) Pregnancy prevention responsibility-during or after sexual intercourse
  (i) Purchasing condoms
  (ii) Initiating use of a condom
(C) Sexual advances - initiating sex
(D) Respect for female sex partners
(E) Sexual urges
(F) Coerced or forced sex
(G) Peer pressure to have sex
(H) Seductive dressing.

Premarital virginity (is premarital virginity more important or more required for girls than boys?)

There are variations in adolescents' responses about boys and girls maintaining premarital virginity. Although both boys and girls feel that premarital virginity is expected of boys and girls, some feel it is more important for girls to remain virgins before marriage. Their reasons for supporting premarital virginity for girls are as follow:

(i) The cultural norm and Christian values demand that girls maintain their virginity before the marriage.
(ii) To enable girls to have love and confidence of potential spouses, which is expected to make the husbands respect them, and be proud of them.
(iii) Because girls bear the brunt of the consequences of losing virginity before marriage, which could lead to,

TABLE 5 Probit regression of factors associated with ideologies about adolescent sexuality and sexual behaviors.

Demographic variables	It is wrong for unmarried adolescents to have sex			Boys and girls should abstain from sex until they get married			Adolescents can have sex provided they use contraceptives			Consent should be obtained from the sexual partner before intercourse		
	t-value	SE	95% CI	*t*-value	SE	95% CI	*t*-value	SE	95% CI	*t*-value	SE	95% CI
Place of residence (urban)	**1.97***	0.10	0.00–0.39	**3.20***	0.11	0.14–0.56	−0.91	0.09	−0.25–0.09	1.54	0.12	−0.05–0.40
Sex/Gender (male)	**-2.24***	0.10	−0.42 to −0.03	**-3.88***	0.12	−0.63 to −0.21	**3.49***	0.09	1.14–0.49	−0.74	0.12	−0.31–0.14
Schooling status(in-school)	0.43	0.18	−0.28–0.43	0.55	0.19	−0.27–0.49	**-3.52***	0.15	−0.85 to −0.24	−1.52	0.27	−0.94–0.11
Work status (working for pay)	**-2.24***	0.11	−0.44 to −0.03	**-2.95***	0.12	−0.58 to −0.12	1.25	0.10	−0.07–0.31	0.99	0.12	−0.12–0.37

Statistical significance: $^*p < 0.05$; variables in the bracket are the groups of interest (e.g., female = 1). The bold values indicates the statistical significant which is set at $^*t$-value ≥ 1.96.

TABLE 6 Probit regression of factors associated with gender norms about adolescent sexuality and sexual behaviors.

Demographic variables	Believes a boy has to force a girl to have sex with him			Believes sex should be initiated by boys only			Believes sex could be initiated by either the boy or the girl			Believes it is the girls' responsibility to ensure she doesn't get pregnant		
	t-value	SE	95% CI	*t*-value	SE	95% CI	*t*-value	SE	95% CI	*t*-value	SE	95% CI
Place of residence (urban)	**3.90***	0.11	0.21–0.65	0.38	0.14	−0.22–0.33	−1.75	0.17	−0.65–0.04	1.89	0.17	−0.01–0.32
Sex/Gender (male)	−0.23	0.11	−0.23–0.19	**-4.37***	0.14	−0.88 to −0.34	0.22	0.18	−0.31–0.38	−1.70	0.82	−0.30–0.02
Schooling status (in-school)	−0.78	1.97	−0.54–0.23	0.72	0.24	−0.30–0.66	−1.47	0.50	−1.72–0.24	−0.56	0.16	−0.40–0.22
Work status (working for pay)	0.52	0.11	−0.16–0.28	1.43	0.15	−0.08–0.50	**3.65***	0.20	0.34–1.13	−0.24	0.09	−0.19–0.15

Statistical significance: * $p < 0.05$; Variables in the bracket are the groups of interest (e.g., female = 1). The bold values indicates the statistical significant which is set at *t-value ≥ 1.96.

unwanted pregnancy, dropping out of school if pregnant, and distraction in academic work.

(iv) To avoid contracting sexually transmitted infections.

(v) Loss of virginity affects a girl's marriage options because nobody wants to marry a girl who is not a virgin.

(vi) Unwanted pregnancy has adverse consequences for girls.

These expressions are substantiated by the following quotes;

> *"Is for girls because when you are a virgin and you get married, your husband will love you better than another person. When he goes out with his friends, he will be telling them do you know that my wife is the best…" (R1, ADABF, female adolescent).*

> *"A girl is supposed to be a virgin because if a man comes to marry her and finds out that she has a baby the man will leave her and check elsewhere." (R11, ADIKM, male adolescent)*

> *"What I think about boys and girls having sex before marriage is that if you start having sex with a boy and you are not married to him the boy may get you pregnant and dump you". (R4, ADEZF, female adolescent)*

Concerning support for pre-marital virginity for both boys and girls, some male respondents feel that boys and girls are expected to be virgins to avoid adverse consequences such as contracting STIs. Quotes buttressing this expression follow.

> *"It (premarital virginity) is required for both boys and girls because if one has sex before marriage, he or she may contract HIV…" (R5, ADEZM male adolescent)*

> *"It is good for both of them to be virgins because after marriage they may love each other. But when they break their virginity, the lady may hate the man and the man may hate the lady also" (R11, ADEZM, male adolescent)*

Responsibility to prevent pregnancy during or after sexual intercourse

Purchasing condoms

Many respondents feel that both boys and girls should buy condoms to ensure it is available when they want to have sexual intercourse to avoid unwanted pregnancy and sexually transmitted infections. "Both of them, because both of them are afraid of pregnancy." (R5, ADEZM)

Concerning boys, the perception is that they should purchase condoms to ensure that the girls they have sex with do not become pregnant. Supporting quotes include the following;

> *"As for me, I can say that it is the boy because if you want to have sex you will buy the condom to avoid unwanted pregnancy" (R6, ADIKM male adolescent).*

> *"The Boy... Some would say let them use it so that the girl will not get pregnant. Some will say I don't have money to abort the baby" (R5 ADEZF, female adolescent).*

While in the case of girls, the responses are that girls should buy condoms to protect themselves from contracting sexually transmitted infections because they can easily contract diseases. Females are expected to buy condoms because they want to prevent unwanted pregnancies. Furthermore, participants conveyed the notion that some males dislike using condoms during sexual intercourse therefore, the female partner should be the person to purchase condom to ensure that condom is available during sex. These expressions are supported by the following quotes;

> *"Girls are the ones that will buy condoms because they are the ones the sperm is going into their body" (R3, ADIKM, male adolescent).*

> *"Females because some males don't like using a condom, the reason being that when they are using a condom, they don't enjoy the sex" (R5, ADABF, female adolescent).*

However, most boys share the view that both boys and girls should purchase condoms because they do not want to contract STIs, especially when they engage in casual sexual intercourse; that a girl needs to have her condom when she wants to have sex even if the boy does not have any at hand to avoid pregnancy. These reasons are expressed in the following quotes;

> *"Both of them should have the condom because they have not known each other so that they will not contract disease" (R3, ADIKM, male adolescent).*
> *"Girls or boys should buy a condom so that when the boy is not with his own the girl will be with her own and when they have sex the girl will not be pregnant" (R5, ADIKM, male adolescent).*
> *"Using a condom is for a boyfriend and girlfriend is because you don't know how the girl is doing before" (R6, ADIKZ, male adolescent).*

According to some female respondents, a major constraint a girl may have in purchasing a condom is that she will be afraid the boy will perceive that she is scared of contracting an infection from him and also because some males do not like to use a condom. Illustrating quotes include the following;

> *"The girls cannot buy condoms because if the girl buys condom the boy will be thinking that the girl does not want to contract disease" (R4, ADEZF, female adolescent).*

> *"Females do not buy it because some males don't like using condoms reason being that when they are using a condom, they don't enjoy sex" (R6, ADAFF, female adolescent).*

Initiating use of a condom

Many of the male and female respondents think it is the girl's responsibility to protect herself from unwanted pregnancy because she experiences the shame of unwanted pregnancy.

Illustrative quotes follow;

> "*It is the girl's responsibility because the disgrace will be felt more by her family*" (R1, ADABF female adolescent).

> *"...the girl because she does not want to get pregnant and when the boy denies her and there is nothing she can do, she will be the one to suffer" (R3, ADIKF, female adolescent).*

> *"I can say that it is the girls because the consequences would be borne by the girls" (R6, ADIKM, Male adolescent).*

> *"It is the girl. As I am now, I may see a girl not that I love her but, I love her because of what she has. I may even go near to her and have sex with her and then I will leave her, and if she becomes pregnant that one does not concern me" (R12, ADIKM, male adolescent).*

Regarding the responsibility of the boy, a few male and female respondents also feel it is the boy's responsibility to initiate the use of condom during sexual intercourse to prevent them from contracting STIs, and ensure the girl does not get pregnant because he will be compelled to take responsibility of the girl if pregnancy occurs. The following quotes substantiate the responses.

> *"It is the responsibility of the boy to try all possible means to prevent pregnancy. If she, unfortunately, gets pregnant the parents will ask her the very person that impregnated her; all the blame has to go back to the very person that impregnated her. Now when they get to the boy's family the boy will be regretting why he failed to protect himself" (R1, ADEZM, male adolescent).*

> *"It is the boy because the boy will make use of the condom to prevent certain diseases (R3, ADIKM, male adolescent).*

> *"…the boy because when he impregnates the girl…he has nothing to offer when the parents of the girl tell him to take her as his wife" (R4, ADIKF, female adolescent).*

Sexual advances-initiating sexual intercourse

The majority of the male and female respondents think that boys initiate sexual advances because girls are shy to do that and because males have a greater urge for sex. Only a few female respondents said that girls also initiate sex.

> *"It is the boy because the girl will be feeling shy to talk about it" (R2, ADABF, female adolescent).*

> *"…because they have more sexual urge" (R1, ADIKF, female adolescent).*

> *"I will say it is a girl because when the boy comes and says you this girl, I will want to have sex with you and if the girl is eventually in need of that she will agree." (R4. ADIKF, female adolescent).*

Respect for female sex partners

The majority of the respondents think that a boy does not respect a girl he has had sex with. The reasons are that; some think that virginity is the pride of girls; by having premarital sex the girl is seen to have lost her dignity; and the boy may dump the girl after having sex with her. See supporting quotes from male and female responses;

> *"…because a girl's dignity is her virginity since the girl has sold her dignity and virginity to the guy it will make the boy treat the girl anyhow" (R11, ADAFM, male adolescent).*

> *"Yes, because they (males) have got what they want, then they will push you (girls) away" (R5, ADEZF, female adolescent).*

> *"Male counterparts lose respect for the females they have slept with because they feel you open up to everybody like that" (R 11, ADOHM, male adolescent).*

Sexual urges

Many girls perceive that boys have more sexual urges and are not able to control themselves when compared to girls. Also, some mentioned that boys need more sex than girls. The following quotes buttress the responses;

> *"It is the male that has more urge because when the girls are not dressing decently it will attract the male to have sex with them" (R3, ADABF, female adolescent).*

> *"…it is the boys that normally have the urge for having sex (R1, ADIKF female adolescent).*

> *"…the boys are under more pressure to have sex than girls because they always have sexual urge more than the girls" (R3, ADIKF, female adolescent).*

Coerced or forced sex

The consensus is that girls should not be coerced into having sex. The reasons are because it is not good; the girl may not be in the mood for sex; coerced sex may cause physical injury; is likely to be unprotected with a high risk of infection; could result in an unwanted pregnancy. These responses are supported by the following quotes;

> "*I said no. If the boy forces the girl and she gets pregnant, it is left for the boy to go and know how he will remove it, otherwise it will cause another problem* "(R5, ADIKM male adolescent).

> "*You do not need to force the girl because if you force the girl, it may harm her*" (R2, ADIKM, male adolescent).

> "*No, although sometimes the girls used to attract the boys by being naked (seductive dressing) on the road that should not concern the boys. They should not have to force the girls for sex.*" (R3, ADEZF, female adolescent).

However, a female respondent rightly points out that one of the reasons boys engage in forced sex is because they tend to use their masculine strength to overpower the girls.

> *"Yes, the boys are used to forcing the girls but the girls don't want to have sex with them. If a girl and a boy are on the way and he told her let's have sex and she refuses he will force her because he has more power than her. (R4, ADEZF, female adolescent).*

Peer pressure to have sex

The majority of the respondents agreed that peer pressure to have sex exists. Some indicated that both boys and girls are under pressure to have sex, but boys experience more peer pressure to have sex than girls. "*…the boys are under more pressure than the girls because they have more sexual urge than females*" (R3, ADIKF, female adolescent). Moreover, in the case of boys, their friends who have had sex before pressurize them to have sex by teasing, cajoling and calling them "*…'juu' guy, 'middle man'…*" (R7, ADAFM, Male adolescent).

The pressure according to some male respondents is aggravated because boys are lured by the indecent dressing of girls when they are with them. "*Because if the girl wears indecent dressing like that, the boy will develop the sexual desire, then he will think of having sex with the girl*" (R1, ADIKM, male adolescent).

Concerning girls, some girls and boys reported that information from their peers, the material possessions their friends dangle before them and their family background are some of the factors that influence adolescent girls to have sex. Illustrative quotes follow;

> *"They said that if you are going to have sex with the boy, he will be providing everything for you" (R8, ADEZF, female adolescent).*

> *"They said that if you have sex with a boy now when you get married it will not be hard for you" (R5, ADEZF, female adolescent).*

> *"It depends on the person's family upbringing. Material things shown by friends sometimes make girls join them" (R1, ADABF, female adolescent).*

> *"That females succumb to peer pressure to have sex "…because of [financial imbalance] lack of money" (R3, ADIKM, male adolescent).*

Seductive dressing

The respondents said that indecent dressing such as exposing the body, wearing short skirts and showing their breasts, is seductive and contributes to the occurrence of coercive sex; and suggested that girls should dress decently to avoid sexual harassment. These suggestions were mostly opined by adolescent boys. See below for supporting quotes. "*…the reproductive system of the boys reacts more highly than the girls' when they see such dressing*" (R9, ADIKM, male adolescent).

> *"Girls can lure men and if a man does not have the feeling to have sex, the girl's dressing can cause him to have the urge for sex" (R9, ADAFM, male adolescent).*

> *"The girl's dressing is not good. Like some girls like to wear miniskirts, or like the bra they use there is one they call push up, if they wear that one it would push their breast out and if the boys see it, they will feel like having sex with that person" (R5, ADIKM, male adolescent).*

Discussion

Our findings contribute to the knowledge of gender norms and ideologies about sexuality among adolescents, in the study site where about 9.6% of 15 to 19 years old girls have begun childbearing (NDHS, 2019). Our study demonstrates that norms and ideologies about sexuality prevail, are gendered, and are also influenced by socio-economic and demographic characteristics. This study is unique in that it examines variations among adolescents and generates findings that could be useful in designing strategies for addressing their sexual and reproductive health needs.

The prevailing beliefs of adolescents regarding sexuality are that abstinence should be upheld among unmarried adolescents, consent should be obtained before sexual intercourse, it is wrong for unmarried adolescents to have sex, and sex is permitted if contraceptives are used, in that order. These beliefs about sex among adolescents were sustained irrespective of place of residence, schooling, gender and wealth index. There were significant correlations between some of these ideologies and respondents' gender and place of residence. In qualitative findings, cultural norms, religious values and adverse health consequences of engaging in unprotected sexual intercourse were the reasons adolescents revealed for supporting premarital virginity. The implication is that gender ideology plays a large role in adolescents' decisions making concerning sexuality (Okigbo et al., 2018). Researchers in Ghana have also reported, that there is a dominant ideology of abstaining from premarital sex among young people (Van de Bongardt et al., 2015). However, this belief contradicts the observed sexual permissiveness among young people, which is influenced by modernization. Studies carried out in Nigeria, Tanzania and Vietnam have also reported that young people believe it is acceptable for adolescents to engage in premarital sex as long as they are not in school or are economically viable and that premarital sex is inevitable (Kagashe and Honest, 2013; Udigwe et al., 2014; Adogu et al., 2015; Bergenfeld et al., 2021). This affirms the result of these findings as adolescent boys than girls were more likely to believe that sex is permitted among adolescents as long as contraceptives are used.

Regarding gender norms about adolescent sexuality, the dominant ideology was that sex should be initiated by boys because girls feel shy initiating sex and that the boys experience more urge for sex than the girls. They also point out that the responsibility to ensure that sexual intercourse does not result in pregnancy lies on the girl/female partner. However, some adolescents feel that it is the responsibility of both the boys and girls to ensure that condoms are available before sexual intercourse to avoid unwanted pregnancy and STIs. This confirms findings from similar African research studies of gender norms about responsibility for preventing unwanted pregnancy (Capurchande et al., 2016; Nalukwago et al., 2019).

Although the majority of the adolescents in this survey believed that consent should be obtained before sex, a considerable number believed that a boy has to force a girl to have sex. However, the consensus in qualitative findings is that girls should not be coerced into having sex to avoid physical injury, infection and unwanted pregnancy. Some South African studies have reported that forced sex is considered as a sign of love, and is defensible if it occurs in the boy's house (Jewkes and Morrell, 2010; De Vries et al., 2014). These gender norms place the young boys (and indeed men) in the position of sexual dominance which in turn limits the capability of young girls to take control of their sexual and reproductive health (Pulerwitz et al., 2010). In our finding, a female categorically pointed out that one of the reasons boys engage in forced sex is because they tend to use their masculine strength to overpower the girls. Evidence shows that African men continue to uphold gender norms that confine women to conventional roles, including the role of sexual servants/slaves (El Feki et al., 2017). As young people observe and adopt these norms in their sexual relationships, it hinders the attainment of mutual and happy sexual relationships in adulthood. The prevalent gender norms about sexuality and contraception further highlight the need for culturally relevant community-led interventions/strategies designed on the background of an in-depth understanding of the social and cultural contexts, to contribute to changing gender narratives about sexuality.

Peer pressure to have sexual intercourse among adolescents exists. Although both boys and girls experience pressure to have sex, boys were described to experience more peer pressure to have sex than girls. Their friends who have had sexual intercourse, pressurize them to have sex by teasing and cajoling them. This corresponds with other findings which revealed that boys are more susceptible to peer influences as compared to girls (Bingenheimer et al., 2015; Widman et al., 2016). The pressure to have sex among boys could also be aggravated through the indecent/seductive dressing of girls when they are with boys. Hence, girls should dress decently to avoid sexual harassment and the occurrence of coercive sex. On the other hand, the information girls receive from their peers, the quest for material possessions and family socio-economic conditions contribute to girls' pressure to have sex.

Further analysis revealed that these norms and ideologies about sexual permissiveness are gendered. Adolescent boys were less likely to believe in premarital abstinence, and more likely to believe that premarital sexual intercourse is acceptable as long as contraception is assured. The belief that sex should be initiated by the boy alone was also gendered. The sexual permissiveness of adolescent boys and the intolerance of girls corroborate similar assertions that perceptions about sexuality, regardless of age group, are shaped by gender (Casique, 2019). Whilst, young boys express relatively more tolerance for pre-marital sexual relationships, adolescent girls primarily choose pre-marital sexual abstinence for the fear of the adverse social and health consequences of sexual intercourse (Long-Middleton et al., 2013). Our findings on gender ideologies and norms could be attributed to social and cultural environments which co-mingle to influence individual sexual behavioral choices, perceptions and actions (Hanson et al., 2014). Generally, adolescents learn what the society and culture expect of them from what their parents teach them, religious and cultural teachings, as well as other institutions of socialization (Okigbo et al., 2018; http://othersociologist.com/sociology-of-gender/). The findings highlight the importance of context in shaping the sexual ideologies of adolescents.

The scope of the study is limited because it only reports findings from unmarried adolescents aged 13 to 18 years. The exclusion of married adolescents and other age groups of adolescents limits the generalizability of the results. There is a need for further research of some of the progressive attitudes and beliefs which were found to be held more among adolescents. This will enable better understanding and approaches to address adolescents' needs based on gender and contextual differences. Another limitation of the study is that the use of FGDs may have limited participants' openness and contributions to discussions about sexuality. However, the researchers were trained to maintain a neutral attitude with participants and assured them of confidentiality of information they provided. The FGDs were used to promote dialogue and exchange on the beliefs that are commonly held by adolescents on gender and sexuality.

In conclusion, adolescents' beliefs about sexuality, including taking responsibility for the prevention of unwanted pregnancy, are influenced by norms and ideologies, some of which are gendered and correlate with the demographic and socio-economic characteristics of adolescents. Some of these ideologies/norms could be beneficial or harmless, while others could be harmful to adolescents' SRH. These harmful ideologies/norms about sexuality could contribute immensely in limiting adolescents from meeting their SRH needs with adverse implications on their health outcomes. Considering the potentially harmful effects of some of these norms and ideologies about sexuality, adolescent health programs/interventions should be tailored to address the identified gender norms and ideologies. Therefore, concerted efforts should target identified predictors of adolescents' beliefs

about sexuality and other factors that could contribute to contextual changes.

Future research on ideologies/norms about adolescents' sexuality could be undertaken to understand the gendered perspectives of these adolescents and how their gendered perspectives interact with other socio-economic and socio-demographic factors such as age, schooling status, place of residence, peer or cultural influence and, working status. In order to determine similarities and peculiarities, studies could also be undertaken in other settings.

Data availability statement

For the quantitative findings, the datasets presented in this study can be found in online repositories. The name of the repository and accession number(s) can be found below: UK Data Service. doi: 10.5255/UKDA-SN-854374.

