



Knowledge, Attitude and Willingness to Teach Sexuality Education among Secondary School Teachers in Nnewi, Nigeria

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Authors' contributions

This work was carried out in collaboration between both authors. Author POUA designed the study, wrote the protocol, edited the manuscript performed and managed the statistical analysis and supervised the work. Author OSN managed the data collection, wrote the first draft of the manuscript and managed the literature searches. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/BJESBS/2015/15352

Editor(s):

(1) Eduardo Montero Garcia, Department of Electromechanical Engineering, Polytechnic School, University of Burgos, Spain.

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Reviewers:

(1) Isara Tongsamsi, Songkhla Rajabhat University, Thailand.

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(3) Anonymous, Sweden.

(4) Anonymous, USA.

Complete Peer review History: <http://www.sciencedomain.org/review-history.php?iid=1025&id=21&aid=8482>

Original Research Article

Received 21st November 2014

Accepted 18th February 2015

Published 16th March 2015

ABSTRACT

Aim: Sexuality education (SE) is a lifelong process of acquiring information and developing attitudes, perceptions and values about sex, sexual identity and intimacy. Schools have been acknowledged as sites for sexual health promotion, and comprehensive SE programs are known to delay initiation of sex, reduce number of sexual partners and increase the use of contraceptives. This study investigated the knowledge, attitude and willingness to teach SE among secondary school teachers in Nnewi, Anambra State.

Methodology: A cross sectional study was carried out among 150 randomly selected teachers in secondary schools in Nnewi, Nigeria.

Results: They were 118 females and 32 males and their mean age was 38.2 years. About 52.7% had Bachelor's degree in education, and 6% had Master's degree. Knowledge of SE was poor as

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only 25% knew more than one component of the package with “sexual maturity” recording the highest knowledge at 33%. Majority 135 (90%) agreed that SE should be taught in schools, and a markedly higher proportion of female than male teachers ($p < 0.01$), supported this view. Age group 30-39 years was significantly more knowledgeable than the rest about “contraception” ($p < 0.01$) and “sexual maturity” ($p < 0.005$). Whereas 136 (90.7%) were willing to teach SE, 123 (82%) said both sexes should be targets of such education. Major identified barriers to SE were “low awareness” 62 (41.3%), “lack of skill” 40 (26.7%), and “cultural barrier” 32 (21.3%).

Conclusion: Knowledge of SE among the teachers was poor, even though many of them displayed the right attitude giving their willingness to teach it. Teachers need in-service training to improve their knowledge and modify adverse cultural beliefs towards SE. The school curriculum should be updated to introduce and accommodate all aspects of the subject.

Keywords: Sexuality education; attitude; secondary school teachers; Nnewi; Nigeria.

1. INTRODUCTION

A person can acquire knowledge through experience or education and this can lead to the theoretical or practical understanding of a subject [1]. The transfer of knowledge can result in attitudinal change or a settled way of thinking or feeling, typically reflected in the person's behavior towards a certain idea, object, person or situation [2]. This can ultimately lead to willingness or readiness to carry out a given task [3]. Formal education takes place in primary school, secondary school and at the tertiary level. Secondary schools usually offer general, technical, and vocational or university preparatory curricula [3]. Teachers are the vessels for the impartation of knowledge or skill to students to enhance learning or understanding [3].

Sex education, which is sometimes called sexuality education (SE) or sex and relationships education is the process of assimilating information and developing attitudes and perceptions about sex, sexual inclination, relationships and intimacy [4]. SE is also about nurturing young people's skills to enable them make informed choices regarding their behaviour, and also acquire the necessary confidence and competence to act on these choices [4]. SE is a major component of comprehensive health education and the goal is to help children and adolescents become healthy adults with responsible reproductive health behaviours [5]. It is a lifelong process of building a strong foundation for sexual health and should take place in homes, schools and faith-based institutions [6]. Parents and guardians ought to be primary instructors of sex education for their children [7,8]. School based sexuality education should complement and supplement the

sexuality education children receive from their families, religious and community groups [9].

