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Challenges of Family-oriented Sexual Health Education in Northern Nigeria and their Implications on Children's Well-Being: A Phenomenological Exploration of Educator's Perspectives

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ABSTRACT

Background & aim: Family-oriented sexual health education plays an important role in promoting the well-being of individuals. However, in many countries, its proper implementation has faced restrictions. This study aimed to explore the lived experiences of educators regarding the challenges surrounding family-based sexual health education in northern Nigeria.

Methods: This phenomenological study was conducted in northern Nigeria between March and August 2023. Participants included 14 university faculty members and health educators from five states, who were selected by purposeful sampling. Data was collected by semi-structured interviews and analyzed using Colaizzi's strategy of descriptive phenomenological data analysis. MAXQDA version 20 was used for data organization.

Results: The data analysis yielded four main themes including sixteen subthemes, which we classified into Extrapersonal challenges, interpersonal obstacles, intrapersonal barriers, and considerations for better implementation. The first theme highlighted challenges such as inconsistency in the educational program, socio-economic barriers, regional and ethnic disparities, religious concerns, cultural obstacles, media threats, and regional insecurity. The second theme reflected functional and interactional obstacles including parents' negative attitudes, weakness of parenting, a lack of knowledge and awareness, and incompetent role models. The third theme encompassed shame and personal discomfort, irresponsibility, and lack of motivation. The last theme emphasized developmental consideration, emphasis on moral values, and utilizing cultural and religious opportunities.

Conclusion: More robust policies, cultural inclusivity, and interventions aimed at enhancing the knowledge and skills of educators and caregivers could mitigate the current barriers' repercussions on reproductive health.

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Introduction

Early increase in risky sexual activities among teenagers and its associated consequences are increasing in many countries including Nigeria (1). The lack of adequate parental care is a significant barrier to implementing sexuality education in the country. This lack of parental intervention has led to the ignorance of young children and adolescents, which is associated with so many consequences such as moral laxity, early sexual debut, promiscuity, unwanted pregnancies, and cases of abortion among youths in the country (2).

Sexuality education is a lifelong process that involves acquiring knowledge, developing attitudes, beliefs, and skills that promote sexual and reproductive health of individuals, and improve the quality of their lives (3). The family-based sexual health education involves parent-child interaction that includes various topics including puberty education, sexually transmitted infections (STI), HIV protection (4), sexual violence prevention (5), and sexual identity development (6). It also includes principles of responding to children's questions and curiosities, preventing them from exposure to obscene materials, preventing them from being aggressors (7), promoting healthy sexual relationships, and nutrition (8). Furthermore, family-based sexuality education provides parent related skills that promote sexuality-related competencies including communication skills, monitoring skills, and self-efficacy (9). Parents and caregiver's involvement in sexuality education have been reported to play an effective role in reducing risky sexual behavior (10), preventing sexual abuse, teaching healthy decision-making (11), as well as promoting sex-related knowledge, skills, and attitudes (10,12). Furthermore, parental intervention has been found to be effective in responding to the sexual health educational needs of children with clinical situations (13-14).

Globally, there have been reports of numerous parent-focused sexuality education programs that have had positive outcomes for both parents and children (12,15). However, a review of literature revealed the paucity of family-based programs in Nigeria. It has been found that many Nigerian parents avoid initiating sex-related communication with their children, and even when they do address sexuality issues, they often make it more complicated for children to access accurate information and develop sex-related competencies (16–18).

The Nigerian government has made efforts to address sexual health issues by providing a curriculum, which was later integrated into the school system by the National Education Research and Development Council (NERDC) in 2003 (19). However, the implementation of sexual health education programs remains a controversial issue, particularly in the northern regions, due to socio-cultural factors and conservative attitudes. These restrictions have had significant consequences on the prevalence of HIV and other sexually transmitted infections in various regions of the country (20). Risky sexual behaviors, repeated sexual assaults, lack of preparation for marital responsibilities, and school dropouts are some instances of the consequences (21-22).

