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Reproductive Knowledge, Sexual Behaviour and Contraceptive Use among Adolescents in Niger State of Nigeria

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ABSTRACT

Eight hundred and ninety six adolescents aged 11–25 years were recruited into this study using a multi-stage random sampling method. Overall, about 33% of them had already had first sexual experience but more males than females reported having experienced first sexual encounter. Only 3.6% of the respondents were married. One half of the sexually experienced adolescents had more than one sexual partner at the time of the study. Majority of the respondents (91.9%) had heard about HIV/AIDS and at least a STD. A wide disparity was found in knowledge and use of the contraceptive methods studied, ranging from 41.9% to 63.8% for knowledge and from 0.7% to 12.5% for use. Knowledge and use of condom was highest. For prevention of HIV/AIDS, more males than females thought condom was useful. More Gwari and Hausa respondents claimed that they did not use any family planning method during their first sexual relationship than Yoruba and Igbo respondents. There is need for reproductive health programmes to intensify efforts towards improving adolescents' attitudes to risky sexual behaviours and motivate them to undertake behaviours that would limit such risks. (*Afr J Reprod Health* 2003; 7[1]: 37–48)

RÉSUMÉ

Les comportements reproductifs, sexuels et contraceptifs des adolescents dans l'Etat de Niger au Nigéria. Huit cent quatre-vingt-seize adolescents âgés de 11–25 ans ont été recrutés pour faire partie de cette étude qui a été effectuée à l'aide de la méthode d'échantillonnage à multiples étapes. D'ensemble, environ 33% d'eux avaient déjà eu un premier rapport sexuel, mais il y avait plus des hommes qui avaient déclaré avoir eu une première expérience du rapport sexuel. Seuls 3,6% des interrogés étaient mariés. La moitié des adolescents qui étaient sexuellement expérimentés avaient plus d'un partenaire sexuel au moment où l'étude a été menée. La majorité des interrogés (91,9%) étaient au courant de l'existence du VIH/SIDA et au moins d'une MST. Il y avait un grand écart entre la connaissance et l'emploi des méthodes contraceptives, qui allait de 41,9% jusqu'à 63,8% pour la connaissance et de 0,7% à 12,5% pour l'emploi. La connaissance et l'emploi du préservatif étaient les plus élevés. Quant à la prévention du VIH/SIDA, il y avait plus des hommes que des femmes qui ont pensé que le préservatif était utile. Plus des interrogés d'origine gwari et haoussa que les interrogés d'origine yorubas et ibo ont déclaré qu'ils n'avaient pas employé la méthode de planification familiale au cours de leurs premiers rapports sexuels. Il faut que les programmes de la santé reproductive intensifient leurs efforts vers l'amélioration des attitudes des adolescents envers les comportements sexuels à risque et de les motiver de façon à ce qu'ils puissent se comporter de manière à réduire de tels risques. (*Rev Afr Santé Reprod* 2003; 7[1]: 37–48)

KEY WORDS: *Adolescents, contraception, sexual behaviour, Nigeria*

INTRODUCTION

The transition from childhood to adolescence is characterised by an increase in personal control, responsibility and independence.¹ Adolescents frequently negotiate and adjust to increased demands of a more autonomous lifestyle. In this context, responses to societal sexual norms and expectations can be seen as one of the key tasks of adolescence. Traditional norms in most Nigerian cultures demand premarital sexual abstinence until entry into marital unions. Nevertheless, the norms have almost disappeared in all ethnic groups.² A survey in Ekiti State shows that older women are more likely to be virgins till the time of marriage than younger women.³ The magnitude of adolescents' sexual behaviour is growing and fast emerging as a public health concern in the country.

It is necessary to put into perspective the sexual behaviour of adolescents since it is central to the prevention of transmission of human immunodeficiency virus (HIV) and other sexually transmitted infections (STIs) in the country.^a About nine out of every ten male and female non student adolescents are sexually active⁴ and 40% of secondary school students in Lagos have already had sexual intercourse.⁵ Most of them had their first intercourse between ages 10 and 16 years. The picture is similar in many urban and rural areas in the country. In Calabar, 54% of female and 52% of male adolescents had sex mostly before age 15.⁶ Likewise, a survey in rural and urban Enugu, Kaduna, Lagos,

Onitsha and Zaria shows that rates of adolescent sexual activities are high. Forty per cent of female and 50% of male adolescents had already had their first sexual contacts.⁷ The study further shows that a greater proportion of urban females compared to their male counterparts frequently engage in sexual relationships.