Ethics statement

The studies involving human participants were reviewed and approved by Health Research Ethics Committee of University of Nigeria Teaching Hospital with reference number NHREC/05/01/2008B-FWA00002458-IRB00002323. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

Author contributions

CM, NE, and OO conceptualized and designed the study protocol and instruments used for data collection. IA, CM, UE, and IE were involved in data collection. IA and CM produced the first draft of the manuscript. All the authors participated in data analysis, reviewed, and approved the final version of the manuscript for journal submission.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Paul Mukisa Wako Bukuluki,
Makerere University, Uganda

REVIEWED BY
Violeta Alarcão,
University Institute of Lisbon, Portugal
Sónia Pintassilgo,
University Institute of Lisbon (ISCTE), Portugal

*CORRESPONDENCE
Mahua Mandal
mmandal@mathematica-mpr.com

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Using structural equation modeling to examine the influence of family planning social norms on modern contraceptive use in Nigeria

Mahua Mandal[1]*, Lisa M. Calhoun[1], Courtney McGuire[1] and Ilene S. Speizer[1,2]

[1]Carolina Population Center, University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, [2]Department of Maternal and Child Health, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC, United States

Despite high knowledge of family planning (FP) among Nigerian women, use of modern contraceptives remains low. While FP investments in Nigeria have been ongoing for decades, relatively little emphasis on contextual and structural factors may have contributed to low demand for and use of contraception. From 2009 to 2014, the Bill & Melinda Gates Foundation (BMGF) supported the Nigerian Urban Reproductive Health Initiative (NURHI) with the aim of increasing voluntary use of contraceptives among women ages 15–49 years in six Nigerian cities. A subsequent phase of NURHI was implemented in three states for the next 3 to 5 years. Using cross-sectional survey data from three cities (two exposed to NURHI, one not exposed), this study examines whether social norms around FP were related to women's use of modern contraception, and whether the relationship differed by varying levels of exposure to the program (i.e., by city). We identified three distinct FP social norms through factor analysis: norms around delaying first pregnancy; spacing or limiting pregnancies; and using contraception when the husband disagrees. Using structural equation modeling, we found that FP social norms are related to use of modern contraceptive methods, and the relationship varies by city and norm type. The observed differences suggest that this relationship depends on numerous factors at the individual, interpersonal and societal level, and this may include malleable factors influenced by the NURHI program.

KEYWORDS

family planning, social norms, Nigeria, Nigerian Urban Reproductive Health Initiative, structural equation modeling, gender norms

Introduction

Nigeria's population, estimated at about 200 million as of 2019, is projected to increase to about 440 million by the year 2050 (United Nations, 2019). With a current rate of over 5 children per woman, Nigeria's total fertility rate remains higher than most other sub-Saharan African countries, including those in West Africa (United Nations, 2019).

Fertility levels are particularly high in some Nigerian subpopulations, including among residents of the North West and North East regions of the country; Hausa, Fulani, and Kanuri ethnic groups; and those who identify as Muslim or practice traditional religions (Mberu and Reed, 2014). Despite high knowledge of family planning (FP) in Nigeria-−93% of women of reproductive age know of at least one contraceptive method—contraceptive use remains low (National Population Commission (NPC) [Nigeria] and ICF International, 2019). Among married Nigerian women modern contraceptive use increased from 10% in 2013 to only 12% in 2018 (National Population Commission (NPC) [Nigeria] and ICF International, 2014, 2019). There is wide geographical variation in modern contraceptive use in Nigeria, with estimates among married women ranging from 3.9% in the North-West region to 20.0% and 25.4% in the North-Central and South-West regions, respectively (National Population Commission (NPC) [Nigeria] and ICF International, 2014).

A plethora of studies have examined individual- and interpersonal level predictors of contraceptive use in Nigeria. These include wealth, education, ethnicity, women's decision-making abilities, and spousal support and communication (Achana et al., 2015; Ezeanolue et al., 2015; Adebowale et al., 2016; Wulifan et al., 2016; Asaolu et al., 2017; Alo et al., 2020; Bolarinwa et al., 2021). A smaller body of research has examined health facility- and community-level factors, including method stock out (Anglewicz et al., 2021), health care worker home visits (Asaolu et al., 2019), social norms (Alo et al., 2020), and community-level knowledge and literacy (Bolarinwa et al., 2021), that influence use of contraception. While FP investments in Nigeria have been ongoing for decades, relatively little emphasis on contextual and structural factors may have contributed to low demand for and use of family planning (Ejembi et al., 2015). Greater focus on structural influences, including social norms, that increase acceptance and use of contraceptive methods is needed.

Social norms are informal rules that govern behavior in a particular context (Cialdini et al., 1991). Scholars from across the social sciences have attempted to measure and explain the effect of social norms on people's choices and behaviors (Cialdini et al., 1991; Boyd and Richerson, 1994; Brennan et al., 2013; Elsenbroich and Gilbert, 2014; Young, 2015). While collective (social) norms exist at the social level—typically, the group, community, or national level—individuals' interpretation of these norms, known as perceived (social) norms, exist at the individual, psychological level. Perceived norms are the result of individuals' cognitive processes; thus, understanding the role that social and behavior change communication programs have on influencing norms is operationalized through measurement of perceived norms (Lapinksi, 2005). While some health-related studies have attempted to measure the influence of collective norms on health choices and behaviors (Babalola, 2007; Rimal et al., 2013; Sedlander and Rimal, 2019), research on family planning and sexual and reproductive health has increasingly focused on the ways in which perceived norms influence behaviors (Dynes et al., 2012; Rimal et al., 2015; Jain et al., 2018; Cislaghi and Heise, 2019b; Costenbader et al., 2019).

Perceived norms are further delineated into injunctive norms—beliefs about what other people approve of or think one should do—and descriptive norms—beliefs about what other people do (Cialdini et al., 1991; Cialdini and Trost, 1998). The influence of injunctive and descriptive norms on family planning and reproductive health behaviors is mixed. For example, one study evaluating the influence of a male engagement and social norms intervention in the Democratic Republic of Congo found that injunctive norms among married women and descriptive FP norms among married men were associated with future intention to use FP. However, there was no association between descriptive FP norms among women, or injunctive FP norms among men, and future intentions to use FP (Costenbader et al., 2019). Another study in Ethiopia found that, among 15–24 year old male youth, the descriptive norm of knowing a friend who had ever used condoms was associated with use of condoms at last sex, and the injunctive norm of being worried about other people would think if the respondent needed condoms significantly decreased their likelihood of using condoms (Jain et al., 2018). Another study implemented in Kenya and Ethiopia found that injunctive norms alone were not associated with women's contraceptive use; rather, women whose current number of sons was lower than their perception of the community ideal had a lower odds of reporting contraceptive use, while women whose personal ideal number of sons was lower than their perceived community ideals had a greater odds of reported contraceptive use (Dynes et al., 2012).

The Nigerian Urban Reproductive Health Initiative (NURHI), funded by the Bill and Melinda Gates Foundation (BMGF) and implemented by the Johns Hopkins Center for Communication Programs, aimed to increase voluntary modern contraceptives use among women ages 15–49 years through comprehensive demand and supply side programming. NURHI programming was guided by the theory of ideation, which proposes that people's actions are influenced strongly by their beliefs, ideas, and feelings. Ideation factors include personal attitudes and beliefs (i.e., what a person knows about FP and how they think it will affect them), and social norms (i.e., what a person believes other people will think of them if they use FP). NUHRI designed and integrated communication methodologies, including those used in mass media campaigns and social mobilization efforts, into each component of the program, including the service delivery ones; and placed intensive and sustained effort and resources into demand generation activities. NUHRI defined demand for family planning as the desire and ability among women and/or men to take action to plan their facilities. The program hypothesized that the demand generation elements would work together to influence ideation factors, including social norms; and these, along with the supply programming, would

in turn increase use of modern contraception (Krenn et al., 2014).

Phase 1 of NURHI was implemented from 2009 to 2014 in six Nigerian cities: Abuja, Ibadan, Ilorin, Kaduna, Benin and Zaira. NURHI's demand generation activities consisted of communication campaigns to promote discussion of FP, reduce social barriers, myths, and social stigma, and increase approval of FP methods. Vehicles for the communication campaign included mass media (posters, television and radio spots), entertainment-education (radio and television dramas), and social mobilization to enhance interpersonal communication during client-provider interactions, between spouses, during trade group meetings, and through neighborhood campaigns and social events (NURHI, no datea). Supply side programming included provider training, ensuring security of commodity supplies, and improving the overall clinic environment in target facilities (NURHI, no dateb). A subsequent phase of NURHI, Phase 2, was implemented in three states: Oyo, from 2015 to 2018; and Lagos and Kaduna from 2015 to 2020. Phase 2 focused on specific priority audiences of women with unmet need, traditional method users, men and service providers (NURHI, 2018a); and integrated the use of digital and social media into the demand generation strategy (NURHI 2, no date). For further details on the NURHI intervention, please see Krenn et al. (2014) and Adedini et al. (2018).

This study examines whether social norms around FP are related to women's use of modern contraception. Focusing on residents in the cities of Ilorin, Kaduna and Jos, this study also examines whether the relationship between social norms and use of modern contraception differs by varying levels of exposure to NURHI (i.e., by city).

Materials and methods

Study design and sample

The NURHI Sustainability Study examined the continued impacts of the NURHI program on FP attitudes and behaviors 2 years after the end of Phase 1. We used data from the 2017 cross-sectional survey that was part of a 2015 parent study. Three cities with varying levels of the program were included in the current analysis. NURHI Phase 1 only was implemented in Ilorin; NURHI Phases 1 and 2 were implemented in Kaduna; and in Jos, no NURHI program had been implemented.

In 2015, a cross sectional survey was undertaken in Ilorin and Kaduna. For the 2015 survey, a two-stage sampling design was used to obtain a representative sample of respondents in each city. First, enumeration areas from the 2006 Nigeria census frame were grouped into primary sampling units (PSUs); a random selection of PSUs was then taken. Next, a household listing and mapping was undertaken and then 41 households were randomly selected from each PSU. Following informed consent, all women of reproductive age (15–49 years) who had spent the previous night in the household were eligible for participation. The 2015 data were not utilized for the current analysis, but all of the PSUs in Ilorin and Kaduna in the 2015 survey were included in the 2017 survey.

In 2017, a second cross-sectional survey was undertaken which included Ilorin, Kaduna and Jos. In Ilorin and Kaduna, we undertook a census of all households located in the sampled PSUs from the 2015 survey to permit matching women to the 2015 sample. All women ages 15–49 who had spent the previous night in the household were eligible to participate in the study after providing informed consent. In Jos, which was not included in the 2015 survey, a two-stage sampling design was used. A total of 56 PSUs were selected from the 2006 Nigeria Census sampling frame. A listing and mapping exercise was undertaken and a random sample of 33 households was selected in each Jos cluster. All women ages 15–49 years residing in or visiting the selected households the night before the survey were eligible to be interviewed after providing informed consent. The initial sample size was 10,535. The analysis in this paper includes only women who reported ever having sexual intercourse. After dropping respondents who reported never having sexual intercourse, the final sample size for this study was 6,396 (1,685 in Ilorin; 3,238 in Kaduna; and 1,473 in Jos).

Study measures

Outcome measure: Use of a modern contraceptive method

The 2017 NURHI Sustainability Study survey included a question on which contraceptive methods the respondent or her partner was using at the time of the survey. Modern method use consists of use of at least one the following: female sterilization, implant, intrauterine device (IUD), injectables, daily pill, emergency pill, male condom, female condom, lactational amenorrhea method (LAM), or standard days method (SDM). Women were coded one if they currently used any of these modern methods and zero otherwise.

Social norms

The survey included a series of quantitative questions based on vignettes to elicit social norms related to FP use for delaying first pregnancy, spacing pregnancies, and limiting pregnancy. Vignettes are mini-scenarios that ask respondents about their perspectives and attitudes toward one or more fictional characters, and are increasingly used to measure social norms (Cislaghi and Heise, 2016; Learning Collaborative to Advance Normative Change, 2019). The study vignettes

included (1) an adolescent girl who was sexually active with her 17-year-old boyfriend and was considering using modern contraception; (2) a 21-year-old mother of a 6-month-old baby who wanted to space her next pregnancy while her husband wanted another child immediately; and (3) a 28-year-old woman with four children who wanted to prevent future pregnancies. All social norms survey items were asked on a five-point Likert response scale (e.g., strongly agree, agree, do not agree nor disagree, disagree, strongly disagree) (see social norms survey items on Tables 2, 3).

Individual-level factors

Respondent characteristics included age (categorical, in 5-year increments), marital status (ever married/living together, never married/living together), highest education level (none, Quranic only, primary, junior secondary, senior secondary, higher), parity (none, 1–3, 4–6), religion (Christian, Muslim), religiosity (not at all or somewhat religious, strongly religious), and wealth based on quintile levels. These factors were included given the extant evidence on their relationship to use of modern contraception (Achana et al., 2015; Ezeanolue et al., 2015; Adebowale et al., 2016; Wulifan et al., 2016; Asaolu et al., 2017; Alo et al., 2020; Bolarinwa et al., 2021).

Data analysis

All analyses used weighted data and accounted for the clustered design of the 2017 NURHI Sustainability Study. First, we explored the demographic characteristics of the sample, calculating frequency distributions for the whole sample and by location. Next, we conducted exploratory factor analysis (EFA) with oblique (Promax) rotations to determine the latent constructs of social norms. We used scree tests and eigenvalues to determine the number of social norm factors to retain. We dropped items that produced factor loadings below 0.45 or uniquenesses (i.e., percent variance unexplained) above 0.75, and that did not conceptually fit the factor model. To examine the strength of each FP social norm, we calculated mean scores for each factor by multiplying the items within the factor by their factor loading. We then summed across the products and divided by the number of items within the factor. Last, we fit generalized structural equation models to assess whether FP social norms were associated with respondents' use of modern contraceptives, and whether the relationship differed by city. We fit several models using data from the full sample and used Akaike Information Criterion (AIC) to determine whether one model fit the data better than others. Subsequently, we used a series of tests of invariance to conduct group comparisons of the selected model by city.

Ethics

The study protocol and all consent procedures and consent forms were approved by the Institutional Review Board at the University of North Carolina at Chapel Hill and by the National Health Research Ethics Committee of Nigeria (NHREC) in Nigeria.

Results

Across all cities, sexually experienced respondents were, on average, 32 years old, and about 84% had been ever married or lived with a man as married. Senior secondary school was the highest level of education for about one-third of women. About 20% of women had no children, almost half (44%) had between one child and three children, and the remaining had four to six children. The sample of women who ever had sex from Jos is slightly younger, less likely to be ever married or living with their partner, and have fewer children than their counterparts from Kaduna or Ilorin. In Ilorin and Kaduna almost two-thirds of respondents were Muslim (66% and 57%, respectively), while in Jos almost two-thirds were Christian (64%). More than three-quarters of respondents reported being strongly religious (81% in total). About 30% of women had used a modern method of contraception at the time of the survey (see Table 1).

Results from weighted exploratory factor analysis revealed three social norm factors, or constructs, around FP. The first factor included three items about FP social norms to delay first pregnancy among adolescents (alpha = 0.68). The second included four items about FP social norms to space pregnancies or limit all pregnancies among married women (alpha = 0.79). The third included three items about FP social norms around women's use of contraception when their husbands disagree (alpha = 0.75). Three survey items about FP social norms that did not conceptually or statistically fit were discarded from the final factor model (see Tables 2, 3).

Mean scores for each factor showed that, overall, FP social norms around spacing and limiting pregnancies was strongest, or most positive, while norms around delaying first pregnancy was weakest, or least positive. Mean scores differed slightly by city, with FP social norms for delaying first pregnancy highest in Kaduna and lowest in Jos; for spacing and limiting pregnancies highest in Ilorin and lowest in Jos; and for using contraception when the husband disagreed highest in Ilorin and lowest in Kaduna (see Table 4).

The final structural equation model for the full sample indicated that all three constructs of FP social norms were significantly associated with use of a modern contraceptive method ($p < 0.01$) (see Figure 1). For every one-unit increase in FP social norms around delaying an adolescent girl's first pregnancy, there was an increase of 0.11 path coefficients in the respondent using a modern method at the time of the

TABLE 1 Demographic characteristics and use of modern contraceptive methods among 15–49 year old female respondents in Nigeria who ever had sex, 2017 ($n = 6,396$).

	Ilorin ($n = 1,685$)		Kaduna ($n = 3,238$)		Jos ($n = 1,473$)		Total ($n = 6,396$)	
Age								
Mean (Median)	32.3 (32.0)		32.1 (31.0)		31.3 (30.0)		32.0 (31.0)	
	Percent*	**n¥**	**Percent***	**n¥**	**Percent***	**n¥**	**Percent***	**n¥**
Age in 5-yrs increments								
15–19 years	4.9	85	3.8	119	5.2	79	4.5	283
20–24 years	14.3	241	15.9	523	16.7	241	15.5	1,005
25–29 years	21.3	355	22.4	732	23.3	352	22.2	1,439
30–34 years	17.6	293	19.6	619	20.0	292	19.0	1,204
35–39 years	19.2	324	16.4	539	16.7	249	17.6	1,112
40–44 years	12.6	215	12.5	397	9.8	139	11.9	751
45–49 years	10.1	172	9.5	309	8.3	121	9.4	602
Marital status								
Ever married/living together	84.2	1,417	86.7	2,850	78.9	1,166	83.9	5,433
Never married/living together	15.8	268	13.3	388	21.1	307	16.1	963
Highest level of education								
None	7.4	126	3.0	86	3.6	46	4.8	258
Quranic only	2.2	35	8.9	314	5.3	76	5.5	425
Primary	16.6	282	14.9	495	13.7	202	15.2	979
Junior secondary	3.2	58	11.2	386	13.0	191	8.7	635
Senior secondary	35.5	595	33.5	1,074	31.4	474	33.7	2,143
Higher	35.2	588	28.5	883	32.9	483	32.0	1,954
Parity								
0	18.5	313	17.8	544	23.9	348	19.5	1,205
1–3	44.2	740	43.2	1,382	44.0	633	43.7	2,755
4–6	37.2	632	39.1	1,312	32.2	492	36.9	2,436
Religion								
Christian	34.2	582	42.9	1,144	64.3	943	44.7	2,669
Muslim	65.8	1,103	57.1	2,094	35.7	50	55.3	3,727
Religiosity								
Not at all or somewhat	20.9	356	17.2	529	19.3	282	19.1	1,167
Strongly	79.1	1,329	82.8	2,709	80.7	1,191	80.9	5,229
Wealth								
Poorest	19.6	331	17.1	542	17.3	258	18.1	1,131
Poor	21.3	357	19.4	633	21.3	290	20.6	1,280
Middle	21.4	358	19.9	664	20.1	290	20.5	1,312
Wealthy	20.8	351	20.8	691	20.1	319	20.7	1,261
Wealthiest	16.9	288	22.8	708	21.2	316	20.2	1,312
Use of modern method of contraception	31.3	529	30.7	946	28.7	427	30.4	1,909

Percentages are adjusted for the design of the survey.
*Weighted percent.
¥ Unweighted n.

survey (coeff = 0.11; 95% CI = 0.04, 0.19). Note, each FP social norms construct was measured in five units in total, with each increasing unit indicating more favorable social norms (e.g., shifting from agreeing to strongly agreeing that the community approves is an example of increasing social norms, or norms becoming more favorable, by one unit). Modern contraceptive use increased by about 0.31 coefficients for every one unit increase in social norms around using FP to space or limit

TABLE 2 Factor loadings and uniqueness's based on exploratory factor analysis for items related to social norms around family planning in Nigeria, 2017 ($n = 6,396$).

	Expectations and community approval of adolescents' contraceptive use to delay first pregnancy ($\alpha = 0.68$)	Community approval for spacing and limiting births ($\alpha = 0.79$)	Expectations and community approval of contraceptive use when husband does not agree ($\alpha = 0.75$)	Uniqueness
Factor loadings				
Belief that most community members would say a sexually active unmarried adolescent should use modern contraception to avoid pregnancy [sn2]	0.70			0.54
Belief that most sexually active unmarried adolescents in community would use contraception [sn3]	0.71			0.51
Belief that most community members would say that a married adolescent who does not want to get pregnant should use modern contraception [sn4]	0.47			0.71
Belief that most community members would approve of a young woman with an infant spacing her next pregnancy [sn5]		0.61		0.58
Belief that most community members would agree that a young woman with an infant who wants to space her next pregnancy should use modern contraception [sn6]		0.60		0.55
Belief that most community members would approve of a woman with four children who wants no more to prevent another pregnancy [sn10]		0.76		0.48
Belief that most community members would agree that a woman with four children who wants to prevent another pregnancy should use contraception [sn11]		0.74		0.47
Belief that most community members would agree that a woman with an infant who wants to space her next pregnancy should use contraception even if her husband does not want her to [sn7]			0.80	0.41
Belief that most women with infants who want to space their next pregnancy would use contraception even if their husbands did not want them to [sn8]			0.68	0.48
Belief that most members of a woman's religious congregation would approve of her contraceptive use even if her husband wanted another baby soon [sn9]			0.59	0.66

TABLE 3 FP social norm survey items discarded from the final three-factor model.

Belief that community members would say an unmarried adolescent with a boyfriend should not have sex [sn1]
Belief that most community members would think a woman has concerns about having more children should talk to her husband [sn12]
Belief that a health care provider who learns that a woman is seeking contraception without her husband's knowledge would give the woman contraception [sn13]

TABLE 4 Mean score of FP social norm factors by city.

Mean score of FP social norms	Ilorin ($n = 1,685$)	Kaduna ($n = 3,238$)	Jos ($n = 1,473$)
Delaying first pregnancy	1.69	1.72	1.67
Spacing and limiting pregnancies	2.91	2.74	2.58
Using contraception when husband disagrees	2.03	1.97	2.01

pregnancies (coeff = 0.31; 95% CI = 0.19, 0.43); and increased by about 0.08 coefficients for every one unit increase in norms around using contraception even when the husband disagrees (coeff =0.08; 95% CI = 0.01, 0.14). Except for household wealth, use of a modern contraceptive was also significantly associated with all covariates ($p < 0.01$) (see Figure 1).

The models differed by location in the FP social norm constructs that were associated with respondents' use of modern contraception (see Table 5). In Kaduna only, the social norm around adolescents delaying their first pregnancy was associated with respondents' use of a modern contraceptive. In Ilorin only, the norm around using contraceptives when a husband disagrees was associated with use of a modern method. In all three sites, the norm around spacing and limiting pregnancies was associated with respondents' use of modern contraception.