Unfortunately, no study specifically investigated the challenges of family-based sexual health education in Nigeria, and there is no standalone topic dedicated to orienting parents in schools or any other educational institutions, which has increased the challenges of proper implementation within the family setting in the region. A stand-alone program addressing sexual health education at the family level is an essential need. However, before implementing a suitable curriculum, it is important to explore the challenges faced by the practitioners in implementing family-oriented sexuality education in the region. Previous studies in Nigeria revealed that parents struggle to discuss sex-related issues with their children. Factors such as parental love, lack of education, and religious beliefs have been reported to hinder the provision of family-oriented sexuality education in the country (8,16,23).

Further exploratory studies that examine the lived experiences of educators and caregivers are needed to enrich the existing literature on sexuality education and to inform recommendations for policymakers, educators, and other stakeholders involved in promoting sexual health.

The purpose of this study was to explore the barriers and challenges faced by educators in

northern Nigeria when providing home-based sexual health education.

Materials and Methods

This study utilized a phenomenological approach to gain insights into the experienced challenges in providing sexuality education within the family context of northern Nigeria. Phenomenological studies aim to describe and interpret the shared experiences of individuals by understanding the meanings they ascribe to them. In the context of examining the lived experiences of individuals regarding specific issues, this approach is regarded as the most effective method for such analyses (24-25).

The study involved 14 practicing educators who were purposefully selected from the Faculties of Education, Psychology, Social Sciences, and Religious Studies affiliated to 3 governmental universities in northern Nigerian, as well as health professionals from five states of the region. The inclusion criteria were being married, having a child, and having practical or research experience in relation to sexuality education. Based on the established exclusion criteria, the process disqualified candidates who were unwilling to participate, excluded those from other regions, and removed single individuals. During the recruitment process, several challenges were encountered. These included initial reluctance from some potential participants due to the sensitivity of the topic, particularly discussions related to sexuality. Cultural norms and concerns about confidentiality also made some individuals hesitant to participate. To address these issues, trust was built through the involvement of respected community members and clear communication about the study's purpose, confidentiality measures, and voluntary nature of participation were maintained.

The volunteered participants took part in a semi-structured interview which focused on their experience with conducting family-oriented sexuality education in northern Nigeria. They were also asked to provide their interpretation of sexuality education in the region. The interviews lasted between 38 and 79 minutes the participants were interviewed at their workplaces with prior coordination with the heads of departments at Usman Danfodio University Sokoto, Ahmadu Bello University Zaria, and the Comprehensive Health Centers in Bakori and Funtua local government area of Katsina state. Before the interviews, we contacted each participant individually and provided them with a participant's package. This package included a pen, a research introduction letter, an information sheet, and an informed consent form. The data collection process was carried out between March and August 2023 by the first author, who holds PhD. in educational Psychology and received formal training in qualitative data collection and has previously conducted interview-based studies in similar cultural contexts.

The interview began with rapport-building and a restatement of research aims. Participants were asked: “Can you elaborate on your experiences with implementing home-based sexuality education in northern Nigeria?” Subsequent open-ended questions explored their perceptions of delivery methods, challenges, familial impacts, and improvement strategies. Probing questions were used to clarify responses and encourage depth. Non-verbal cues (e.g., body language, vocal tone) were observed to assess comfort and guide inquiry. Sessions concluded by inviting final reflections, followed by gratitude and confidentiality reassurances. Data collection ceased at the 14th interview upon achieving theoretical saturation, consistent with qualitative norms for homogeneous cohorts.

We applied Colaizzi’s method (1978) to analyze the obtained data. The method is a qualitative approach utilized for analyzing textual data to extract meaningful themes and concepts (25). Using this method, the interviewer initially gathered participants' descriptions and thoroughly examined them to uncover the depth of their meanings. Then the most important sentences and conceptualized important themes were extracted. After categorizing the concepts and topics, we provided a comprehensive description of the issue examined.

MAXQDA Version 20 was employed to systematically organize and analyze audio-recorded interview data and their corresponding textual transcripts. Trustworthiness was rigorously established in alignment with Lincoln and Guba’s (1985) framework, operationalized through four

criteria: Credibility was ensured via member checks to validate participant accounts; Dependability was achieved through external audits and meticulous documentation of the research process; Transferability was supported by contextually rich thick descriptions of the sociocultural setting; and Confirmability was maintained through reflexive journaling to critically interrogate researcher subjectivity and bias.

Results

The study included 14 educators who met the eligibility criteria. The participants' ages ranged from 34 to 60 years, with a mean age of 43.5. All participants are indegenes in one of the northern Nigerian states (Table 1).

