

# HIV/AIDS: Are Our Secondary School Students in Zaria Metropolis Receiving Adequate Communication from Their Families?

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## Abstract

**Introduction:** Nigeria has one of the highest proportions of cases of HIV/AIDS globally. This burden is more pronounced in the younger population which includes secondary school students (SSS). We set out to determine the level of family communication among SSS in Zaria metropolis. **Subjects and Methods:** We carried out a cross-sectional study among 73 randomly selected students. Data were obtained with a semi-structured, pretested, self-administered questionnaire. Descriptive statistics were used to present data at the univariate level while Chi-square or Fisher's exact test was employed to identify the relationship between non-numeric variables with a 5% level of significance. **Results:** The mean age ( $\pm$  standard deviation) was  $16.1 \pm 1.1$  years. Majority have heard 60 (82.2%) and have good knowledge 55 (75.3%) of family communication. There was an overall positive attitude as 44 (60.3%) believe it helps prevent HIV/AIDS and 57 (78.1%) believe it is very important and should be encouraged. Most (57 [78.1%]) have had family communication, with mother as the preferred partner 49 (86%). HIV/AIDS (44 [77.2%]) was the major issue discussed. We out that found the knowledge of family communication was significantly associated with its practice ( $P = 0.018$ ). **Conclusion:** Awareness, knowledge, attitude, and practice of family communication were good among respondents. Father's educational level and knowledge of family communication were significantly associated with its practice among respondents. More studies are required to evaluate the determinants of the practice of family communication.

**Keywords:** HIV/AIDS, parent-child communication, prevention, secondary schools

## INTRODUCTION

The HIV/AIDS pandemic is an important public health issue especially as it affects a productive age group.<sup>[1-3]</sup> Available data show that youth within the 15–24 year age group contributes half the burden of the disease.<sup>[3-5]</sup> In the absence of a currently certified cure, prevention remains the best way of curbing this menace.<sup>[3]</sup> Various preventive measures have been outlined which include abstinence, prevention of parent-to-child transmission, appropriate use of a condom, health education, avoidance of risky sexual behaviors, safe blood transfusion practices, appropriate use of sharps, and avoiding intravenous drug abuse.<sup>[3,5,6]</sup> Family communication is an aspect that will improve the area of health education as a preventive measure on HIV/AIDS, but with very few local and international studies to assess its current practice to the best of our knowledge.<sup>[7-10]</sup>

There are several theories concerning family communication and its importance.<sup>[11]</sup> Our research relates to the family communication patterns theory and explores how parents socialize their children to process mediated information.<sup>[11]</sup> There is a dearth of studies on the awareness and knowledge of family communication among secondary school students (SSS) as the studies reviewed only focused on attitude<sup>[12,13]</sup> practice<sup>[5,8,9,14,15]</sup> and in some cases determinants<sup>[5,8,9]</sup> of

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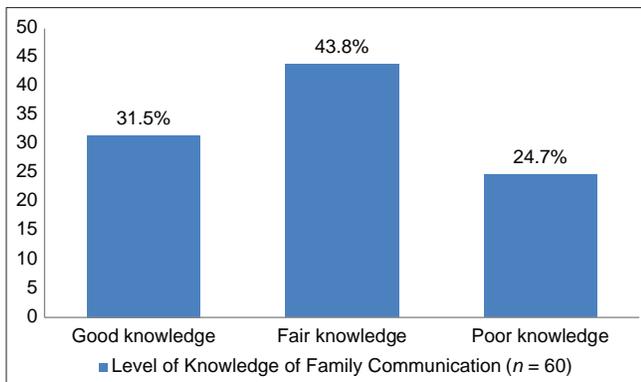
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**Figure 1:** Level of knowledge of respondents on family communication among secondary school students in Zaria ( $n = 60$ )

practice of family communication. The attitude toward family communication varies among different groups of people. pre-existing cultural beliefs and religion were found to play significant roles in influencing the practice of family communication.<sup>[12,13]</sup> A study in Namibia showed such discussions between parents and children were traditionally seen as taboo.<sup>[11,12]</sup> This could affect the way communication is handled which is vital to the prevention of social vices and other health conditions. In another study done among fourteen thousand nine hundred and forty-four adolescents from schools in two African countries revealed that the most predominant belief among many of their cultures is that reproductive health issues are a reservation of adults and married individuals; and not for everyone.<sup>[16]</sup> On a global scale, the practice of family communication is found to be on the low side even as very few studies have been done in this aspect.<sup>[7-10]</sup> Also, most of these studies are those conducted outside Africa.<sup>[8]</sup> Even where it is being practiced, data showed inconsistent results.<sup>[14]</sup> In one of the studies, males were more likely to discuss condom use with their father than females with a proportion of 58% and 27% respectively.<sup>[14]</sup>

