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Can a school health club-based intervention significantly influence the drivers of gendered sexual norms and ideologies among in-school adolescents in southeast Nigeria?

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Abstract

Individual experiences, social policies, and environmental exposure shape beliefs, norms and ideologies about sexuality. The objective of this study was to determine the effectiveness of a school health club training programme in improving adolescents' knowledge and perceptions of gender norms and ideologies about sexuality. This was an intervention study among in-school adolescent boys and girls in 12 secondary schools in Ebonyi State, southeast Nigeria. The intervention was the establishment of school health clubs in six schools (intervention), while the six other schools served as controls that did not have school health clubs. Data was collected using a pre-tested interviewer-administered questionnaire. Bivariate and multivariate logistic regression analyses were used to analyse the data. More than half of the adolescents in the intervention (58.3%) and non-intervention (56.1%) schools believed that men need sex more than women. About 90% of adolescents in school (in both arms) agreed that both boys and girls should remain virgins until marriage. Majority of adolescents in both intervention and non-intervention schools disagreed with the notion that "it is justifiable for a boy to hit his girlfriend". Female gender (OR: 1.6; CI 1.1-2.4), senior secondary school level (OR: 1.6; CI 1.0-2.5), and urban residence (OR: 1.7; CI: 1.1-2.5) were associated with the perception that boys do not respect girls who agree to have sex with them. Working for pay decreases the likelihood of having the perception that girls should remain virgin until they marry (OR: 0.4; CI: 0.2-0.9), while living in the urban area increases the likelihood of having the perception that boys should remain virgins until marriage (OR: 2.1; 1.1-4.1). Female gender (OR: 0.7; CI: 0.5-1.0) and urban residence (OR: 0.6; 0.4-0.9) decrease the likelihood of having the perception that men need sex more frequently than women do. In the intervention arm, female gender was associated with perception that boys do not respect girls who agree to have sex with them (OR: 2.4; CI: 1.3-4.3) while older age was associated with the perception that men need sex more frequently than women in the intervention arm (OR: 1.2; CI: 1.0-1.4). No predictor was found in the non-intervention arm. Although both intervention and non-intervention arms had positive perceptions of gendered sexual norms and ideologies, a school health club-based intervention could influence the drivers of these norms. (*Afr J Reprod Health* 2024; 28 [8s]: 83-92).

Keywords: Gender norms; Ideologies; Sexuality; Adolescents; Nigeria

Résumé

Les expériences individuelles, les politiques sociales et l'exposition à l'environnement façonnent les croyances, les normes et les idéologies en matière de sexualité. L'objectif de cette étude était de déterminer l'efficacité d'un programme de formation d'un club de santé scolaire pour améliorer les connaissances et les perceptions des adolescents concernant les normes de genre et les idéologies en matière de sexualité. Il s'agissait d'une étude d'intervention auprès d'adolescents, garçons et filles, scolarisés dans 12 écoles secondaires de l'État d'Ebonyi, au sud-est du Nigeria. L'intervention consistait en la création de clubs de santé scolaire dans six écoles (intervention), tandis que les six autres écoles servaient de contrôles qui ne disposaient pas de clubs de santé scolaire. Les données ont été collectées à l'aide d'un questionnaire pré-testé administré par l'intervieweur. Des analyses de régression logistique bivariées et multivariées ont été utilisées pour analyser les données. Plus de la moitié des adolescents des écoles d'intervention (58,3 %) et de non-intervention (56,1 %) pensaient que les hommes avaient plus besoin de relations sexuelles que les femmes. Environ 90 % des adolescents scolarisés (dans les deux bras) étaient d'accord sur le fait que les garçons et les filles devraient rester vierges jusqu'au mariage. La majorité des adolescents des écoles d'intervention et des écoles non-interventionnelles étaient en désaccord avec l'idée selon laquelle « il est justifiable qu'un garçon frappe sa petite amie ». Le sexe féminin (OR : 1,6 ; IC 1,1-2,4), le niveau d'études secondaires de deuxième cycle (OR : 1,6 ; IC 1,0-2,5) et la résidence urbaine (OR : 1,7 ; IC : 1,1-2,5) étaient associés à la perception que les garçons ne respectent pas les filles qui acceptent d'avoir des relations sexuelles avec