Discussion and conclusion

After adjusting for demographic characteristics and household wealth among all women who ever had sex in three cities in Nigeria, we found that social norms around using FP to delay first pregnancy, to space and limit pregnancies, and when the husband disagreed with contraceptive use were associated with women's use of modern contraception. However, when we examined the data by level of exposure to the NURHI program (i.e., by city of residence) we found substantial differences. Social norms around using FP to space or limit pregnancies was associated with modern contraceptive use in all three cities. In contrast, FP social norms to delay first pregnancy among adolescents was associated with modern contraceptive use in Kaduna only; and FP social norms for using contraception when a husband disagrees was associated with modern contraceptive use in Ilorin only.

The observed differences suggest that the relationship between specific FP social norms and women's use of modern contraception depends on numerous factors at the individual, interpersonal and societal levels (Rimal and Lapinski, 2015), and this may include malleable factors influenced by the NURHI program. For example, increasing access to FP among youth, including addressing provider bias by using human-centered design approaches was a deliberate focus of Phase 2 and in Kaduna only (NURHI, 2018b). This component of the program may have supported positive FP norms specifically around adolescents' use of contraception, which in turn may have influenced contraceptive use among a broader cross-section of women in Kaduna. This spillover effect is similar to findings from another study in Nigeria using Performance Monitoring and Accountability 2020 data where authors observed a significant relationship between a facility's delivery of adolescent reproductive healthcare and modern contraceptive use by sexually active women of all reproductive ages (Asaolu et al., 2019). Communities are often less accepting of adolescents' use of FP than that of adult women's (Adams et al., 2013; Cannon et al., 2022), and this is supported by our study as well, given that in all three cities the mean scores for social norms supporting adolescents' use of FP was lower than those of the other measured FP social norms. Positive social norms around adolescents using FP to delay a first pregnancy indicates that individuals perceive members of their community to be open to and/or lenient about FP use in general. That is, this specific norm is likely the most "liberal" of perceived FP norms, indicating that women likely believe that their communities would accept most women's use of FP. However, this FP social norm may influence women's actual use of modern contraception only in certain circumstances, such as when supply side factors, such as access to a range of modern methods and quality of services, are improved. While supply side factors were addressed in Ilorin during NURHI Phase 1, they were strengthened in Phase 2 in Kaduna only. A longitudinal study of quality of services in NURHI sites found that in 2017 Kaduna had better quality services and significantly more new contraceptive users compared to Ilorin (Speizer et al., 2019). Improved access and higher quality services may be necessary factors to accompany perceived norms that are favorable to FP in order to influence contraceptive behaviors.

The observed relationship in Ilorin between FP social norms around using contraception when the husband disagrees and use of modern contraception is more challenging to explain. This finding may be a result of socio-cultural differences between the cities. For example, while both Ilorin and Kaduna are a majority Muslim, there are different compositions of ethnic groups between these two States of Nigeria, Kwara and Kaduna States. The majority of residents in Kwara State are Yoruba people while in Kaduna State they are Hausa and Funali. One multi-level analysis of spatial distribution and factors associated with modern contraceptive use among women in Nigeria found that Yoruba women were more likely than Hausa women to use modern contraception (Bolarinwa et al., 2021). Given that our study did not control for ethnicity, this may be a salient factor that influenced our results. Varying gender norms among different ethnic groups may influence whether specific FP social norms are associated with use of modern contraception.

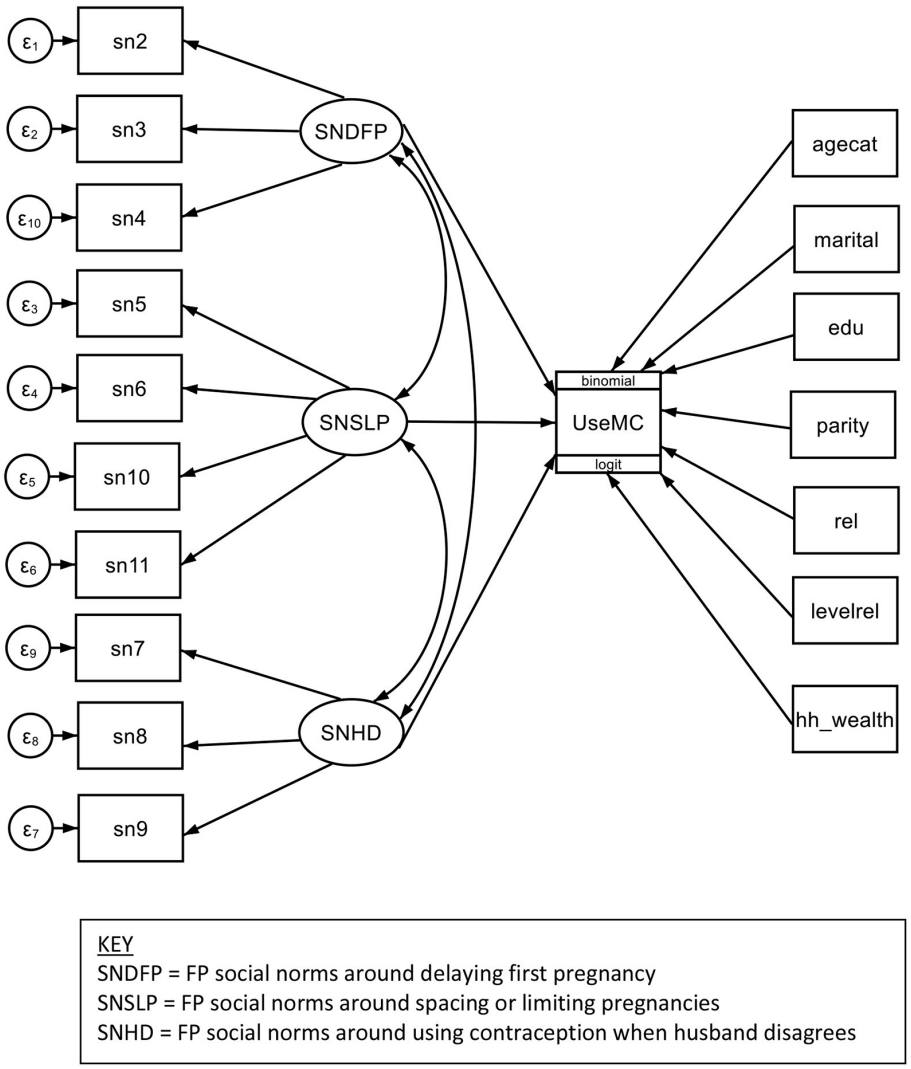

FIGURE 1
Structural equation model for association of family planning social norms with current use of modern contraceptive methods among women, Nigeria, 2017.

Gender norms are informal rules and shared social expectations that distinguish expected behavior based on gender (Marcus et al., 2015) and keep the gender system intact (Cislaghi and Heise, 2019a). Gender norms is one element of the gender system, a social system that apportions resources, roles, power and entitlement according to whether a person or practice is perceived as male or female, masculine or feminine (Ridgeway, 2004). Gender norms are embedded within the institutions and narrative of a given culture, produced and reproduced through individuals' actions, and enforced by those who hold power and benefit from compliance to those norms. As such, gender norms have been predominantly conceptualized as a social construct (West and Zimmerman, 1987; Ridgeway, 2004; Cislaghi and Heise, 2019a). Cislaghi and Heise (Cislaghi and Heise, 2019a) suggests, however, that gender norms are at the intersection of the social and individual because the role they play in shaping women's and men's access to resources affects their voice and sense of self and power.

Social norms around FP—particularly beliefs about the contraceptive behaviors women in a community would or should practice despite disagreement or opposition from their husbands—incorporate gender norms. Perceptions of what community members support and are doing with regard to a gendered behavior depend on societal and cultural expectations of women's and men's roles, how community members occupy those roles, and whether perceptions of community members' occupation of those roles are accurate. Gendered expectations to prove fecundity may dictate that women (and men) refrain from using modern contraception. Gendered expectations to replicate male-dominated power dynamics may dictate that that women use contraception only if their husbands agree. Because social and gender norms and their association with behaviors are

TABLE 5 Path coefficients by study location for structural equation model for association of family planning social norms with current use of modern contraceptive methods among women who ever had sex, Nigeria, 2017.

	Ilorin ($n = 1,685$)	Kaduna ($n = 3,238$)	Jos ($n = 1,473$)
FP social norm factors/constructs for			
Delaying first pregnancy	0.06	0.25***	−0.21
Spacing and limiting pregnancies	0.35**	0.24*	0.50***
Using contraception when husband disagrees	0.14**	0.03	0.03
Covariates			
Age	−0.15**	−0.21***	−0.25***
Ever married	−0.68***	−0.71***	−0.29
Highest education	0.06	0.24***	0.06
Parity	0.31***	0.39***	0.40***
Religion	−0.19	−0.81***	−1.97***
Level of religiosity	0.12	0.11	0.68***
Household wealth	0.10*	−0.01	0.02

*p<0.05; **p<0.01; ***p<0.001.

contextually specific, it may be possible that a family planning program such as NURHI disrupts unequal gender norms in one city (Ilorin) but not in another city (Kaduna), despite greater intensity of the program.

Some of our findings diverge from previous research results on social norms and contraceptive use. Most salient, our social norm factors for delaying first pregnancy, and spacing and limiting pregnancies include both injunctive and descriptive items. While our original analysis plan was to separate factors by descriptive norms and injunctive norms, doing so did not produce high factor loadings. Though distinguishing between injunctive and descriptive norms has become a common approach to social norms and behavioral research, the practice is not uniformly supported by all behavior change theorists (Rimal and Lapinski, 2015). For example, revisions of the theory of reasoned action do not make a distinction between these types of norms (Yzer, 2012). Relatedly, the fact that retaining injunctive and descriptive items within a single factor produced better statistical results may suggest that some respondents do not conceptually differentiate descriptive norms from injunctive norms.

This study has several limitations. First, this is a cross-sectional study and temporality cannot be established. It is possible that women who use contraception are subsequently more likely to perceive positive norms related to family planning within their communities. Additionally, when asked what most people in their community would do or whether most people in a reference group would approve of a particular behavior (injunctive norms), some respondents may revert to sharing their own opinions and perspectives (Cannon et al., 2022). This means that the survey questions in this study may have captured gender norms [operationalized as attitudes toward gender roles and dynamics in relation to family planning (Cislaghi and Heise, 2019a)] in addition to, or instead of, perceived social norms (perceptions of what community members would do or approve of with regard to family planning).

This study also has several strengths. Compared to running separate regression models, using structural equation modeling is a more comprehensive method to analyzing the relationship among latent variables. Structural equation modeling explicitly assesses measurement errors and estimates latent variables *via* observed variables. Additionally, fully developed models are tested against the data using SEM as a conceptual structure, meaning the relationship among the latent constructs and the observed variables must be pre-specified. The conceptual structure is then evaluated for fit against the sample data (Byrne, 2011).

As part of its FP2030 commitment, the Government of Nigeria aims to increase the national contraceptive prevalence rate from 12% to at least 27% through scaling up evidence-based, high impact practices (FP2030, 2022). The Government has also committed to reducing social and gender norms that hinder access to right-based family planning information and services (FP2030, 2022). Both of these efforts can be supported through continued communications and mobilization interventions that focus on shifting social norms around family planning. As seen in the study results, whether and how social norms shift depend on both the type of norm and the context and population within which the norm is being addressed. In order to design interventions that are adequately nuanced and have the best chance of effectiveness, program designers must differentiate and adapt interventions to specific communities. For example, while promoting norms to use family planning to space pregnancies may be an effective strategy across most communities, promoting norms for family planning use among adolescents may be less palatable and therefore less effective in certain communities. Program designers can use various analytic tools, such as the Social Norms Exploration Tool (Institute for Reproductive Health, 2020), to explore social norms for specific populations and their reference groups, and use the results to help better design norms interventions that are specific for their communities.

Conclusion

Further research is needed on how collective social and gender norms influence perceived social and gender norms and how both are related to behavior. Challenges remain in measuring collective norms, which exist at a social level, with validity. Aggregating data collected at the individual level is likely to be misleading (Lapinksi, 2005). Additionally, we need a more granular understanding of the circumstances under which

positive FP social norms lead to improved reproductive health behaviors. Whether and how norms lead to a given behavior depend on attributes of the behavior, such as how private or detectable the behavior is and how independently of other people the behavior can be carried out (Rimal and Lapinski, 2015; Cislaghi and Heise, 2018); characteristics of the individual, such as self-efficacy and self-monitoring (how strongly people are influenced by personal values and attitudes compared to the behaviors of those around them); and interpersonal- and societal-level moderators, such as group identify and group proximity (Rimal and Lapinski, 2015). The relationship between norms and behavior are further influenced by the strength of sanctions of not following the normative behavior and whether the norm is proximately or distally related to the behavior (Cislaghi and Heise, 2019b). These characteristics must be considered when designing future social and behavioral programming around family planning and reproductive health.

Data availability statement

The original contributions presented in the study are included in the article/supplementary materials, further inquiries can be directed to the corresponding author/s.

Ethics statement

The studies involving human participants were reviewed and approved by Institutional Review Boards at the University of North Carolina at Chapel Hill (UNC-CH) (No. 17-1215) in the United States and the National Research Ethics Committee of Nigeria (No. NHREC/01/01/2007). Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

Author contributions

IS and LC contributed to the conception and design of the original study. LC and CM led the data collection. MM led the design and analysis of the secondary data and wrote the manuscript. All authors contributed to manuscript revision and read and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Kath Woodward,
The Open University, United Kingdom

REVIEWED BY
Dina Refki,
University at Albany, United States
Hellen Venganai,
Women's University in Africa, Zimbabwe

*CORRESPONDENCE
Julius Kikooma
✉ kikooma.julius@mak.ac.ug

†These authors have contributed equally to this work and share first authorship

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Engaging men in gender transformative work in institutions of higher learning: A case of the men's hub at Makerere University

Julius Kikooma[1*†], Grace Bantebya Kyomuhendo[2†], Florence Kyoheirwe Muhanguzi[2†] and Stanley Babalanda[3]

[1]School of Psychology, Makerere University, Kampala, Uganda, [2]School of Women and Gender Studies, Makerere University, Kampala, Uganda, [3]Faculty of Social Sciences, Kyambogo University, Kampala, Uganda

It was noted that globally, sexual harassment (SH), abuse, and exploitation in higher education institutions (HEIs) remain a problem. In Uganda, it regularly made headlines in the media. Yet, it was only after high-profile cases were reported in the media that a spotlight was put on the problem. Moreover, despite there being policies on sexual harassment, changes in reporting processes, and a roster for the swift investigation of sexual harassment cases, sexual harassment persisted in the respective units of Makerere University. The study reported here was based on a project code-named "Whole University Approach: Kicking Sexual Harassment out of Higher Education Institutions in Uganda" (hereafter referred to as the KISH Project). It was action research intended to move beyond feminizing SH interventions and draw in all the key stakeholders with respectively tailored interventions that were need-based. The project applied multiple interventions targeting different stakeholders (including students, academic and support staff, and administrators) to address gaps, prevention, and support for the survivors of SH in HEIs. One of the project components is a "men's hub," which is aimed at providing space for both male staff and male students to hold dialogs on positive masculinity and call them to act as agents of change in a bid to address sexual harassment within higher education institutions (HEIs). As a platform that brings men together to discuss the issues of sexual harassment, the sessions at the men's hub enhanced their confidence and ability to prevent and respond to sexual harassment as well as their knowledge about the issues of masculinity and how they relate to sexual harassment. It was found to be an empowering platform with opportunities for awareness creation and the potential for amplifying the role of men in influencing change by speaking up and acting on their masculinity to address sexual harassment.

KEYWORDS

sexual harassment, engaging men, masculinities, gender, social norms

1. Introduction

Sexual harassment (SH), abuse, and exploitation remain a problem that has been widely reported in workplaces (Mukoboza, 2016). In fact, there is a wide range of literature on this subject (Pyke, 1996; Berman et al., 2000; Thomas, 2004; Huerta et al., 2006). It indicates that sexual harassment is a key issue at higher institutions of learning and is a real problem, which affects students' health, emotional wellbeing, and ability to succeed academically (Hill and Silva, 2005). Some of the literature makes the point that although students are disproportionately affected (due to the hierarchies in the power dynamics of the student-teacher relationship), everyone in this university campus setting is a potential victim of sexual harassment since female students, female lecturers, and male students are all harassed.

The question of hierarchies in the power dynamics at these institutions especially as it relates to the social construction of gender is treated as a key cause for the victimization, not only of female students but also of female faculty, especially when compared to the victimization that happens against men. According to the Ugandan National Academy of Sciences study of 2018, women are much more likely to be the victims because they are often more vulnerable than men. The reasons cited are their lack of power which puts them in more vulnerable positions. Nonetheless, men too can fall victim to both male- and female-perpetuated violence in university settings (Namitala, 2022).

Engaging men has now become part of established global efforts to prevent violence against women and girls (VAWG; Flood, 2011; Chakraborty et al., 2016, 2018), which is widely recognized as a pressing social issue across the world and is considered a violation of basic human rights, as well as having adverse effects on social, political, and economic inequity. Indeed, there are growing efforts globally to involve boys and men in the prevention of violence against girls and women. Efforts to prevent violence against girls and women now increasingly take it as a given that they must engage men and, as Flood (2011) noted, men are called upon to be involved in a range of initiatives as participants in education programs, as targets of social marketing campaigns, as policymakers and gatekeepers, and as activists and advocates. Most interventions focus on making men's behaviors and attitudes more gender equitable.

Issues of gendered violence and inequity have been addressed most prominently by feminist scholarship and research since the 1970's, which have recognized and highlighted the multilayered nature of such violence expressed in the multifaceted and hierarchical relationships between and among groups of men as well as between men and women. The direction taken in the literature that supports such scholarship argues for charting a path for allyship that capitalizes on the possibilities of moving from violence to supportive practice (Chopra, 2003; Flood, 2015). Scholars who hold this perspective argue that social research should take seriously men's current supportive practices (Cash and Smith, 2010; Macabre, 2012; Casey et al., 2016). While scholarship on male allies has demonstrated the nature of their transformations and motivations, less attention has been paid to their negotiations of masculinity, privilege, and the intersection between subjecthood and social contexts.

Feeding into conversations on how sociocultural and political constructions of hegemonic masculinity and patriarchal social norms underpin violence against women and other gendered bodies at interpersonal and structural levels, the relatively new and rapidly expanding research field of Masculinity Studies or Critical Men's Studies calls for deeper understandings of the social contexts in which men become engaged and the shifts, negotiations and changes that such work engenders in their conceptions of masculine identity subjecthood and community (Christofidou, 2021). As Christofidou (2021) noted, the debates currently unfolding in the field of critical men and masculinities studies concerns whether and how men and masculinities are changing and how these inform their engagements with women activists' anti-violence work in their communities. Such studies insist that men and masculinities be recognized as critical, both socially and politically, and foreground some of the ways in which particular versions of masculinity were and remain a key problem globally (Connell, 1998, 2000, 2001; Kimmel et al., 2005; Hearn et al., 2006). There is also a growing focus on men and masculinities in research on the African continent as well (Ratele, 2006, 2016; Shefer et al., 2007; Clowes, 2013; Mwine, 2018, 2019, 2020; Ahikire and Mwine, 2020). Alongside studies on gender, violence, and sexuality studies focusing on masculinities in Africa, scholars have begun to explore the social construction of heterosexual masculinities, particularly between and among young men and boys on the continent.

However, much of this research has been inspired by the imperatives of challenging the spread and impact of HIV/AIDS in Africa, and such research has inadvertently tended to demonize boys and men, constructing them as inherently problematic. As a result, such scholarship has not always provided a more nuanced picture of the complexities of the social construction of masculinity and the often contradictory experiences of boys and men (Pattman, 2007; Shefer et al., 2007; Bhana and Pattman, 2009). Relatedly, there is relatively little documentation on how programs that engage men and boys in the prevention of violence against women may lead to change or reformulation of masculinities in the African context. In feminist-informed programs, critically examining traditional assumptions about gender, and particularly masculinity, constitutes a central component of discussions with men regarding dismantling violence (Casey et al., 2012; Dozois and Wells, 2020). A number of interventions in this line of thinking invite men to reimagine closely held beliefs about their own gender but with the infrequent theorization of how the desired change can be supported to occur. As Gibbs et al. (2015) pointed out, the lack of an explicit theory within interventions working with men and boys means that it is sometimes unclear what change is sought.

1.1. Fighting sexual harassment in HEIs in Uganda

Addressing gender-based violence in all its manifestations is a priority area highlighted in a number of the Government of Uganda policies and plans including the 2015 National Development Plan (NDPII), the 2016 Social Sector Development Plan, the 2016 Gender Based Violence policy, and the 2007 Gender Policy. Notwithstanding the national level of commitment *via* the supportive policy and legal framework, the government recognizes that it has not fully addressed the problem. In a report of the parliamentary select committee on an inquiry into the allegations of sexual harassment in institutions of higher learning in 2019, the committee found that sexual violence is widespread in virtually all the institutions of learning visited. The committee however noted that the actual prevalence of the vice in the country is difficult to determine as many of the cases are never reported. It was also observed that in Uganda, there is no sufficient empirical information to initiate targeted programs for empowering students and staff to respond to and prevent sexual harassment in HEIs. Among other recommendations, the committee charged the Ministry of Education and Sports with formalizing the collection of data on sexual violence in the institution of higher learning and publishing it on an annual basis.

While academic institutions are considered elitist spaces with high awareness levels and intellectualism (Nyende, 2006 cited in Namitala, 2022), sexual harassment has received unprecedented attention in recent years within academia. There have been

opportunities to question hegemonic beliefs and practices upon which harmful forms of masculinities in higher education institutions are constituted through masculinities scholarship. Opportunities have also increasingly opened up to research men's experiences including how masculinities and femininities relate to the reproduction of inequalities. Moreover, while the drivers of sexual harassment are related to a range of underlying factors, it is part and parcel of manifestations of gender-based violence and the abuse of power. To address the challenge, Makerere University has put in place a policy and regulations against sexual harassment to curb the vice within its structures. The *Policy and Regulations Against Sexual Harassment* at Makerere University defines the term "sexual harassment" as "unwelcome sexual advances, requests for sexual favors or unwanted physical, verbal or non-verbal conduct of a sexual nature." To date, the university has a number of policies, systems, and structures for addressing sexual harassment at all levels including the Gender Equality Policy and the anti-sexual harassment policy objectives of ending sexual harassment, as well as the Gender Mainstreaming Directorate as a cross-cutting measure in all its operations. Yet, despite those structures, sexual harassment persists in the respective units of Makerere University (Namitala, 2022). It has also been noted that several cases go unreported, and there is a culture of fear and silence among the victims of the abuse (Makerere University, 2018; Namitala, 2022).