In sub-Saharan Africa, there exists a low level of family communication as depicted by a study that found TV and radio programs (22%) as the foremost avenue for information on health-related issues ahead of physical parent-child communication (12%).<sup>[8]</sup> Most available studies are quite inconsistent concerning family communication practice. An Ethiopian study revealed that only 36.8% of respondents had ever deliberated more than one reproductive health matter with their parents.<sup>[15]</sup> This situation may be even more critical than depicted in these studies and thus in need of urgent action. In Ibadan, a research in adolescents revealed that even though family communication is not uncommon, it is usually characterized by indirect communication which may not pass on the intended message.<sup>[17]</sup> It is unclear what happens in the Northern setting which has a predominantly religious background. A cross-sectional study in Kwara State, Nigeria, among 200 respondents showed that the level of parent-child family communication was above average.<sup>[18]</sup> This is one of the findings that shed a positive light on the level and importance

of family communication. This same study found that the parents' level of education (about 86% of parents had formal education) is a strong determinant and gender difference has also been described as more females, in significantly higher proportion (86%), had a parent-to-child communication than their male colleagues (76%).<sup>[5]</sup> This is a critical factor that is seen in most of our schools. In another separate study, several factors have been outlined as threats to effective family communication. These factors are as well present in our local Nigerian environment. These include but not limited to parental avoidance due to embarrassment, lack of understanding of issues needed to be discussed, lack of self-confidence, modest communication skills, cultural beliefs that sexuality is strictly an adult affair, lack of sex education to parents when they were young and in some, fear of experimentation, and early sexual debut.<sup>[12]</sup>

With family being the primary agent of socialization, its role in shaping the thoughts of youth especially those within the target age group cannot be overemphasized.<sup>[19]</sup> Adequate information of any adverse condition is a prerequisite to its prevention. Adequate family communication can therefore arm youths with knowledge, a necessary tool for the prevention of HIV/AIDS.<sup>[5,8,14]</sup> Information obtained from our study will reveal the status of the current practice of family communication which will be useful in guiding policy formulation. It will also provide an opportunity for more research on the aspect of prevention of HIV/AIDS as it concerns SSS in Zaria and other parts of the country where the practice of family communication was found to be inadequate.

This study was carried out to determine awareness, knowledge, attitude and practice family communication among school students in Zaria metropolis.

## SUBJECTS AND METHODS

This research was carried out in Zaria metropolis in selected secondary schools. Zaria metropolis has 22 public senior secondary schools and 9 private secondary schools some of which are male-only; others female only while others are mixed. A few have boarding facilities. The schools in Zaria metropolis include Federal Government Girls College, Zaria; Demonstration secondary School, A. B. U.; Zaria Academy Shika; Islamic Trust of Nigeria Secondary School; Government Girls Secondary school Dogon Bauchi; Government Day Secondary School, Chindit Barracks; Comprehensive College; Triumph Commercial Secondary School; Nigeria Military School; Inter-Chapel Bible College; Therbow Secondary School; and Commercial Secondary School.

They follow the basic 6-3-3-4 educational system as obtained Nationwide with Junior Secondary School one to three and Senior Secondary School one to three. They mostly have about three to four arms per class. Their subjects are mainly Arts, Sciences, and Social Sciences.<sup>[20]</sup>

A cross-sectional, school-based, descriptive study was employed for this study. Our study population were all students

in public secondary schools in Zaria metropolis. Only senior students were included in the study. We excluded students who were sick or absent during data collection.

We determined the sample size ( $n$ ) using Fisher's formula for determining sample size for cross-sectional studies when the primary outcome variable is categorical:

$$n = \frac{Z^2 pq^{(21)}}{d^2}$$

where  $n$  = minimum sample size.

$Z$  = Standard normal deviate at 95% level of confidence = 1.96.

$P$  = 0.05 (proportion of family communication in Northern Nigeria).<sup>[8]</sup>

$q$  =  $1 - P = 0.95$

$d$  = Margin of error = 5% = 0.05

$$n = \frac{1.96^2 \times 0.05 \times 0.95}{0.05^2} = \frac{0.1825}{0.0025} = 73$$

Allowance of 10% for nonresponse =  $0.1 \times 73 = 7.3$ .

Minimum sample size was  $73 + 7.3 = 80.3 \approx 80$  students.

