

Awareness and Utilization of Adolescent Reproductive Health Services among In-School Adolescents in Urban and Rural Communities in Oyo State

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Abstract

Introduction: Adolescents require a range of scientifically accurate sexual and reproductive health information and services. Adolescent reproductive health services (ARHSs) are an integral part of adolescent health and it is pertinent that adolescents know about them to be able to benefit from them. This study was to assess the awareness and utilization of adolescents in Oyo State about ARHSs. **Materials and Methods:** A descriptive cross-sectional study carried out among in-school adolescents where 225 respondents each were selected for the rural and urban groups using a multi-stage sampling technique. Data were collected using a semi-structured questionnaire, and analysis was performed with SPSS version 22. **Results:** A total of 225 rural and 225 urban respondents participated in this study, with a mean age of 14.3 ± 1.93 and 13.9 ± 2.03 for rural and urban respondents, respectively. Few of the respondents (59, 13.1%) were aware of the existence of ARHS, of which, 34 (57.6%) were of the urban respondents and 25 (42.4%) were from the rural respondents. Only 36 (7.8%) of respondents had ever utilized ARHS with 22 (61.1%) from urban communities. The major reason why almost half of 207 (49.6%) of the adolescents had never been to a facility rendering ARHS before was that they did not know where to go, which was higher among the rural respondents. **Conclusions:** Awareness of ARHSs was lower among rural respondents, leading to poor utilization of such service. It is, therefore, recommended that more youth-friendly environments should be made available and accessible to adolescents, especially in rural areas (114, 53.3%).

Keywords: Adolescent, reproductive health, rural, urban

INTRODUCTION

Adolescents constitute about 20% of the world population.¹ An estimate done in a study puts the adolescent's population globally at 1.2 billion with 85% of them living in the developing countries.² According to the World Health Organization, adolescence is the period of transition from childhood to adulthood and this begins with the onset of puberty. Their age ranges between 10 and 19 years. During this period, the adolescent develops the secondary sexual features with further progression to reproductive and sexual maturity.¹ Physical development is not the only form of development during adolescence; they also undergo emotional, psychological, and intellectual development.²

The risks of sexual abuse and other forms of sexual violence are high during adolescence. As a result of this, adolescents

have special health needs and they require special reproductive health (RH) attention.³ This includes RH information; sexual abuse counseling, sexuality and reproduction; harmful reproductive health practices; human immunodeficiency virus (HIV) and AIDS; maternal health; sexually transmitted infections (STIs); gender issues; cervical/breast cancer and family planning services.³

Despite the large population of adolescents, their health needs have neither been well researched nor adequately addressed;

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their RH needs, especially are not well understood and are underestimated. Research shows that adolescents indulge in premarital sex more frequently at an early age,^{4,5} the incidence of pregnancies among them is rising,⁶ most of them face the risk of induced abortions under unsafe conditions⁷ and contracting STIs including HIV.^{8,9} Adolescents can protect themselves against sexually transmitted diseases and unwanted pregnancy when they have access to private and confidential services, they care for their RH and take advantage of other opportunities that will contribute to their lifelong well-being.¹⁰

The study of awareness, as well as utilization of adolescent reproductive health service (ARHS), among adolescents, is pertinent to the design and implementation of the necessary intervention in Nigeria. Studies have been carried out on RH service among adolescents in the urban area, but very few studies compared the awareness as well as the utilization of ARHS in both areas. Thus, this study is needed to provide information to policymakers, adolescent leaders and organizations to guide the development of effective, comprehensive sexuality intervention programs for rural and urban adolescents in Nigeria.

MATERIALS AND METHODS

The study was done in Oyo State. Oyo State is one of the states that make up the Federal Republic of Nigeria. There are 33 local government areas (LGAs) in the state and these local governments (LGs) are mainly divided into urban, semi-urban, and rural LGs. Oyo State has 325 general and private hospitals and 374 maternity clinics (108). Other important facilities include dispensaries, health centers, etc.

Study design

The study was a cross-sectional study, comparative in design, carried out in two rural and two urban LGAs in Oyo State, Nigeria, between March and June 2016.