It is widely accepted that young people have a right to sex education; this is because it is an avenue through which they are helped to protect themselves against abuse, exploitation, unwanted pregnancies, sexually transmitted infections and HIV/AIDS [10]. Moreover providing sex education helps to maintain the right of young people to have their needs met and to enjoy their sexuality and the relationships they cultivate [10]. However, SE is a subject on which many schools and most parents remain silent [11]. Its objective is to reduce the risks of potentially negative outcomes from sexual behaviour and also to contribute to young people's positive experience of their sexuality by enhancing the quality of their relationships and their ability to make informed decision over their life time [11].

SE also helps adolescents understand the physiological, social and emotional changes they experience as they mature, develop healthy and rewarding relationship and make wise informed and responsible decisions on sexuality matters [12]. It covers the following dimensions of a person's sexuality [12]; Physical: which entails physical sexual maturation and intimacy, the physiology of sex and human reproduction. Emotional: which includes sexual attitude and feelings towards self and others. Social: which involves sexual norms and behaviours and their legal, cultural and societal implications. Ethical: which connotes values and moral systems related to sexuality [12].

The effectiveness of school based SE depends on, among other factors, the skill and performance of teachers who implement it [13]. Furthermore, studies have shown that the extent

to which teachers implement the school-based SE curriculum is to a large extent dependent upon their perception and is influenced by their attitude towards it [14]. Indeed one of the cardinal features of an effective SE programme is the degree to which teachers are willing to show positive attitude towards teaching it [15]. It is against this background that several researchers have proposed that teachers' knowledge, attitude and willingness to teach sexuality education be assessed.

Therefore the specific objectives of this study include; determining the knowledge and attitude towards sexuality education among secondary school teachers in Nnewi, assessing their willingness to teach sexuality education; and determining the relationship between socio-demographic variables and knowledge of sexuality education among the teachers.

2. METHODOLOGY

2.1 Description of the Area

The study was carried out in Anambra State, which is located between longitude 7°E and latitude 6°20'N and has a total land area of 4844 km², a population of 4,055,048 and a population density of 837.1km². Located in the southeast of Nigeria, Anambra state shares boundaries with Delta state to the west, Imo and Rivers State to the south, Enugu State to the east and Kogi State to the north. It has 21 local government areas, and the indigenous ethnic group is the Igbo which constitutes 98% of the population.

Nnewi is the second largest city in Anambra State. The town is located east of the river Niger and about 22km southeast of Onitsha and within the tropical rain forest region of Nigeria. Nnewi, as a historical town has many cultural events adorned with festivities and monuments, including Edo Ezemewi shrine, Udoogwugwu shrine (Ichi) and New Yam (Afiolu) festival. Nnewi has a traditional monarch called Igwe and most of its occupants are Christians.

Nnewi has several secondary schools, which provide children aged 11 and 18 years with part or all of their secondary education and this comes after primary or vocational training. This study was carried out among teachers of four public secondary schools in Nnewi: Two are all boys' while the other two are all girls' schools.

2.2 Study Design / Sample Size Determination

The study was a descriptive cross-sectional survey in which structured questionnaires were administered.

The sample size was calculated using the formular [13] below:

$$n = \frac{Z^2pq}{d^2}$$

where,

n= The desired sample size (when population is greater than 10,000)

Z= Standard normal deviate set at 1.96 which corresponds to 95% confidence level.

P= Proportion of persons in the population with factors under study. The estimate is 50% (i.e 0.5), q = Proportion of persons in the population without factors under study (i.e. q =1.0-P), d= degree of accuracy desired = 0.08.

$$n = \frac{Z^2pq}{d^2} = \frac{(1.96)^2 (0.5) (0.5)}{(0.08)^2} = \frac{0.9604}{0.0064} = 150.0$$

Therefore the desired sample size = 150 teachers.