The eligible respondents were selected using a multi-stage sampling. Firstly, a list of public schools in Zaria metropolis was made. We then selected six schools using simple random sampling. In the second stage, three eligible students from each classroom in SS1–SS3 were sampled using stratified random sampling using their class registers as a sampling frame. This was continued till the required sample size was obtained.

A semi-structured, pretested, self-administered questionnaire which was adapted from previous similar studies was used.<sup>[22-24]</sup> The questionnaire had the following five main sections: sociodemographic data of the respondents; awareness, knowledge, attitude toward and practice of family communication. Data were managed with Statistical Package for Social Sciences V 25.0 and were presented in the form of charts and tables.

Frequencies and percentages were used to summarize qualitative variables such as gender and educational status, while mean and standard deviation were used for numeric variables such as age and number of communications at the univariate level while at bivariate level analysis, Chi-squared test was used to establish any relationship between qualitative variables at the level of significance of five percent. A score of <50% was graded as poor knowledge, 50% to 70% as fair, and >70% as good the attitude was graded using a 5-point Likert scale.

Ethical clearance was obtained from HREC of Ahmadu Bello University Teaching Hospital Zaria. Permission was gotten from the principals of the schools before commencing data collection. Consent was obtained from each respondent after explaining the purpose of the research. Confidentiality of the information was assured and the privacy of the respondent was

maintained. Data collected were stored in a password-protected computer. Only the researchers had access to the computer to ensure data security.

## RESULTS

The average age  $\pm$  standard deviation of respondents was  $16.1 \pm 1.1$  years. Our respondents were predominantly females [40 (54.8%)]. The majority [48 (65.8%)] were Hausa, with 64 (87.7%) of the respondents being of the Islamic faith. The majority 38 (52.1%) belonged to a monogamous family setting [Table 1]. Only 60 (82.2%) of the respondents were aware of family communication and family members were the most prevalent source of information in 31 respondents (42.5%) [Table 2]. When asked about the meaning of family communication, 55 (75.3%) respondents correctly knew its meaning [Table 2]. Only 2 (2.8%) of the respondents thought that family communication leads to unwanted behavior. The majority (43 [60.6%]) of the respondents said that lack of confidence among their parents and family members is a factor that hinders family communication [Table 3]. Only 19 (31.5%) of the respondents

**Table 1: Sociodemographic characteristics of respondents ( $n=73$ )**

Variables	Frequency (%)
Age (years)	
≤15	15 (20.5)
16-19	58 (79.5)
Sex	
Male	33 (45.2)
Female	40 (54.8)
Tribe	
Hausa	48 (65.8)
Yoruba	1 (1.4)
Igbo	1 (1.4)
Others*	23 (31.5)
Religion	
Islam	64 (87.7)
Christianity	9 (12.3)
Father's educational status	
No formal education	1 (1.4)
Primary education	0
Secondary education	0
Tertiary	51 (69.9)
Do not know	21 (28.8)
Mother's educational status	
Primary education	2 (2.7)
Secondary education	8 (11)
Tertiary education	42 (57.5)
Do not know	21 (28.8)
Marriage setting	
Monogamous	38 (52.1)
Polygamous	31 (42.5)
Don't know	4 (3.4)

\*Ebira, Idoma, Kagoro, Jukun, Nupe, Bade etc., other languages

had good knowledge of family communication [Figure 1]. Majority of our respondents (35 [58.3%]) strongly agreed that family communication helps to prevent HIV/AIDS, sickle cell disease, as well as unwanted pregnancies [Table 4]. Majority of the students (25 [41.7%]) strongly disagreed that family communication promotes immorality as well as promiscuity. Almost all of our respondents agreed (59 [98.3%]) that family communication is very important and should be encouraged [Table 4]. Most of our respondents (53 [88.3%]) that were aware of family communication have had family communication at least once and the mother was the most preferred communication partner [49 (86.0%)] [Table 5]. The most common issue discussed during the communication was on HIV/AIDS (44 [77.2%]) [Table 5]. Knowledge of family communication was significantly associated with the practice of family communication [Table 6].

## DISCUSSION

Most of the respondents were within the 16–19 years' age group and the largest proportion were SS2 students. Findings were similar to another study done in Northern Nigeria<sup>[8]</sup> which

also used almost similar age groups of respondents. The female students predominate the respondents, similar to a Ghanaian study<sup>[14]</sup> but different from another done in Kwara, Nigeria.<sup>[8]</sup> Most of the respondents were Hausa by tribe, other tribes such as Epira, Idoma, Kagoro, Jukun, Nupe, Bade, and Fulani account for most of the remaining while Yoruba and Igbo accounted for a very little percentage of respondents. The majority were Muslims and the rest Christians. This however runs contrary to the findings of another study in Nigeria<sup>[8]</sup> where the Yoruba tribe predominated and the two major religions almost shared similar percentages, probably due to the difference in the region.