Study population

The study population included adolescents aged 10–19 years attending public and private day secondary schools in urban and rural communities of Oyo State.

Inclusion criteria

Adolescents attending public and private day secondary schools in urban and rural communities in Oyo-State were included.

Exclusion criteria

Married in-school adolescents were exempted from this study.

Sample size calculation

The sample size was calculated using the formula for comparing two groups. The assumptions of 95% confidence level, 5% error margin, and 10% nonresponse rate were used to determine the sample size. Accordingly, 225 respondents each were chosen from rural and urban communities, making the total sample size of 450.

Sampling and data collection procedure

A multistage sampling technique was used.

First stage: Selection of local governments

Using the grouping of 33 LGAs in Oyo State into 12 rural, 9 semi-urban and 12 urban LGAs by the LG commission in Oyo State (based on population, Ibadan North East and Ogbomosho North LGs were the urban LG selected while the rural LG selected were Olorunsogo and Surulere LG using balloting technique.

Second stage: Selection of schools

All secondary schools in Oyo State were stratified into private and public secondary schools. The lists of all public and private secondary day schools in the selected four LGAs were obtained from the respective Local Government Inspectors of Education. Two public schools and two private schools were selected from the four LGAs using simple random sampling (simple balloting). The four rural schools were United Missionary Christian Association Model College (private), Orile-Igbon Community Secondary School (public), Zoe Secondary School (private) and Ogunbode Memorial Secondary School (public), while urban schools selected were Soun High School (public), Aduke Groups of Schools (private), Excellence Private School (private), and Army Barracks Secondary School (public). The number of respondents chosen from each school was proportionally selected by dividing the number of pupils in the school divided by the total number of students in the eight schools multiplied by the calculated sample size.

Third stage: Determination of desired sample size per school

The desired sample size was selected using stratified random sampling with the proportional allocation of students from the different classes in the selected secondary schools; stratification was done according to the classes (junior secondary school 1 to senior secondary school 3). Sixty respondents were proportionally allocated to the different arms of each of the selected schools. This was achieved by dividing the total number of students that are in the class by the total number in the school and multiplying it by the desired number of respondents in that school (60) as shown below:

$$\frac{\text{Number of students in the class} \times \text{Desired number of respondents in that school (60)}}{\text{Total number of students in the class}}$$

Number of respondents selected in each class in the selected schools.

Fourth stage: Selection of respondents

The respondents were chosen using systematic sampling technique (with the sampling fraction calculated based on the number of students present in the class and the number of respondents to be selected) with the aid of the

teacher's class register. First, respondents from each class were selected by simple random technique using the class register, and subsequent respondents selected using sampling fraction (systematic sampling).

RESULTS

There were slightly more males (246, 54.7%) than females (204, 45.3%) [Table 1]. Most of the respondents were from the Yoruba ethnic group (413, 91.8%), and were Christians (330, 73.3%). The mean age of the urban respondents was 13.9 ± 2.03 years and that of the rural respondents was 14.3 ± 1.93 years. There were more of the middle age adolescents in rural areas and more of the early and middle adolescents in urban areas.

Awareness of respondents about reproductive health services

A majority of the respondents, 200 (88.9%) [Table 2] of the rural and 191 (84.9%) of the urban were not aware of ARHSs, whereas 25 (11.1%) of the rural and 34 (15.1%) were aware. The mass media (radio and television) was the main source of information for 36 (42.6%) of the respondents, followed by parents, schools, then health professionals.

Thirteen (52%) and 30 (88.2%) [Table 3] of the rural and urban respondents in both groups knew that counseling services are

rendered in ARHS. This difference in their awareness on the type of services rendered in ARHS was statistically significant ($P = 0.002$). The difference in the knowledge of adolescents about RH was also statistically significant among the two groups ($P = 0.035$).

Thirteen (5.8%) and 22 (9.8%) [Table 4] of rural and urban respondents had ever utilized ARHS while and 212 (94.6%) and 203 (90.2%) of rural and urban, respectively, had never been to ARHS. The difference between the utilization of ARHS of both groups was not statistically significant ($P = 0.113$).