Table 1. Participants' demographic characteristics

Gender	Age	Carrier/highest level of Education	Academic position	State of origin
Male	40	Masters, Health Education	Senior community health officer	Katsina
Male	43	Ph.D. in Sociology	Assistant lecturer	Sokoto
Female	41	Ph.D. in Sociology of Education	Assistant lecturer	Birnin Kebbi
Male	55	Ph.D. in Sociology of Education	Professor	Sokoto
Male	34	Masters, Health Education	Senior Health Education officer	Katsina
Male	38	Masters, Guidance and Counselling	Senior staff	Katsina
Male	47	Ph.D. in Curriculum and Development	Associate professor	Kano
Male	45	Masters, Religious Studies	Graduate assistant	Katsina
Male	40	Masters, Adult Education	Graduate assistant	Kano
Male	41	Masters, Psychology	Senior staff	Katsina
Male	35	Masters, Instructional Technology	Graduate assistant	Kano
Male	51	Ph.D. in Philosophy of Education	Associate professor	Kaduna
Male	60	Ph.D. in Islamic Studies	Professor	Kaduna
Female	39	Masters, Islamic Studies	Graduate assistant	Katsina

Thematic analysis of the data revealed four main themes: extra-personal challenges, interpersonal obstacles, intrapersonal barriers, and considerations for effective implementation. These themes were developed by sixteen subthemes, as illustrated in Table 2. The following sections provide a detailed explanation of each theme, accompanied by verbatim statements from the participants.

Table 2. Main themes and subthemes explaining sexuality education barriers

Row	Subthemes	Main Themes
1	"inconsistency of the educational program", "Socio-economic barriers", "regional and ethnic disparity", "religious concern", "cultural challenges", "media threat", "regional insecurity".	Extrapersonal challenges
2	"stakeholders' parents' negative attitude about sexuality education", "weakness in parenting approach", "lack of sexuality education knowledge skills and awareness", "incompetent role model"	Interpersonal obstacles
3	"Shame and personal discomfort", "irresponsibility and lack of motivation".	Intrapersonal barriers
4	"developmental considerations", "emphasis on moralitymoral values" "utilizing cultural and religious opportunities"	Considerations for better implementation

Theme 1: Extrapersonal challenges

This theme represents the challenges rooted in the broader social context and directly or indirectly restricts the process of implementing sexual health education.

1.1- Inconsistency in the educational program

One of the main barriers identified by participants was the lack of parent-focused and culturally appropriate sexual health education programs. The existing school-based programs were perceived as incompatible with the local culture, leading to a lack of motivation among families to practice sexual health education at home as stated by one of the participants:

"The main problem we have here in the north is that there is no specific program that covers this issue in families. They only provide sex education in schools, primary and secondary schools, and sometimes on radio and television, which most families believe to contradict their culture" (Participant #5, male, 38 years old).

When asked about the challenges of providing family-oriented sexual health education, most of the participants mentioned that parents and caregivers perceive the educational programs introduced by schools and health centers as inappropriate.

1.2- Socio-economic barriers

The educators pointed out that economic disparities in Nigeria may limit access to quality education, including sexual health education. Families from low-income backgrounds may not have time for their children due to the financial demands that are often unmet. On the other hand, some families involve their children in financial issues and send them to work as hawkers, making them vulnerable to early sexual debut as explained by a participant:

"From the side of the parents, I think economic hardship has a negative effect in this regard. Some are employees with low income, and others are self-employed and sometimes go to work and earn nothing for the family. Most of them are incapable of providing for their children's needs and are always busy looking for a possible solution rather than teaching about sex" (Participant #5, male, 34 years old).

1.3- Regional and ethnic disparity

Regional and ethnic disparities pose a challenge to the development of an integrated content and process that can cater to the diverse states in the northern part of the country. The various ethnic groups in the region have different norms and values, and there are also variations in conservative beliefs from state to state. Additionally, rural and urban areas differ in their approach to sexual issues. While some rural areas maintain their own practices and face the consequences, others adapt to new orientations. As one participant explained:

"Even in the north, we have diverse ethnicities and values. Some are sensitive about sex issues, while others have no problem with it. That's why you will see good acceptance in states like Kogi and Jos, but it might be challenging in the northwestern part of the country" (participant #3, female, 41 years old).