2.3 Sampling Technique / Data Collection

A multistage sampling technique was used. The secondary schools were stratified according to ownership and also gender of students. A simple random sampling method was used to select one school from each category making a total of four (4) schools. All the available teachers in the selected schools were approached for the study and they all agreed to participate. Data was collected using structured, pre-tested self-administered questionnaire in 4 sections (A-D).Section A has question on biodata, section B has questions on knowledge about sexuality education and for purpose of this research consists of a four-item package namely: contraception, abstinence, relationship and sexual maturity. Section C has questions on attitude and section D on Willingness to teach sexuality education.

Participants' confidentiality was assured and the data collection tool administered after a brief explanation of the study was given and informed consent obtained.

2.4 Data Analysis

The data collected was analyzed using the Microsoft Excel of the computer. Percentages, arithmetic mean and standard deviation were worked out. The chi-square test of significance was also determined to confirm the observed relationship between predictor and outcome variables. The results were presented in tables and figures for easy appreciation.

2.5 Ethical Consideration

Letter of identification was obtained from the office of Head of Department Community Medicine Nnamdi Azikiwe University. The teachers were informed of the purpose of the study and questionnaires were assigned. The response of each individual was kept in strict confidence. Permission was obtained from the Ethics Committee of NAUTH, Nnewi through the project supervisor.

2.6 Limitation of Study

Most of the schools where the study was carried out were in examination session at the period of research, thus limiting the access to teachers. Also some of the full time teachers were on leave at this period thus further limiting the available number of teachers for the study.

The determination of the knowledge of SE of the teachers was done via a single self-assessment item. Therefore teachers may have overestimated or underestimated their knowledge.

3. RESULTS

Majority of the respondents (n=77) fall within the age group 30-39. The mean age is 38.20± 2.83

years. One hundred and eighteen (78.7%) are females while 32 (21.3%) are males. Also 79 (52.7%) had Bachelor’s degree in education, 28 (18.7%) had certificate of education, 24 (16%) with diploma, 10 (6.7%) with Bachelor’s degree in Science and 9 (6.0%) with Master’s degree. Sixty-one (40.7%) of subjects have taught for 4 years while 12 (8.0%) have a teaching experience of between 10-14 yrs.

Table 1 depicts the knowledge of sexuality education among the teachers. It shows that 50 (33.3%) of the teachers had knowledge of sexual maturity, 46 (30.7%) knew about “abstinence”, and 41 (27.3%) about “relationships” while only 25 (16.7%) had good knowledge of “Contraception”. The major source of information about these SE components was textbooks, 72 (48.0%). The other sources include the media, 35 (23.0%); friends 35 (23.3%) and library 12 (8.0%).

Table 2 is about perception and attitude of the teachers towards sexuality education and it shows that 135 (90.0%) of them agreed that SE should be taught in schools. Also 123(82.0%) believed that both sexes should be targets of such education as opposed to 22 (14.7%) who favored female – only SE and 5 (3.3%) who wanted male-only SE. Furthermore, 80 (53.3%) believed that SE should rightly commence at junior secondary 1 (JS1); 26 (17.3%) said SE should start at JS3; 14 (9.3%) at JS2; 16 (10.7%) at senior secondary (SS3); 8 (5.3%) at SS1 and 6 (4.0%) at SS2. Almost all the respondents 146 (97.3%) said they would encourage adults to openly discuss SE.

Fig. 1 depicts the willingness of the respondents to teach SE. It shows that 136 (90.7%) of the teachers are willing to teach SE.

