Reproductive Health Challenges of Rural Female Adolescents in Rural Area of South Eastern Nigeria

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ABSTRACT

Background: A rural young girl continues to be vulnerable in many societies of the world, including Nigeria because sexual and reproductive health needs are often underserved. Adolescent sexual and reproductive health (SRH) refers to the physical, mental and emotional well-being of adolescents which includes freedom from sexual violence, STIs, unwanted pregnancy, unsafe abortion, maternal death, and disability. These young individuals experience new mental, physical and hormonal changes that predispose them to issues associated with discovering their sexuality. **Objectives:** The study sought to determine the reproductive health knowledge as well as the reproductive health challenges of female rural adolescents in a rural area of South Eastern Nigeria. **Subjects and Methods:** A cross-sectional study was conducted of 250 secondary school students in Anaocha local government area in South Eastern Nigeria. The classes of the students varied from both junior and senior secondary classes. Multistage sampling technique was used in the selection of participants. Simple random sampling of towns and schools were done. Stratified sampling of the various classes in the schools was done and finally simple random sampling of respondents was done. Self administered questionnaire was used to obtain data from selected respondents. **Results:** Two hundred and fifty female adolescents were studied with a mean age of 14 ± 2.01 years. Majority of the students (82.8%) had attained menarche while 99.6% of students had a good understanding of puberty. Thirty-two had engaged in sexual activity with mean age of coitarche being 11 ± 3.3 years and modal age group being 12-14 years. Thirteen (5.2%) of the respondents had sex for economic reasons. Four (1.2%) had been raped while 22 (8.8%) of the respondents had been sexually harassed. Of those who had engaged in sex, only 7 (21.8%) used contraceptive while only one case of unwanted pregnancy was reported. **Conclusion:** Many of the respondents had good knowledge about puberty with cycle length and fertile period but poor knowledge on prevention of sexually transmitted diseases. There was also early coitarche with poor contraceptive use. Reproductive health challenges such as STIs, vaginal infections, unprotected intercourse, substance abuse, and same-sex relationship were still present among adolescents in the rural south Eastern Nigeria. There is still need for sexuality education to prepare young adolescents for a healthy sexual and reproductive life.

Keywords: Female, Adolescent, Reproductive health challenges, Rural

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INTRODUCTION

Reproductive health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity in all matters relating to the reproductive system and to its functions and processes[1]. Sexual health is the approach to sexuality founded in accurate knowledge, personal awareness and self-acceptance where one's behavior and values care for needed reproductive health challenges.[2]

Majority of the population of low and middle income countries, especially those in rural area are unable to secure meaningful jobs. These adolescents do not have adequate information about their sexuality and sexual health.

In Nigeria, a significant population of adolescents are sexually active with about 46% of adolescents aged 15-19 years being sexually active and involved in unprotected sexual activities with multiple partners, exposing them to some reproductive health consequences.[3,4]

While there have been reports of increased access to contraceptives with tertiary institutions, problems of usage still arise from poor acceptance of these services either for cultural, religious or financial reasons.[5]

Strict abortion laws as it were exist in Nigeria but despite these abortion laws, quacks still find ways to perform unsafe abortions using outdated techniques and further creating more reproductive health problems for these adolescents.[6]

In addition to the myriad of conditions affecting the reproductive health of adolescents in rural areas, is the poor information services which prevents adolescents from recognizing danger signs as well as seeking prompt and effective health care services. This consequently may result in further complications worsening their reproductive health outcome.

Furthermore, the health services in Nigeria are not properly designed to specifically meet the needs of these young adolescents as the health workers do not receive regular training on issues pertaining to adolescent's sexual and reproductive health as well as modalities of delivering these services to these adolescents in a timely and receptive manner. Religious beliefs, stigmatization and negative attitudes of caregivers and some health workers toward young females who present with certain reproductive health challenges negatively influence the ease with which young females open up about reproductive health concerns which they might have.[7,8] Strict traditions forbid some women in some regions of the country from giving reproductive health education to their daughters when they come of age, while this may not be the case in other parts of the country.[9] Often times, health workers due to the busy nature of their duties and or non-enabling environment of the workplace may be unable to educate these adolescents on the reproductive health problems they might encounter and this leaves a non-sensitized adolescent population experiencing and re-experiencing some of the aforementioned problems. Poor knowledge of adolescents about their reproductive health makes them more prone to indulging in unsafe sexual practices.[10] In addition, teachers who teach in mixed schools might find it more challenging than those who teach in single sex schools to effectively relay this topic to their students.