elles. Travailler contre rémunération diminue la probabilité d'avoir l'impression que les filles devraient rester vierges jusqu'à leur mariage (OR : 0,4 ; IC : 0,2-0,9), tandis que vivre en zone urbaine augmente la probabilité d'avoir l'impression que les garçons devraient rester vierges jusqu'au mariage. (OU : 2.1 ; 1.1-4.1). Le sexe féminin (OR : 0,7 ; IC : 0,5-1,0) et la résidence urbaine (OR : 0,6 ; 0,4-0,9) diminuent la probabilité d'avoir la perception que les hommes ont besoin de relations sexuelles plus fréquemment que les femmes. Dans le groupe d'intervention, le sexe féminin était associé à la perception que les garçons ne respectent pas les filles qui acceptent d'avoir des relations sexuelles avec eux (OR : 2,4 ; IC : 1,3-4,3), tandis que l'âge plus avancé était associé à la perception que les hommes avaient besoin de relations sexuelles plus fréquemment que les hommes. femmes dans le bras d'intervention (OR : 1,2 ; IC : 1,0-1,4). Aucun prédicteur n'a été trouvé dans le bras sans intervention. Même si les groupes d'intervention et de non-intervention avaient des perceptions positives des normes et idéologies sexuelles sexistes, une intervention basée sur un club de santé scolaire pourrait influencer les moteurs de ces normes. (*Afr J Reprod Health* 2024; 28 [8s]: 83-92).

Mots-clés: Normes de genre ; Idéologies ; Sexualité; Adolescents ; Nigeria

Introduction

Gender norms are the social rules and expectations that keep the gender system intact¹. This includes how individuals are expected to act, speak, dress, groom, and conduct themselves based on their assigned sex². Gender norms are enforced, learnt and internalized through interaction with various social networks and institutions³. There are gender role expectations for every society, ethnic group, and culture which may differ from group to group. Gender norms draw upon and reinforce gender stereotypes about women, men and gender-diverse individuals³. These gender stereotypes are grouped into four categories and include personality traits, domestic behaviours, occupations, and physical appearance³. Gender norms can be harmful and have negative implications for health⁴.

The health and well-being of women and girls may be at risk because of the gender inequality and discrimination they face⁴. For instance, female adolescents may become less equipped to take care of themselves financially in adulthood because of the gendered perspective of socialising female adolescents with more domestic chores. This will mean financial dependency on men which when combined with gender inequitable attitudes can be linked to increased experience of violence and HIV risk behaviours such as transactional sex among females⁵. Similarly, boys and men's health and wellbeing can also be impacted negatively by harmful gender norms. For example, boys may be encouraged to perpetrate violence, indulge in smoking, take sexual health risks and refuse to seek help or healthcare⁴.

On its part, sexuality is a crucial aspect of normal, healthy maturation and should be considered in adolescent development. According to World Health Organisation, ".....sex, gender identities and roles, sexual orientation, eroticism,

pleasure, intimacy and reproduction are a central aspect of being human"⁶. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviours, practices, roles and relationships although not all of these are always experienced or expressed⁶. Sexuality is influenced by a combination of factors including biological, psychological, social, economic, political, cultural, legal, historical, religious and spiritual factors"⁶. Culture plays a key role in controlling sexuality in human beings because sexual behaviours are governed by sexuality norms. However, there are variations in sexuality behaviors from one ethnicity or group to another⁷. Social norms (including gender norms) strongly influence young people's socialisation and their beliefs about sexuality⁸. Behaviours and sexual relationships of young women and girls are often influenced by socio-cultural beliefs about gender roles⁹. Furthermore, the family is a strong agent of socialisation for formation of gender role ideology. Intergenerational transmission of attitudes occurs in families through direct interaction and role modeling^{5,10}. Nevertheless these family effects seem to fade during adolescence due to life experiences and influence of peers¹⁰.

Generally, certain ideologies about sexuality have been reported. Some of these ideologies centre on sexual drives and sexual power^{11,12}. Overtime, there have been variations in beliefs about nature of men's and women's sexual drives, although the contemporary view is that men's sex drive is stronger^{11,13}. Similarly, gender inequalities in power regarding the dynamics of sexual relations between men and women have been reported by variety of feminist scholars. This has been shown to contribute to the rate of sexual violence against women¹¹.