The main reason given by rural respondents (114, 53.3%) and urban respondents (93, 45.8%) [Table 5] for not have accessed ARHS before was that they did not know where to go, which however was not statistically significant ($P = 0.128$). Furthermore, a greater proportion of urban respondents (76, 37.4%) chose that the reason why they had not been to a service center was that they do not need the service, the difference of which was statistically significant ($P = 0.003$).

More adolescents within the age range 14 and 7 had utilized adolescent health service at one time or the other and most were males. A majority of those who had utilized ARHS were Christians (22, 70.2%) and most of them live with their parents (24, 77.2%).

Table 1: Sociodemographic profile of the respondents

Sociodemographic characteristics	Frequency (%)			Statistics
	Rural (n=225)	Urban (n=225)	Total (n=450)	
Age in groups (years)				
10-13	76 (33.8)	88 (39.1)	164 (36.4)	$t=2.44$, $df=2$, $P=0.302$
14-17	144 (64.0)	129 (57.3)	273 (60.7)	
18-19	5 (2.2)	8 (3.6)	13 (2.9)	
Mean age	14.3±1.93	13.9±2.03	14.06±2.02	
Class				
JSS 1-3	112 (49.8)	113 (50.2)	225 (50.0)	$\chi^2=0.009^*$, $df=1$, $P=0.925$
SSS 1-3	113 (50.2)	112 (49.8)	225 (50.0)	
Gender				
Male	131 (58.2)	115 (51.1)	246 (54.7)	$\chi^2=2.296$, $df=1$, $P=0.130$
Female	94 (41.8)	110 (48.9)	204 (45.3)	
Religion				
Christianity	166 (73.8)	164 (72.9)	330 (73.3)	$\chi^2=2.012$, $df=2$, $P=0.366$
Islam	59 (26.2)	59 (26.1)	118 (26.2)	
Traditional	0 (0.0)	2 (100.0)	2 (0.5)	
Ethnicity				
Yoruba	204 (90.7)	209 (92.9)	413 (91.8)	$\chi^2=4.541$, $df=3$, $P=0.209$
Hausa/Fulani	10 (4.4)	3 (1.3)	13 (1.3)	
Igbo	6 (2.7)	9 (4.0)	9 (4.0)	
Others	5 (2.2)	4 (1.8)	4 (1.8)	
Custodian				
Both parents	173 (76.9)	183 (81.3)	356 (79.1)	$\chi^2=1.349$, $df=2$, $P=1.349$
Single parent	35 (15.6)	28 (12.4)	63 (14.0)	
Others	17 (7.5)	14 (6.3)	31 (6.9)	

*Statistically significant. JSS – Junior Secondary School; SSS – Senior Secondary School

Table 2: Respondents' awareness and source of information about reproductive health services

	Frequency (%)			Statistics
	Rural (n=225)	Urban (n=225)	Total (n=450)	
Awareness about ARHS				
Yes	25 (11.1)	34 (15.1)	59 (13.1)	$\chi^2=1.580$, df=1, $P=0.209$
No	200 (88.9)	191 (84.9)	391 (86.9)	
Total	225 (100.0)	225 (100.0)	450 (100.0)	
Sources of information on ARHS**				
Mass media (television, radio)	4 (16.0)	9 (26.5)	36 (42.6)	0.338
Parents	10 (40.0)	7 (20.6)	17 (20.6)	0.104
School	4 (16.0)	10 (29.4)	14 (23.7)	0.231
Friend	3 (12.0)	8 (23.5)	11 (18.6)	0.261
Youth friendly club	4 (16.0)	6 (17.6)	10 (16.9)	0.868
Internet***	1 (4.0)	9 (26.5)	10 (16.9)	0.023*
Doctor/nurse	7 (28.0)	10 (29.4)	17 (28.8)	0.906
Workshop	4 (16.0)	9 (26.5)	13 (22.0)	0.338

*Statistically significant, **Multiple responses allowed, ***Fischer exact. ARHS – Adolescent reproductive health service

Table 3: Respondents' awareness about services rendered in an adolescent reproductive health facility