The government has been observed to put in a good number of interventions aimed at the reduction as well as handling of the occurrence of these reproductive health challenges but cases keep being recorded.[11] However, there appears to be lack of adequate political will in the maintenance and funding of interventions to bring sexual health education to the general public as well as reinforce already existing facilities. This might be due the multi religious and multi tribal nature of the country, the lack of accurate data on such topics and consequently lack of tools for planning, monitoring and education.[12]

A healthy sexuality in addition to absence of disease, includes the understanding of sexuality and sexual relationships to the point that its expression is free from dissemination and coercion.

Adequate knowledge of reproductive health challenges will therefore help adolescents to make informed choices on reproductive and sexual health issues.

In view of the fact that reproductive health challenges are faced by adolescents all over the world, it has become imperative that research and intervention is tailored to meet the needs specified by regional differences and characteristics of young people so as to improve their sexual and reproductive health.

Objectives

We aim to determine the reproductive health knowledge of female adolescents of secondary schools in a rural area in South Eastern Nigeria. We also determined the reproductive health challenges of the female adolescents.

SUBJECTS AND METHODS

Study area

This study was conducted among female adolescents in Anaocha LGA in Anambra state. Anaocha LGA consists of ten towns with sixteen government secondary schools. Only female secondary schools were considered during the study.

Study Design

A school-based cross-sectional descriptive study design was used.

Study population

The study population of this study is female adolescent secondary schools students between the ages of 10 and 19years.

Inclusion Criteria

All students who fall within the specified age group and had their parent's/school guardian's consent or voluntarily gave their consent for those who were aged 18 years or more to participate in the study.

Exclusion Criteria:

Those who were married but still in secondary school.

Sample size determination

This study derived its sample size using the formula Z^2pq/d^2 with absolute error margin of 5%(d =0.05), type 1 error of 5%(Z = 1.96%), and prevalence of sexually transmitted diseases among high school female students in Imo state 17.6%.[13,14,15] The calculated minimum sample size required for the study was 223. This was further adjusted to compensate for the non-response rate of 10% to give a final response rate of 246 which was approximated to 250.

Multistage sampling technique was used. The first stage involved simple random sampling of the ten towns in the Anaocha LGA to select three towns for the study. Three towns were selected, Agulu , Adazi Nnukwu and Aguluzoigbo

The second stage involved the simple random sampling of the government secondary schools in the selected towns to select the study schools. Of the four schools in Agulu, one school which is an all girls' school was randomly selected while of the two schools in Adazi Nnukwu, one school which is also an all girls' school was selected. Of the two major schools in Aguluzoigbo, one school which was a mixed secondary school was randomly selected.

The third stage involved stratified random sampling technique with proportionate allocation to determine the number of students to be selected from each school based on the number of students in the selected schools.

The fourth stage was done using a simple random sampling method to select the students studied from each class. All the underage students whose parents had given consent to participate in the study or those who voluntarily gave their consent in each class were identified with numbers. The number of students required from each class was obtained by randomly picking the papers and the students with the matched numbers were then selected and interviewed.

Data Collection Method

A well-adapted semi-structured questionnaire which had earlier been pretested and self-administered was used to collect data.

Terms

Sexually Transmitted Infection in this study was defined by unusual or foul-smelling vaginal discharge, vaginal itching or rashes/sores after unprotected sexual intercourse.

Vaginal Infections was defined by presence of whitish vaginal discharge and or vaginal itching.

Aberrant Sexual Activity in this study was defined by same sex sexual relationship.

Statistical Analysis

The collected data was sorted, cleaned up and analyzed accordingly. The software, Statistical Package for Social Sciences(SPSS) V22 was used to analyze the collated data. The univariate analysis was presented in the form of tables, figure and texts. Sample summary statistics such as mean, standard deviation and percentages were used to describe the key data. Bivariate analysis was used to investigate the association between the explanatory and response variables using Chi-square analysis or Fischer's exact test as may be appropriate.

Ethical Considerations

Research ethics approval was obtained from the ethics and research review committee of the Nnamdi Azikiwe University Teaching Hospital, Nnewi. Permission was then obtained from the Anaocha local government area secretariat education unit and subsequently the school authorities were notified accordingly. Written informed consent was obtained from the respondents after debriefing the students on the nature, aim and benefit of the research. Those less than 18 years were asked to inform their parents or their school guardian for those who were boarders so as to obtain their consent to enable them participate in the study.