1.2. The problem

As part of the response to the above situation, Makerere University revised its policy on sexual harassment, changed reporting processes, and created a roster for swiftly investigating sexual harassment cases. The measures aim at imposing strict punishments for any infraction of the rules. However, there is a danger with this approach as these conflate behaviors and do not help in understanding or tackling the roots of unacceptable actions. Dysfunctional systems are not changed through "quick fix" punishments of offenders nor through codes of conduct and disciplinary procedures. As Alison Phipps (2017) pointed out, this is called "institutional airbrushing." What you get is that the visible blemish is removed and the underlying malaise is left to fester. Tackling sexual harassment on campus is more than naming and shaming. As others (Huerta et al., 2006; Mukoboza, 2016) have argued, seeking justice for sexual harassment without acknowledging the injustices built into the fabric of institutions will protect some at the expense of others. Without wider cultural change, they can simply create compliance through fear of punishment, which is the opposite of systemic reform. What is needed is cultural change, which makes a difference in the long term.

Against that background, the School of Women and Gender Studies working in collaboration with the School of Psychology, the School of Computing and Information Technology, and Kyambogo University undertook to provide a solution to the persistent sexual harassment within higher education institutions. The proposed solution was the project titled "*Whole University Approach: Kicking Sexual Harassment out of Higher Education Institutions in Uganda*" *(KISH Project)*. The KISH project was implemented with support from the Government of the Republic of Uganda through the Makerere University Research and Innovations Fund (Mak-RIF). The overarching objective of the project was to provide holistic measures involving all key stakeholders and institute multiple interventions targeting different stakeholders with different needs and capabilities.

The adoption of a holistic approach was one of its unique selling points for a number of reasons. First, it had been noted that the existing interventions were largely reactive in nature, mainly focusing on investigations of reported cases. This was already a serious constraint, given the parliamentary select committee findings that indicated that several cases go unreported and the existence of a culture of fear and silence among the victims. Second, the existing structures that include SH committees at various administrative units were largely inactive with no clear direction of work. Third, the focus on students was predominantly through sensitization meetings. Fourth, there had been no program specifically targeting male students and staff on the issues of sexual harassment in higher education institutions in Uganda.

1.3. The men's hub at Makerere University

One of the KISH project components is a men's hub for male staff and male students to dialog on masculinity, their roles, and accountability on issues of sexual harassment. It is a space created for a men's "hangout" club to hold fireplace-type conversations among men's groups around gender and violence against women and girls linking them with women's situations in their environment. It is designed to complement traditional "changing minds" approaches to behavior change (e.g., psychoeducational programming) using environmental cues to increase prosocial, equitable behaviors in specific male-oriented settings.

Through the KISH project, the men's hub started engaging men in the drive to end sexual harassment by forming men's groups on campus on a pilot basis. The pilot has been used to develop some materials for training peer groups in the prevention and engendering accountability among males engaged in programs for ending sexual harassment, abuse, and exploitation in higher education institutions in the country. At the moment, work accomplished has been undertaken at Makerere University. In the second phase of the project, it was replicated at another public university: Kyambogo University. The plan was to scale it to other institutions of higher education.

The intention was to come up with a platform that would enable us to create the social conditions that will stop SH before it starts. The idea was to work with men to cultivate capacities in three key areas for gender transformation, namely, gender equality, healthy masculinities, and healthy relationships. The hub's activities are geared toward strengthening this combination of capacities in "constructed" male-oriented settings with the hope that this would lead to healthy relationship competencies to stop the perpetration of multiple forms of gender-based violence including intimate partner violence, violence against women, dating violence, and peer-to-peer aggression. Approaching SH through a focus on male-oriented settings helps in amplifying the signals associated with gender equality and healthy relationships and correspondingly works to disrupt signals related to inequality, discrimination, and violence. Ultimately, the men's hub is working to support men to move toward becoming agents of change in public and observable ways.

Core themes from the conversations include paths to masculinity, the transmission of masculinity, male understandings of women, and the emotional lives of men. Paths to and transmission of masculinity deal with the participants' experiences and reflect on the ways in which they experience and learn about masculinity and where they derive these experiences and lessons. Male understandings of women capture the participants' views of women and how they relate to them in their everyday life. The emotional lives of men and transitional moments describe the participants' emotional experiences and the ways that these experiences facilitate meaningful changes in their lives.

2. Research framework

The KISH approach is a holistic system to prevent and respond to sexual harassment (SH) through student-friendly innovations that address knowledge gaps, prevention, and support for the survivors of SH in HEIs. It was action research intended to move beyond feminizing SH interventions and draw in all the key stakeholders with respectively tailored interventions that were need-based. The project included four key components, namely, an online KISH system for reporting, supporting, and processing cases of sexual harassment (SH) in a confidential and safe space; KISH Student's Clubs for capacity building in life skills and knowledge about prevention and reporting systems for SH for undergraduate female students which are managed by the trained coaches; online SH course for providing information on SH, policies and structures for addressing SH, sources of support, and response mechanisms for staff and students; and the men's hub for providing space for male staff and students to hold dialogs on positive masculinity and encouraging them to be the agents of change as a strategy for addressing SH within in HEIs.

2.1. Materials and methods

As an action research, the study utilized a mixed-methods approach involving evaluation methodologies to establish the impact of the proposed innovations. This included undertaking a baseline survey for establishing the characteristics, perceptions, and experiences of SH, knowledge of prevention and response mechanisms, user needs, and expectations of the KISH online application and course. An end line survey to establish the impact of the interventions was planned for but the results reported here are based on a midterm evaluation that was carried out after one year of implementation. Data were collected using the quantitative and qualitative methods for both the baseline and end-line surveys, respectively. Quantitative data were obtained using a questionnaire for students. Qualitative data were generated through key informants and in-depth interviews and focus group discussions for students and staff. Given the multiple components constituting the whole project, specific activities and results relating to each component were reported separately. Since the focus of this study was on the issue of engaging men in the fight against sexual harassment, the rest of the sections will be on the experience from this project relating to the men's hub component.

The mode of operation of the hub involves holding men's dialog groups for students and staff established as the nodes of conversation; quarterly meetings/seminars of certified hub members/alumni on different male-related topics; joint meetings for staff and students held once a year to showcase solidarity and their role in promoting masculinity; and an annual event of men's dialog to share with the public. We conducted 15 men's dialogs with groups of students and staff totaling 288 (i.e., 173 male students and 115 male staff). The workshops introduced participants to the following: sexual harassment, its forms, and effects; the concept of masculinity; the link between masculinity and sexual harassment; and progressive forms of male behavior that promote a sexual harassment-free learning environment.

As explained earlier, the men's hub involves holding dialog sessions in a workshop format targeting male staff and students, focusing on harnessing positive masculinity to address SH and sharing knowledge on SH, and developing strategies as a group to stop SH in HEIs. The workshops mainly focus on the terms "male sexuality" and "masculinity" as the descriptors for the socialization process that influence male sexual expression. This is after realizing that the manner in which the socialization processes are embedded within the men's sexuality and their psyche is ill-explored. Frequently, we got feedback from the participants pointing to the fact that the socialization processes that men undergo in their sexual development can lead them toward normalizing sexual violence.

Analysis of masculinity at the men's hub focused the attention of participants on the ill effects hegemonic masculinity has on men, as well as the detrimental and disastrous effects that it has on women. We engaged experts to help us reflect on the genealogy of its ill effects. The participants were asked to reflect on how they socialized into being men in their contexts. They reflected upon who their agents of socialization were that influenced their masculinities (i.e., the categories of masculinity they developed). These reflections were conducted using reflective tools, such as the "manbox," to recognize the challenges men face in trying to fulfill society's expectations about gender roles and the cost of harmful masculinities and to develop new perceptions for change.

After 1 year of implementation, a mid-term evaluation was conducted. The main objectives of the evaluation were to (1) track progress in the implementation of the project after 1 year; (2) identify the achievements as per the project objectives and outcomes; (3) examine the stakeholders' perceptions regarding the intervention's ability to address sexual harassment; and (4) identify the strategies for the uptake and sustainability of the interventions. The evaluation targeted male students and staff who participated in the men's hub activities and their facilitators. It focused on knowledge acquired about SH, prevention and response, positive masculinities and life skills, and the application of the knowledge and skills to address SH.

3. Results

The dialog sessions used the opportunities for reflection provided by the hub's environment to get participants to reflect on the importance, not only of acknowledging the negative impact that dominant forms of masculinity have on women but also on how they undermine boys' and men's health and wellbeing. In addition, this awareness—of the dangers of conforming to harmful masculine lifestyles—was the basis for engaging the participants to question and seek to transform harmful practices. The key findings from the sessions are organized under three issues, namely, men's understanding of sexual harassment; the causes of sexual harassment; and what men stand to gain from gender equity and a violence-free academic environment.

3.1. Understanding sexual harassment

Regarding the manifestations/forms of sexual harassment, men's perception reflected a narrow understanding of sexual harassment at the beginning of the dialogs. Most of the men were limiting sexual harassment to sexual intercourse, leaving out many other forms. However, as the dialogs continued and heated debates arose, more forms and manifestations were identified and these helped in widening and deepening their understanding of sexual harassment as exemplified in the following extracts describing it as:

> *Inappropriate physical conduct of any body parts such as scratching, pinching, stroking or brushing up the body*
> *Unwanted and persistent explicit or implicit propositions to engage in sexual activity*
> *Intentional disrobing or exposure of sexual body parts or underwear*
> *Unwanted demands for sexual relations in exchange for employment or academic or other favors*
> *Sexual scares such as leering and ogling with suggestive overtones*
> *Lustful gestures such as hands or sign language to denote to sexual activity*
> *Stalking through following or spying on a person*
> *Sexual assault and rape*
> *ICT or Cyber based sexual harassment such as trolling through tweets, text messages and sharing unwanted private massages and photos on social media platforms.*

The male staff participants argued that the existing policy against sexual harassment at Makerere University seems to be narrow in defining what comprises sexual harassment and that it needs to be widened and made more clear on what constitutes sexual harassment. Having a broader understanding of sexual harassment would help them to avoid operating in ignorance.

3.2. Causes of sexual harassment

With regard to the causes of sexual harassment, different participants come up with different accounts. They revolved around the nature of socialization the men go through and the culture of silence.

3.2.1. The nature of socialization the men go through

Among the commonly agreed upon causes was the nature of socialization that men go through in the various social institutions that make the boy child develop a feeling of sexual entitlement at the expense of the girl child. Besides, power games in the form of power over women that men mainly use to exploit women sexually were also mentioned. One of the examples that come out vividly was the power of the red pen held by the lecturer.

> "*With the power of the red pen in the hands of the male lecturer who feels entitled to sexual pleasure, the young girls around campus can hardly survive sexual harassment*" (a male student participant).

Most of the participants directly or indirectly linked sexual harassment to the long-term effects of one's possession of toxic masculinities. The participants argued that they or their male friends exhibit behaviors that might result in sexual harassment. Such acts include the following: use of threatening tone or words, aggressiveness, desire to control others using hands, suppression of emotions, treating sex as a competition, men talking about their conquest, feeling entitled to sex every time you see a woman, looking at women as sexual objects, looking at women as weak, and categorizing some men as weaker because of their sexual behavior mainly those with one sexual partner.

Related to toxic masculinities, male students discussed the issue of the ideal male student behavior at university and how it related to sexual harassment. Male students argued that the ideal male student and sexual harassment are related. They insisted that they are about

> "*Be having many girls or 'importing' or sleeping with many of them,"*
> *"getting ladies for sex at all costs,"*
> *"being physical fit it which includes the ability to sleep with a number of girls at campus,"*
> *"being vulgar, we observe men at university taking pride in throwing vulgar words to ladies,"*
> *"being intelligent in class and discussions makes more girls attracted,"*
> *"a drunk male student would have a strong desire to sexually abuse their female counterparts."*

Male student participants conceded that the normalization of such behaviors referred to as ideal male student conduct at university has rendered many male students to become seasonal perpetrators of sexual harassment.

They, however, suggested that the only way to overcome this challenge is through promoting progressive masculinities because, for them, there is no relationship between being a gentleman and sexual harassment. Being a gentleman demands that you will have one girlfriend, will respect the ladies, and will try as much as you can to support the ladies to settle on campus and progress academically.

Upon realizing that conforming to what is commonly understood in campus language as "cool masculinities" has the potential to institutionalize sexualized relations, the hub participants noted that this is the recipe for the toxic masculinity practices that lead to SH. These "cool" albeit toxic masculinities are characterized by,

> *Looking nice—gals fall for you "Importing" Having sex with multiple girls, Drinking/clubbing Braving the strike, Sex, just-for-just Updating sexual relations, and Vulgarity (Mwine, A. Men's Hub facilitator).*

Conforming with such sexualized masculinities comes with a cost, not only in financial and health terms, but also in terms of lost time for education (inadequate attention and poor academic performance), negative institutional reputation (unsafe and sexualized spaces), and essential learning in institutions of higher education about sexual relationships and legitimizing a subtle culture of sexual oppression. In addition, participants also

decried the general decay of moral values accompanied by diverse cultural differences among people. This came out during a heated debate on whether a dress code that is perceived as indecent can cause sexual harassment or not. On this issue, dialog participants would identify with either of the two positions. One position was a view that perceived indecent dressing was responsible for tempting men to sexually harass their female counterparts, given the way the women dressed. However, the second position was based on a disagreement with the issue of perceived indecent dressing as a justification for sexual harassment. They argued that different cultures define indecency differently and that what one considers indecent among the Baganda for instance might not be indecent among the Karamojong. The Baganda people constitute the largest ethnic group in Uganda. The Karamojong people are an ethnic group that lives in the northeastern part of Uganda and have a very different cultural setup from that of the Baganda people.

3.2.2. Culture of silence

The participant's views on reporting sexual harassment cases were negative, indicating that the majority of men never believed in reporting sexual harassment cases whether as victims or bystanders. During the dialogs, male staff and students defended their unwillingness to report sexual harassment raising arguments like:

- "*We were advised that we use counseling to help the 'student harassers' rather than run out of class…*"
- "*Oh, imagine a male lecturer reporting a female student for sexual harassment! Of course I have been a victim but…. it's just tricky.*"
- "*I was harassed and asked a female lecturer colleague to help and counsel the student. It was tricky too.*"
- "*By the way forms and motives for harassment differ and the response/management needs to be response specific.*"
- "*Men are quiet because they are just reserved, and take it normal.*"
- "*It is fairly easier to survive an 'attack' by a student on the part of a male lecturer who is not ready to fall victim than it is when a student is harassed by a lecturer.*"
- "*The issue of SH has been largely one sided, always portraying men as perpetrators while women are always victims… so, I think the chances of my claims being taken seriously/believed are low. Perhaps I will be seen as not being 'man enough.*"'
- "*Some students feel very beautiful and think they can lure any man. They therefore feel the power to move male lecturers by their sexual attractions.*"
- "*Although there have been cases where a female harasses a male but when the male refuses, the female say, am going to shout that you want to rape me and so, from harassment to blackmail and threats.*"
- "*However, on the other hand, men are not empowered to report violence against them. The superiority complex shuts them down and suffer with the abuse.*"

Both male students and staff alluded to the challenge of men reporting sexual violence as having structural and psychological constraints in that nobody in the concerned offices seemed to believe men can be sexually harassed. To them, society has been made to believe that it is men who harass and not otherwise. Below, we share some notable quotes from the men's conversations at the hub:

> …The issue of SH has been largely one-sided, always portraying men as perpetrators while women are always victims. So, I think the chances of my claims being taken seriously/believed are low. Perhaps I will be seen as not being "man enough"…
>
> …Some students feel very beautiful and think they can lure any man. They therefore feel the power to move male lecturers by their sexual attractions…
>
> …A female student comes "Help me I am willing and ready to do anything"…

Credibility and victim-blaming were other causes that participants pointed out. According to the participants, the more victims are blamed for having been sexually harassed, the more they shun away from reporting and seeking help and this gives leeway for the perpetrators to continue. They also hinted that most of the existing structures make it a blame game by asking the victims questions such as:

> "*What were you doing in his room? Why did you walk alone at night? Why did you dress like that?*"

Such blame game-based questions and others tend to scare away victims from reporting cases of sexual harassment, and this causes the persistence of the vice.

Regarding the participant's perception of who are the most common victims of sexual harassment, they indicated that

> "*It could be anybody, all of us, anybody can be a victim, Staff and students, mainly female students, male and female, both gender, but I think the first party to perceive it, mostly those with least power in a relationship, students can be perpetrators of sexual harassment against male lecturers, even male students against female lecturers.*"

3.3. What men stand to gain from gender equity and a violence-free academic environment

The responses of men's hub participants during the midterm evaluation indicated that they appreciated the opportunity that the men's hub provided. They noted that it helped them to engage with real-life situations as men, re-learn, and unlearn from each other as well as getting to understand how they contribute to sexual harassment. In addition, they observed that the dialogs provide them with information to make informed decisions about their behaviors and "control themselves from falling into trouble," other than traditional culturally held notions of masculinities and of who a man should be.

Below are some men's hub voices from the respondents who participated in the midterm evaluation.

> *The strength of the hub is getting men to talk to each other and with each other because this is a subject that is rarely got before men to discuss and talk about, so I think that's the strength of the hub. When men normally meet, they tend to talk about other things but not issues of sexual harassment of the women. (IDI, Men's Hub—Staff)*
>
> *The men's hub has given information and taught us about sexual harassment online, how to report and how to prevent ourselves from being perpetrators of the sexual harassment vices more so it has enabled us to reach out to the students with such information because we have held several meetings hence its meeting these objectives. (IDI, Men's Hub—Student)*
>
> *Where I work, I deal with gender-based violence, I have done research on gender-based violence, I have had an addition knowledge, the concept of positive masculinity I knew of, and I thought was in practice, but I did not know what I was practicing. I knew it was all about being fair, I did not know about the concept of positive masculinity. That has to be a lesson and a course that has to be taught to others. (IDI, Men's Hub—Student)*

According to these students and staff, the sessions enhanced their confidence and ability to prevent and respond to sexual harassment as well as their knowledge about the issues of masculinity and how they relate to sexual harassment. The men's hub as a platform that brings men together to discuss the issues of sexual harassment was found to be an empowering platform with opportunities for awareness creation, amplifying the role of men to influence change by speaking up, and acting on their masculinity to address sexual harassment.

In total, five specific benefits for men's hub participants were identified for promoting an educational environment that is free of SH. These include the following:

1. Academic excellence—young men performing exceptionally well. This can be made through intentional processes of challenging and re-imagining masculinities on the campus that lead to crafting new values, rules, and expectations of being a university student—(e.g., celebrating academic performance), and they can act as partners in the fight against SH in the university by:

    a. Promoting positive masculinities which are progressive in nature.
    b. Supporting their female counterparts in progressively pursuing their academic and career goals.
    c. Treating women the way they would have treated their sisters or daughters.
    d. Sensitizing their male counterparts on the need for creating a favorable environment for working and learning that is free of sexual harassment threats.
    e. Understanding that women are not sub-humans, they can suffer other people's conduct against them, and they need to realize that these are students and not sexual objects. They need to be treated as students who need to be helped to improve their performance. … *We need to treat these students as our daughters.*
    f. Reconceptualization of women not as sexual tools.

2. Hub members identifying, reporting, and condemning cases of SH.
3. Mentor each other and new university entrants on non-violence and SH-free practices.
4. Open up opportunities to question hegemonic beliefs and practices upon which harmful forms of masculinities in higher education institutions are constituted to include deliberately engineering unlearning, and re-learning of everyday cultural expectations that compel men into SH.
5. Participating in university leadership; including mentorship of freshers—student leaders.

4. Discussion

When the men's hub was set up at Makerere University, it sought to operationalize a conceptual model for engaging men as advocates for change, as advanced by Funk (2018), centered on working with men to build capacities in the following three key areas: gender equality, healthy masculinities, and healthy relationships. During the dialogs, male students and staff members proposed a number of ways through which they can act as partners in the fight against sexual harassment at the university. These included the following:

- Having a broader understanding of sexual harassment so as to avoid operating out of ignorance.
- Embracing reporting of cases of sexual harassment whether as victims or as bystanders.
- Practicing morality and ethical values as men in society.
- Talking to students openly to reveal to them that none of the two parties is meant to harass the other sexually.
- Breaking the silence about sexual harassment.

Taking responsibility for their personal actions and views regarding matters of sexual harassment such that… "we stop blaming one another but ourselves."

As the work evolved, the emphasis shifted to include a greater focus on social norms and networks. It was realized that engaging a socially privileged group in dismantling structures that benefit them can be challenging. Indeed, during the activities of the men's hub, two issues become manifest during critical reflections between participants and the facilitators. First, as Casey et al. (2012) pointed out critically exploring traditional masculinity and its associated privileges generates one of the fundamental tensions inherent in engaging men in anti-violence work. It is like inviting them to change closely held beliefs about their own gender. It is tantamount to asking them to shed the privileges that accrue to them based on gender. Therefore, while participants appreciated the benefits of a more gender-equal society, they also realized they had something to lose from restructuring the prevailing systems of power. So, while all men's hub participants were initially interested to be part of the call to men to be agents of change, many were cautious or hesitant as some of the extracts presented under the results on men's socialization and the culture of silence indicated. This goes to show that when mapped on Funk's (2018) three rungs continuum of male engagement to prevent gender-based violence and promote gender equality, the majority were at the "maintain status" quo or the "aware" rungs. "Maintain status" participants were characterized by hostile, opposed, resistant or uninterested views, and attitudes toward promoting gender equality. Participants' views categorized under the "aware" rung were hesitant, curious, and interested. In all, both categories fall below the ultimate rung on Funk's (2018) continuum of male engagement labeled "advocate" where

one demonstrates the characteristics of being inspired, engaged, influencing and even leading efforts to prevent gender-based violence and promote gender equality.