^a HIV affects more adolescents and young adults in the country than those in other age groups.

In Benin, 77% of adolescent schoolgirls were sexually active.⁸ In Ilorin, 62% of in-school adolescents were sexually active, out of which 30% of females and 58% of males had sex by the age of 19 years.⁹ A slightly lower proportion of adolescents (55%) is observed to be sexually active in a survey of in-school adolescents in the south-eastern parts of the country.¹⁰ Several studies also indicate high levels of multiple sexual partners among adolescents in various parts of the country. About 35% of female adolescents in Lagos and a higher proportion of males report that they maintain more than one sexual partner within non-marital relations.¹¹ Similarly in Benin, 35% of adolescent schoolgirls had multiple sexual partners⁸, while in Lagos 75% of sexually active adolescent students indicated that they had more than two partners.⁵ Among adolescent university students in Ibadan, 48% had multiple sexual partners.¹²

The 1999 Nigerian Demographic and Health Survey (NDHS)¹³ also depicts similar findings. The data show that about 57% of Nigerian females between 15 and 19 years had no sexual experience, while close to 16% of those between 20 and 24 years had no such experience. For males, 73% of those between 15 and 19 years had no sexual experience, while 36% of those between 20 and 24 years had no such experience. There are, however, demographic disparities in relation to sexual activity of respondents between 15 and 19 years. About 25% of females were sexually active, while only 10% of males in the same age group were active. More females (50%) and males (52%) in rural areas were active compared to females (44%) and males (47%) in urban areas. In addition, between 67 and 71% of females in the northern parts and 38–44% in southern parts of the country were sexually active. Furthermore, females and males without education were more sexually active than their counterparts with either primary or secondary education. Of those in the 15–19 years age group, only 10.3% of females and 26% of males used condom during their last intercourse.

The brief empirical review in this paper suggests that most adolescents in the country are sexually experienced with tendency for multiple partnerships. Much severe risks are however associated with their sexual practice. There are concomitant risks of pregnancy and coital related diseases such as STDs and HIV infections. About one half of female unmarried adolescents in parts of Nigeria claimed to have been pregnant.⁴ In Ilorin, 13% of adolescent male students reported that they had made a partner pregnant, and 69%

claimed that the pregnancies were aborted. Of the females in the study, 9% noted that they had ever been pregnant. Of these, 75% said that the pregnancies were aborted.⁹ The adolescents usually perceived their pregnancies as 'unwanted', thus they terminated them through illicit abortion, which are usually injurious to the female victim's health. Those who did not abort their pregnancies became premature mothers and often had to interrupt or discontinue their schooling if they were already in school.¹⁴ A recent study observed that adolescents mostly delay abortion, eventually allow unqualified persons to conduct it, use methods that jeopardise their life, and only seek medical attention if complications arise.¹⁵

Another danger that results from the risky sexual behaviour of adolescents is the likelihood of becoming infected with HIV. A survey shows that 21% of adolescents are at high risk of contracting STIs and HIV due to their involvement in casual unprotected sex.⁹ Another study further shows that many female adolescents in south-eastern Nigeria have a variety of STIs, namely, trichomoniasis (11%), chlamydial infection (11%), vaginal discharge (82%) and candidiasis (26%).¹⁶ Although the STIs were non fatal they could predispose to HIV infection.¹⁷

Need for In-depth Knowledge of Adolescent Sexual Behaviour in Diverse Cultural Groups in Nigeria

Most of the aforementioned studies and other existing ones represent interesting and significant contributions in the area of adolescent sexual behaviour. However, they have limited national coverage in their sample populations. A significant proportion of the research focuses on adolescents in the southern parts of the country, while it is particularly limited for adolescents in the northern parts of the country. One of the reasons is that most researchers on sexual behaviour are based in the southern part of the country.¹⁸ The 1999 NDHS appears to show an exemption since it is a representative nationwide study with some insights on adolescent sexual practices. Nonetheless, the survey lacks depth in understanding of adolescent sexual knowledge, attitudes, preferences and behaviours in relevant contexts.