Variables	Frequency (Percentage)			χ^2	df	P
	Rural (n=25)	Urban (n=34)	Total (n=59)			
Services rendered in ARHS**(n=59)						
Counseling	13 (52.0)	30 (88.2)	43 (72.9)	9.571	1	0.002*
HIV testing	14 (56.0)	26 (76.5)	40 (67.8)	2.765	1	0.096
Information on ARH	10 (40.0)	23 (69.6)	33 (55.9)	4.468	1	0.035*
Pregnancy test	12 (48.0)	21 (61.8)	33 (55.9)	1.107	1	0.293
Recreation	12 (48.0)	20 (58.8)	32 (54.2)	0.680	1	0.410
Breast examination	14 (56.0)	17 (50.0)	31 (52.5)	0.208	1	0.648
STI treatment	13 (52.0)	18 (52.9)	31 (52.5)	0.005	1	0.943
Treatment of common ailment	10 (40.0)	18 (52.9)	28 (47.5)	0.968	1	0.325
Family planning	8 (32.0)	19 (55.9)	27 (45.8)	3.311	1	0.069
Immunization	8 (32.0)	15 (44.1)	23 (39.0)	0.889	1	0.346

*Statistically Significant, **Multiple response allowed. ARH – Adolescent reproductive health; HIV – Human Immunodeficiency Virus; ARHS – Adolescent reproductive health service

Table 4: Utilization of adolescent reproductive health service center

Variables	Frequency (%)			Statistics
	Rural (n=225)	Urban (n=225)	Total (n=450)	
Ever visited adolescent reproductive service centre				
Yes	14 (5.8)	22 (9.8)	36 (7.8)	$\chi^2=2.509$, df=1, $P=0.113$
No	211 (94.6)	203 (90.2)	414 (92.2)	

DISCUSSION

The utilization of adolescent RH is strongly determined by the level of awareness.¹¹ In this study, the level of awareness about ARHS was very low; only about one-tenth of respondents were aware of ARHS. This low level of adolescents' awareness about RH service has been reported in Sri Lanka¹² and also among secondary school students in a Nigerian study.¹³ However, it contradicts that found in Ghana, where adolescents have a high awareness of ARHS.¹⁴ This may be because adolescent health service is well structured in Ghana compared with the situation in Nigeria, where ARHS is still

being advocated to be incorporated into the existing health services most of which are not yet actualized. Furthermore, unlike a study done by Paudel *et al.* in Nepal, where parents and the Internet were the main sources of ARHSs,¹⁵ the common source found out in this study was the mass media and health personnel. This was, however, consistent with studies done in Ethiopia¹⁶ and in another state in Nigeria,¹⁷ where health professionals and the mass media were the major source of information. Furthermore, more of the urban respondents got to know about ARHS, from the Internet compared with their rural counterparts. This difference may

Table 5: Respondents reasons for not accessing reproductive health service

Reasons for not utilizing service**	Frequency (Percentage)			χ^2	Df	P
	Rural (n=211)	Urban (n=203)	Total (n=414)			
I didn't know where to go	114 (53.3)	93 (45.8)	207 (49.6)	2.318	1	0.128
I do not need the service	51 (23.8)	76 (37.4)	127 (30.5)	9.106	1	0.003*
I don't have money	15 (7.0)	10 (4.9)	25 (6.0)	0.802	1	0.370
Clinic too far	25 (11.7)	20 (9.9)	45 (10.8)	0.362	1	0.547
I don't have the chance	27 (12.6)	23 (11.3)	50 (12.0)	0.163	1	0.686
May et familiar face/staff	17 (7.9)	9 (4.4)	26 (6.2)	2.196	1	0.138
My parent refused	23 (10.7)	20 (9.9)	43 (10.3)	0.090	1	0.764
Time of service not convenient	15 (7.0)	10 (4.9)	25 (6.0)	0.802	1	0.370
Fear of being seen by parent	13 (6.1)	10 (4.9)	23 (5.5)	0.276	1	0.599
Embarrassed at needing service	14 (6.5)	8 (3.9)	22 (5.3)	0.410	1	0.235
Provider may be judgmental	3 (1.4)	3 (1.5)	6 (1.4)	0.004	1	0.948