Table 1. Knowledge of sexuality education among the teachers

Major components of sexuality education	Number that know (n=150)	Percentage (%)
More than one component of package	38	25
Contraception	25	16.7
Abstinence	46	30.7
Relationship	41	27.3
Sexual maturity	50	33.3
Source of information about sexuality education	Number	Percentage (%)
Media	49	32.7
Library	12	8
Friends	35	23.3
Books	72	48
Others	4	2.7

Table 2. Perception and attitude towards sexuality education

Perception / attitude items	Frequency n=150	Percentage (%)
Sexuality education should be taught in schools	135	90
Which gender should receive sexuality education?		
Male should receive equality education	5	3.3
Female should receive sexuality education	22	14.7
Both should receive sexuality education	123	82
Sexuality education should commence at:		
Junior secondary 1 (JS1)	80	53.3
Junior secondary 2 (JS2)	14	9.3
Junior secondary 3 (JS3)	26	17.3
Senior secondary 1 (SS1)	8	5.3
Senior secondary 2 (SS2)	6	4
Senior secondary 3 (SS3)	16	10.7
Will encourage adults to openly discuss sexuality education	146	97.3

Table 3 shows that the age of the respondents is significantly associated with their knowledge of "contraception" and "sexual maturity". The 30-39 age group displayed significantly higher knowledge of "contraception" than the rest ($\chi^2 = 11.8$; $p < 0.01$), while the ≥ 40 years age group showed significantly higher knowledge of "sexual maturity" than their counterparts in other age groups ($\chi^2 = 12.8$; $p < 0.005$). Furthermore, the female teachers are more knowledgeable than the males with regards to the topics of "contraception" ($\chi^2 = 2.84$; $p > 0.05$) and "abstinence" ($\chi^2 = 2.1$; $p > 0.05$), even though the differences are not statistically significant.

Table 4 tests the significance of respondents' gender on their attitude towards SE. Significantly higher proportion of females than males support the teaching of SE in secondary schools ($\chi^2 = 14.1$; $p < 0.01$).

Fig. 2 shows that 62(41.3%) cited lack of awareness as perceived reason for drawbacks in SE, 40(26.7%) cited lack of skilled teachers while 32(21.3%) pointed at culture as a drawback to SE. Others which made up 5 (3.3%) included shyness, ignorance, absence in school curriculum and lack of commitment.

4. DISCUSSION

One hundred and fifty questionnaires were analyzed and the majority of respondents fell within the age range of 30-39 years (33.3%). The mean age was 38.2 ± 2.8 years. This corresponds to a similar study done in Enugu State, Nigeria where the mean age was found to be 38.1 ± 7.5 years. Also, most respondents were females (78.7%) compared to males

(21.3%). This is also similar to the study done by Aniebue P.N. in Enugu State, Nigeria which showed that 213 teachers out of 300 were females [14]. This huge discrepancy between proportions of females and males in our study may imply a preponderance of views as perceived by female teachers and a dominance of female-gender opinions in the result.

The study showed that both general and specific knowledge of a school-based sexuality education programme were poor as knowledge of more than one component of SE was low (25.0%). This is in contra-distinction to the result of a similar study done in Ibadan, Nigeria where 63.2% could identify contents of a school based sex education curriculum [15]. This difference may be attributed to the disparity in levels of health awareness creation between the two parts of the country. The western parts of the country especially Ibadan and Lagos by virtue of location of large numbers of relevant institutions and non-governmental organizations (NGOs) in them [16], enjoy greater exposure to health information and programs as opposed to the eastern region (where this study was carried out) which suffers relative deprivation in this area [16]. Respondents of age-group 30-39 years were significantly more knowledgeable about contraception than those in other age groups. This is perhaps because ages 30-39 years fall within the later part of the reproductive age group (15-45 years) [17] who expectedly are in marital relationships, and during this time, issues of family planning and contraception constitute their major preoccupation. So their higher knowledge of contraception is because they are more likely to have experienced or practiced it than respondents of the younger age groups.