Our study found that almost all of them have heard of family communication while on average, the majority only had a fair knowledge of the concept. However, a lesser percentage showed good knowledge of it including its advantages and factors that hinder effective family communication as mentioned in a previous study.<sup>[12]</sup> A high level of awareness, therefore, implies the students are likely to seek information and services regarding HIV/AIDS which is expected to improve their knowledge and subsequent positive behavioral change.

A high proportion of the respondents in this study showed a positive attitude toward the practice of family communication as was the case reported in a study where both parents and children saw an advantage in parent-child sex discussion.<sup>[11]</sup> A smaller percentage however correlated with a study in two African countries – Tanzania and South Africa – where the respondents thought such discussions are taboo and would only encourage promiscuity.<sup>[16]</sup> This positive attitude obtained from our study is likely to yield a positive behavioral change and therefore should be encouraged.

Despite their average knowledge of the concept, most of the respondents have had family communication which started at a mean age of 12 years with a mean frequency of 5 discussion sessions among them. Issues discussed ranged from HIV/AIDS, sex and sexuality issues, menstruation, and genetic conditions such as sickle cell disease to pregnancy. They

**Table 2: Awareness of family communication and source of information among secondary school students in Zaria (n=73)**

Awareness	Frequency (%)
Heard of family Communication?	
Yes	60 (82.2)
No	13 (17.8)
Source of information	
Family	31 (42.5)
Mass media	19 (26.0)
Friends	5 (6.8)
Mosque/church	2 (2.7)
Others	3 (4.1)

**Table 3: General knowledge of family communication among secondary school students in Zaria (n=60)**

Characteristics	Response	Frequency (%)
Meaning of family communication	Putting calls through to family members	4 (6.7)
	Discussions centering on sex and sex-related issues only	5 (8.3)
	Teaching females about menstruation and how to take care of themselves only	2 (3.3)
	Holding meaningful discussions on issues affecting especially adolescents including prevention of HIV/AIDS	49 (81.7)
Advantages of family communication	Prepares children for adult life	58 (96.7)
	Promotes parent-child bonding	36 (60.0)
	It leads to unwanted behavior	2 (3.3)
	It reduces the number of unwanted pregnancies	45 (75.0)
Factors that hinder family communication	It leads to more contraceptive use	4 (6.7)
	Embarrassment	19 (31.7)
	Lack of awareness of what to talk about	34 (56.7)
	Lack of confidence	38 (63.3)
	Poor communication skills	34 (56.7)
	Parents who had no family communication	27 (45.0)
	Conducive environment	6 (10.0)

**Table 4: Attitude toward family communication among secondary school students in Zaria (n=60)**

Characteristics	Response	Frequency (%)
Family communication helps prevent HIV/AIDS, sickle cell disease, unwanted pregnancy and others	Strongly agree	35 (58.3)
	Agree	22 (36.7)
	Neutral	3 (5.0)
	Disagree	0
	Strongly disagree	0
It makes adolescents well informed to protect themselves against social vices	Strongly agree	36 (60.0)
	Agree	22 (36.7)
	Neutral	2 (3.3)
	Disagree	0
	Strongly disagree	0
It enhances the bond among family members	Strongly agree	37 (61.7)
	Agree	13 (21.7)
	Neutral	6 (10.0)
	Disagree	3 (5.0)
	Strongly disagree	1 (1.7)
It promotes immorality and encourages promiscuity	Strongly agree	6 (10.0)
	Agree	5 (8.3)
	Neutral	9 (15.0)
	Disagree	15 (25.0)
	Strongly disagree	25 (41.7)
Family members should tell relatives about genetic risks and not health professionals	Strongly agree	10 (16.7)
	Agree	17 (28.3)
	Neutral	13 (21.7)
	Disagree	15 (25.0)
	Strongly disagree	5 (8.3)
It is the entire responsibility of health workers and school teachers to counsel adolescents and not the family	Strongly agree	8 (13.3)
	Agree	3 (5.0)
	Neutral	10 (16.7)
	Disagree	30 (50.0)
	Strongly disagree	9 (15.0)
Family communication is very important and should be encouraged	Strongly agree	48 (80.0)
	Agree	11 (18.3)
	Neutral	1 (1.7)
	Disagree	0
	Strongly disagree	0
It is not important and should be abolished	Strongly agree	1 (1.7)
	Agree	0
	Neutral	1 (1.7)
	Disagree	12 (20.0)
	Strongly disagree	46 (76.7)

rarely however discuss issues pertaining condom use and contraception. This may be explained by the religious and cultural inclination of the respondents most of who are Hausa Muslims and who see these as no-go-areas. Similar patterns of family communication were noticed in some previous studies.<sup>[5,12,14,16,25,26]</sup> This showed that against the odds of culture and religion, family communication takes place at a favorable level among them perhaps due to recognizing the dangers associated with some health conditions like HIV. This is a step forward from the public health perspective.