The dearth of information on the sexual practices of adolescents in the north is quite worrisome given the twin knowledge that risk reduction efforts are more effective when culturally sensitive¹⁹, and that ethnicity is one of the major variables associated with sexual behaviour and risk.²⁰ A preponderance of research studies that do not reflect countrywide characteristics will obviously lack overarching empirical basis with which to compare, evaluate and guide ongoing research across national geographical regions and cultures. This is quite important with recognition of the 1991 national provisional census figures of 88,514,501 Nigerians, and of about one out of every five falling within the ages of 10 and 19 years. The need for cross-cultural comparisons of adolescent sexual behaviours is further emphasised by extreme diversity of the Nigerian population. The

country has over 250 ethnic groups, with about 10 notable cultural groups – Hausa-Fulani, Yoruba, Ibo, Kanuri, Tiv, Edo, Nupe, Efik/Ibibio and Ijaw – accounting for nearly 80% of the total population.²¹

Equally compelling is the need to obtain knowledge of national adolescent sexuality patterns and dynamics to enable interventions to be established according to specific and general cultural findings. Yet intervention programmes have been developed and implemented countrywide to encourage adolescent rational decisions on safe sexual and reproductive behaviour, despite relatively little knowledge about adolescent reproductive and sexual behaviour in some cultural groups. Consequently, studies on adolescent sexual process and outcomes are important in those groups for both programmatic and theoretical purposes. Admittedly, urgent attention is required in terms of information that suggests appropriate interventions in certain areas of adolescent sexuality in Nigeria. Nevertheless, such knowledge entails awareness of any trends and differentiation available in the country's diverse cultural areas in order to systematise the interventions. In all, availability of reliable and in-depth countrywide adolescent sexual and reproductive information will facilitate design of effective policies, programmes and strategies. Quite important also is the fact that such knowledge will suggest predictors that are or are not culture-specific. Further, regional priorities and peculiarities may be established to accommodate various needs.

Our purpose in this study was to obtain in-depth information about sexual activities, beliefs, perceptions, knowledge and experience of adolescents in Niger State, northern Nigeria. As previously mentioned, less research has been conducted on samples from diverse cultural backgrounds, especially in Niger State with large Gwari and Hausa ethnic groups. Niger State lies between latitudes 8° 10' north and longitudes 4° 8' east. The state shares a common boundary with Sokoto State to the north-west, Kaduna and Plateau States to east, Kwara State to the south-west and the Federal Capital Territory (FCT) to south-east. The 1991 country provisional census puts the population of Niger State at 2,421,581, made up of 1,169,115 females and 1,252,466 males. They are mostly practising Islam, Christianity or African traditional religion. Agriculture is the mainstay of the state's economy. The main agricultural products are guinea corn, maize, millet, cassava, yam, groundnut and rice.

The sexual beliefs and practices of adolescents in the state deserve investigation in order to provide relevant information for intervention purposes. The study is also essential to shed light on ways to stem the spread of HIV in the state before it goes out of hand. In 2000, the HIV seroprevalence rate in the country reached an epidemic point of 5%.²² There are however regional disparities in the rates. It is 3.4% for Niger State, the lowest among the states that make up the north central zone of Nigeria. The seroprevalence average for the zone is 7.6%, with Benue having as high as 14.9%, and Kaduna, Plateau and FCT having 6.5%, 6% and 7.9% respectively.²³

METHODS

To be representative of the range of ethnic groups and levels of development and family planning use in the state, survey data were collected through a multi-stage probability sample of adolescent males and females living in rural and urban areas, as part of a larger study. To estimate an appropriate sample size, it was assumed that 50% of the adolescents had an accurate understanding of reproductive health. The sample size within four percentage points of 50% with a 95% confidence interval for the cluster sampling technique was 612. To increase precision, a total of 898 adolescents were interviewed. Twenty seven cluster sites were randomly selected for the survey, 15 in urban areas and 12 in rural areas. About 32 respondents were included per cluster. Within each cluster, local government areas (LGAs) were randomly selected. The LGAs are Chanchanga, Mariga, Shiroro, Agwara, Gurara and Agaie. Subsequently, wards were randomly selected within the LGAs. The survey team enumerated schools and economic units in the wards. Respondents were afterwards selected from the sampled sites at defined intervals from a random start to obtain the desired sample size.