"In a country like Nigeria with a high population and different ethnic groups, it is impossible to introduce a single curriculum and expect everyone to adhere to it, especially when it comes to sex." (Participant #4, male, 55 years old).

The majority of educational stakeholders believe that in order to address the regional and ethnic disparities, there is a requirement for an intervention program targeting at least the two main regions of the country (north and south).

1.4- Religious Concerns

According to participants, there is a perception in northern Nigeria that the content of sex education is not in line with Islamic teachings, the predominant religion in the region. In Islamic doctrine, any stimuli that incite sexual desire outside the bounds of marriage are deemed prohibited. The religion has specific guidelines and processes that Muslims should follow regarding sexual matters. The perceived incompatibility of the content and delivery of sex education has led to objections and resistance from society. One participant expressed their viewpoint as follows:

"That is why the society objects to it because it promotes illicit relationships instead of discouraging them. Islam advises against engaging in such relationships. It is safer to stay away from them rather than getting involved and then trying to prevent diseases and

unwanted pregnancies." (Participant #13, male, 60 years old)

The majority of participants believe that sex education should promote abstinence until marriage, and the teaching process should align with religious mandates. For instance, male teachers should educate male students and female teachers should educate female students. Additionally, it is important to note that the Islamic viewpoint on sexuality emphasizes moral values rather than solely focusing on health and relationships. One respondent highlighted this perspective:

"The most important aspect emphasized by Islam is morality, which can be considered the foundation of the religion. Therefore, it is evident that parents also place a strong emphasis on instilling moral values in their children in this context." (Participant #12, male, 51 years old).

1.5- Cultural obstacles

The stakeholders reported cultural challenges such as some traditional practices like genital mutilation, early marriage, and gender inequality as obstacles to home-based sexual health education.

"It has recently been integrated into our educational system, and people are still unfamiliar with it. Due to cultural norms, discussing sex is often met with judgment and stigma. I remember when I was young if a girl talked about sex, her friends would criticize and discriminate against her." (Participant #3, female, 41 years old)

According to the participants who work in the field of education, open discussion about sex is not supported by cultural norms. Initiating such discussion often leads to mass condemnation and abandonment, despite the fact that religion promotes openness when it comes to discussing sex as explained by a respondent:

"Our religion encourages open discussion and sharing knowledge about everything, including sex. However, our culture does not allow it due to feelings of shame." (Participant #2, male, 43 years old)

The stakeholders also reported facing cultural challenges, which have resulted in a lack of interest in initiating sex-related discussions between parents and children. Eight participants mentioned this as a significant obstacle. Additionally, some participants highlighted how these cultural challenges contribute to the persistence of harmful practices such as female genital mutilation and the use of traditional sex power medicines:

"There is an issue of female genital mutilation which is rooted in culture and religion, you know there is this belief that encourages doing anything that can reduce sexual desire." (Participant #5, male, 34 years old)

Another challenge related to culture is the conservative approach held by some parents, resulting in gender disparity and limiting females' access to decision-making power and educational opportunities. One manifestation of this approach is early marriage, which was explained by one of the participants:

"In Hausa land [north], there are many problems that have become normalized. For instance, boys are given priority over girls, even when it comes to education. As a result, young girls as young as 12 or 13 years old are sometimes married off. Parents often undermine the medical aspects and the girl's preparedness for her marital responsibilities." (Participant #3, female, 41 years old)

On the topic of early marriage, other participants hold contrasting beliefs and argue that early marriage is a preferable solution to prevent sexual activity and premarital sex. However, this viewpoint overlooks other possible solutions, such as developing self-control and decision-making skills. Additionally, it is important to consider medical conditions and potential risks associated with early marriage.

1.6- Media Threat

The participants raised concerns about the potentially harmful effects of social media and other virtual platforms. They believe that children can be exposed to negative content that could impact their character. Educators emphasized the problematic nature of certain virtual programs, noting that parents do not make an effort to equip their children with the necessary skills to differentiate between good and bad content. This lack of guidance can lead to young girls imitating online behavior, posing challenges in controlling their actions as they mature and become more instinct-driven:

"Media today is really problematic, especially in satellite programs. Parents do not give their children a criterion of identifying good and bad in it. Most of the young girls imitate what they see online." (Participant #8, male, 45 years old)

The participants raised concerns about the negative impact of inappropriate sexual behaviors learned through media. They emphasized that social media is not a suitable source of sex education for children, as it exposes them to obscene content due to unrestricted access.