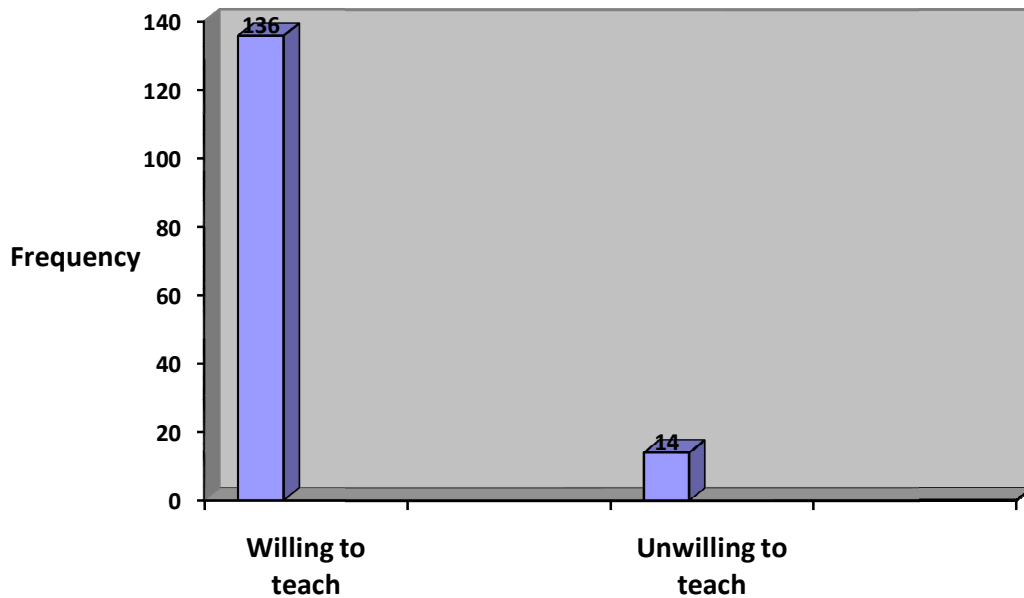


Fig. 1. Willingness to teach sexuality education

Table 3. Age and gender versus knowledge of sexuality education components

Age	Knowledge of sexuality education components							
	Contraception		Abstinence		Relationships		Sexual maturity	
	No.(%)	χ^2 (p-value)	No.(%)	χ^2 (p-value)	No.(%)	χ^2 (p-value)	No.(%)	χ^2 (p-value)
20-29	4(10.8)	11.8(<0.01)	8(21.6)	4.52(>0.05)	12(32.4)	4.41(>0.05)	7(18.9)	12.8(<0.005)
30-39	15(30)		11(22)		10(20)		6(9.5)	
>40	6(9.5)		22(34.9)		17(27)		32(50.8)	
Gender	Contraception		Abstinence		Relationships		Sexual maturity	
	No.(%)	χ^2 (p-value)	No.(%)	χ^2 (p-value)	No.(%)	χ^2 (p-value)	No.(%)	χ^2 (p-value)
Male	3(9.4)	2.84(>0.05)	6(18.8)	2.11(>0.05)	11(34.4)	1.73(>0.05)	12(34.4)	1.86(>0.05)
Female	22(18.6)		35(29.7)		28(23.7)		33(28)	

Table 4. Attitude to teaching sexuality education according to gender

Gender	Sexuality education should be taught in secondary schools		Total (%)
	Yes (%)	No (%)	
Male	23 (71.9)	9 (28.1)	32(100)
Female	112 (94.9)	6(5.1)	118(100)
Total	135	15	150

$\chi^2 = 14.1$; $p < 0.01$; Cramer's V statistic = 0.307. This indicates a strong relationship between gender and belief that sexuality education should be taught in secondary schools

In the same vein, teachers ≥ 40 years were markedly knowledgeable about the subject of sexual maturity. This is the process of physical changes that occur in a child's body until full development into an adult body, capable of sexual reproduction. It is initiated by hormones released from the brain to the gonads: the ovaries in a girl, the testes in a boy. In response to the stimulus, the gonads in turn produce hormones that enhance libido as well as increase growth, function, and transformation of the brain,

bones, muscle, blood, skin, hair, breasts, and sex organs. Physical growth in height and weight increases in the first half of this maturity and is completed when the child has fully developed into an adult. Before full maturation of their reproductive capabilities, the physical differences between boys and girls are the external genitalia [18,19]. For the teachers to have a good grasp of the preceding topic, it will require not only superior intellectual prowess but also wisdom and experience that develop with age [20]. It is

therefore little wonder that the teachers aged ≥ 41 years turned out significantly more knowledgeable in this area than did the other age groups.