A survey questionnaire that contained 105 close and open-ended questions on demographic characteristics, sexual behaviour, marriage and reproduction, contraceptive knowledge and use, sexually transmitted diseases including HIV/AIDS, abortion and family planning was used to elicit information from the respondents. Prior to use in this study, the questionnaire was field tested on a group of male and female adolescents in one rural and one urban area of the state, different from those in study sites. The questionnaire was subsequently amended appropriately before use. A separate pilot test of the questionnaire provided test-retest reliability. Kappa reliabilities on items ranged from 0.73 to 1.0. Because the questionnaire did not yield a total score, reliability of the summed score could not be assessed.

Male and female interviewers were trained during a three-day workshop. A representative population-based survey of adolescents was completed in all the selected LGAs of the state between November 1997 and May 1998. Male interviewers worked with male respondents while female interviewers worked with female respondents.

Data from the survey were coded and entered into a computer using the SPSS 6.1 software. Simple percentages, descriptive measures and correlation analyses were computed to establish relationships among variables. Chi-square tests of independence were conducted. Relationships between relevant demographic and sexual/reproductive variables were assessed. The relationships were reported if they were statistically significant at $p < 0.05$.

RESULTS

Characteristics of the Sample

Four hundred and thirty nine (48.9%) of the respondents were males while 459 (50.9%) were females ([Table 1](#)). Some 52.9% were from the urban areas and the remaining 47.1% were from the rural areas. The respondents ranged in age from 11 to 25 years with mean age of 16.8 years (SD = 2.1). About 85% were between ages 14 and 20 years.

Although majority of the respondents were Hausa (21%) and Gwari (44%), some of them were from other ethnic groups particularly Ibo (15.5%) and Yoruba (8%). A slightly higher proportion of the respondents were Muslims (51.0%) while 43% were Christians. Only 2.4% were married while a vast majority (94.5%) were single. About 62% lived with both parents while 9% were living with their mothers and 8.8% with their fathers. A larger percentage of all the respondents (63.3%) had fathers with only one wife while 34% had fathers in polygynous relationships. The existence of respondents from polygynous families apparently explains a wide sibling size range of between 0 and 25. Majority of the respondents (74.2%) had sibling size of between one and eight. Most of the respondents' fathers (34.8%) worked as civil servants, many others worked either as traders (18.3%) or farmers (25.5%). The respondents had at least one type of education. Majority of them were in school (72%), while 28% were out of school at the time of the study. All of those who were out of school had some schooling experience. About 98% had some or complete primary school education while about 2% had some secondary school education.^b

^b *The decision to present the socio-demographic characteristics of in and out-of-school respondents together (as in Table 1) was statistical. Except for education, the respondents did not show statistical difference ($p < 0.05$) on any of the demographic and urban-rural residency variables.*

Sexual Behaviour

Some of the respondents were sexually experienced. Almost one third (32.7%) said they had already had their first sexual experience, while about 66% said they had never had sexual relations. Of those who had already had first sexual intercourse, 64% were males and 36% were females. More out-of-school (55%) respondents said they had already had their first sexual intercourse than in-school respondents (45%). Slightly more rural (53%) than urban (43%) respondents reported having had their first sexual intercourse. Most of those who had already had sexual relationships (86%) claimed that they started when they were between ages 13 and 20 years. During the period of their first sexual intercourse, about 35% stated that either they or their partners used a particular family planning (FP) method to avoid pregnancy. The remaining 65% indicated that they did not use any family planning device because they were ignorant of any methods.