"Media does not have a limit, a small girl in six, seven or eight can get access to BF (blue films) [pornographic content], and that is harmful and contrary to the norms and values of the community" (Participant #11, male, 35 years old)

It is evident from these discussions that the participants view media, particularly social media, as a potential threat to children's well-being and moral development. They advocate for the implementation of stricter guidelines and parental involvement to protect children from harmful content and ensure their healthy growth.

1.7- Regional insecurity insecurity

According to the respondents, insecurity is a significant issue linked to sexual problems in northern Nigeria. This problem leads to the displacement of numerous families, forcing them to seek refuge in camps or other locations. This displacement has been reported to heighten the vulnerability of both sexually disciplined and indiscipline families.

"Insecurity has also had an impact on sexual harassment. The unrest caused by Boko Haram and banditry in the northern region has led to a significant increase in unwanted pregnancies." (Participant #9, male, 40 years old)

Theme 2: Interpersonal obstacles

This theme represents the functional and interactional factors that can negatively impact the way sexual health education is approached. The factors included the attitudes of parents and caregivers, lack of appropriate educational approaches and skills, and ineffective role modeling.

2.1- Negative attitudes of parents

The personal attitudes and beliefs of parents and caregivers have a significant influence on how they approach sexuality education. Misunderstanding its concept and objectives has led many stakeholders to resist it and refrain from communicating with their children about it. A participant explained the way misconceptions about sexual health education led to resistance as he said:

"In northern Nigeria, people think like sex Education is all about teaching sexual intercourse. They even call it ilimin jima'i [hausa language: knowledge of sexual intercourse] and in fact, it is not like that." (Participant #11, male, 35 years old).

Several participants, particularly those who strongly align with the values of Northern Nigeria, raised their concerns regarding the existing sex education program. The opposition often stems from concerns regarding its potential negative societal impact and the perceived promotion of deviant behaviors.

2.2- Weakness of parenting

Weaknesses in general parenting is a significant issue in the country as a whole, particularly in the northern region. Many individuals may be interested in getting married, but they often lack the necessary knowledge and preparation to effectively fulfill their responsibilities towards their children. This often leads to the birth of children without the parents knowing how to adequately address their educational needs, as highlighted by a participant:

"Sometimes parents themselves are unaware of their parental responsibilities and still choose to have a child, even when they are not mature enough. As the proverb goes, "a child cannot raise another child." (Participant #14, female, 39 years old)

Some participants believe that the issue with parents and caregivers goes beyond just a lack of knowledge. They argue that the problem lies in their ability to effectively utilize general parenting skills to promote sexual health within the family.

2.3- Lack of sexual health education and awareness

The educational experts emphasized the importance of providing children with

knowledge and skills related to sexuality education. Unfortunately, many parents lack the necessary understanding and ability to support their children in this area. This lack of support can result in children developing a liberal approach to relationships and becoming vulnerable to the repellent consequences:

"Nowadays, many parents are faced with the challenge of not knowing how to effectively address this issue. As a result, they often opt to grant their children complete freedom to navigate their own paths. However, this approach can give rise to another set of problems." (Participant #14, female, 39 years old)

The participants emphasized that a lack of knowledge and skills in sexual health can contribute to a neglectful approach toward sexual issues, ultimately leading to unhealthy relationships.

2.4- Incompetent Role Models

The participants expressed concerns about the negative influence of peers or elders, such as parents and school teachers, on children. They believed that if a caregiver or teacher had a flawed character, it could impact the behavior of children due to their tendency to imitate. As a result, parents were advised to closely monitor their children's relationships to prevent them from being influenced by inappropriate role models. One participant stated:

"Parents should be vigilant in overseeing their children's interactions to ensure they are not negatively influenced by misguided role models." (Participant #6, male, 38 years old)

"Children often form strong bonds with their peers based on shared interests and similarities. As a result, they may be influenced by their peers' behavior and beliefs. If a child's relationship with their peers is not aligned with the values and teachings of their parents, it can lead to a gradual shift in the child's behavior and attitudes." (Participant #1, male, 40 years old)

Such relationships can result in sexual activities that may be considered inconsistent with cultural values and moral standards "Let's take the example I gave you earlier as the interpersonal aspect of sexual moral decadence. A girl that has been trained well but due to the peer group influences, she has got affected [by them] and engage in lesbianism." (Participant #10, male 41 years old).