Second, traditionally toxic masculinities are associated with gender inequality and violence against women. Yet that framing is based on a deficit model (i.e., tells men what they should not do, rather than focusing on alternative attitudes and behaviors) that reinforces a simplistic gender binary (i.e., man/woman) with no scope for flexibility, reflection, or experimentation and as such passively contributes to the reproduction of patriarchal relations and structural inequality. What emerged from the excerpts of participants reflecting on what men stand to gain from gender equity and a violence-free academic environment indicates that a shift in emphasis is needed to tap the power of networks as cornerstones for transmitting cues for human behavior change. According to Dozois and Wells (2020), human behavior is governed by a subtle but pervasive set of cues that are transmitted through networks. It is therefore plausible to suggest that male-oriented settings have the potential to amplify the signals associated with gender equality and healthy relationships. The efforts of the men's hub in this respect are geared toward disrupting signals related to inequality, discrimination, and violence and building their capacity to help each other so that people in those settings can increasingly engage in healthier and equitable relationships.

5. Conclusion

Using experiences from an action research intervention project on engaging men and boys in gender transformative work, the article interrogates what men can do to work with women in challenging the institutionalized nature of sexual and gender-based violence. Extracts from the men's dialogs and their responses from the mid-term project evaluation suggest that men are interested in the work, but they are also hesitant or cautious. Assessing ways men respond, react, or behave in this kind of work and recognizing where they are at in the process can help in supporting men's transition into advocates for change.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving human participants were reviewed and approved by Makerere University, Social Sciences Research Ethics Committee. The Ethics Committee waived the requirement of written informed consent for participation.

Author contributions

JK, GK, and FM contributed to conception and design of the study. SB organized the database. JK wrote the first draft of the manuscript. All authors contributed to manuscript revision, read, and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Alfonso Osorio,
University of Navarra, Spain

REVIEWED BY
O. Alexander Miller,
Voorhees College, United States
Michael Amera,
Debre Berhan University, Ethiopia
Manuel Lucas Matheu,
University of Almeria, Spain

*CORRESPONDENCE
Birhan Tsegaw Taye
✉ tsegawbirhan2@gmail.com

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Intimate partner sexual violence during pregnancy and its associated factors in Northwest Ethiopian women

Zelalem Nigussie Azene[1], Mehari Woldemariam Merid[2], Asefa Adimasu Taddese[2], Zewudu Andualem[3], Nakachew Sewnet Amare[4] and Birhan Tsegaw Taye[4]*

[1]Department of Women's and Family Health, School of Midwifery, College of Medicine and Health Sciences, University of Gondar, Gondar, Ethiopia, [2]Department of Epidemiology and Biostatistics, Institute of Public Health, College of Medicine and Health Sciences, University of Gondar, Gondar, Ethiopia, [3]Department of Environmental and Occupational Health and Safety, Institute of Public Health, College of Medicine and Health Sciences, University of Gondar, Gondar, Ethiopia, [4]School of Nursing and Midwifery, Asrat Woldeyes Health Science Campus, Debre Berhan University, Debre Berhan, Ethiopia

Background: Violence against women is a global problem. In pregnant women, it is a particular concern as a virtue of the additional risks to the unborn child. Of different acts of violence, sexual violence shares the major contribution that results in short and long-term physical, sexual, reproductive, and mental health problems of pregnant women. Little is known about sexual violence during pregnancy in Ethiopia.

Objective: this study aimed to assess the proportion and factors associated with intimate partners' sexual violence against pregnant women in Northwest Ethiopia.

Methods: A cross-sectional study was conducted among 409 pregnant women in Debre Markos town from March to April 2018. The study participants were selected using a systematic random sampling technique. A pre-tested and validated questionnaire was used. Binary logistic regression analyses were done to identify associated factors and the adjusted odds ratio (AOR) with its 95 % confidence interval (CI) at a p-value of <0.05 was used to declare a significant association.

Result: Of 409 pregnant women, 19.8% have experienced sexual violence by their intimate partner during their current pregnancy. Accordingly, the major intimate partner sexual violence during pregnancy was having unwanted sexual intercourse due to fear from the partner (13.4%), being forced to do something sexual that is degrading or humiliating (13.0%), and being physically forced to have sexual intercourse (9.8%). Living with her partner/husband (AOR: 3.73, 95% CI: 1.30, 10.69), uneducated educational status of partner (AOR: 2.43, 95% CI: 1.06, 5.56), and frequency of alcohol consumption (AOR: 3.20, 95% CI: 1.24, 8.26) were factors associated with increased occurrence of intimate partner sexual violence during pregnancy.

Conclusion: The proportion of sexual violence against pregnant women by their intimate partner(s) was found to be common in our study. Socio-demographic and behavioral-related factors were risk factors for sexual violence. As a result, preventive strategies and interventions centering on the empowerment of those facing the greatest barriers to reproductive freedom require a shift from traditional ways of thinking.

KEYWORDS

sexual violence, pregnant women, intimate partner, Ethiopia, sexual and reproductive health

Introduction

Intimate partner sexual violence (IPSV) can occur in all types of intimate relationships regardless of gender identity or sexual orientation and it is not only defined by gender or sexuality but also by abusive behavior (Krug et al., 2002; Taylor and Gaskin-Laniyan, 2007; Zinzow et al., 2010; US Department of Justice, 2012; Abebe Abate et al., 2016). It is correspondingly defined as an act that results in any suffering or harm to women, including threats and deprivation of liberty, occurring either in public or private life committed by acquaintances or strangers (Karaoglu et al., 2005).

Globally, an estimated 35% of women have experienced either physical and/or IPSV (Kilonzo et al., 2009; Global WHO, 2013; Thomson, 2019) 9.12, and among 70% of survivors who were victimized by someone they knew, about 25% are sexually abused by an intimate partner or spouse (Centers for Disease Control and Prevention, 2014). Despite, sexual violence legislation in Africa, particularly, sub-Saharan Africa has been increasing (Nasir and Hyder, 2003; Angela, 2012) and the problem is preventable (ACOG, 2019), the occurrence ranged from 4 to 54% (Centers for Disease Control and Prevention, 2003; Head and Milton, 2014) 11. The magnitude of IPV ranged from worldwide (9), and 2-57% in Africa (10). In Ethiopia, the pooled prevalence of IPV was 26.1% in 2018 (11). As of evidence, approximately 15–71% of people experienced physical, sexual, or some combination of these types of violence at some point in their lives (12).

Violating pregnant mothers is a major public health crisis and a barrier to the development of the country (Angela, 2012; ACOG, 2019). As evidence indicated that victims of violence experience physical injury, mental health problems, and physical problems including suicide attempts, cardiovascular disease, unwanted pregnancy, registering late for prenatal care, suffering from preterm labor or miscarriage, or giving birth to low birth weight infants, gynecologic disease and substance abuse, which can all lead to hospitalization, disability or death (Savona-Ventura, 2001; Centers for Disease Control and Prevention, 2003; Karaoglu et al., 2005; Head and Milton, 2014; ACOG, 2019). Sexually violated women are more likely to have a poor quality of health as compared to women without a history of abuse (Bonomi and Rivara, 2007; Pikarinen et al., 2007; Ellsberg et al., 2008; Zinzow et al., 2011) and develop complicated pregnancy outcomes (Stenson et al., 2003). Another report also showed that nausea and vomiting, tiredness, backache, heartburn, constipation, vaginal discharge, leg cramps, edema, headache, urinary incontinence, pelvic girdle relaxation, and urinary tract infections during pregnancy are results of sexual violence which changes the normal physiology (Freeman, 1980; Enkin and Neilson, 2000; Draper, 2006) and usually have no bearing on the outcome of pregnancy (Freeman, 1980; Enkin and Neilson, 2000).

Youn age, high-risk behavior including alcohol/substance misuse, and other forms of violence such as domestic violence by a spouse or partner in an intimate relationship against the other spouse or partner (Avegno and Mills, 2007; Kilpatrick et al., 2007; Tjaden and Thoennes, 2000). Other researchers also explained socio-economic, cultural, biological, and environmental factors. Thus, low income, low education status, involvement in aggressive or delinquent behavior as an adolescent, alcohol, and drug use, personality factors including low self-esteem, depression, antisocial personality disorders, having experienced violence as a child, gender differences in society, rigid gender roles and traditional norms that favor men, and most women are subordinate to their husbands and the acceptance of such behavior by society are some of the known related factors (Rosenberg and Hammond, 1998; World Health Organization Document, 2004). As a result, sexual violence causes serious physical, mental, sexual, and reproductive health problems for women in the short and long-term affecting their whole life.

Despite this considerable health burden, previous studies focused on the prevalence and determinants of intimate partner violence; so, little is recognized about the sexual violence of pregnant women in Ethiopia, particularly in the study area. Moreover, evidence is not well documented on which factors are contributed to an increase in intimate partner sexual violence in the course of pregnancy. Hence, this study aimed to assess the proportion and factors associated with intimate partner sexual violence in pregnant women.

Methods

Study design, period, and setting

A facility-based cross-sectional study was conducted from March 16 to April 14, 2018, in Debre Markos town, Northwest Ethiopia. It is located in the East Gojjam Zone, far 299 kilometers Northwest of Addis Ababa, the capital of Ethiopia. Depending on the population projection of Ethiopia for all regions at the woreda level from 2014–to 2017, the town has an estimated total population of 92,470, of which 46,738 were females. It also comprised one referral hospital, three public health Centers, seven private clinics, and 14 health posts, seven in rural and seven in urban areas. All four public health facilities and three private clinics in the town are providing antenatal care services.

Source and study population

All pregnant women who visited the public health institutions in the town for ANC service were the source population, whereas pregnant women who were available during the data collection period in the selected institutions were the study population.

Sample size determination and sampling procedure

The sample size (422 pregnant women) was computed by using a single population proportion formula by considering the following assumptions: The proportion of women who have experienced IPSV during pregnancy was 50%, the level of significance was 95%, a margin of error 5%, and non-response

Abbreviations: ANC, Antenatal Care; IPSV, Intimate Partner Sexual Violence; SPSS, Statistical Package for Social Science; WHO, World Health Organization.

rate 10%. The sample size was allocated proportionally to the four health facilities in the town according to the number of previous client flow (pregnant women) that visited each health facility during the preceding month before data collection. Then, the study participants were selected through a systematic random sampling technique.

Study variables and measurements

IPSV during pregnancy is a response variable, whereas socio-demographic, husband or partner characteristics, socio-cultural and family experience of violence, and reproductive variables were independent variables included in this study. An intimate partner was defined as a current spouse, co-habited (live in the same house without formal marriage), current non-marital partner (boyfriend), former partner, or spouse. Sexual violence was considered in this study if the study participant's response is "Yes" to any one of the items such as uses of force, coercion, or psychological intimidation to force the woman to engage in a sex act against her will whether or not it is completed.

Data collection tools, procedures, and quality control

The content validity of the questionnaire was judged by a group of researchers who are experts on maternal and child health to evaluate and enhance the items in the question. A face-to-face interviewer-administered questionnaire (Devries et al., 2011) was used to collect data from all pregnant women who consented to be part of the study. To ensure the quality of data, the questionnaire was first developed in English, then translated into the local language (i.e., Amharic), and finally back into English to check its consistency by local and English language professionals. Five female midwives for data collection and one BSC midwife for supervision were recruited from each of the public health institutions in Debre Markos town. They were trained for one day on the objective of the study and the ways of data collection. Supervisors and principal investigators have closely monitored the day-to-day data collection process. Finally, data were sorted, checked, entered into the EPI-Info, and cleaned for analysis.

Data processing and statistical analysis

The questionnaires were coded, and the data were entered and cleaned by EPI-Info 7.0 statistical software and then exported to SPSS version 20 for further analysis. Data were summarized and descriptive statistics were carried out. Model fitness was checked using Hosmer and Lemeshow test. Bivariable and multivariable logistics regressions were fitted to identify the significance of associations between the outcome and independent variables. In multivariable logistic regression analysis, a p-value of ≤ 0.05 with 95% CI for the AOR was used to determine the significant association.

TABLE 1 Socio-demographic characteristics of the study participants ($n = 409$).

Characteristics		Frequency	Percentage
Age of women in years	17–23	118	28.9
	24–26	95	23.2
	27–30	106	25.9
	31–46	90	22
Religion	Orthodox	339	82.9
	Muslim	59	14.4
	Protestant	8	2
	Catholic	3	0.7
Place of residence	Rural	116	28.4
	Urban	293	71.6
Current marital status	Single	8	2
	Married	391	95.6
	Divorced	7	1.7
	Widowed	1	0.2
	Separated	2	0.5
Type of marriage ceremony	No ceremony Civil marriage Religious marriage Customary marriage	29 52 56 264	7.2 13 14 65.8
Women's education	No formal education	128	31.3
	Primary education	64	15.6
	Secondary education	103	25.2
	More than secondary	114	27.9
Partner's education	No formal educational Primary education Secondary education More than secondary	123 44 95 147	30.1 10.8 23.2 35.9
Women's occupation	Housewife	188	46
	Farmer	75	18.3
	Student	1	0.2
	Private employee	18	4.4
	Government employee	79	19.3
	Merchant	35	8.6
	Others[a]	13	3.2
Partner's occupation	Farmer Student Private employee Government employee Merchant Others [b]	107 3 93 122 66 18	26.2 0.7 22.7 29.8 16.2 4.4
The decision-maker in the household	Husband only Me only Jointly	132 4 238	35.3 1.1 63.6
Living with partner/husband	Yes No	35 374	8.6 91.4

(Continued)

TABLE 1 (Continued)

Characteristics		Frequency	Percentage
Partner's unfaithful relation	Yes No	238 171	58.19 41.81
Partner's frequency of alcohol drinking	Daily 1–2 times per week ≤3 times per month	92 93 69	36.2 36.6 27.2
Monthly income in ETB	<2,500	212	51.8
	≥2,500	197	48.2

Others[a], daily laborer, unemployed; Others[b], Driver, Deacon, daily laborer, priest.

Results

Maternal socio-demographic characteristics

Of a total of 422 sampled population, 409 participants were involved in this study making a response rate of 96.9%. The mean age of women was 27.1 ± SD 5.6 years. More than half (52.1%) of the respondents were in the age group of 17 to 26 years. The samples were predominantly urban (71.6%) and orthodox Christian 339 (82.9%) religion followers. Regarding the occupational status of the respondents, 46.0 % were housewives. About 95.6 % of the respondents were married and 31.3% have no formal education. Of the total participants, 35.3% of women reported that household decision was made by their husband only and 63.6% of participants had a joint decision with their husband (see Table 1).

Obstetrics characteristics of participants

Of the participants, 114 (28.4%) respondents got married before the age of 18 year-olds and 44 (10.8%) became pregnant for the first time. More than half (51.6%) start their ANC follow-up in the first trimester of pregnancy. Moreover, 24 (5.9%) of the study participants had a history of abortion (see Table 2).

The proportion of IPSV among pregnant mothers

This indicated that the overall proportion of intimate partner sexual violence during the current pregnancy was 19.8% (95% CI: 15.9, 23.5). Thus, the major IPSV during pregnancy was having unwanted sexual intercourse due to fear from the partner 55 (13.4%), being forced to do something sexual that is degrading 53 (13.0%), and being physically forced to have sexual intercourse 40 (9.8) (see Table 3).

TABLE 2 Obstetrics characteristics of participants ($n = 409$).

Characteristics		Frequency	Percentage
Age at first pregnancy	<18 years	44	10.8
	≥18 years	365	89.2
Age at first marriage	<18 years ≥18 years	114 287	28.4 71.6
Gravidness	Primigravida Multigravidas	194 215	47.4 52.6
Pregnancy desired by	Women Partner Both of us	144 148 117	35.29 36.1 28.61
First ANC initiation	1st trimester 2nd trimester 3rd trimester	211 169 29	51.6 41.3 7.1
History of abortion	Yes	24	5.9
	No	385	94.1

TABLE 3 Proportion of IPSV among pregnant women in Debre Markos town, Northwest, Ethiopia ($n = 409$).

Violence items	Frequency	Percentage
Physically forced you to have sexual intercourse	40	9.8
Having unwanted sexual intercourse because of fear from the partner	55	13.4
Forced you to do something sexual that is degrading or humiliating	53	13.0
The overall prevalence of IPSV during pregnancy	81	19.8

Factors associated with IPSV among pregnant women

In the bi-variable analysis; extramarital sex, education status of partner, frequency of alcohol consumption, residence, living with partner/husband, the timing of ANC start, educational status of women, had children from another partner (s), partner's occupational status, and partner's unfaithful relation was significantly associated with sexual violence by an intimate partner during pregnancy but lost the significance in multivariable analyses. After controlling the possible confounders, however, only living with her partner/husband, education status of the partner, and frequency of alcohol consumption were found significantly associated with increased prevalence of IPSV during pregnancy.

In our study, women whose husbands/partners consume alcohol frequently were 3.2 times (AOR: 3.20, 95% CI: 1.24, 8.26) more likely to be victimized by intimate partner sexual violence than their counterparts. The educational status of the partner was also another sociodemographic variable predicting the likelihood of IPSV during the time of pregnancy. Pregnant women whose partners/husbands were uneducated were at 2.43 (AOR: 2.43, 95% CI: 1.06, 5.56) times higher risk to attempt IPSV as compared to their counterparts (see Table 4).

TABLE 4 Bivariable and Multivariable analysis of factors associated with IPSV among pregnant women in Debre Markos town, Northwest, Ethiopia ($n = 409$).

Variables	Category	IPSV		COR (95% CI)	AOR (95% CI)
		Yes	No		
Timing of ANC start	1st trimester	33	178	0.58 (0.35–0.95)	0.72 (0.38–1.37)
	2nd and 3rd trimester	48	150	1(Ref)	
Residence	Rural	30	86	1.66 (0.99–2.77)	2.52 (0.76–8.28)
	Urban	51	242	1(Ref)	
Frequency of alcohol consumption	Daily	32	60	3.56 (1.56–8.09)	3.2 (1.24–8.26)*
	1–2 times per week	27	66	2.73 (1.19–6.26)	2.84 (1.11–7.26)*
	≤3 times per month	9	60	1(Ref)	
Women's education	Not educated	30	98	1.38 (0.83–2.29)	0.63 (0.27–1.5)
	Educated at least primary level	51	230	1(Ref)	
Partner's education	Not educated	37	86	2.37 (1.43–3.91)	2.43 (1.06–5.56)*
	Educated at least primary level	44	242	1(Ref)	
Extramarital sex	Yes	28	71	1(Ref)	
	No	53	257	0.52 (0.31–0.89)	0.67 (0.29–1.54)
Partner's occupation	Farmer	27	80	1(Ref)	
	Private employee	23	70	0.97 (0.51–1.85)	3.03 (0.81–11.39)
	Gov't employee	13	109	0.35 (0.17–0.73)	1.96 (0.43–8.95)
	Merchant	13	53	0.73 (0.34–1.53)	3.72 (0.81–17.12)
Had children from another partner (s)	Yes	20	43	2.17 (1.19–3.95)	1.43 (0.56–3.64)
	No	61	285	1(Ref)	
Living with partner/husband	Yes	13	22	2.66 (1.27–5.54)	3.73 (1.3–10.69)*
	No	68	306	1(Ref)	
Partner's unfaithful relation	Yes	59	179	1(Ref)	
	No	22	149	0.45 (0.26–0.77)	0.54 (0.27–1.06)

*$p < 0.05$, Hosmer and Lemeshow goodness of fit ($p = 0.71$).

Furthermore, living with her husband also affected the occurrence of sexual violence during pregnancy. The pregnant women who were living with their husbands were at 3.73 (AOR: 3.73, 95% CI: 1.30, 10.69) times increased risk of being abused by their intimate partner as compared to women living alone.

Discussion

In Ethiopia, under the current sustainable development goal (SDG) period, the welfare of mothers, newborns, and children remains a top priority for health, but intimate partner sexual violence has become one of the main contributing factors that adversely affect the health of the woman and her fetus. To the best of our knowledge, this study is the first of its kind to exclusively quantify the proportion of IPSV during pregnancy along with the associated factors in Ethiopia. Hence, the current study has particularly assessed the proportion and the factors of IPSV in the setting.

Accordingly, the key findings of this study point out the role of social determinants of health in maternity services in Ethiopia and the necessity of conducting further research using a triangulated methodological approach to address deep-rooted social determinants of health in the context of IPSV. The overall proportion of IPSV during the current pregnancy was found to be 19.8% (95% CI: 15.9, 23.5). Thus, the major IPSV during pregnancy was having unwanted sexual intercourse because of fear from the partner (13.4%) and being forced to do something sexual that is degrading or humiliating (13.0%). Moreover, living with her spouse, not being educated educational status of her spouse, and frequency of alcohol consumption (drunk daily and 1–2 times per week) were important determinants associated with IPSV during pregnancy.

The result of our findings noted a higher prevalence of IPSV during the current pregnancy compared to different studies conducted in Tanzania (Sigalla, 2017), Rwanda (Ntaganira et al., 2008), Ghana (Ogum Alangea et al., 2018), Brazil (Puccia et al., 2018), and other regions of the country (Laelago et al., 2014; Yimer et al., 2014; Gebrezgi et al., 2017). There could be justified different

perspectives. For instance, the community perception regarding intimate partner violence, violence measurement across scholars, and cultural differences among people across regions were some of the reasons for variation in the prevalence of intimate partner sexual violence. The probable cause of this situation might be due to the variations in culture, social norms, and the implementation of laws that prevent violence against women. For example, evidence from the 2016 EDHS has indicated that a lower proportion of males supporting wife-beating in southern Ethiopia at 14.9% as compared to the Harari region at 22.6% indicating that differences in social norms might contribute to the differences in proportions of IPSV. On the other hand, the current prevalence of IPSV was lower than in some other studies conducted elsewhere (Rosenberg and Hammond, 1998; Reed, 2015; Abebe Abate et al., 2016; Ayodapo et al., 2017; Field et al., 2018; Pengpid et al., 2018; Shamu, 2018; Lencha et al., 2019).