Most of the respondents (54.1%) who had already had sexual experience also reported that they had more than one sexual partner (males 66% and females 44%). Slightly more in-school respondents (55%) reported having multiple sexual partners than the out-of-school respondents (53%). The frequency of respondents' sexual intercourse ranged from 0 to 13 times in the past one week before the survey. Majority of them (84.4%) noted that they had sexual encounters between one and six times during the period, but slightly more males (54%) than females (46%) were in this category. Most (58%) of the sexually active respondents claimed that they had sexual activities for pleasure, about 22% wanted to test their fertility and 7% wanted to test their sexual efficacy. Apparently, the frequent sexual activities of the respondents may be explained by how they spent their free time. Only few respondents reported that they did extra reading or serious work during their spare time. Majority (61%) claimed that they engaged in playing games and sleeping.

All the respondents attempted to seek information about sexual issues. About 23% obtained information from friends, 23.2% sought information from physicians, while 18.3% got information from parents.

Among those already sexually experienced, considerably more males than females (83.3% vs. 16.7%) between ages 14 and 20 years claimed that they had engaged in their first sexual intercourse ($\chi^2 = 19.68$, $df = 10$, $p < 0.03$). However, more females (42.2%) than males (16%) had a higher probability of engaging in their first sexual intercourse at earlier ages of between 11 and 13 years ($\chi^2 = 25.51$, $df = 3$, $p < 0.00001$). Likewise, more out-of-school respondents than their in-school counterparts (55% vs. 45%) reported that they had engaged in their first sexual encounter ($\chi^2 = 22.4$, $df = 10$, $p < 0.05$). Place of residence, education and religion had no influence on the probability of occurrence of first sexual intercourse. Majority of respondents with primary education (85%) and 10% with secondary education reported the need for pleasure as their major reason for having first sexual intercourse ($\chi^2 = 69.4$, $df = 50$, $p < 0.03$).

Table 2

Marriage and Reproduction

Most (95.7%) of the respondents were not yet married while 3.6% were married. Eighty seven per cent of out-of-school and 13% of in-school respondents were married. Fifty six per cent of the married lived in rural areas while 44% lived in urban areas. Most of those in marital relationships reported that they got married between ages 15 and 17 years and the marriages were contracted in a church or mosque, or a civil type of marriage. About half indicated that they were in monogamous relationships with equal percentage in polygynous relationships. Majority (81%) of all the married respondents said they already had 1–5 children. Almost all of them (92%) said they had been married for 1–6 years. Nearly 65% reported that they chose their own spouse while others reported that their

parents chose for them. As reported by the married respondents, age range of their spouses was from 20 to 31 years.

Both the married and unmarried respondents had their own expectations of marriage. Most of them (32.6%) believed that the ideal age for a female to marry is 14–18 years, while only 2.1% thought that males should marry at this age. About one third of respondents believed that the ideal age for a male to marry is 23–26 years, while another one third thought males should marry at 27–32 years.

Respondents also expressed their fertility preferences. Majority (73.7%) said a boy or girl should remain a virgin until marriage, while 22.3% (a percentage slightly lower than those who already had sexual intercourse) thought otherwise. When married, most respondents (60%) said they prefer to have 4–6 children. Two thirds would prefer up to four male children while the remaining would prefer 2–3 male children. Generally, about half of the respondents believed that God determines how many children a couple should have. Twenty per cent felt that the husband should decide, in contrast to 4% who felt that the wife should decide, and another 17% felt that such decision should be made by both husband and wife.