RESULTS

The response rate was 100% (250/250). One hundred and eleven(44.4%) respondents fell within the age range of 15-17 years with a mean age of 14 ±2.0 years. One hundred and twenty two (48.8%) of the respondents were in junior class while 128(51.2%) were in senior class. One hundred and eighty eight(75.2%) of them were from families that had 4 children or more.

One hundred and seventy five(70%) adolescents had heard about puberty from their parents while about 86% of them had held discussions with their parents about sex and pregnancy. One hundred and seventy one (68.4%) of them were aware that a girl was most likely to get pregnant if she had sex at ovulation. Thirty Two (12.8%) had at one time or the other engaged in sex while 11 (4.4%) were sexually active.

Four girls (1.6%) had been victims of rape. Of the respondents that had been exposed sexually, 12(36.4%) of them engaged in it out of their personal curiosity while 6(18.2%) of them were involved due to peer pressure.

Those who engaged in sex for economic reasons were 7(2.8%) while four(1.6%) of the them engaged in sex for personal satisfaction.

The commonest sexual and reproductive health issue experienced was vaginal infections in 102(41.1%) adolescents followed by aberrant sexual activity in 24(9.6%) of them and then dysmenorrhoea in 21(8.5%) respondents. Fifty two(20.8%) adolescents were involved in substance abuse (alcohol, cigarettes and weed).

Table 1: ***Sociodemographic characteristics of the respondents***

Socio-Demographics	Frequency (N=250)	n(100%)
Age Group		
11 years	32	14.00
14 years	102	42.00
17 years	116	44.00
	14 ± 2.011 years	
Class		
Junior secondary	122	48.80
Senior secondary	128	51.20
Occupation Of Mother		
Trader	126	50.4
Civil servant	81	32.4
Artisan	11	4.4
Professional	22	8.8
Unemployed	10	4. 0
Occupation Of Father		
Trader	134	52.8
Civil servant	34	14.0
Artisan	30	11.2
Professional	40	15.6
Unemployed	12	5.0

Table 2: Common Reproductive Health Challenges encountered

Health Challenges	Frequency	Percentage
Sexual Harrasment	22	8.8
Unprotected sexual intercourse	25	10
Vaginal infections	102	40.8
Primary Dysmenorrhoea	21	8.4
Substance use	52	20.8
Lesbianism	24	9.6
Multiple sexual partners	15	6

Table 3: Assessment of the level of knowledge of puberty among the study participants

Knowledge on reproductive cycle	Frequency (250)	n(100%)
Meaning of puberty		
A period when secondary sexual characteristics develop in boys and girls	249	99.60
A period when girls can marry	Nil	0.00
I don't know	1	0.40
Knowledge of term delayed puberty in females		
12 years	33	13.20
14 years	64	25.60
17 years	95	38.00
20 years	58	23.20
Knowledge of the most common cycle length		
14 days	39	15.60
28 days	205	82.00
50 days	1	0.40
9 months	5	2.00
Understanding of fertile period		
At ovulation	171	68.40
During her menses	43	17.20
I don't know	14	5.60
Immediately after her menses	22	8.80

Table 4: **Sexual history of sexually active respondents**

Sexual activities	Frequency (n=32)	n(100%)
Coitarche		
3-5 years	3	9.38
6-8 years	2	6.25
9-11 years	9	28.13
12-14 years	14	43.75
15-17 years	4	12.50
Mean	**11.1 ± 3.31 years**	
Last intercourse		
1-7 days ago	9	28.12
7-30 days ago	Nil	0.00
1-2 months ago	2	6.25
3 months – 1 yr. ago	Nil	0.00
More than a year ago	21	65.62
Reason for first intercourse		
Economic reasons	12	37.50
Personal curiosity	5	15.62
Personal satisfaction	8	25.00
Pressure from friends	3	9.38
Raped	4	12.50
Number of sexual partners		
1	17	6.80
2	11	4.40
3	4	1.60
Known ways of preventing sexually transmitted diseases(N-250)		
Antibiotics capsules or tablet	130	52
Apply antibiotics cream	70	28
Use condom	45	18
Use herbal medication	5	2
Substances used(N-52)		
Alcohol	29	11.6
Weed/Marijuana	14	5.6
Cigarettes	9	3.6

Table 5: The assessment of the study participants on the use of contraceptives.

	Yes	No	Total
Contraceptives use at coitarche	7 (21.875%)	25 (78.125%)	**32**
Contraceptive use at last intercourse	8 (25%)	24 (85%)	**32**

Reason for non -contraceptive use during last encounter	Frequency	n(%)
Didn't know about contraceptives	4	16.66
Preferred not to use contraceptives	16	66.66
Raped	4	16.66
TOTAL	**24**	**100**

n = 32.