Female teachers were more knowledgeable than the males though not quite significantly about the subjects of contraception and abstinence. This can be explained from the point of view that the majority of available contraceptive methods are female-specific thus leaving the males with the condom, sterilization and withdrawal [21]. It is thus hardly surprising that a typical family planning (FP) clinic is populated by married women who receive all the necessary information to the disadvantage of their male spouses who are often nowhere to be found near the FP clinics. Therefore, a combination of these two factors; more exposure to FP clinics and ready availability of female-specific FP products may have contributed to markedly increase the knowledge of these components of SE among the female teachers. Sexual abstinence entails the practice of refraining from some or all aspects of sexual activity for medical, psychological, legal, social, financial, philosophical, moral or religious reasons. It may be voluntary (when an individual chooses not to

engage in sexual activity due to moral or religious reasons), an involuntary consequence of social circumstances (when one cannot find any willing sexual partners), or legally enforced (e.g. in countries where sexual activity outside marriage is illegal, in prisons etc.) [22]. Females are known to be more sexually abstinent than males [23] and this explains the significantly higher knowledge of the subject by the female teachers compared to their male counterparts. This is further supported by a Nigerian study which found that more female adolescents than males know that sexual abstinence prevents teen sex and out of wedlock pregnancy [24].

This study has found that majority of the respondents (96.0%) approved the inclusion of sex education in the secondary school curriculum and this is in agreement with result of similar studies in Enugu [14] and Osun [25] states where 94.0% and 86.9% respectively approved inclusion of sex education into the school curriculum. Integration of SE into the school curriculum is a good strategy to ensure continuity and sustainability of the programme in secondary schools across the country. A large proportion of the respondents are of the opinion that SE be