More male (62.7%) than female (37.3%) respondents would want a boy or girl to be a virgin until marriage ($\chi^2 = 21.28$, $df = 1$, $p < 0.001$). Likewise, more of those who had not had first sexual intercourse (83%) than those who had already had first intercourse (17%) believed that someone should remain a virgin until marriage ($\chi^2 = 31.4$, $df = 1$, $p < 0.001$). Furthermore, more Muslims (51.3%) than Christians (46.9%) would prefer a boy/girl to remain a virgin until marriage ($\chi^2 = 9.05$, $df = 3$, $p < 0.028$). Majority of Hausa (73%) and Gwari (80%) respondents claimed that they got married when they were between 15 and 19 years old, compared to the Yorubas (10%) ($\chi^2 = 21.52$, $df = 8$, $p < 0.005$). Eighty per cent of those who were pregnant at the time of the survey had completed primary education and 13% had completed secondary education ($\chi^2 = 18.61$, $df = 5$, $p < 0.002$). Similarly, more out-of-school than in-school respondents were pregnant at the time of the survey ($\chi^2 = 44.7$, $df = 1$, $p < 0.0001$). More respondents who had completed primary education (89.7%) than those with higher education (35.6%) were likely to report having given birth to a baby ($\chi^2 = 12.269$, $df = 5$, $p < 0.0002$). More Muslim than Christian respondents would prefer to have more than five children ($\chi^2 = 19.84$, $df = 9$, $p < 0.001$). However, female respondents were more likely than male respondents to refer decisions about the number of children appropriate for them to God or Allah ($\chi^2 = 23.06$, $df = 5$, $p < 0.0003$). More Hausa and Gwari respondents than respondents from other ethnic groups believed that God or Allah determines how many children a married couple should have ($\chi^2 = 101.484$, $df = 50$, $p < 0.001$). Also, more Muslims than Christians believed that God decides the number of children a couple should have ($\chi^2 = 61.61$, $df = 9$, $p < 0.05$).

Sexually Related Diseases and Induced Abortion

Almost all the respondents (91.9%) were aware of the existence of HIV/AIDS and all of them had knowledge of various forms of STDs. Majority of them (76.6%) knew about gonorrhoea, 25.7% had heard of syphilis, about 7% knew about herpes, 21.3% had knowledge of pubic lice, and only 3% had knowledge of chlamydia.

Majority of the respondents obtained information on sexual disease prevention and cure from people outside their immediate family, which include teachers (25.6%), friends (13.3%) and medical personnel (21.9%). Few respondents (8.4%) obtained information from their parents.

Most of the respondents had some information about several aspects of sexually related diseases. More than half of the respondents (58.7%) acknowledged that there are no cures for AIDS and 36% felt that AIDS could be cured if detected early. Seventy seven per cent were aware that HIV could be transmitted through heterosexual intercourse, while most respondents were aware of other ways of HIV transmission. About 80% thought that it could be transmitted through sharing needles and 84.4% knew that a pregnant woman could pass it to her unborn child. About half believed that the use of antibiotics before sex could protect one from contracting STDs while about 61% affirmed that STDs could be contacted from unclean toilet seats. Some respondents had particular ideas of measures to prevent contracting HIV/AIDS. Only 27.2% reported that condoms could be used, 16% felt that avoidance of casual sex could prevent it, while 21% believed that having sex with multiple partners or with prostitutes could lead to infection with HIV. Seventy two per cent were aware that STDs could be cured. Almost 90% explained that they would consult a physician or visit a hospital if they contact any STD, only 0.6% would report such diseases to family members, while 3.2% would visit a native doctor.

Since numerous respondents were already active in non-marital relationships, one would expect that some of the female adolescents may have been pregnant at some time. Six per cent of the respondents reported that they or their partners had been pregnant and aborted the pregnancy,^c majority of who had had abortion 1–3 times. Almost all the abortions took place in the hospital with various consequences. Six out of every 10 respondents reported satisfactory outcome while every other one reported death of the partner, and every other three reported medical complications.

^c This may however be a conservative percentage in the past one year since some females would avoid telling their partners about their own experiences of induced abortion for fear of the partners telling others and the perceived consequent social stigmatisation.

Associations were sought between respondents' sexual preventive measures and the socio-demographic variables. Results show that more female (52.6%) compared to male (47.4%) respondents had heard of HIV/AIDS at the time of interview ($\chi^2 = 6.93$, $df = 1$, p