*Statistically significant. **Multiple responses allowed

Table 6: Association between socio-demographic characteristics of respondents and utilization of ARHS

Variables	Utilization			Statistics
	Yes	No	Total	
Age				
10-13	5 (26.3)	149 (32.9)	164 (36.4)	$\chi^2=13.067$, df=2, P=0.001
14-17	23 (57.9)	240 (62.8)	273 (60.7)	
18-19	5 (15.8)	5 (4.3)	13 (3.9)	
Sex				
Male	22 (73.7)	204 (49.7)	246 (54.7)	$\chi^2=11.772$, df=1, P=0.001
Female	11 (26.8)	189 (50.3)	204 (45.3)	
Religion				
Islam	10 (28.1)	314 (27.5)	330 (73.3)	$\chi^2=3.591$, df=3, P=0.309
Christianity	22 (70.2)	78 (71.9)	118 (26.2)	
Traditional	1 (1.8)	1 (0.2)	2 (0.5)	
Who respondent live with				
Both parents	24 (77.2)	312 (77.4)	356 (77.4)	$\chi^2=0.040$, df=2, P=0.980
Single	7 (15.8)	54 (16.2)	63 (16.2)	
Others	2 (7.0)	27 (6.4)	31 (6.4)	

ARHS – Adolescent reproductive health service

be a result of more accessibility of adolescents to internet services in the urban areas.

Furthermore, more of the urban respondents knew counseling and information on RH issue to be rendered in an ARHS center than the rural respondents, the difference of which was statistically significant. The difference could be linked with the exposure of the urban dwellers to both mass and social media. Exposure to most of these channels increases the knowledge of adolescents in various spheres of life, sexual and RH inclusive.³

Utilization of ARHS was found to be unsatisfactory in this study, as only about one-tenth of respondents had ever used RH services, two-third of which were from the urban area. This is corroborated with a similar study in Sri Lanka, where none of the adolescents had ever accessed an adolescent RH facility.¹² This is, however, different from the study done in Ethiopia, where about four-fifth of respondents had utilized

Family Planning and Voluntary Counseling and Testing services respectively before.¹⁸ A likely reason for this could be because issues that pertain to ARHS in Nigeria is still viewed as a myth or taboo. Young people are not expected to express their sexual needs openly. Therefore, they resort into keeping to themselves in issue that relates to their sexuality. This may, however, be to their disadvantage as they miss vital information and counseling about sexual and RH as a result of this.

More adolescents within the ages of 14–17 years utilized ARHS more than other age groups [Table 6]. This is in tandem with another study done in Ethiopia¹⁹ This corroborates the fact that as adolescents advance in age, they become more explorative in relation to their development, RH issues inclusive.²⁰ Furthermore, the younger age groups may feel they are too young to explore RH services; hence, the reason why most of them had never utilized any.

The major reason given by half of the respondents, with a higher proportion of adolescents from rural communities, for not using an ARHS facility was because they did not know where to go. This finding is consistent with the study done in the Southern part of Nigeria, about the adequacy of adolescent healthcare where it was found that the nonavailability of RH service facilities prevents youth from utilizing sexual and RH service.²¹ This actually is a pointer to the paucity of facilities that provide youth-friendly services in the rural areas of the country.

CONCLUSIONS AND RECOMMENDATIONS

This study shows that the level of awareness of adolescents about the existence of an ARHS was very low, with more adolescents from rural communities less aware compared to their urban counterparts. Furthermore, only a few respondents had been to an ARHS, most of which were from the urban communities and the major reason why most of the respondents had assessed ARHS before was that they did not know where to go. Therefore, it is recommended that awareness of the availability of ARHS services should be intensified among

adolescents, especially in rural areas. Furthermore, adolescent RH should be incorporated into the school curriculum and hence that they can be exposed to safe and correct information as regards their RH at an early age. Furthermore, it is recommended that ARHS be incorporated into the existing health facility and an enabling environment should be provided for the adolescents to assess such without discrimination.

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Conflicts of interest

There are no conflicts of interest.

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