Theme 3: Intrapersonal barriers

This theme represents the personal feelings that affect the process of imparting sexual health education in the family setting.

3.1- Shame and personal discomfort

The respondents highlighted that parents and caregivers often feel uneasy when it comes to discussing sex with their children. This discomfort leads to a lack of proper guidance, which can confuse both the child and the instructor. One participant expressed this sentiment:

"It is not easy for parents to have open discussions about sex with their children. Even when a teacher covers the topic, they are cautious and careful in their presentations." (Participant #12, male, 51 years old)

In some cultures, even natural and legal things like pregnancy can cause discomfort and shyness due to strong beliefs about chastity: "The chastity in our culture was strong enough in a way that some women are shy because they are pregnant. Though we witness some changes still there are some signs of that chastity." (Participant #8, male, 45 years old)

The absence of parental involvement in addressing matters related to sex can result in early pregnancy and the consideration of abortion, as indicated by a participant.

"…In Hausa culture, when a woman becomes pregnant outside of marriage, it is common for her to be hidden or for some families to opt for abortion. In more extreme cases, parents may even disown their daughter and remove her from the family." (Participant #10, male, 41 years old)

3.2- Irresponsibility and lack of motivation

Parents' lack of responsibility and motivation can be a significant barrier to providing children with sexual health knowledge and skills. Unfortunately, many parents fail to fulfill their responsibilities and react negligently when it comes to sex education as stated by the participants:

"One issue is the negligent way some parents treat their children by allowing them to do as they please without proper guidance." (Participant #14, female, 39 years old)

Some parents may not see the importance of taking preventive measures when it comes to sexuality education. According to a participant:

"Other parents do not make an effort to manage cross-gender relations and they believe that it is just a matter of new civilization and it should be accepted" (Participant #1, male, 40 years old).

Theme 4: Considerations for Improved Implementation

During the discussion, the educators shared valuable insights on considerations for enhancing implementation and addressing encountered challenges. Key considerations highlighted include taking into account developmental factors, promoting an integrated response that respects cultural and religious diversity, and placing emphasis on moral values. These considerations contribute to a more effective implementation process.

4.1- Developmental Considerations

The participants acknowledged that sexuality education should be tailored to individuals of different ages. The content and approach to discussing sexual issues should be adapted based on the developmental stage of the recipient:

"Children bring some questions about sensitive topics such as childbirth. Sex education here is to give proper orientation. Proper orientation here is to talk according to their age." (Participant #9, male, 40 years old)

Most respondents emphasized the importance of age appropriateness in sex education to prevent it from promoting early sexual debut. They believe that exposing children to information that is not suitable for their developmental stage may lead to premature engagement in sexual activities as highlighted by a concerned participant:

"How can you explain it explicitly and barely or even practically?! Talking about sex with young people without considering their age will make them eager to practice it. So everything should be in sequence". (Participant #3, female, 41 years old)

4.2- Emphasis on moral values

The participants argue that incorporating moral values into sex education can enhance its effectiveness and increase acceptance. Many stakeholders firmly believe that morality can play a crucial role in upholding societal norms and promoting sexual health.

"In order to enhance its effectiveness and good outcome in this context, it is important to emphasize morality and decency." (Participant #12, male, 51 years old).

Another respondent added:

"They should receive comprehensive education on the nature and process of sexuality, as well as on the norms and values associated with it. This includes imparting moral values related to sex and sexuality" (Participant #10, male, 41 years old)

4.3- Utilizing Cultural and Religious Opportunities

The majority of participants emphasized incorporating cultural values and religious teachings into sexuality education. They believe that involving culture and religion in the implementation of sex education will lead to better acceptance and adherence to the teachings.

"Here in the northern region, people try to abide by Sharia law. Therefore, when we connect the topic of sex education with Islamic law, such as the regulations regarding interactions between males and females, people will listen to that" (Participant #14, female, 39 years).