< 0.008). On ethnic affiliation, more Hausa (53%) and Gwari (55%) compared to either Yoruba (7.3%) or Igbo (11.9%) respondents felt that HIV infection could be prevented by avoiding multiple sexual relationships ($\chi^2 = 402.17$, $df = 150$, $p < 0.0000$). On sex related information, more female (91.3%) than male (8.7%) respondents had obtained sexual health information from nurses ($\chi^2 = 137.37$, $df = 13$, $p < 0.0000$). More Gwari (53%) and Hausa (49%) than Yoruba (14%) and Igbo (20%) respondents indicated that they obtained sexual health information from physicians ($\chi^2 = 165.33$, $df = 130$, $p < 0.01$). More males than females (88% vs. 14.5%) believed that the condom is useful for preventing HIV infection ($\chi^2 = 127.81$, $df = 15$, $p < 0.0000$). In case of STD infection, majority of female (82%) compared to male (6%) respondents would seek care from the native doctor if they have an STD ($\chi^2 = 71.23$, $df = 30$, $p < 0.000$). However, more males (62%) than females (37%) thought that a girl should seek the help of a physician for an unwanted pregnancy ($\chi^2 = 55.23$, $df = 11$, $p < 0.0000$).

Family Planning

At the time of the survey respondents had some knowledge of FP methods. Condom was well known by 63.8% of respondents and respondents had knowledge of other methods in various degrees. Fifty one per cent knew about pills, 59.5% had heard about injections, 51.2% had knowledge of foaming tablets and 53.9% knew about withdrawal method. Fewer respondents (47.9%) had knowledge of IUD, diaphragm (42.4%), female sterilisation (48.8%), male sterilisation (41.9%) and rhythm (49.3%). Only 9.7% reported that they or their partners had ever used pills during sexual relationships, while a slightly higher proportion (10%) had used the rhythm method. Condoms were used by 12.5% of the respondents while male and female sterilisation methods were not used. At the time of the survey about 6.3% were using the condom, while 2.1% reported that they or their partners were using pills in sexual relationships. Only 1.2% reported that they were using withdrawal method. A range of 0.7% to 1.1% rate of current use was reported for other methods.

Half of the respondents were not interested in using any FP method in future. They complained that the use of such methods could reduce sexual pleasure. In contrast, 44.5% felt that they would be interested in using a method in future. Eleven per cent would like to use pills, 15.4% would use the condom, while 17.3% would likely use injections in future.

More than half of the respondents knew where to obtain information about FP methods — one third from the doctor, another one third through the media and only 6% from the Planned Parenthood Federation of Nigeria (PPFN).

Table 3

There was association between respondents' first source of information about FP and sex, ethnic group as well as religion. More males (83.4%) than females (22.4%) had their first information about family planning methods from friends ($\chi^2 = 42.62$, $df = 6$, $p < 0.0000$). Compared to respondents from other ethnic groups, more Hausa respondents claimed that their first source of information was medical personnel ($\chi^2 = 85.85$, $df = 60$, $p < 0.015$). In addition, more Christians (63.2%) than Muslims (32%) reported that they had their first information about FP from books and novels ($\chi^2 = 66.41$, $df = 18$, $p < 0.0000$). More Hausa (44%) and Gwari (45%) than either Yoruba (13.5%) or Igbo (19%) respondents did not use any FP method during their first intercourse due to lack of knowledge of the methods ($\chi^2 = 127.32$, $df = 63$, $p < 0.0000$). More male (54%) than female respondents had used a FP method with their partner to avoid pregnancy ($\chi^2 = 4.7$, $df = 1$, $p < 0.02$). Likewise, more male (54.5%) than female (45%) respondents would like to use a FP method in future sexual encounters ($\chi^2 = 9.05$, $df = 1$, $p < 0.002$). On ethnic affiliation, more Hausa (46%) and Gwari (54%) than Yoruba (8.2%) and Igbo (18.8%) respondents were willing to use a FP method in future ($\chi^2 = 19.46$, $df = 3$, $p < 0.0002$).