The disparity between our findings and across literature can be explained from different standpoints. Of these, it might be due to differences in study designs, such as the study conducted in Abay Chomen district, Oromia, Ethiopia was a community-based study whereas this study was facility-based which might have missed those women who were not coming to health facilities. It is also determined by the observed differences in cultural acceptability of domestic violence and hence underreporting and fear of disclosing the IPSV exposure (Stöckl et al., 2014). Furthermore, the majority of studies on violence during pregnancy measure only physical violence, but since our study was on sexual violence women usually do not report it while it is most detrimental to women's and their children's wellbeing. But, our finding was consistent with a few studies conducted somewhere (Tanimu et al., 2016; Malan et al., 2018; Ogum Alangea et al., 2018). Furthermore, health education and promotion interventions to reduce intimate partner sexual violence during pregnancy are recommended to facilitate and support improved use of skilled care during the maternal continuum of care, self-care, and home care practices for the woman and newborn. This also calls for an understanding of the joint responsibilities of men and women, so that they become equal partners in public and private lives and encouraging and enabling men to take responsibility for their sexual and reproductive behavior.

This study identified the factors associated with IPSV among pregnant women. Accordingly, women whose husbands or partners consume alcohol frequently were nearly three times more likely to be victimized by IPSV than their counterparts. This has been supplemented by different studies conducted so far (Laelago et al., 2014; Yimer et al., 2014; Tanimu et al., 2016; Gebrezgi et al., 2017; Alebel et al., 2018; Field et al., 2018; Ogum Alangea et al., 2018; Lencha et al., 2019). There could be different explanations for the risk of IPSV in women by their partners who are frequent alcohol consumers. For instance, alcohol drinking can cause the individual to develop an aggressive character, and misunderstanding verbal or non-verbal cues, and alcohol usage might be a source of dispute in relationships and thereby result in violent behavior (Stöckl et al., 2014; Jewkes et al., 2002). Moreover, some persons may intentionally use alcohol to hide behind the alcohol involved in antisocial behaviors such as violence against their partners.

Another factor significantly associated with intimate IPSV was unable to read and write the education level of the husband or partner. Thus, pregnant women whose partners/husbands had no education were at higher risk of sustaining sexual violence. This was in agreement with some studies conducted elsewhere (Abebe Abate et al., 2016; Bifftu et al., 2017; Gebrezgi et al., 2017; Alebel et al., 2018; Ogum Alangea et al., 2018). This can be explained that when partner education status increases the ability to negotiate may increase and as a result, the violence will decrease. In addition, it is a fact that partners with no formal education were more likely to have traditional perceptions regarding gender equality (Naved and Persson, 2008). Evidence revealed that low levels of education and lack of discussion to decide jointly with partners increase women's likelihood of experiencing violence during pregnancy (Abeya et al., 2011).

The authors acknowledged some limitations that should be considered when interpreting the results. One, the study was cross-sectional, a design that does not permit the establishment of cause-effect relationships. Secondly, due to the sensitive nature of the issue (sexual violence), women might feel fear to disclose their exposure (social desirability bias), resulting in an underestimation of the result. So, there is a need for further qualitative research to address behavioral factors.

Conclusion

This result indicated that intimate partner sexual violence during pregnancy is a major social problem in Ethiopian women. The risk factors of IPSV during the pregnancy period were connected to social determinants of health. Therefore, it is recommended that an optimal intervention such as health education communication that discourages violence against women, provision of women-centered care, and advocacy/empowerment intervention should be implemented.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by University of Gondar, Ethiopia. The patients/participants provided their written informed consent to participate in this study.

Author contributions

ZAz wrote the proposal, participated in data collection, and drafted the paper. MM, AT, ZAn, NA, and BT participated in data analysis, and manuscript preparation and revised the subsequent drafts of the paper. All the authors read and approved the final manuscript.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The reviewer MA declared a shared affiliation with the authors NA and BT to the handling editor at the time of review.

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EDITED BY
Kath Woodward,
The Open University, United Kingdom

REVIEWED BY
Adekunle Adedeji,
North-West University, South Africa
Modupe Taiwo,
Save the Children, United Kingdom

*CORRESPONDENCE
Resty Nakitto
✉ wagresty15@gmail.com

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Risk factors for intimate partner emotional violence among women in union in Uganda

Resty Nakitto[1]*, Abel Nzabona[2] and Stephen Ojiambo Wandera[1]

[1]Department of Population Studies, School of Statistics and Planning, College of Business and Management Sciences, Makerere University, Kampala, Uganda, [2]Centre for Basic Research, Kampala, Uganda

Introduction: Despite the growing evidence of the prevalence of gender-based violence in Uganda, less is known about the factors influencing intimate partner emotional violence (IPEV) among married women in the country. This study investigated the social demographic factors associated with IPEV among married women aged 15 years and older.

Data and methods: The study used the 2016 Uganda Demographic Healthy Survey (UDHS) data. A weighted sample of 5,642 women who had been in a union was selected. A binary logistic regression model was fitted to analyze the predictors of IPEV.

Results: Almost four in 10 (38%) married women experienced IPEV. Witnessing parental violence (OR = 1.37, CI = 0.59–0.92), partner's controlling behavior (OR = 4.26, CI = 3.29–5.52), and attaining age 35+ (OR = 1.44, CI = 1.06–1.95) increased the odds of IPEV. Residing in rural areas (OR = 0.004, CI = 0.48–0.99) and having higher education (OR = 0.51, CI = 0.26–1.00) decreased the odds of IPEV.

Conclusion and implications: Witnessing parental violence, alcohol consumption, age, place of residence, partner's controlling behavior, and level of education influence IPEV among married women in Uganda. The findings have several implications including strengthening IPEV-prevention campaigns, women empowerment, and alcohol consumption regulations.

KEYWORDS

intimate, emotional, alcohol, controlling behavior, consumption, violence

Introduction

Intimate Partner Emotional Violence (IPEV) is any behavior within an intimate relationship that causes physical, sexual, or psychological harm (Onanubi et al., 2017). The acts of emotional violence include verbal assault, dominance, control, isolation, ridicule, or the use of intimate knowledge for dilapidation (Follingstad et al., 2005). Engel (2002) adds that emotional abuse can also mean any non-physical behavior or attitude that control, subdue, punish, or isolate another person through the use of humiliation or fear. Perpetrators of emotional violence engage in acts that include humiliating the victim, controlling what the victim can or cannot do, withholding information from the victim, deliberately doing something to make the victim feel diminished or embarrassed, isolating the victim from friends and/or family, denying the victim access to money or other basic resources, stalking the victim, demeaning the victim in public or in private, and undermining the victim's confidence and/or sense of self-worth (O'Leary, 2004).

A person experiencing IPEV can witness various consequences which are not limited to suicidal ideation, depression, and posttraumatic stress disorders such as intense fear, shortness of breath, nightmares, sleeping difficulties, dizziness, cramps, and many more (Soomar, 2015). All these effects if untreated can expose the victim to mental illness and death in the long run.

Globally, 48.4% of women and 48.8% of men have experienced at least one psychologically aggressive behavior by an intimate partner. Four in 10 women and men have experienced at least one form of coercive control by an intimate partner in their lifetime. Approximately 18.7% of women have experienced threats of physical harm by an intimate partner and women who earn 65% or more of their household's income are more likely to be psychologically abused by their intimate partners (National Coalition Against Domestic Violence, 2015). These percentages remain alarmingly high with short- and long-term effects on women's health (Lawoko et al., 2013). Reports show that more than half of the victims of IPEV often experience short-term and long-term effects which include depression, post-traumatic stress disorder, suicidal ideation, low self-esteem, and difficulty trusting others (National Coalition Against Domestic Violence, 2015).

In Uganda, the 2016 Uganda Demographic and Health Survey (UDHS) reveal that 56% of the women had experienced at least one form of violence including emotional, physical, or sexual. That was far away from the fifth Sustainable Development Goal (SDG) which targets ending all forms of discrimination and violence against women and girls (Loewe and Rippin, 2015). Despite the growing understanding of IPEV as an important public health and safety issue, its complete eradication was still challenging for several reasons such as a lack of good data on the nature and magnitude of IPEV, limited funding and resources to address it, preservation of cultural norms and practices, and the long-held assumptions that violence is inevitable and preventable.

Intimate partner emotional violence is a risk factor for various adverse psychological health outcomes and is a major public health issue with short-term and long-term effects, for example, the risk of contracting HIV and STIs, pregnancy complications, miscarriages, low birth weight, and so many others (Uwayo, 2014). Only one-third (29%) of women exposed to violence are able to receive primary healthcare (Devries et al., 2013). These risks have directed the international community to implement laws and measures that would protect women from gender-based violence including IPEV. However, the existence of these international initiatives which include laws and policies in the country had not been able to eliminate IPEV completely.

Existing studies had focused on physical violence, sexual intimate partner violence, non-partner sexual violence, and the effect of violence on child growth (Whitaker, 2014; Durevall and Lindskog, 2015; Mönttinen and Tetri, 2016; Cools and Kotsadam, 2017). Other studies had focused on the attitude of men and women toward IPV and the relationship between IPV and the contraction of HIV and other sexually transmitted diseases (Capaldi et al., 2012; Wagman et al., 2015). However, limited research had been conducted about factors influencing intimate partner emotional violence among married women in Uganda.

Conceptual framework

The conceptual framework was developed from an integrated ecological model to explain the factors which influence violence. Figure 1 shows an IPEV conceptual framework adapted from Heise (1998). Four levels of the sources of violence were defined, namely, society, individual, relationship, and community level factors (Azam and Naylor, 2013). Individual-associated factors are factors within the individual that may be biological and could increase the likelihood of being a victim or perpetrator of IPEV. They include gender, age, level of education, alcohol consumption, witnessing parental violence, and employment levels (Azam and Naylor, 2013).

Relationship level factors are those which involved close social interactions between the individual and the people in his or her immediate environment. Those most common include the number of wives, ability to make household decisions, control of resources, and wealth quintile. The model further presupposed that community-level factors referred to the community contexts within which violence occurs. In the study, the residence is the community-level factor that was put into consideration (Azam and Naylor, 2013).

Finally, the society-level factors are related to the systems of the society and culture where the person lived. This meant that men were exposed to cultural messages which encouraged male superiority and granted them the right to control female behavior. The society-level factors considered in the study are attitudes that justify wife beating. Conclusively, no single factor works in isolation. All factors should be tackled simultaneously if the issue of violence is to be addressed.

Data and methods

Data source

The study used secondary data from the 2016 Uganda Demographic and Health Survey (UDHS). It covered all regions and districts in the country. The sampling frame used for the 2016 UDHS was the frame of the Uganda National Population and Housing Census (NPHC), conducted in 2014; the sampling frame was provided by the Uganda Bureau of Statistics. The census frame is a complete list of all census Enumeration Areas (EAs) created for the 2014 NPHC. In Uganda, an EA is a geographic area that covers an average of 130 households (Uganda Bureau of Statistics (UBOS) ICF, 2018).

Survey design

The 2016 UDHS sample was stratified and selected in two stages. In the first stage, 697 EAs were selected from the 2014 Uganda NPHC: 162 EAs in urban areas and 535 in rural areas. Households constituted the second stage of sampling. A listing of households was compiled in each of the 696 accessible selected EAs from April to October 2016. The sample EAs were selected independently from each stratum using probability proportional to size. The 20,880 selected households resulted in 18,506 women successfully being interviewed, with an average

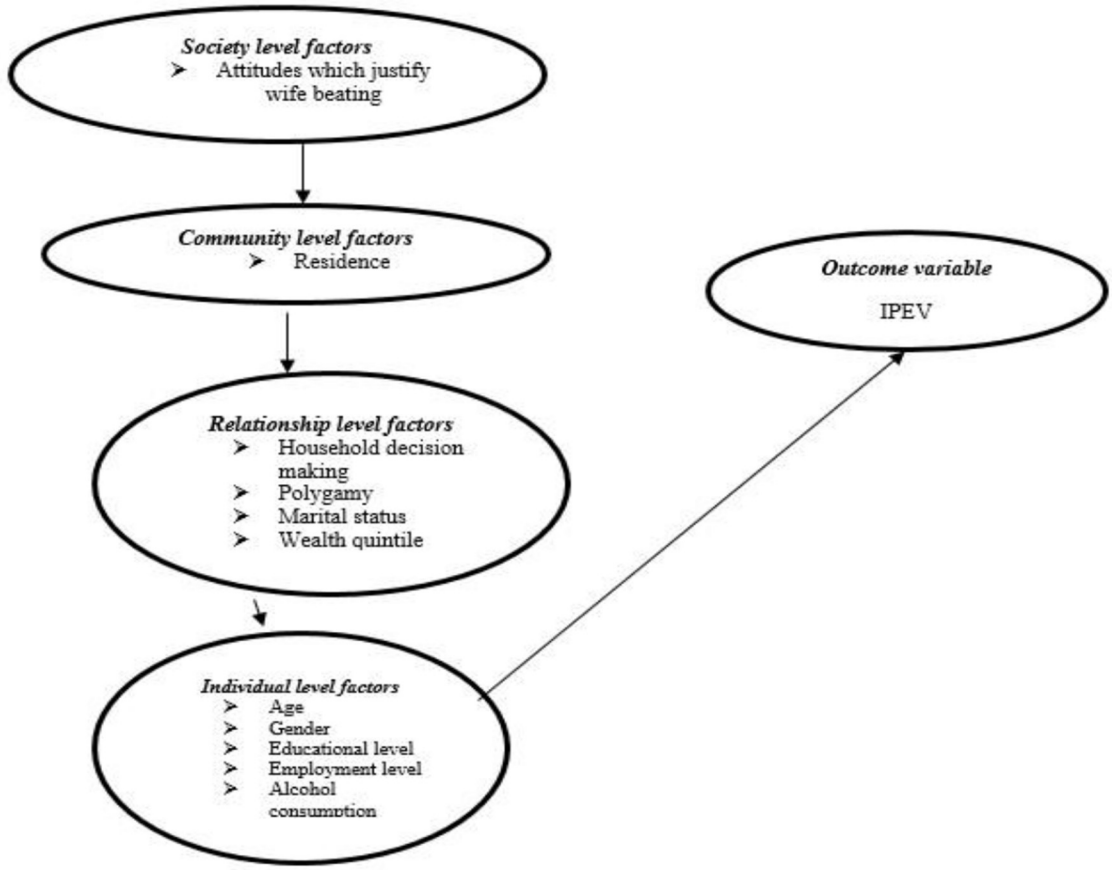

FIGURE 1
Conceptual framework for the study of IPEV. Adapted from Heise (1998).

of 1,200 complete interviews per domain [Uganda Bureau of Statistics (UBOS) ICF, 2018]. In addition, all women aged 15–49 years who were either permanent residents of the selected households or visitors who stayed in the household the night before the survey were eligible to be interviewed. In the survey, interviewers used tablet computers to record all questionnaire responses during the interviews. The tablet computers were equipped with Bluetooth technology to enable remote electronic transfer of files, such as assignments from the team supervisor to the interviewers, individual questionnaires among survey team members, and completed questionnaires from interviewers to team supervisors. The CAPI data collection system employed in the 2016 UDHS was developed by the DHS Program with the mobile version of CSPro. The CSPro software was developed jointly by the U.S. Census Bureau, Serpro S.A., and The DHS Program [Uganda Bureau of Statistics (UBOS) ICF, 2018].

Validation of survey instruments

The UDHS technical team, composed of staff from UBOS and ICF, participated in a 2-day training of trainers (TOT) workshop conducted on 17 and 18 March 2016. The pretest training took place between 21 March and 8 April 2016 at the Imperial Golf View Hotel in Entebbe Municipality. The UDHS technical team and ICF technical specialists trained 45 participants to administer the paper and electronic questionnaires. The pretest fieldwork took place between 13 and 15 April 2016 in clusters surrounding the training venue in Entebbe Municipality that were not included in the 2016 UDHS sample area, which covered ∼240 households. The UDHS technical team and ICF conducted debriefing sessions with the pretest field staff on 16 April 2016; modifications to the questionnaires were made based on lessons learned from the exercise. Teams then spent an additional week upcountry testing the translations.

Study population

The study only focused on married women aged 15–49 years. In the survey, 9,232 women were interviewed. From this survey, a weighted sample of 5,642 women who reported being union or cohabiting for the last 12 months was extracted. The domestic violence weighting (d005) was applied to attach the weights during analysis.

Variables

The outcome variable of the study was Intimate Partner Emotional Violence (IPEV). In the UDHS, information about IPEV was captured by asking a question like Did your husband/partner ever:

- Say or do something to humiliate you?
- Threaten to hurt or harm you or someone you care about?
- Insult or make you feel bad about yourself?

The outcome variable was binary because, for each of the above questions, the respondent was expected to answer either Yes or No. The binary response from the three questions was merged into an aggregate measure of intimate partner emotional violence (variable d104) in the UDHS. The outcome variable was coded 0 = No (did not experience IPEV) and 1 = Yes (experienced IPEV).

The explanatory variables of the study were classified into three categories, namely, women's social demographic factors which included the following: number of other wives, marital status, witnessed parental violence, age, residence, sex of household head, wealth index, education level of the wife and husband, and type of earnings. Others were women empowerment indicators which included participation in decision-making and ownership of assets. The last set comprised of partners' controlling behavior and attitudes justifying physical violence and alcohol consumption.

Social demographic factors were measured by whether the husband had one or more co-wives = 1 and no other wives = 2, current marital status (which is married or cohabiting), and witnessed parental violence which was measured by whether the respondent reported ever witnessing her father beating her mother (with a binary outcome of 0 = No, 1 = Yes); age was categorized into three groups (15–24, 25–34, and 35+years), residence (urban = 1 and rural = 2), sex of the household head (male = 1 and female = 2), wealth index, education level of the wife and husband, and type of earnings.

Second, are women's empowerment indicators which include participation in decision-making autonomy regarding who usually makes decisions about (a) how women's earnings are used; (b) women's healthcare; (c) large household purchases; (d) visits to family or relatives; and (e) what to do with the money the partner earns. Responses to these questions were recorded into two categories (1 = woman decides alone/jointly with partner, 0 = partner alone/others). The responses were further merged where participation in any of the above decisions was coded 1 = Yes and lack of participation 0 = No. The assumption was that women who made decisions either alone or jointly with their partners were more empowered than those in households where decisions were made by either their partners alone or other people. Ownership of a house or land was recorded into two categories: woman alone/jointly with the partner as the empowered category and partner alone/others as the other.

The partner controlling behavior of men where women were asked whether their present partners: (a) were jealous if respondents talked with other men; (b) accused them of unfaithfulness; (c) did not permit them to meet female friends; (d) tried to limit respondents' contact with family, and (e) insisted on knowing where they were. Attitudes justifying physical violence were measured by questions concerning whether wife beating was justifiable if the wife: (a) goes out without telling her partner; (b) neglects their children; (c) argues with her partner, and (d) refuses to have sex with her partner. A positive response to any of the above was (1 = "yes" or 0 = "no"). All these variables had binary responses (0 = no and 1 = yes).

Partner's alcohol consumption was measured by two questions: (a) Does your partner drink alcohol? This was coded as a binary outcome (0 = No, 1 = Yes). The second follow-up question was asked to those who said yes to drinking alcohol: (b) How often does (did) he get drunk: often, only sometimes, or never? The response categories were 0 = never, 1 = often, 2 = sometimes. I also included women's attitudes toward their partners—whether they were afraid of their partners—in this category of variables. Women were asked if they were afraid of their partners. This was categorized as 0 = never, 1 = most of the time.

Data analysis

Data analysis was done using STATA software. To generate a clearer understanding of the relationship between IPEV and the explanatory variables, the data were analyzed at three levels which comprise univariate analysis where the study used weighted frequencies and percentages to show the distribution of each of the explanatory variables, namely, society-level factors, community-level factors, relationship-level factors, and individual-level factors.

The chi-square test of 95% confidence interval was used to determine the association between IPEV and women's empowerment (economic empowerment, attitudes justifying physical violence, and decision-making autonomy), partners' behaviors, and women's social demographic factors. The study used contingency tables in order to examine the relationship between IPEV and the explanatory variables.

The study conducted multivariable logistic regression analyses to assess predictors of IPEV. Results were reported using Odds Ratios (OR) at 95% confidence intervals. The binary logistic regression model was used where IPEV was modeled with background characteristics, attitudes justifying wife beating, and partners' controlling behavior. A link test was performed to determine the goodness of fit of the model.

Ethical considerations

- The study ensured the confidentiality of the information extracted from the dataset.
- The authors also ensured that the dataset is strictly used for academic purposes and not any other role outside academics.
- The authors also sought permission from the supervisors to use the dataset. This involved the author clearly stating the study objectives in the proposal and, hence, the need to use the dataset.

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TABLE 1 Percentage distribution of married women who experienced IPEV by background characteristics.