Table 6: A cross tabulation analysis showing the association between age at first intercourse and use of contraceptives at the last intercourse among the study participants.

Coitarche	Total	Use of contraceptive at last intercourse		$\chi 2$ value	p-value
		Yes	No		
3-5 years	3 (100.0)	0	3 (12.50)		
6-8 years	2 (100.0)	0	2 (8.33)		
9-11 years	9 (100.0)	0	9 (37.50)	10.85	0.028*
12-14 years	14 (100.0)	5 (62.50)	9 (37.50)		
15-17 years	4 (100.0)	3 (37.50)	1 (4.17)		

** statistically significant, p -value ≤ 0.05*

Table 7: A cross tabulation analysis showing the relationship between occupation of mother and coitarche of the study participants

Coitarche	Total	Occupation of mother					$\chi 2$ value	p-value
		Traders	Civil servant	Laborer	Professional	Unemployed		
3-5 years	3 (100.0)	0	2 (66.67)	1(33.33)	0	0		
6-8 years	2 (100.0)	1 (50.00)	1 (50.00)	0	0	0		
9-11 years	9 (100.0)	5 (55.56)	3(33.33)	1	0	0	12.31	0.722
12-14 years	14(100.0)	7 (50.00)	4 (28.57)	0 (11.11)	2 (14.29)	1 (7.14)		
15-17 years	4 (100.0)	3(75.00)	1 (25.00)	0	0	0		

Coitarche Fisher's exact test was used to test for association and the value obtained indicates that mother's occupation is not significantly associated with the age of coitarche in these rural adolescents.

DISCUSSION

This study revealed a mean age of 14 ±2.0 years which is in line with the study done by Ajah et al showing the mean age of his respondents to be 13.13 ±1.37 years. The study also revealed that the rural adolescents had some lapses in their knowledge of their reproductive health. Majority of the respondents (70%) had their information on puberty from their parents which is also in line with the study by Ajah et al where about 75% of the respondents received education on puberty from their mothers at home but higher than the 10.4% obtained by Duru et al in the same geographic location.[i6,17] This could be due to increasing level of awareness from parents on the need for sex education in the families so as to convey the right information to their children. Getting sexual and reproductive health information from the right sources is a key step in developing a right and healthy reproductive lifestyle. Only 18.4% of the adolescents got their information from friends and /or older siblings.

In this study, most of the respondents (82%) were aware of the usual female cycle length of 28 days whereas 68.4% of the respondents knew at what point in the cycle a girl was most likely to get pregnant. The level of knowledge of the menstrual cycle in this cycle is quite high. This is in contrast to the poor knowledge about safe period in menstrual cycle among adolescents recorded by Adedokun et al where 87% of the adolescents did not know anything about their safe period as well as Cortez et al who recorded a knowledge rate of 6.6%, both in Northern Nigeria.[18,19] In the study by Godswill J in Northern Nigeria, the knowledge on reproductive health issues was not the problem but the difficulty in the ability to make their own free decisions as they were influenced greatly by their parents.[20]

Thirty two (12.8%) of the respondents had been sexually active and the mean age of coitarche in the study was 11.1 ±3.3 years. This is in contrast to the findings of Envuladu et al in Northern Nigeria where 38% of the adolescents were sexually active.[21] This difference could be attributed to the fact that majority of the adolescents in their study were in their late adolescence. Ilika et al in South Eastern Nigeria had a majority of the respondents attaining coitarche at 19 years which is quite higher than the age of coitarche in this study.[22] Having the correct information about one's reproductive cycle is necessary in preventing unintended pregnancies.

This study revealed that 12.8% of the rural adolescents had engaged in sex at one point or the other. Of these, 31.5% of these had their last sexual encounter within the last two months prior to this study while 22.9% had theirs in the one week preceding the study. Of these sexually active participants, 12.1% were raped. Those engaged in sex mainly out of personal curiosity had the highest number (36.36%) which is contrary to the findings by Duru et al where the majority of the respondents (95%) engaged in sex for economic reasons. Only 21.2% of the sexually active adolescents engaged in sex for economic reasons in this study. Peer pressure was only responsible for sexual activity in 18.2% of them. Similar studies in the region also recorded a higher percentage of respondents engaging in sex due to peer pressure when compared with the findings in this study. The majority of those who had engaged in sex had their coitarche between 12 - 14years followed by those within 9-11years of age. This study also revealed that 8.8% of the adolescents had been sexually harassed in the past while 3.2% of the respondents had been victims of rape. This is lower than the finding by Hashini et al in South Africa with reported rape of 7.5%. It brings to the fore the need for serious civil punishment to be set up for rapists as the psychological trauma and sexual consequences associated with rape is quite enormous.[23]