A number of other factors are involved in shaping gender perspectives and ideologies ranging from childhood experiences, social

policies, and environmental factors such as exposure to media¹⁰. Gender equitable perceptions and attitudes may change with age, education and experiences as well as other factors. A study among Tanzanian adolescents found that younger adolescents had more equitable attitudes⁵ while another study that was carried out in Uganda revealed that younger adolescents were less gender equitable than older adolescents¹⁴. The perception of gender norms and ideologies about sexuality among adolescents is underexplored in Nigeria and few authors have published original articles on this subject matter. A study carried out in the south eastern part of the country reported that boys perceived sexual activity as carrying out sexual exploits and 'subduing girls'¹⁵. Some of the cherished qualities among the boys were male dominance, strength, sexual aggression, ruthlessness, risk-taking, and indifference to the feelings and ideas of one's sexual partners. The study also revealed that the boys are taught to be in control of their relationships with girls. Faithfulness, submission and respect for the boy were the major expectations boys have of relationships with girls. In addition, occasional use of force by boys was seen as crucial to check the excesses of girls and to prevent them from being lured or deceived by other boys¹⁵.

School health club constitutes a voluntary gathering of students at the school level, whereby students gather under the guidance of their teachers to acquire knowledge, engage in discussions, and address matters pertaining to their health and well-being during their time at school^{16,17}. The goal of school health clubs is to enhance the physical and mental well-being of both students and teachers. Through school health clubs, students are empowered to actively contribute to the positive change in their surroundings, turning the school into a hub for promoting health and human rights within the broader community¹⁸. The considerable amount of time children spend in school provides an opportunity to enhance their health. Therefore, establishing a school health club can serve as a channel to positively impact the well-being of students¹⁶. Evidence shows that school-based adolescent health clubs have the capacity to influence the knowledge, attitudes, and behaviors of students¹⁹. Evidence also shows that school health clubs has been listed by stakeholders as an important strategy for delivering sexual and

reproductive health rights information to adolescents²⁰. The objective of this study was to determine the effectiveness of a school health club programme in improving adolescents' knowledge and perceptions of gender norms and ideologies about sexuality.

This paper presents new knowledge on adolescents' perspectives of gender norms and ideologies about sexuality. A good understanding of determinants of gender norms and ideologies is necessary for designing interventions and policies that can influence gender perspectives towards improving gender equality. The evidence from this paper would be for improving reproductive well-being among adolescents in Nigeria.

Methods

Study area

This study was conducted in twelve communities from six local government areas (LGAs) in Ebonyi state, southeast Nigeria. There were six schools where adolescent sexual and reproductive health (ASRH) interventions were implemented and six non-intervention schools. Ebonyi state is located in southeast geo-political zone of Nigeria, located on latitude: 6° 15' 18" N, longitude: 8° 05' 55" E. There are 13 LGAs in the state grouped into three senatorial zones. The selected LGAs were listed by stakeholders as having the highest unwanted teenage pregnancy rates in the State.

Study design

This study was an intervention study. The study population comprised of adolescent boys and girls who were between 13 to 18 years of age in each of the public schools selected from the six study LGAs. A total of 514 adolescents were interviewed from six ASRH intervention schools and six non-intervention schools. The communities where ARSH intervention was carried out include Agbaja- Nnuhu in Abakaliki LGA, Nwofe in Izzi LGA, Abina-Ikwo in Ikwo LGA, Onueke (Amuzu) in Ezza South LGA, Ebunwana in Afikpo South LGA and Okposi-Okwu in Ohaozara LGA. The non-intervention communities were Amagu Unuhu in Abakaliki LGA, Ndieze in Izzi LGA, Ekpelu in Ikwo LGA, Okoffia in Ezza South LGA, Oso Edda in Afikpo South LGA and Ugwulangwu in Ohaozara LGA.