Social-demographic characteristics	Percentage (%)	Frequency
Age		
15–24	29.7	1,675
25–34	38.0	2,145
35+	32.3	1,822
Type of place of residence		
Urban	22.3	1,261
Rural	77.7	4,382
Sex of household head		
Male	82.3	4,643
Female	17.7	1,000
Current marital status		
Married	50.0	2,820
Cohabiting	50.0	2,822
Highest education level of women		
No education	12.6	709
Primary	59.4	3,349
Secondary	20.4	1,153
Higher	7.6	431
Partner's education level		
No education	8.9	504
Primary	53.0	2,990
Secondary	26.1	1,472
Higher	12.0	677
Number of other wives		
No other wives	74.2	4,187
One or more co-wives	25.8	1,456
Respondent's father ever beat her mother		
No	64.1	3,614
Yes	35.9	2,028
Type of earning's from respondent's work		
Not paid	20.8	983
Cash only	46.9	2,212
Cash and in-kind	32.3	1,524
Wealth index		
Poorest	19.3	1,089
Poorer	20.6	1,160
Middle	20.1	1,135
Richer	18.8	1,059
Richest	21.3	1,200
Ownership of assets		
(a) Owns land alone or jointly		
No	57.2	3, 225
Yes	42.8	2,417
(b) Owns a house alone or jointly		
No	47.0	2,650
Yes	53.0	2,992
Partner alcohol consumption		
No	59.0	3,329
Yes	41.0	2,312
Frequency of partner being drunk		
Never gets drunk	11.5	265
Often gets drunk	32.2	744
Sometimes gets drunk	56.4	1,304
Beating justified		
No	50.1	2,819
Yes	49.9	2,823
Total	100	
Decision making in household		
No	12.8	724
Yes	87.2	4,919
Partners' controlling behavior		
No	30.8	1,735
Yes	69.2	3,907
Total	100	5,642

(Continued)

TABLE 1 (Continued)

Some frequencies do not add up to 5,642 due to missing responses and/or filters that dropped some questions when a certain criterion was not met.

Results

Background characteristics of the respondents

Table 1 shows the social demographic characteristics of the respondents which were assessed at the society, community, relationship, and individual levels. The majority (70%) of the respondents above the age of 25 years had experienced emotional violence and the least were in the age bracket of 15–24 years (30%). The majority were rural residents (78%). Most (82%) of the households were headed by male participants. Half (50%) of the women were married and half (50%) were cohabiting. More than half (59%) of the women had attained primary education and so were their partners (53%). Very few men and women had attained higher education (12 and 8%, respectively).

Almost three-quarters (74%) of the women had reported their husbands having no other wives whereas just over a quarter (26%) had reported their partners having at least one or more co-wives. Close to half (47%) earned cash only and 21% were not

paid at all. Twenty-one percent of the women were from poorer and middle-wealth quintiles and more than one-third (36%) had witnessed parental violence. Half (50%) of the women had not been beaten by their partners but also half (50%) had justified being beaten for any of the reasons. The majority (87%) of the women participated in decision making and only 13% did not take active participation. Just over two-thirds (69%) of the men controlled their wives at home for any reason.

Association of IPEV with women's background characteristics

Table 2 presents the association of IPEV with background characteristics. The results revealed that all the background factors were significantly associated with IPEV except the sex of the household head. IPEV was higher (82%) among women of 25 years and above who are rural residents (40%); 42% of the women are married and close to half (44%) are not educated. The least percentage has attained higher education (20%). A high percentage of their partners (42%) have not gone to school and 27% have attained higher education. Most women (44%) have reported their partners having no other wives and close to half (49%) have witnessed parental violence.

Financially, 41 and 42% are not paid or receive cash and in-kind, respectively. The majority of the women are from the poorest wealth quintile (45%) and only 27% are considered to be rich. Most (41%) of the women own houses and land jointly with their partners.

Half (50%) of the men drink alcohol and more often get drunk (65%). A small percentage (27%) never gets drunk. Women justified (43%) being beaten by their husbands for any of the reasons such as burning food, neglecting children, refusing to have sex, arguing with their husbands, and going anywhere without telling their husbands. Most of the women (44%) do not make joint decisions with their partners in the household and 48% have their partners control their behavior for any reason. Only 16% of women are not controlled by men in any way.

Predictors of IPEV

Women aged 25 years and above had increased odds of experiencing IPEV compared to those aged 15–24 years (OR = 1.31; CI = 0.99–1.72) and women residing in rural areas had reduced odds of experiencing IPEV compared to those in the urban areas (OR = 0.68; CI = 0.48–0.99). Women who are cohabiting were less likely to experience IPEV compared to those who are married (OR = 0.74; CI = 0.59–0.92). Women who had witnessed parental violence were more likely to experience IPEV compared to those who did not (OR = 1.37; CI = 1.09–1.70). The predictors of IPEV are shown in Table 3 below.

Women whose partners drank often or sometimes had increased odds of experiencing IPEV (OR = 4.24, CI = 2.85–6.31; OR = 2.41, CI = 1.66–3.49), respectively, compared to those who never got drunk. Conclusively, women whose partners controlled their behavior for any reason were more likely to experience IPEV compared to those whose husbands did not control their behavior.

Results also show that the wealth index except middle-income people, education level of wife and partner, type of earnings, justification for wife beating except occupation, and ownership of land and a house had no significant relationship with IPEV, but the rest were significant.

Discussion

The objectives of the study were to investigate the association between attitude toward wife beating and intimate partner emotional violence, assess the relationship between partners' controlling behavior and intimate partner emotional violence, evaluate the relationship between social demographic factors and intimate partner emotional violence, and examine the relationship between women empowerment and IPEV.

The study revealed that age is one of the most influential demographic predictors of IPEV. Women aged 25 years and older had increased odds of experiencing IPEV compared to those aged 15–24 years. In Uganda, women at the age of 25 years are entering marriage and, therefore, begin to be exposed to emotional violence and the risk increases with knowledge of women's rights. It is also likely that as a woman progresses in age, she becomes more psychologically abused by the partner who may resort to marrying again whereas the previous woman has limited chances of getting another partner due to age, having children to care for, and respect for herself. The study results are in agreement with the studies conducted by Capaldi et al. (2012), Ismayilova and El-Bassel (2013), Karakurt and Silver (2013), Wandera et al. (2015), and Karamagi et al. (2006), which revealed that violence increases with age. The study contradicts the studies by Naved et al. (2017), Onanubi et al. (2017), and Puri et al. (2012), which showed that women below 25 years of age were more likely to be victims of violence as compared to women aged 25 years and above.

The study revealed that women residing in rural areas had reduced odds of experiencing IPEV compared to those in urban areas. This is because women who experience denial of basic human needs such as education, access to assets, power, and control of resources have limited ability to make decisions which exposes them to emotional abuse regardless of the residence where they come from. The findings are in agreement with the studies conducted by Osinde et al. (2011) and Ismayilova and El-Bassel (2013). However, study results contradict with results of other studies where emotional violence is high in rural areas (Bazargan-Hejazi et al., 2013; UBOS ICF, 2017). This is because a majority of these women in rural areas were illiterate, and majorly employed in subsistence agriculture which was characterized by low incomes, and hence cannot make any decisions at home and this makes them susceptible to emotional violence.

Education was another predictor of IPEV. Women with higher education levels were less likely to experience IPEV compared to those with no education. This is because high education levels among women make them more exposed, empowered economically, and have the higher bargaining power to decision-making compared to those who are not educated, and this decreases their risk to IPEV. The Uganda demographic survey from 2006

TABLE 2 Association of IPEV with women's background characteristics.

Experienced IPEV in the last 12 months				
Variables	Yes (%)	No (%)	Frequency	*p*-value
Age in 10-year groups				
15–24	32.1	67.9	1,675	**0.000**
25–34	37.9	62.2	2,146	
35+	43.7	56.3	1,822	
Type of place of residence				
Urban	31.9	68.1	1,261	**0.000**
Rural	39.8	60.2	4,382	
Sex of household head				
Male	38.5	61.5	4,643	0.134
Female	35.6	64.4	999	
Current marital status				
Married	42.0	58.0	2,820	**0.000**
Cohabiting	34.1	65.9	2,822	
Highest education level of wife				
No education	44.0	56.0	709	**0.000**
Primary	41.7	58.3	3,349	
Secondary	30.2	69.8	1,153	
Higher	20.2	78.8	431	
Husband/partner's education level				
No education	42.3	57.7	504	**0.000**
Primary	42.3	57.7	2,990	
Secondary	33.2	66.8	1,472	
Higher	26.5	73.5	677	
Number of other wives				
No other wives	43.5	56.5	4,187	**0.000**
One or more co-wives	36.1	63.9	1,456	
Respondent's father ever beat her mother				
No	32.2	67.8	3,614	**0.000**
Yes	48.5	51.5	2,028	
Type of earning's from respondent's work				
Not paid	41.3	58.6	983	**0.040**
Cash only	37.4	62.6	2,212	
Cash and in-kind	42.3	57.7	1,524	
Wealth index				
Poorest	44.5	55.5	1,089	**0.000**
Poorer	40.3	59.7	1,160	
Middle	42.1	57.9	1,135	
Richer	37.2	62.8	1,059	
Richest	26.8	73.2	1,200	
Ownership of assets				
(a) Owns land alone or jointly				

(Continued)

TABLE 2 (Continued)

Experienced IPEV in the last 12 months				
Variables	Yes (%)	No (%)	Frequency	*p*-value
No	35.7	64.3	3,225	**0.001**
Yes	41.1	58.9	2,417	
(b) Owns a house alone or jointly				
No	34.9	65.2	2,650	**0.000**
Yes	40.8	59.2	2,992	
Alcohol consumption				
Husband /partner drinks alcohol				
No	29.6	98.7	3,329	**0.000**
Yes	50.1	49.9	2,313	
Frequency of partner being drunk				
Never gets drunk	26.8	73.2	265	**0.000**
Often gets drunk	64.6	35.4	744	
Sometimes gets drunk	46.5	53.5	1,304	
Beating justified				
No	33.0	67.0	2,819	**0.000**
Yes	43.0	57.0	2,823	
Decision making in a household				
No	44.1	55.9	724	**0.0015**
Yes	37.1	62.9	4,919	
Partners' controlling behavior				
No	15.5	84.5	1,735	**0.000**
Yes	48.0	52.0	3,907	
Total	100	100	5,642	

The bold values indicate there exists a significant association between the dependent and the independent variables.

up to 2016 and the studies by Kwagala et al. (2013) reported similar findings.

Wealth status was another correlate of IPEV. Women who are middle-income earners were more likely to experience IPEV compared to those who are the poorest. This could be a result of failing to balance the responsibilities at home with work while earning so little to support the family. These results contradict the findings of studies conducted by Goodman et al. (2009), Vyas and Watts (2009), Osinde et al. (2011), Edwards et al. (2014), and Wandera et al. (2015) in Uganda and elsewhere.

In addition to the above, study results also show that women who are cohabiting had fewer odds to experience IPEV compared to those who are married. Women who do not stay with the child's father are likely to experience less emotional violence. This is in agreement with the study carried out by Huang et al. (2010). The study results contradict with a majority of the findings which stipulate that emotional violence is high among cohabiting couples (Capaldi et al., 2012; MacQuarrie et al., 2015; Bui et al., 2018).

Women who have witnessed parental violence were more likely to experience IPEV compared to those who did not. The environment in which we grow defines our behavior in the future. Witnessing violence during childhood teaches men that violence is an effective tool to resolve frustrations, stress, or conflict. It also teaches boys and men that violence is acceptable and appropriate to use to assert power. The women accept to be perpetrated by men because they have seen their fathers do the same to their mothers. The study findings are in agreement with the studies conducted by Karamagi et al. (2006), Speizer (2010), Wandera et al. (2015), and Kwagala and Wandera (2016) who suggested that witnessing violence as a child makes one become a perpetrator or a victim of violence in future.

Women whose partners drink often or sometimes had increased odds of experiencing IPEV. The study findings were expected because when men drink, they feel superior, their cognitive processing ability increases, impulse control is lowered, and information processing is distorted which sparks violence. Alcohol consumption makes victims violent, speak vulgar language, and men become aggressive which provokes quarrels and fights. This is in agreement with the studies conducted by Osinde et al. (2011), Devries et al. (2013), Ismayilova and El-Bassel (2013), and Wandera et al. (2015) who revealed that alcohol consumption was closely related to emotional violence.

Finally, study findings show that partners' controlling behavior had a significant relationship with IPEV. Results show that men

TABLE 3 Predictors of IPEV.

Variables	Odds ratio	*p*-value	95% confidence interval	
Age in 10-year groups				
15–24 (Rc)				
25–34	1.31	**0.050**	0.99	1.72
35+	1.44	**0.018**	1.06	1.95
Type of place of residence				
Urban (Rc)				
Rural	0.68	**0.041**	0.48	0.99
Current marital status				
Married (Rc)				
Living with partner/cohabiting	0.74	**0.007**	0.59	0.92
Respondent's father ever beat her mother				
No (Rc)				
Yes	1.37	**0.006**	1.09	1.70
Highest education level of woman				
No education (Rc)				
Primary	1.12	0.495	0.811	1.54
Secondary	1.05	0.835	0.671	1.64
Higher	0.51	**0.052**	0.26	1.00
Partner's education level				
No education (Rc)				
Primary	0.88	0.483	0.62	1.26
Secondary	0.87	0.520	0.58	1.32
Higher	1.25	0.436	0.71	2.18
Number of other wives				
One or more co-wives (Rc)				
No other wives	0.91	0.450	0.71	1.64
Type of earning from respondent's work				
Not paid (Rc)				
Cash only	1.20	0.233	0.89	1.62
Cash and in kind	1.32	0.065	0.98	1.77
Wealth index				
Poorest (Rc)				
Poorer	1.11	0.489	0.83	1.47
Middle	1.36	**0.050**	0.99	1.85
Richer	1.06	0.749	0.13	1.54
Richest	0.83	0.475	0.51	1.37
Ownership of assets				
(a) Owns land alone or jointly				
No (Rc)				
Yes	1.21	0.185	0.91	1.61
(b) Owns a house alone or jointly				
No (Rc)				

(Continued)

TABLE 3 (Continued)

Variables	Odds ratio	*p*-value	95% confidence interval	
Yes	0.84	0.230	0.63	1.12
Alcohol consumption				
Frequency of partner being drunk				
Never gets drunk (Rc)				
often gets drunk	4.24	**0.000**	2.85	6.31
Sometimes gets drunk	2.41	**0.000**	1.66	3.49
Decision making in a household				
No (Rc)				
Yes	0.86	0.443	0.58	1.27
Beating justified				
No (Rc)				
Yes	1.16	0.162	0.94	1.44
Partners' controlling behavior				
No (Rc)				
Yes	4.32	**0.000**	3.33	5.60

The bold values indicate there exists a significant association between the dependent and the independent variables.

who are jealous for reasons such as meeting friends without permission, husbands afraid of their partner most of the time, insisting to know where their wife is, and husbands jealous if a wife talked to other men had increased odds of experiencing IPEV compared to those who do not have any of the above characters. This is true because, in Uganda, most male participants dominate family structures where the woman is regarded as one of the male properties which encourages men to impose rules over women, hence causing violence. In addition, men want to impose their masculinity to be secure at home and they do this by controlling their partners at all levels. This is supported by Vung et al. (2008), Antai (2011), Durevall and Lindskog (2015), and Wandera et al. (2015), who revealed that partners' controlling behavior can induce emotional violence at home.

Conclusion

We conclude that age, type of residence, current marital status, respondent's father ever beaten her mother, education, wealth quintile, drinking alcohol, and controlling behaviors influence IPEV. Women aged above 25 years were more likely to experience IPEV as compared to those aged below 25 years. With residence, women in rural areas were less likely to experience IPEV as compared to their counterparts in urban areas. Women with a higher level of education are less likely to experience IPEV compared to those with no education; women whose partners drink alcohol are more likely to experience IPEV compared to those who do not drink alcohol; women who are cohabiting are less likely to experience IPEV compared to those who are married; and women who witnessed parental violence were more likely to experience IPEV compared to those who never witnessed intimate partner emotional violence.

Recommendations

Intimate partner emotional violence has been present since time immemorial with its roots largely in the patriarchal control of women by men and associated with lower status of women. The factors like partners' controlling behavior can be eliminated if IPEV eradication programs are designed to empower women, work with men to change their understanding of masculinity, and modify gendered institutions, policies, and laws toward achieving greater equality.

Education being a significant predictor of IPEV, there is a need to encourage girls to attain higher education so that they become empowered with knowledge and the ability to exercise their rights in a household. The government should also strengthen enforcement of alcohol-related laws and regulations and step up funding to the budgets of the sectors mandated to handle violence against women so that we do not depend only on donor aid because if they withdraw the funds then VAW programs will collapse.

Age being a significant predictor of IPEV, there is a need to promote healthy relationships among the younger age groups. This could be done through interventions such as encouraging teenagers to always have open discussions with friends of the opposite sex; forming clubs where teenagers and young people can openly talk about their relationships or sex life; and building self-esteem among the teenagers/adolescents so that they can make informed decisions regarding their lives.

In regard to the type of residence, there is a need to provide support and equipment to the health facilities in rural and urban areas. This is so because victims of IPEV seek treatment from health facilities. When health facilities are provided with the required equipment, they can easily identify victims, provide treatment, and refer victims who require specialized services.

Additionally, there is a need to focus on training healthcare providers to identify and respond to IPEV victims and drawing up guidelines for the proper management of IPEV victims.

Marital status being a significant predictor, there is a need for the married coordinating councils to monitor and exchange information about IPEV causes and effects on the married people in churches and communities. This will help to identify and address the problem.

Finally, there is also a need to carry out IPEV outreaches to the communities and prevention campaigns to raise awareness about the problem and to change social norms and behaviors that indirectly/directly lead to IPEV.

Study limitations

Intimate partner emotional violence is self-reporting where any biases and errors may be due to privacy concerns and memory lapses which could have translated into an underestimation or overestimation of the prevalence of emotional violence.

The study used UDHS 2016 data, the researcher had no influence on the study design, sample size determination, data collection, and data entry which might have affected the results of the study.

Data availability statement

Publicly available datasets were analyzed in this study. This data can be found here: www.ubos.org.

Author contributions

RN conceived, designed, implemented the study inclusive of data analysis and presentation, interpretation, and discussion of results. AN provided guidance on study conceptualization, data analysis, and interpretation of results. SW guided the study conceptualization and advised on data analysis. All authors participated in drafting the manuscript and read and approved the final version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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EDITED BY
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Chinyere Ojiugo Mbachu,
University of Nigeria, Nsukka, Nigeria

*CORRESPONDENCE
Modupe Oladunni Taiwo
✉ oladunnitaiwo@gmail.com

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Understanding how social norms influence access to and utilization of adolescent sexual and reproductive health services in Northern Nigeria

Modupe Oladunni Taiwo[1]*, Oluwatoyin Oyekenu[2] and Rahinatu Hussaini[1,2]

[1]Save the Children International, London, United Kingdom, [2]Global Alliance for Improved Nutrition, Abuja, Nigeria

Background: This study explored the influence of social norms on the access and utilization of sexual and reproductive health services by adolescents. Apart from individual and environmental barriers, social norms influence contraceptive decisions and ultimately sexual and reproductive health outcomes. Social norms that shape group behavior describe acceptable standards of behavior and evoke sanctions when such behavior standards are not adhered to. Sexually active adolescents in Nigeria have a relatively low level of modern contraceptive use being influenced by social norms. Scaling up adolescent reproductive health interventions that integrate normative change for a wider impact of programs remains challenging.

Methods: Using data from 18 communities, 188 married and unmarried adolescents (F52% and M48%) and 69 (F37%; M63%) reference group participants were purposively sampled and participated in a social norms exploration intervention study conducted through focus group discussion and in-depth interviews between October and November 2019. The Advancing Learning and Innovation on Gender Norms (ALIGN) Social Norms Exploration Tool (SNET) was adapted for the data collection into discussion guides and vignettes. Pilot testing of the tools informed review and validation prior to actual data collection.

Findings: Low contraceptive uptake by adolescents was characterized by early and forced marriage in childhood; a prominent practice enshrined in social norms around girl-childchastity, family honor, and disapproval of pre-marital sex and pregnancy out of wedlock.

Conclusion: The understanding of harmful social norms, normative change actors, and potential norm-shifting factors for contraceptive decisions by adolescents is essential for effective adolescent sexual and reproductive health interventions for wider impact and adaptive programming in behavior change interventions for improving the access to and utilization of modern contraceptives by adolescents for improved sexual health outcomes, the attainment of the Family Planning (FP) 2030 commitment and universal health coverage policy.

KEYWORDS

sexual and reproductive health, child early and forced marriage, social norms exploration, gender transformation, Northern Nigeria

Introduction

Adolescents and young people aged 10–24 make up one-quarter of the world's population (UNFPA, 2014). This demography contributes significantly to poor sexual and reproductive health outcomes.Low contraceptive uptake among adolescents in sub-Saharan Africa is a major driver of early pregnancy and abortion as well as increased risk of HIV infection and maternal and child morbidity and mortality (Harrington et al., 2021). Nguyen et al. (2019) noted that early marriage, a reality for millions, restricts educational and vocational opportunities, leading to an intergenerational cycle of poverty.

Still in the formative phase of developing agency, the abilities, capacities, attitudes, and behaviors of young people are determined by the social systems that shape decisions and norms that dictate what is acceptable within the social group (Mackie et al., 2015). Social norms that shape behaviors and actions within a social network have been identified as an important influencer of contraceptive decisions and uptakeby adolescents. In Nigeria, contraceptive prevalence among adolescents 15–19 years is 2%, leaving a large population of adolescents with unmet needs and with its attendant consequences (National Population Commission (NPC) and ICF, 2019).

"Disapproval" by influencers on social networks, which is closely linked with social norms, is perceived as a key factor influencing low contraceptive uptake. However, attempts at describing the influence of social norms on contraceptive use have focused largely on theoretical explanations with limited contextual relevance to the realities of adolescents. Social norms are described as unwritten, obligatory rules that prescribes appropriate and acceptable behaviors in a community and is enforced by the reference group (Stoebenau et al., 2019; Cislaghi and Heise, 2020). A large qualitative U.S. student study identified a series of varied norms that stretch or restrict agency in negotiating sex among adolescents, validating the role of social norms in moderating contraceptive use (Mollborn, 2010; Mollborn, 2016).

With the understanding that social norms are powerful unwritten rules that moderate adolescent contraceptive use, scholars and practitioners in Africa are integrating social norms strategies to address sexual and reproductive health behaviors among adolescents (Cislaghi and Heise, 2020). Howbeit, few studies exist in developing nations on the influence of social norms on contraceptive uptake among adolescents (Ajilore, 2015; Ezenwaka et al., 2020; Mbachu et al., 2021; Agu et al., 2022; Agha et al., n.d.). Married adolescents most especially face many barriers to accessing contraceptives including sociocultural and religious inhibition and patriarchal influence mandating spousal permission to access health care.