One of the participants expressed the belief that incorporating cultural values and religious teachings into sexuality education can be challenging. This is because these aspects are interconnected in certain areas and rely on each other in others:

"When you feel that it is a conventional position for you to talk about sexuality education and culture, you will find that there is an intermission with many aspects of religion. Its relation with culture can also be mutual. But in some cases, there is a possibility of you interrelating them while they are interdependent. And this is where the integration becomes complicated" (Participant #4, male, 50 years old)

The importance of taking into account culture and religion in matters of sex education and other health concerns was highlighted by all the participants.

The analysis of the obtained data revealed an implication of sexuality education barriers on the overall well-being of individuals through factors that result from the mentioned limitations and restrictions (as highlighted by participants 2, 3, 5, 6, 9, 10, 11, 13, and 14. Such implications are illustrated in Table 3.

Table 3. Implications of sexual health education barriers and the potential consequences

Implications	Associated Consequences
Implication for reproductive health	Early sexual debut Early pregnancy Sexually transmitted infections (STIs) Abortion Female genital mutilation (FGM)
Social implications	Access to inappropriate information Gender disparity Sexual deviation and immorality contagion Sexual abuse Abandonment and stigmatization

Discussion

The research findings have highlighted various challenges and limitations of sexual health education, which have been found to impact children's overall well-being and lead to issues like abortion, teenage pregnancy, early sexual debut, and sexually transmitted infections. These unfavorable consequences were caused by intrapersonal inadequacies that exist in the microsystem (family system) as well as the macro system which is the broader level of social system according to the ecological system theory (26-27). Both of the two factors affect the nature of interactions about sexual health education.

Our findings highlighted how the sociocultural situation (as a macrosystem) influences the attitudes and reactions of people toward sexual matters. Culture, as an informational system that governs the emotions and behavior of individuals, plays a significant role in how sexual health issues are approached. According to Matsumoto and Wilson (28), Culture shapes belief systems that influence social roles, norms, and interpersonal values, and programs conflicting with cultural values face resistance. Our findings also revealed an inconsistency between the current sex education content and culture-rooted attitudes, resulting in resistance against sexual health education in the country. This implies the need to revisit the culture and provide more harmonious content and procedures. Our study emphasizes that culture and religion can actually promote sexual health rather than hinder it. Religious teachings were found to be inherently compatible with many aspects of sexuality education and to support sexual health (30-31). Some research findings suggest that religiosity, as part of the cultural system, has the potential to reduce factors associated with early sexual debut (32-33), as religion also influences attitudes towards early sexual behavior, abortion, contraception, morality, and divorce (34). Many studies highlighting the restrictive impact of culture and religion on sex education often fail to distinguish between religious content and the interpretation of that content by religious individuals, as these two aspects are interdependent (31). Religion aligns with science-based sexuality education, particularly in the provision of sex-related information while maintaining age-appropriate content. The difference lies in the emphasis placed by the dominant culture and religion on sex education as a means to uphold modesty and morality in sexual matters, whereas science-based sex education primarily emphasizes the importance of human rights and safe practices.

Our study has shown that the main obstacle to family-oriented sexuality education in northern Nigeria is the absence of a consistent curriculum that effectively addresses sexual health in both official and non-official settings, as indicated by previous studies (8,35). The observed inconsistency has a restrictive effect on the way parents address sexual health issues. Some may overlook the content and resort to unhelpful

traditional and conservative approaches, while others may be indifferent and choose not to get involved in such matters. At both the intrapersonal and interpersonal levels, we have observed that a lack of knowledge, skills, and motivation contributes to a lack of control over the influence of peers and adults on children, leading to risky sexual behaviors.

The lack of comprehensive sexuality education harms mental/reproductive health, exacerbating widespread early marriage and teenage pregnancy driven by poverty, insecurity, tradition, and gender inequality (36). This situation poses potential risks that are related to early sexual debut such as psychological distress and poorer health situations in later life (37-38). Additionally, it has been reported to affect normal development, contribute to physical and sexual violence, increase the risk of sexually transmitted infections, perpetuate the cycle of poverty, and lead to high child and maternal mortality rates (39-40).