Intervention

A multi-faceted participatory intervention was implemented at selected schools. The intervention involved training of teachers, school counsellors and peer educators about sexual and reproductive health (SRH). Information provided included basic information on adolescent sexual and reproductive health (ASRH), anatomical and physiological changes during puberty, who is an adolescent, sexual abstinence, premarital sex, life building skills for healthy living, risky sexual behaviours, sources of SRH information, services provided at Youth Friendly Centres (YFCs), adolescent SRH rights, sexual violence and rape. School health clubs were established in the intervention schools. Prior to the inauguration of school health clubs, a public panel discussion was convened with adolescents and teachers from ten (10) public and private secondary schools, a random selection of out-of-school adolescents in attendance. Key policymakers (or their representatives) from the ministries for Health, Education, Information, and Youth and Sport Development were also in attendance. Representatives of non-governmental and civil society organizations working in adolescent health in the State were also involved in the panel discussion. Topics discussed include health systems barriers to accessing SRH services and information for adolescents, socio-cultural and religious norms that influence adolescent health and how these are being tackled in the communities. Adolescents were given opportunities to ask questions and contribute their own experiences, verbally or in writing. Overall, the adolescents were enthusiastic to learn and participate in the interventions that would be implemented in their schools.

The formal inauguration of health clubs in secondary schools was implemented in collaboration with the State Ministry of Health, State Ministry of Information, State Ministry of Education, and Universal Basic Education Board. Preparations for the events were facilitated by the research team, the local government focal person for adolescent health, the school principals, the trained teachers and the peer educators. Materials such as (i) club register; (ii) branded face caps; (iii) branded polo shirts; (iv) branded note pads and pen; (v) manuals for training adolescents on SRHR; and (vi) fliers and posters on the SRHR of

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adolescents were given to each school health club. A billboard of the school health club was also mounted at the entrance of each school to brand it as an adolescent SRH promoting school.

Sampling and sample size

In each LGA, a public secondary school was selected from each of the ASRH intervention and non-intervention communities. Hence, the study was conducted in six intervention schools and six non-intervention schools. Assuming a confidence interval of 95%, power of 80%, and non-response of 10%, a minimum sample size of 458 for the two populations was estimated²¹. However, data was collected from 514 adolescents to increase the power of the study. There were 266 adolescents in the intervention arm and 248 adolescents in the control arm that were selected for the study.

The interviewed students were selected from the class register through a simple random sampling technique, using a table of random numbers generated for each class. A minimum of 42 students were selected using simple random sampling technique from each selected school for the survey. Students were selected from each of the classes (1-3) in the junior and senior secondary levels. An equal number of students were selected from each class, giving 8-9 students per class. Where there is more than one arm of classes in the school, an equal number of students were selected per arm of the class (Table 1).

Data collection

The data collection instrument was a pre-tested tool, adapted from the WHO illustrative questionnaire for interview-surveys with young people²². The questions focused on adolescent's perspectives of gender norms and ideologies towards sexuality. A total of forty-two research assistants were recruited and trained for four days on the objectives of the study, data collection techniques and ethics in research. Paper and electronic copies of the questionnaire were used to collect data over a period of fourteen days. Electronic copies of the questionnaires were uploaded to android tablets using kobo collect. Individual matching of information on completed paper-questionnaire with corresponding electronic-questionnaire was done before and after uploading

Table 1: Number of students selected from each school

Intervention schools			Non-intervention schools		
Schools	Location	Frequency (%)	Schools	Location	Frequency (%)
School 01 (Girls school)	Urban	43 (8.4)	School 02 (Mixed school)	Urban	42 (8.2)
School 03 (Girls school)	Urban	42 (8.2)	School 04 (Mixed school)	Urban	42 (8.2)
School 05 (Mixed school)	Urban	44 (8.6)	School 06 (Girls school)	Urban	39 (7.6)
School 07 (Mixed school)	Rural	43 (8.4)	School 08 (Mixed school)	Rural	42 (8.2)
School 09 (Mixed school)	Rural	42 (8.2)	School 10 (Mixed school)	Rural	42 (8.2)
School 11 (Mixed school)	Rural	50 (10.1)	School 12 (Girls school)	Rural	42 (8.2)

data to the server and data was viewed concurrently.

Data analyses

Data analyses were done with the aid of STATA software. Descriptive statistics and chi square tests were done. Chi square test was done to determine the effect of the intervention. Logistic regression was carried out to identify predictors of perception of gender norms and ideologies about sexuality. Independent variables include age, gender, level of education, place of residence, and working for pay, and study group (intervention/non-intervention). There were six outcome variables used to assess the perception of gender norms and ideologies about sexuality which include:

Outcome1: Believe that a boy to hit his girlfriend is justifiable

Outcome2: Believe that sometimes a boy has to force a girl to have sex if he loves her

Outcome3: Boys do not respect girls who agree to have sex with them

Outcome4: Believe that girls should remain virgins until marriage

Outcome5: Believe that boys should remain virgins until marriage

Outcome6: Men need sex more frequently than women

Each outcome was assessed individually with agree or disagree/“don’t know” options. The value of 1 was assigned to agreed option while 0 was assigned to disagree/don’t know. The level of significance was set at $p < 0.05$ and the confidence interval at 95%.