Various other factors were also seen to influence the practice of family communication in the study population. For instance,

**Table 5: Respondents who have had family communication, their preferred communication partner and issues most discussed among secondary school students in Zaria (n=60)**

Characteristics	Response	Frequency (%)
Ever had family communication?	Yes	53 (88.3)
	No	7 (11.7)
Preferred communication partner*	Mother	49 (86.0)
	Father	15 (26.8)
	Siblings	12 (21.1)
	Others	3 (5.3)
Issues discussed*	Sex and sexuality issues	35 (61.4)
	Pregnancy	30 (52.6)
	Menstruation	33 (57.9)
	Use of condom	8 (14.0)
	HIV/AIDS	44 (77.2)
	Contraceptives	6 (10.5)
	Genetic conditions like sickle cell	30 (52.6)
Others	10 (17.5)	

\*Multiple response set question

as seen in several studies,<sup>[5,9,12,14,16]</sup> the mother is the preferred communication partner (especially to her daughters) to most of the respondents as against the father, siblings and other family members; citing reasons of being more comfortable talking to her or the fact that the mother knows and will respond to their problems better. It was also found out that those with good knowledge of family communication practiced it more and that parents' level of education (especially the father in this study) has a significant association with its practice. Fathers with higher educational status (tertiary) communicated more with their wards, more so in monogamous family types. This is similar to a study which showed students whose parents are educated and have lesser family size converse considerably more than those with no formal education and bigger family size.<sup>[5]</sup> They probably have more time to communicate with their wards due to the size of the family. Our study was not without some limitations. Because family communication sometimes touches on sensitive issues (reproductive health) and our study outcomes relied solely on the information given by the respondent, which may be error-prone. We however assured the students of confidentiality and made them know that we were just conducting research. Also, our study relied on information obtained from the student's viewpoint and did not utilize information from the parents' viewpoint which could have given a more accurate picture of the situation. Lastly, our study was a cross-sectional study and so a cause-effect relationship cannot be explicitly implied.

## CONCLUSION AND RECOMMENDATIONS

Our study concluded that our respondents in Zaria exhibited a good level of awareness of family communication on HIV/AIDS. Most of them demonstrated a fair knowledge of and positive attitude toward family communication while the majority were found to have practiced it at some point in time.

**Table 6: Factors influencing family communication practice among respondents in Zaria (n=60)**

Variable	Response	Practice		$\chi^2$	P
		Yes	No		
Knowledge of family communication	Poor	6 (60.0)	4 (40.0)	7.995*	0.018
	Fair	29 (96.7)	1 (3.3)		
	Good	18 (90.0)	2 (10.0)		
Sex	Male	21 (87.5)	3 (12.5)	0.027**	1.000
	Female	32 (88.9)	4 (11.1)		
Tribe	Hausa	34 (87.2)	5 (12.8)	0.570*	0.903
	Yoruba	1 (100.0)	0		
	Igbo	1 (100.0)	0		
	Others	17 (89.5)	2 (10.5)		
Religion	Islam	46 (88.5)	6 (11.5)	1.060*	1.000
	Christianity	6 (85.7)	1 (14.3)		
Father's educational status	Tertiary education	39 (90.7)	4 (9.3)	0.823	0.364
	Other	14 (82.4)	3 (17.6)		
Mother's educational status	Tertiary education	33 (89.2)	4 (10.8)	0.069*	1.000
	Other education	20 (87.0)	3 (13.0)		

\*Likelihood ratio, \*\*Fisher's exact test

We recommend that these trends be encouraged by secondary school authorities in Zaria metropolis by reaching out to the parents of the students also to continue to educate and to be extended to other areas having poor indices of knowledge and practice of family communication. More research is also needed to evaluate for determinants of the practice of family communication, contents of such communication, and implication of practice on the sexual behavior of students which scope was not covered by our study.

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### Conflicts of interest

There are no conflicts of interest.

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