Our study has uncovered other harmful practices that endanger the lives of teenagers due to limited sexual health education (41). These include unsafe abortion and female genital mutilation. In line with our findings, Yaya & Ghose (42) highlighted that female genital mutilation is prevalent in Nigeria and is linked to mental and physical complications. Various studies have shown that female genital mutilation can lead to long-term and short-term health issues, such as gynecological, obstetric, and psychosexual complications (43-44). Reyners (44) refuted the claim that female genital mutilation is supported by religious teachings and its effectiveness in controlling promiscuity, stating that it is not backed by any religious obligation and may even increase sexual desire.

Unsafe abortion also is another issue as highlighted by the findings. In Nigeria, self-managing abortions using unsafe methods outside formal healthcare centers contributes to abortion-related morbidity and mortality. Onukwugha et al. (45) suggested that the prevalence of contraceptive use and early sexual activity also predict pregnancy termination. Discussing the potential consequences of unsafe abortion, Abhary (46) highlighted its long-term health and economic consequences.

Media-related challenges also have been identified as obstacles in providing sexual health education within families. The widespread use of electronic devices and technology has made it easier for children to be exposed to content that could harm their sexual development (47-48). Parents' lack of media literacy and ability to monitor media usage has made children more susceptible to the harmful effects of media. Several studies have reported that inappropriate media use can have negative consequences (49). For example, watching pornography was reported to be associated with an increase in risky sexual behavior (50). Other studies also reported sexual practice, coercive victimization (51) unhelpful sexual attitudes and behavior as associates of inappropriate use of media (52-53). Our findings suggest the need to advocate for media-related interventions to educate parents about teaching their children how to use media and cyberspace.

Our findings have suggested some considerations for better implementation, including developmental considerations and an emphasis on moral values. The obtained data highlighted that one aspect of developmental consideration is to restrict access to certain sex-related information until individuals reach a certain level of maturity. Parents and stakeholders expressed concerns about the potential harmful effects of providing sex-related information to young children. In line with this statement, previous studies (1,54) revealed that premature exposure to sex-related information can lead to engaging in sexual activities at an early age. However, it is important to note that focusing solely on developmental aspect may not be effective unless potential risks are identified and managed, as developmental growth can be accompanied by increased risk-taking behavior (55). Adolescence in particular should be considered a sensitive period of life, as it is characterized by physiological and cognitive changes that can contribute to risky behaviors. During this age, despite having adult-like cognitive abilities for responsible decision-making in adolescence, the desire for intimacy

and social status can still lead to risky behaviors (56-57).

Research affirms moral values as essential to sexuality education. Current educational frameworks emphasizing liberty and protection neglect moral guidance, limiting youths' understanding of ethical sexual behaviour. A moral decision-making framework enables critical evaluation of consequences, deterring coercive or exploitative actions. Evidence supports integrating moral reasoning and practical wisdom into curricula to address relational complexities (57–60).

The study was limited by sensitivities surrounding sexual matters in the region, resulting in a lack of access for some professionals to participate in the interviews. Our research has highlighted the need to address cultural challenges, although it was unable to specify the extent to which cultural values align with scientific evidence regarding sex education. Further studies could provide more insight into the patterns of utilizing religious and cultural opportunities for sexual health education.

Conclusion

The barriers described in this study have repercussions related to reproductive health that could be mitigated by educational and motivational interventions that improve the abilities of educators and caregivers to manage the physical and psychological consequences of social, procedural, and personal inadequacies related to sexual health education in northern Nigeria. It is important for interventions addressing sexuality education to consider age appropriateness, moral values, and the sociocultural status of the recipients.

Declarations

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Conflicts of interest

Authors declared no conflicts of interest.

Ethical considerations

This study has received approval from the Research Ethics Committee of the Ferdowsi University of Mashhad, Iran (Approval ID: IR.UM.REC.1403.101).

Code of Ethics

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Use of Artificial Intelligence (AI)

We have not used any AI tools or technologies to prepare this manuscript.

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Authors' contribution

All authors AS, SMA and MSR, HS and AAD contributed to the conceptualization and writing of the manuscript. AS and AAD conducted fieldwork and interviews. A.S. led data analysis, interpretation, and drafting of the primary manuscript. HK and MSR oversaw validation of the methodology and findings. All authors critically reviewed, edited, and approved the final manuscript.

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