Ethical considerations

Ethical approval for the study was obtained from the Health Research Ethics Committee of University of Nigeria Teaching Hospital Enugu and the Research and Ethics Committee of Ebonyi State Ministry of Health. Ethical approval was secured from both committees before entry into the study site. Informed written consent was obtained from parents/guardians of adolescents aged 13 to 17 years who participated in the survey. Also, a written assent was obtained from adolescents aged 13 to 17 years and older adolescents aged 18 years gave consent for the study.

Results

Table 2 shows that both arms of the study are comparable in some of their socio-demographic characteristics. Majority of the respondents were females in both arms, in senior secondary school and did not work for pay. About half of the respondents lived in the rural area and were 16 years and above in both arms.

Table 3 shows that there is no statistically significant difference in the perception of gender norms and ideologies about sexuality between the intervention and non-intervention schools. Many in school adolescents residing in both intervention (58.3%) and non-intervention (56.1%) communities agree that men need sex more than women. Majority of adolescents in school who resides in both arms agree that girls (intervention (95.9%) and non-intervention (93.1%)) and boys (intervention (90.2%) and non-intervention (86.3%)) should remain virgins until marriage.

Table 2: Socio-demographic characteristics of adolescents in both intervention and non-intervention communities

Variables (N=514)	Intervention group Frequency (%)	Non-intervention group Frequency (%)	Chisquare (Pvalue)
Gender			
Female	192(72.2)	159(64.1)	0.2(0.6)
Male	74(27.8)	89(35.9)	
Level of education			
Senior	173(65.0)	149(60.1)	1.3(0.2)
Junior	93(35.0)	99(39.9)	
Place of residence			
Urban	130(48.9)	122(49.2)	0.2(0.6)
Rural	136(51.1)	126(50.8)	
Age in single years			
13	32(12.0)	39(15.7)	5.5(0.4)
14	37(13.9)	42(16.9)	
15	55(20.7)	57(23.0)	
16	57(21.4)	50(20.2)	
17	50(18.8)	38(15.3)	
18	35(13.2)	22(8.9)	
Working for pay			
Yes	50(18.9)	42(16.9)	0.3(0.6)
No	214(81.1)	206(83.1)	

Table 3: Perception of gender norms and ideologies about sexuality in intervention and non-intervention schools

Variables (N=514)	Intervention (n=266)		Non-intervention (n=248)		Chi-square (pvalue)
	Agree n (%)	Disagree/ don't know n (%)	Agree n (%)	Disagree/ don't know n (%)	
Believe that a boy to hit his girlfriend is justifiable	21(7.9)	245(92.1)	26(10.5)	222(89.5)	1.0(0.3)
Believe that sometimes a boy has to force a girl to have sex if he loves her	57(21.4)	209(78.6)	57(23.0)	191(77.0)	0.2(0.7)
Believe that girls should remain virgins until marriage	255(95.9)	11(4.1)	231(93.2)	17(6.9)	1.8(0.2)
Believe that boys should remain virgins until marriage	240(90.2)	26(9.8)	214(86.3)	34(13.7)	2.0(0.2)
Boys do not respect girls who agree to have sex with them	160(60.4)	105(39.6)	154(62.1)	94(37.9)	0.2(0.7)
Men need sex more frequently than women	155(58.3)	111(41.7)	139(56.1)	109(44.0)	0.3(0.6)

Majority of adolescents in both arms of the study disagree in intervention and non-intervention arms respectively) with the notion that “It is justifiable for a boy to hit his girlfriend”. About 60% of respondents in both arms agreed that boys will disrespect girls who agree to have sex with them. Over two thirds of respondents disagreed that use of force to have sex with a girl a boy loves is right. There was no statistically significance difference in the adolescents’ perceptions between the two groups.