The influence of social norms also promotes gender inequalities. Adolescent girls are disproportionally affected by gendered social norms (Ghimire and Samuels, 2014; Vaitla et al., 2017; Ninsiima et al., 2018; Bingenheimer, 2019; Malhotra et al., 2019) in decisions about sexual health services. Social norms approaches have been used in public health-related interventions and are gradually gaining popularity in Nigeria. Of 64.3 million adolescents and young people, over 19% of female adolescents have begun childbearing in Nigeria (National Population Commission (NPC) and ICF, 2019). Sexual and reproductive health information and services for adolescents in Nigeria are shrouded in myths and misconceptions (Taiwo et al., 2019). This has led to unprotected sexual practices with severely poor health outcomes: 11% of girls are married by the age of 15 years, 40% have had vesico-virginal fistular, and the contraceptive prevalence rate is 2% with high unmet needs. Sexual and gender-based violence is experienced by 30% of married adolescents, the infant mortality rate is 132/100,000 live births, maternal mortality is 512/100,000 live births, and 37% of children under 5 years experience malnutrition (National Population Commission (NPC) and ICF, 2019). Power imbalances, gender inequity, and discrimination against women and girls increase their vulnerability to gender-based violence, including denial of access to reproductive health services.

In recent times much interest has been developed in exploring the influence of social norms on sexual and reproductive health behavior and access to contraceptive services (Cislaghi and Heise, 2018; Save the Children, 2020). Some social norms are restrictive and hinder adolescents from making independent decisions about accessing reproductive health services and contraceptives as desired (De Meyer et al., 2014). This problem becomes aggravated with early sexual intercourse (Nalukwago et al., 2018), forced early marriage (Steinhaus et al., 2019), unwanted pregnancy (Smith et al., 2016), and sexually transmitted infections (Scholly et al., 2005). These poor reproductive health outcomes should be averted if adolescent girls make their own decisions about the use of contraception (Svanemyr, 2020).

Evidence from many African countries shows that adolescent girls are forced into early marriage to preserve their virginity and out of marriage birth due to disapproval of contraceptive use (Government of Uganda, United Nations Children's Fund, 2015; Berhane et al., 2019). These studies concluded that social norms are adopted and internalized at a very young age and strongly influence how adolescents manage their reproductive health choices.This study aims to understand the influence of social norms on the access and utilization of sexual and reproductive health services by perceived adolescents and to identify relevant reference groups who influence and enforce these social norms to inform adaptive programming.

Materials and methodology

Study design

For this qualitative research, we selected the focus group discussion (FGD) and in-depth interview (IDI) methods to provide a data source for triangulation, maximizing the benefit of FGD for examining questions within the context social interaction by adolescents and IDI for gathering data on sensitive topics from the social networks. We conducted FDG with 188 married and unmarried adolescents (F52% and M48%) age 10–19 and IDI with 69 (F37% and M63%) reference group participants aged 25 and above between October and November 2019 in Northern Nigeria. The region has the lowest contraceptive uptake among adolescents in Nigeria.

Study setting

Study activities took place in 18 communities selected from 3 Northern states Gombe, Katsina and Zamfara. Selected communities are clarified as peri-urban and primarily rural with trading and farming as

the major occupations. Hausa is the main ethnic group and language with a few minority Fulani. All authors have had long-term research engagement in women's reproductive health studies and extensive collective experience in social development interventions, working with the adolescent population in the region.

Sampling and eligibility

Prior to initiating the recruitment of eligible study participants, a series of consultation meetings were held with community leaders, parents of adolescents, husbands/partners for the married adolescents, and other community membersto optimize communication about the study with prospective respondents. Same sex data collectors were paired with participants to secure confidentiality in the discussion of sensitive topics. The team consisted of 16 qualitative interviewers (eight females and eight males) with a background in social science, public health and Monitoring and Evaluation (ME). The principal investigators provided 3 days of training to the field team emphasizing ethical conduct of sensitive research in human subject design especially among adolescents. The FGD and IDI semi-structured interview guides were piloted, revised, and collaboratively translated into Hausa and back into English to optimize comprehension and allow for accurate documenting of responses. The field team worked with health workers/health volunteers and community mobilizers to recruit participants for FGD and IDI from various community venues- homes, community leaders palaces, town halls and markets.

Purposive and snowballing strategies were used for the recruitment of the study participants. The FGD participants were disaggregated by age (10–14, 15–19), sex (female, male), life stage (married and unmarried), and school status (in-school,out of school) to optimize the group dynamics. Adolescents who fell within the demography described above, had parents/guardians willing to provide consent (if <18), and who were at risk of pregnancy were eligible to participate. Adolescents who had ever been sexually active and were currently married or in a sexual relationship were considered "at risk."The IDI participants were the reference groups, including adult females and males who have an influence on adolescents' sexual and reproductive health including contraceptive decisions. They were parents, grandparents, and husbands/partners of married or cohabiting adolescents above 25 years and were selected through a purposive and snowball sampling method.

Adolescents were approached in the communities, and eligibility assessed privately by the study staff team. Written informed consent was signed by adolescents 18 and older. Written parental consent and adolescent consent were obtained for participants under 18. The reference groups also provided written consent for participation. Light refreshments were served to participants to compensate for their time. This study was approved by the Federal Ministry of Health-MOH/ADM/621/V.1/299.

Informed consent and ascent

Written consent was obtained from all participants in both the FGDs and IDI. All participants received compensation for their time and travel and were provided refreshments. Adolescents below 18 years provided parental consent to participate in the study.

Data collection

The study was conducted in three phases. Phase 1 was the identification and selection of the reference groups using the "my social network" tool. Phase 2 was the identification and conduct of FGD with eligible adolescents and phase 3 was the conduct of IDI with the reference groups.

The adolescent participants were separated into the focus discussion groups as follows:

UVYAF-Unmarried Very Young Adolescents Females (10–14).
UVYAM-Unmarried Very Young Adolescents Males (10–14).
MVYAF-Married Very Young Adolescents Females (10–14).
UOAF-Unmarried Older Adolescents Females (15–19).
UOAM-Unmarried Older Adolescents Males (15–19).
MOAF-Married Older Adolescents Females (15–19).
MOAM-Married Older Adolescents Males (15–19).
HOA-Husbands of Adolescent (no age limit).

The focus group discussions were held at various locations preferred by the adolescents including the health facility hall, the palace of the community chief, mosques, or community town halls with the assurance of safety and security. The IDIs were conducted mostly in private homes to assure confidentiality and safety.

The study adapted the Advancing Learning and Innovation on Gender Norms (ALIGN) social norms exploration phases and tools (developed by the Institute for Reproductive Health at Georgetown University and FHI 360 (2016) and Institute for Reproductive Health (2019), United States), including a range of participatory learning and action (PLA) techniques as part of the Social Norms Exploration Tool (SNET). The 5 Whys, "My Social Network," and Vignettes were adapted and developed into the interview guides.

The IDIs and FGDs were conducted in the language preferred by participants. The IDIs and FGDs were digitally audio-recorded and simultaneously transcribed and translated into English by the interviewers themselves; a different team reviewed each transcript for accuracy of transcription and translation. Each participant completed a brief tablet-based socio-demographic questionnaire, which was administered verbally by the study staff.

Data analysis

We used an inductive, thematic approach to analyze the qualitative data.The Co-PIs agreed on a set of initial themes designed to reflect *a priori* domains of interest from the interview guides and exposure to the raw transcripts and field notes. The lead author, who has over 20 years of experience working in Nigeria with expertise in qualitative data analysis, and the co-authors defined the themes and meanings in parallel. After comparing the codes and themes application in two rounds, new themes were added, and the final codebook for the FGDs and IDIs was constructed. Investigators held several meetings to discuss coding discrepancies and emerging themes.The analytic team identified the most significant codes, grouped similar and contrasting excerpts within and between codes, and wrote analytic summaries for

TABLE 1 Participant characteristics.

Characteristics	
Adolescents total ($n = 188$)	
Sex	
Female	97 (52%)
Male	91 (48%)
Location	
Gombe	60 (32%)
Katsina	64 (34%)
Zamfara	64 (34%)
Marital status	
Married females 10–14	15 (15%)
Married females 15–19	35 (36%)
Married males 10–14	0 (0%)
Married males 15–19	25 (27%)
Education status(female)	
in school- primary	24 (25%)
in school-secondary	15 (15%)
Out of school	58 (60%)
Reference group ($n = 69$)	
Sex	
Female	25 (37%)
Male	44 (63%)
Location	
Gombe	26 (38%)
Katsina	27 (39%)
Zamfara	16 (23%)

each major theme.The analysis identified common themes, recurrent patterns, and essential and interesting or dissenting views.

Results

Our findings synthesized the social factors at play as adolescents navigate decisions around contraceptive use. We present the primary themes emerging from the analysis: adolescent fertility and desire, an expectation of the achievement of a girl's purity and family honor through early marriage, the influence of one's significant other in contraceptive decisions, and social influences on fertility decisions and contraceptive use (Table 1).

Adolescent fertility preference and desire influenced by societal expectations

Understanding adolescent fertility preferences and desires is vital for gaining insight into their contraceptive decision-making. Both married and unmarried adolescents generally placed a high value on pregnancy and childbearing, a perception influenced by social expectations of all girls and women whether currently married or planning to marry in the future. Majority of the respondents consider being pregnant and having many children as a blessing and status conferment that guarantees marriage stability for the wife.

> *"It is good to have many children when you are married, this shows that you have a blessing from God"* – Zainab, married adolescent girl, 15 years old, Gombe.

Although pregnancy outside of the marriage is frowned upon as dishonor to the family, pregnancy is celebrated in a marriage even when the wife is an adolescent. The majority of girls resonated less with the concept of "planning" a pregnancy and more with the idea that pregnancy is a "blessing" from God and should be embraced as often as it occurs.

> *"As a married person, only God can give you children and you should not reject it when you receive many from him. Children are a blessing in the home"* – Madinatu, married adolescent girl, 17 years old, Zamfara.

This is a notion developed through the enforcement of social expectations that children accompany marriage and where none exist, this becomes a cause for anxiety and non-acceptance in certain networks. Married women without children are described as "barren" and stigmatized.

There is still a patriarchal value ascribed to and preference for male children in key decisions around marriage, pregnancy, and health-seeking practices. Northern Nigeria presents a skewed bias for males in family life in all communities.

> *"Many families are happy to have sons in their homes and when all your children are only girls, you are not yet a fruitful wife until you have a son for your husband. Sometimes the husband will marry another wife to have a son for him"* – Mallama Bintu, 69 years old, Katsina.

Very few young unmarried adolescents were ambivalent about getting pregnant and having children with the feeling that a child is valuable and desired in all sexual relationships. Many expressed a desire to be married after completion of primary education.

> *"If I get pregnant now, I would just take it easy, I would be happy because pregnancy is not a disease, I only need to carry it for 9 months and deliver and I would have shown that I am fertile."* Ramatu, unmarried adolescent, 15 years old, Gombe.

Social influences on fertility decisions and contraceptive uptake

An important social norm hindering the use of contraception is the expectation that having many children guarantees marital security and enhances the social status of women and respect for men in the community. By implication, this has made many women put their health at great risk to fulfill this obligation and be accepted in the social network. Similarly, the social expectation for son preference for family lineage perpetuity poses the burden of having many

children on the married couple. Respondents confirmed that this could only be achieved by having many children to keep the family name alive.

> *"In our community, a man can only be respected as a man only when he has many children in his house. Also, our religion allows a man to have at least four wives so that he can have many children as a sign of fruitfulness"* Mallam Isha, 64 years old, Zamfara.

The communities do not want to deviate from having large families despite current economic realities and therefore, enforce the norms to prevent uptake of contraception. The value of large family size is the availability of cheap labor on the farm and the continuity of the family business, especially cattle rearing by the sons. Many married adolescents confirmed their husbands' unwillingness to grant permission to access contraceptives in order to prevent a potential drop in their social rating.

> *"Any woman that goes against her husband to get contraceptives services will be seen as feeling bigger than her husband and stands to be punished"* – Amina, married adolescent girl, 14 years old, Gombe.

Many married adolescents feel ostracized from peers for fear of being influenced to use contraceptives without their husbands' permission.

> "*They (the husbands) will not allow her to speak to other women because they can influence her negatively against her husband*"- Abibatu, unmarried adolescent girl, 13 years old, Gombe.

In addition to the shared social expectations by the adolescents, the reference groups of married adolescent females hold powerful, deep-rooted *myths and misconceptions* about the use of modern contraceptives, such as the belief that the use of modern contraceptives causes cancer and damage to the womb, eventually causing infertility. This can be linked to the desire to have many children.

Very poor knowledge about family planning and child spacing was observed among the female reference groups owing to generational denial of healthcare information and services access. In some instances, side effects experienced from off-the-counter contraceptives without appropriate information and counseling created fear of continuing and discouragement of potential users.

Influence of significant other on contraceptive decision

All household decisions including accessing health care services and contraceptives are deferred to the husband or the mother-in-law. An adolescent wife is considered to be too young to make her own decisions and thus requires protection from the older members of the family. Health facilities are not allowed to offer contraceptives without the permission of the husband.

A movement restriction order is placed on an adolescent wife when no family member is available to be in her company. In the traditional African context and many contexts, mothers-in-law are highly esteemed by the wives and play significant roles in disapproval of contraceptive use by the wives.

> "*A woman cannot go out of the house alone, someone must accompany her to her destination even if she wants to visit her mother. Many mothers-in-law do not want us to use contraceptives so as not to prevent pregnancy. We cannot disrespect our mother-in-law, we just agree with them and move on. Their role is to take care of our children and they are always happy when a new baby is born.*" Mariatu, married adolescent girl, 19 years old, Katsina.

Achievement of girl's purity and family honor through early and forced marriage

Early and forced marriage is a common practice across the three states but mainly in the rural areas as a means to enforce girls' purity and family honor. Where child marriage happens, the young girls are socialized to believe it is normal and have accepted it. As stated by the participants, the average age of marriage was between 12 and 15 years. Traditionally, girls at the age of 15 years are regarded as suitable and ready for marriage. Early marriage signifies early childbearing and the opportunity to have many children before getting old. Most marriages are contracted with older men who make the overall decisions, including contraceptive use.

> *"Many young girls in this community marry early because our mothers and grandmothers too married early. We are happy to be married because we get a lot of nice clothes and shoes from our husbands. Our mothers tell us that our husbands will take good care of us if we continue to have many children"*- Adijatu, married adolescent girl, 16 years old, Katsina.

The prominent social norm influencing the practice of child marriage is the expectation of chastity and virginity preservation for girls to promote family honor and dignity. Pregnancy by girls outside of marriage is considered shameful.

The pregnant girl also risks being disowned, and the baby carries the label of illegitimate with a life-long stigma. Potential suitors would most likely avoid marriage to other female siblings from that family and be marked as "not well brought up." Adolescent girls are socialized from a very young age to carry the burden of preserving the family name by getting married early and having many children.

> *"When a girl is 15, she is regarded as an adult, which is the height of her beauty (that is when she can get the best suitors). Men that follow her start reducing afterwards. Furthermore, if she gets to the age of 20, she gets boldness to talk back at her parents, and she can even become promiscuous because she would not listen to her parent"* Mariam, unmarried adolescent girl, 14 years old, Katsina.

Interestingly, while a few mothers interviewed in the reference group were not happy with this tradition and the practice of early marriage, the fear of losing the highly regarded family honor when their daughter becomes pregnant out of wedlock and being mocked by society makes them conform. Mothers desire education for their young girls up to at least senior secondary school, but the pressure and

fear put on them by society makes them submit to marrying the girls off by 15 years old.

> *"It is not all the time that I am happy to marry my girls out, anytime the man comes to our husband, I feel very sad that another girl in my household is going to marry a man she does not know very well, but I do not have a say in the marriage decision. Only my husband and his brothers and his uncles plan the wedding"*- Mallama Sadia, 42 years old, Zamfara.

Adolescent males also expressed the view that some parents fear not meeting social expectations of marrying their daughter off by the time she attains puberty. This places a lot of pressure on the girl's parents and may lead to mockery from the community. Because of this fear, the parents give out their daughters in marriage to whoever shows interest to find acceptance in their communities.

> *"When my sister was being prepared for wedding at the age of 13, I was not happy because I will be going to school alone. She was in class 4 then and my father gave her out to a man from Dadin Jaji village. Now my sister is 20 and has 4 children. She is not using any contraceptive because her husband wants seven children"*- Abubakar,19 years old, Zamfara.

Similarly, most unmarried older adolescent girls believe that puberty is a signal for marriage to safeguard against being promiscuous and dishonoring the family name.

> *"Once a girl reaches the age of puberty, she should be married off because puberty leads to sexual desire; hence parents should give the girls out in marriage to prevent promiscuity and use of contraceptive that will destroy her womb."* Jumai, unmarried adolescent 19 years old, Gombe.

Other social factors were attributed to child marriage and denial of contraceptive use, including fear of not finding a suitable suitor when they get too old.

Discussion

From the 186 adolescents in the FGD and 69 reference group participants who participated in this community-based study, we elicited a strong preference for getting pregnant and having many children as a sign of maintaining societal status and fulfilling expectations. Contraceptive decisions by adolescents were significantly influenced by social norms enforcing the practice of early marriage, high fertility, and son preference. Early and forced marriage was a crucial driver of low contraceptive use. This agrees with Steinhaus et al. (2019), who reported that child marriage in Uganda, influenced by the norm of maintaining family honor, hinders contraceptive use in adolescent girls. The significant social norm promoting child marriage that "girls are expected to maintain chastity and not get pregnant before marriage" is aligned with a finding shared by Smith et al. (2016). When this happens, a girl is deemed to have brought shame to her family, stands the chance of being disowned by her parents, and her child stigmatized. In addition, a girl is expected to preserve the name and honor of their family until marriage. It is believed that when a girl gets pregnant out of wedlock, this brings shame to their family, who also face backlash and may be ostracized by the wider community.

The decision to have the girls marry early supports high fertility and increases the risk of poor sexual health outcomes. The concept that power can be demonstrated in decisions to "adhere to (or not adhere to) social norms" in Pulerwitz et al. (2029) is relevant to our analysis. Contraceptive use by adolescents is generally viewed as a non-conformity to social norms, which impacts independent sexual and reproductive health decisions and contraceptive use. The adolescents in the study communities have lost their agency and power to seek health services when required without spousal permission.

In order to address the influence of social norms on contraceptive decision-making by adolescents, intervention to stimulate behavior change toward contraceptive uptake should target individuals and communities and focus on supporting adolescent decision-making agency and empowerment to challenge the inhibiting norms. In addition, an enabling social environment should be fostered through engagement with key influencers to promote behavior transformation toward acceptance of contraceptive use by adolescents. Provider initiated contraceptive outreach interventions should integrate strategies for addressing pervasive social messaging associating contraceptive use with infertility. Husbands of adolescents and mothers-in-law are the main referents in continuing gender-discriminatory behaviors in adolescent reproductive and sexual health. Similarly, mothers-in-law and grandmothers are the key influencers of disapproval of contraceptive use and advocates for having many children (Dixit et al., 2022). It is therefore critical to channel efforts at shifting harmful social and gender norms to target men/husbands, mothers, grandmothers, and mothers-in-law.

Conclusion

Using the social norms exploration tools to deepen our understanding of the norms influencing adolescent sexual and reproductive health, especially contraceptive use and other interconnected behaviors including, fertility preference and desire, child marriage, and influence of significant others in contraceptive decision-making in Northern Nigeria, there is evidence of intersectionality among the behaviors. Fertility decisions of adolescents are largely influenced by societal expectations and conformity to the desires of husbands and mothers-in-law without consideration for adolescent preference. Early and forced marriage is a prominent practice that supports high fertility and disapproval of contraceptive use. Unequal power relations, low uptake of modern contraceptives with implications for poor maternal and child health outcomes, increased risk of sexually transmitted infections, maternal and infant morbidity and mortality, and overall poor well-being for women and girls are the result of the enforcement of harmful social norms. With an improved understanding of the social norms influencing the utilization of sexual and reproductive health services and the key influencers, professionals can develop appropriate responses to address the impact of these social norms. This knowledge allows for direct engagement with the key influencers through a

human-centered intervention that empowers influencers to self-reflect and develop context-relevant solutions and actions to promote positive social norms within the social network.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by name and affiliation of the ethics committee/institutional review board MOH/ADM/621/V.1/299. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin.

Author contributions

MT was the principal investigator, developed the research concept, and provided leadership in the research development, data collection, analysis, and report. OO supervised the research study and contributed to the development of the manuscript. RH contributed to the design of the study tools and pre-testing. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

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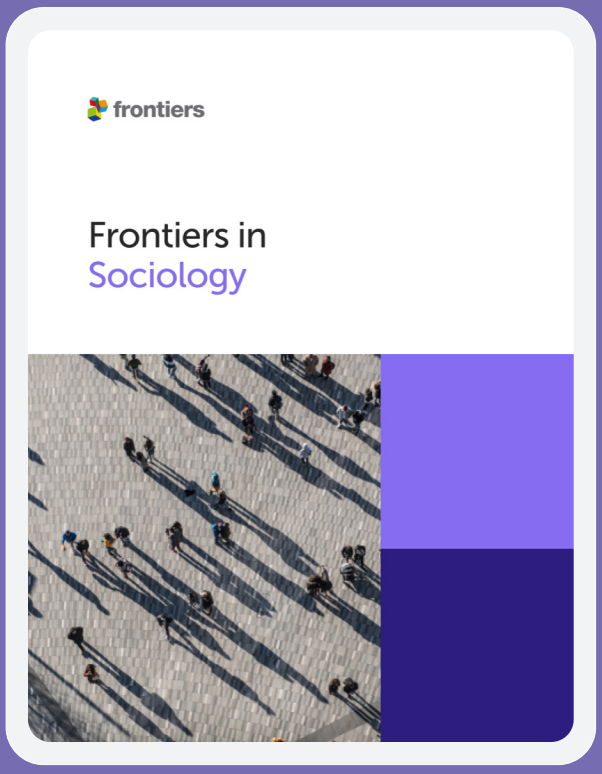

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