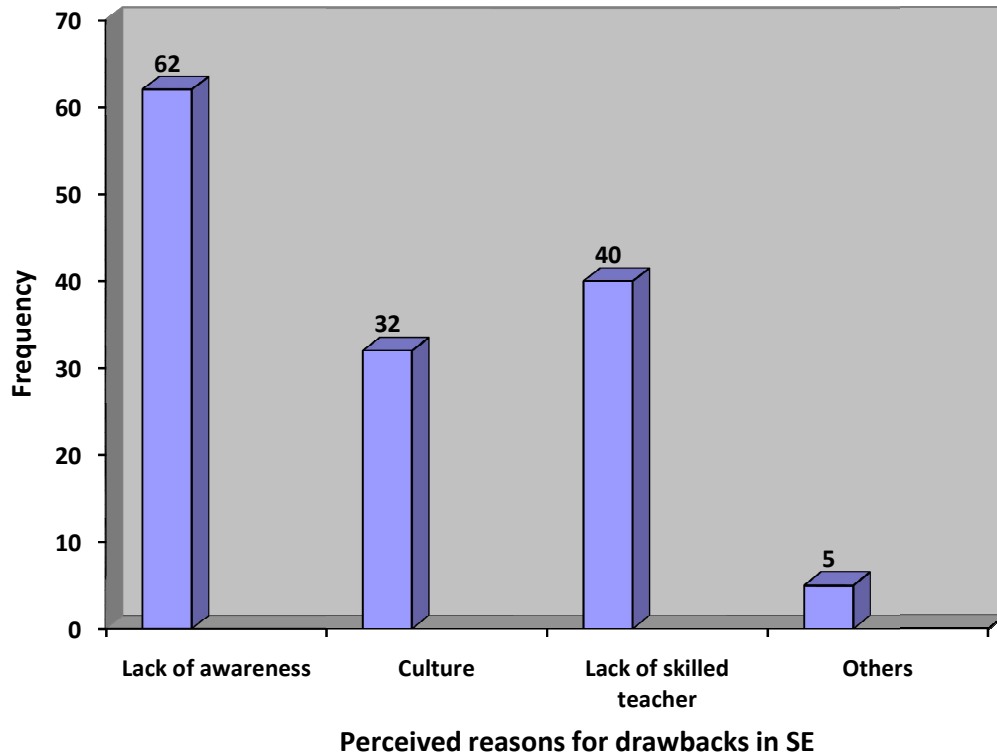


Fig. 2. Reasons for drawback to sexuality education in secondary school

targeted at both genders, with only 14.6% and 3.3% agreeing with female-only and male-only SE respectively. This finding is expected because more often than not, it takes the male and female genders to engage in a sexual relationship. Therefore, couples rather than male-only or female-only format should be targets of SE for greater overall benefit.

Most respondents (53.3%) considered the best class for introducing sex education in schools as Junior Secondary 1 (JS1). This is in keeping with another study done in Enugu [14] where 68% of the teachers perceived early SE as mostly beneficial in preventing unplanned pregnancy even though, 56.0% were also of the opinion that SE will promote early exposure to sexual relationship. The early-SE-introduction similarity observed here may be explained by similarities in traditional and cultural practices prevailing in the southeast zone of Nigeria where both studies were carried out. On the other hand, one can hardly blame the 56% who expressed some reservation about introduction of SE at JS1 level on the grounds that it will encourage early initiation of sexual relationships. This opinion is also hinged on culture which discourages sexual permissiveness in this part of the country [26].

In this study, respondents identified the major drawbacks to SE in secondary school as lack of awareness, lack of skilled teachers and adverse cultural influence. Because SE is still not part of the curriculum of the various schools studied and seminars or awareness programs were hardly organized for the teachers, the solution to the mentioned SE drawbacks may take long in coming. In this part of the world, culture and tradition frown at promiscuity [26], which is believed to be a direct consequence of wanton sex information dissemination. Therefore this cultural inclination and practice discourage teachers' dissemination of sexuality education amongst the students. Majority of the respondents (97.3%) will encourage adults to openly discuss problems they encounter concerning sexuality. This is a welcome development because such discussions have the potential to enrich the knowledge of the attentive student thereby positively impacting on adolescent sexual behavior.

The willingness of respondents to teach sex education was high and this correlates with similar studies done in Gaborone, Botswana [27] and Enugu State, Nigeria [14]. This is a salutary development and depicts the preparedness of

the teachers to confront and overcome the negative influence of tradition on the dissemination of sexuality information to the adolescents.

In summary, this study has found that although the knowledge of teachers on sexuality education was poor, many of them have shown positive attitude towards the subject. They were eager to learn the correct contents of SE for necessary impartation on the students under their care.

It is therefore recommended as follows;

1. That sexuality education be country-wide introduced into the school curriculum of secondary schools at Junior class level.
2. That special training for teachers on sexuality education should be organized by the governing Board of Education in the State.
3. The negative influences of culture and tradition on the early introduction of SE in schools should be tackled by all stakeholders at the individual, family and community levels. Desired change will take time but it is achievable with sustained dialogue, peer education and community engagement.
4. It is recommended that for future research, a longitudinal interventional study with control will be organized to ascertain the effectiveness of sexuality education on the reproductive health status of students. The aim is to generate the desired scientific evidence to further justify the introduction of SE in Nigerian secondary schools.

5. CONCLUSION

In conclusion, this study has revealed a poor knowledge of sexuality education by the teachers, who have however demonstrated commendable positive attitude and willingness to learn the correct contents of SE with a view to also positively impacting on the students under their care. Consequently, it is recommended that SE should be introduced in Nigerian school curricula while more advanced studies should be organized to generate useful outcome variables and more scientific evidence in favour of introducing sexuality education in Nigerian schools.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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