Table 4 shows that females are 1.6 times more likely to have the perception that boys do not respect girls who agree to have sex with them (OR: 1.6; CI 1.1-2.4). Those in senior secondary school are also 1.6 times more likely to have the perception that boys do not respect girls who agree to have sex with them (OR: 1.6; CI 1.0-2.5). Those living in the urban area are 1.7 times more likely to have the perception that boys do not respect girls who agree to have sex with them (OR: 1.7; CI: 1.1-2.5).

Table 4: Logistic regression for perception of gender norms and ideologies about sexuality among adolescents in school

Socio-demographic characteristics	Outcome1			Outcome2			Outcome3		
	CI	OR	p-value	CI	OR	p-value	CI	OR	p-value
Gender (female)	0.4-1.7	0.9	0.7	0.5-1.3	0.8	0.3	1.1-2.4	1.6	0.0**
Intervention (treatment)	0.4-1.3	0.7	0.2	0.6-1.4	0.9	0.6	0.6-1.3	0.9	0.7
Level in school (Senior Secondary)	0.4-1.9	0.9	0.7	1.0-2.8	1.6	0.1	1.0-2.5	1.6	0.0**
Location of residence (urban)	0.4-1.5	0.8	0.4	0.5-1.2	0.8	0.3	1.1-2.5	1.7	0.0**
Age	0.9-1.5	1.2	0.2	0.8-1.1	1.0	0.6	0.8-1.1	1.0	0.6
Working for pay (Yes)	0.8-3.5	1.7	0.1	0.5-1.6	0.9	0.8	0.5-1.3	0.8	0.4

Statistical significance: *** $p < 0.01$, ** $p < 0.05$

Confidence interval - CI

Odds ratio - OR

Outcome 1: Believe that a boy to hit his girlfriend is justifiable

Outcome 2: Believe that sometimes a boy has to force a girl to have sex if he loves her

Outcome 3: Boys do not respect girls who agree to have sex with them

Table 5: Logistic regression for perception of gender norms and ideologies about sexuality among adolescents in school

Socio-demographic characteristics	Outcome4			Outcome5			Outcome6		
	CI	OR	p-value	CI	OR	p-value	CI	OR	p-value
Gender (female)	0.7-5.3	1.9	0.2	0.9-3.7	1.9	0.1	0.5-1.0	0.7	0.0**
Intervention (treatment)	0.9-4.8	2.1	0.1	1.0-3.0	1.7	0.1	0.7-1.5	1.0	0.8
Level in school (Senior Secondary)	0.7-4.7	1.8	0.2	0.5-2.1	1.0	0.9	0.8-1.8	1.2	0.5
Location of residence (urban)	0.9-6.4	2.4	0.1	1.1-4.1	2.1	0.0**	0.4-0.9	0.6	0.0**
Age	0.5-1.0	0.8	0.1	0.7-1.0	0.8	0.1	1.0-1.3	1.1	0.1
Working for pay (Yes)	0.2-0.9	0.4	0.0**	0.3-1.2	0.6	0.2	0.7-1.7	1.1	0.8

Statistical significance: *** $p < 0.01$, ** $p < 0.05$

Confidence interval - CI

Odds ratio - OR

Outcome 4: Believe that girls should remain virgins until marriage

Outcome 5: Believe that boys should remain virgins until marriage

Outcome 6 Men need sex more frequently than women

Table 5 shows that working for pay decreases the likelihood of having the perception that girls should remain virgin until they marry (OR: 0.4; CI: 0.2-0.9), while living in the urban area increases the likelihood of having the perception that boys should remain virgins until marriage (OR: 2.1; 1.1-4.1). Females are less likely to believe that men need sex more frequently than women do (OR: 0.7; CI: 0.5-1.0). Also, students who reside in urban

location are less likely to believe that men need sex more frequently than women do (OR: 0.6; 0.4-0.9). Table 6 shows that being female increases the likelihood of having the perception that boys do not respect girls who agree to have sex with them in the intervention arm (OR: 2.4; CI: 1.3-4.3). Older age increases the likelihood of having the perception that men need sex more frequently than women in the intervention arm (OR:1.2; CI:1.0-1.4).

Discussion

This findings show that majority of adolescents in this study believe that girls and boys should remain virgins until marriage. Similar results have been previously documented in studies done in other countries, such as Uganda and South Africa^{23,24}. This positive perception is important for adolescent sexual and reproductive health because evidence shows that becoming sexually active can have a substantial impact on mental health of female adolescents. It's been found that females who have sex during their adolescence experience have an increased risk of major depression²⁵. Additionally, being virgin has health benefits because it implies abstinence which has no risk of pregnancy or STIs²⁶. On that note, the perception may be helpful in tackling the high level of unintended pregnancies and illegal abortions which are associated with early sexual debut.