Half (50%) of those who had engaged in sexual activity had gotten sexually transmitted infection at one point or the other. Of those who were sexually active, 25% had intense itching after coitus while 25% of them had foul smelling discharge after intercourse. On the overall, 6.4% of the respondents had sexually

transmitted infections. This is much lower than the 13.98% obtained by Obiajuru et al in Imo State in the same South Eastern Region. Hashini et al in South Africa had 40% of the study respondents being infected with STI at any point in their sexual history. More than half (52%) of the respondents believed that taking antibiotics is the best way of preventing sexually transmitted infections in a sexually active person. This lack of knowledge makes them vulnerable to sexually transmitted infections as many of them believed all they needed to prevent STIs was to take antibiotics. This underscores the need for more rigorous safe sex education among these rural adolescents. In addition, this will also go a long way to decrease the risk of unintended pregnancies with its attendant consequences.

Majority of them (82%) knew about one type of contraceptive or the other. The most commonly known contraceptive in this study is the male condom which is also similar to the findings in other studies done within and outside the country. Though there was a high knowledge of contraceptives, there was poor usage as only 21.9% of the sexually active respondents had made use of contraceptives during their first sexual intercourse. This finding is lower than that by Duru et al who had a 29% contraceptive use among respondents at coitarche. This is similar to the study done in Ghana among both in-school and out-schools adolescents.[24] This contraceptive use finding in this study is also much lower than that of Alemi et al in Ethiopia where contraceptive use was 39.6%.[25] A higher rate was gotten by Martinez & Abma in their study where 78% of female adolescents who had intercourse before the age of 20 years used one form of contraceptive method.[26]
Noteworthy is the fact that the association between contraceptive use with first and last sexual encounter was significant (p-0.028) where 21.9% used contraceptive at the first sexual encounter and 25% used contraceptive during their last sexual encounter. This could point to increasing levels of awareness on contraceptive use with increasing age.

Almost half of those sexually active (46.9%) had more than one sexual partner. This is slightly higher than the finding by Duru et al where 40.8% of respondents had more than one partner. However, this is lower when compared to a similar study in Ghana and Tanzania.[24,27]
The commonest reproductive health challenge experienced by the study participants were vaginal infections (41.13%) followed by dysmenorrhoea. These are reproductive health challenges that affect academic performance as well as quality of life. A lot of these adolescents may find it difficult to open up concerning the vaginal infection and as such may not be able to get the needed medical care required. It is therefore necessary that school clinics be set up which will from time to time encourage these girls to seek care for such conditions they may not freely discuss with people.
While dysmenorrhoea is not life-threatening, it can be debilitating and psychologically traumatic for adolescents. It is the most common reason for school absence among adolescents.[28] Some of these adolescents self-medicate and do not bother to seek medical attention. However, it is important that they seek medical care for thorough assessment and proper diagnosis especially in adolescents who are sexually active.
It was observed that 9.68% of these study participants engaged in same sex sexual relationships while 3.23% of them had unintended pregnancy at one point or the other. Whereas the last decade has witnessed progress in rights for LGBTQ persons, lesbianism/homosexuality still remains illegal in this part of the world and is still highly stigmatized. This finding is in contrast to other similar studies which recorded no such sexual act. The implication is that it could pose a burden on their mental health which could affect both their personal lives and academic performance adversely. It is noteworthy that even the adolescents themselves (62.1%) believed that good health education will go a long way to reduce the problem of unsafe sexual practices among them.

It was also observed that quite a number of these adolescents are involved in substance abuse. While

11.6% of them took alcohol for fun, 5.62% sniffed Indian hemp and 3.6% smoked cigarettes. Alcohol & drug use is often associated with sexualmisconduct, poor academic performance, risky behaviour, mental health risks, and poor impulse control as huge direct and indirect cost associated with drug abuse.

CONCLUSION

Rural female adolescents still have unmet reproductive & sexual needs. There is a need for more family and school oriented sexual enlightenment sessions among rural adolescents. Adolescent friendly clinics/healthcare facilities should be set up to encourage them to access care when necessary as well as have opportunities to be educated on sexuality issues pertaining to their health. The healthcare workers must be at the forefront of addressing the challenges of adolescent health especially in the rural areas. Substance use with its adverse effects should be a compulsory part of the secondary school curriculum.

Ethical Approval:

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institution and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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Conflicts of Interest

There are no conflicts of interest

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