Regarding physical and sexual abuse, the majority of adolescents disagreed with the view that "It is justifiable for a boy to hit his girlfriend" and that "use of force to have sex with a girl he loves is right. This finding is useful for the prevention of violence against women. Internalizing such healthy gender norms at early stages can help shape the ideologies of adolescents and lead to gender equitable attitudes during adulthood. Some studies have however reported some level of physical and sexual abuse experienced by adolescent girls in relationships^{27,28}. Gender inequitable attitudes have been shown to be associated with gender-based violence^{29,30}. However, a previous study in southeastern Nigeria reported gender inequitable practices by boys although the study is an older study¹⁵. The difference in the findings might be a reflection of an improvement in the gender equitable attitudes of male adolescents over time.

Concerning sexual drives, many in school adolescents agree that men need sex more than women. This is in keeping with previously documented evidence^{11,13}. Furthermore, about two thirds of respondents in both arms agreed that boys will disrespect girls who agree to have sex with them. Disrespect in relationships is a form of emotional abuse and should be discouraged. This has implications for marital relationships in future because a boy who disrespects a girl that he hasn't

married may likely disrespect her when she eventually becomes his wife. This calls for concern considering the practices in the African culture that permit men to view their wives as their possessions³¹. It is therefore necessary to re-orient adolescent boys and teach them the importance of mutual respect in relationships generally.

Being female, being in senior secondary school and living in the urban area were associated with the perception that boys do not respect girls who agree to have sex with them. This may be because those in senior secondary school may have been exposed to information about their sexual rights. Urban residence may also have led to more exposure and greater access to information on sexual and reproductive health rights.

Similarly, being female decreases the likelihood of believing that men need sex more frequently than women do while students who reside in urban location are less likely to believe that men need sex more frequently than women do. The issue of sexual drive has been previously documented^{11,32}; however, further studies may be necessary to understand better the reasons for these findings. Working for pay was shown to decrease the likelihood of having the perception that girls should remain virgins until they marry. Adolescents who are involved in paid jobs are exposed early to life experiences^{33,34} and may more frequently get involved in sexual activity earlier than those who are fully in school. This could in turn enable these adolescents who work for pay to overcome traditional perceptions that girls and boys should delay sex until marriage.

When data were disaggregated by the study arms (intervention and non-intervention) to compare the effect of gender and age within each group, result showed that gender (female) increases the likelihood of having the perception that boys do not respect girls who agree to have sex with them in the intervention arm. This finding may be as a result of the increased access to information on adolescent sexual rights as a result of the intervention. This also shows that female gender is associated with gender equitable attitudes. It is therefore necessary to strengthen these positive perceptions and attitudes in further interventions. In addition, it is important to continue the provision of age specific and age appropriate ASRH information to adolescents.

Limitations

This study was based on self-reports which may have been prone to social desirability bias. However, besides from its large sample size, this study is one of the few studies in Nigeria that explored adolescents' perceptions of gender norms and ideologies about sexuality.

Conclusion

The study revealed that adolescents had positive perception of gender norms and ideologies towards sexuality. Being female, senior secondary class and urban residence were associated with gender equitable perceptions while working for pay was shown to decrease the likelihood of having the perception that girls and boys should remain virgin until they marry. Internalizing healthy gender norms at early stages can help shape the ideologies of adolescents and lead to gender equitable attitudes during adulthood. Although both intervention and non-intervention arms had positive perceptions of gendered sexual norms and ideologies, a school health club-based intervention could influence the drivers of these norms. We therefore recommend a continuous orientation and re-orientation of adolescents towards gender equitable attitudes. Good education for adolescents and improved access to information on sexual and reproductive health rights should also be emphasized.

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Conflicts of Interest

The authors have no conflicts of interest to declare.

Competing Interests

Authors declare none.

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Author Contributions

COM, and OO conceptualized and designed the study and data collection instruments. ICA, IA, CA, IIE and GOE, carried out data collection. All authors took part in data analysis. ICA and IA wrote the first draft of the manuscript, while all the authors read, revised and approved the final version for submission.

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