DISCUSSION AND CONCLUSION

Because of the narrow age range of the sample population and the national regions represented in our study, it is somewhat possible to make some generalisations from the findings. One can say with confidence that about one third of adolescents of all socioeconomic levels in Niger State have already experienced their first sexual intercourse. Specifically 32.7% (36% females and 64% males; 55% for out-of-school and 45% for in-school respondents) of respondents in the present study have already had first sexual experience. On adolescent school status, the percentage obtained in the present survey appears slightly lower than in most of the first intercourse survey reports for adolescents in many other parts of the country. For instance, some studies report 40% of adolescent schoolgirls in Lagos⁵, 62% of in-school adolescents in Ilorin⁹, and 55% of in-school adolescents in many south-eastern areas of the country¹⁰. In the present study, more males than females had already had their first sexual relationships. This finding is consistent with reports of 40% female and 50% male adolescents in rural and urban Enugu, Kaduna, Lagos, Onitsha and Zaria, who had already had their first sexual contacts.⁷ The present finding is also consistent with results that more adolescent males than females in Ilorin had had their first sexual encounter by age 19.⁹

The present study found that about 54% of adolescents who had already had first sexual experience also reported that they had more than one sexual partner. This finding is slightly higher than some findings in other parts of the country — 48% in Ibadan¹² and about 35% in Benin⁸. Similarly, the present finding shows that 84% (46% females and 54% males) of sexually experienced respondents were sexually active with up to six sexual encounters in the past one week before the survey. This proportion is lower than 77% found among adolescent schoolgirls in Benin⁸ and about 71% in the general northern

female adolescent population.¹³ Also, the percentage presently observed is lower than 62% found among in-school adolescents in Ilorin and 55% among schoolgirls in south-eastern parts of the country.^{9,10}

Similarly, about nine out of every ten adolescents in the state were single and were not yet in any marital relationships. The respondents generally preferred that females should enter marital relations (at about 18–20 years) earlier than males. In addition almost all respondents, regardless of sex and marital status, indicated their fertility preference for an average of six children. Significantly more male than female respondents wanted five or more children.

Although majority of the respondents believed that males or females should remain virgins until marriage, most of those with secondary education significantly thought otherwise compared to those with Koranic, primary or tertiary education. Consistently, more of the respondents with secondary education were significantly likely to report that they had given birth once compared to those who had any other educational qualifications.

Consistent with earlier studies in Lagos, Benin, Ibadan and south-eastern Nigeria^{5,10,12}, the respondents in the present study had information about HIV/AIDS and at least one STD. Except for gonorrhoea and syphilis, they were not familiar with most other examples and cases of STDs. Also, significantly more males than females had no knowledge of HIV/AIDS. Similarly, a vast majority of respondents lacked knowledge of any effective method of preventing HIV infection. Less than 28% of respondents were aware that the infection could be prevented by any of the methods such as condom use and avoidance of multiple sexual partnership and casual sex.

Significant findings that differentiate local Gwari and Hausa respondents from adolescents from other ethnic groups were observed in the study. First, most Gwari and Hausa respondents acknowledged that they married at an earlier age than Yoruba respondents. Second, compared to Yoruba and Igbo respondents Gwari and Hausa respondents mostly believed that God determines how many children a couple should have. Third, more Gwari and Hausa respondents felt that HIV infection could be prevented by not having multiple sexual partners relative to Yoruba and Igbo respondents. Fourth, compared to Yoruba and Igbo respondents, majority of Gwari and Hausa respondents claimed that they obtained sexually related information from physicians. Fifth, most Gwari and Hausa respondents claimed that they did not use any FP method in their first sexual relationships compared to Yoruba and Igbo respondents, although more Gwari and Hausa respondents hoped to use a FP method in future than other ethnic groups.

Future sexual and reproductive health programmes need to systematise interventions according to suggestions from the present study of ethnic differences in perceptions and sexual practices of adolescents in Niger State. There is need for interventions to

consolidate on the belief of the Gwari and Hausa that involvement in multiple sexual partnerships can lead to HIV transmission. The interventions should also aim to promote knowledge and use of safe FP methods among the Gwari and Hausa indigenes since majority of them marry at younger ages, do not frequently use any methods at first sexual intercourse, are ignorant of FP methods and showed willingness to use FP methods in future. This idea is consistent with the directive of the UN International Conference on Population and Development that couples and individuals should have access to the widest possible range of safe and effective FP methods.²⁵ Accordingly, local stakeholders in health should ensure the availability of affordable FP methods for the inhabitants.

A wide disparity between contraceptive knowledge and use was found among the respondents. Knowledge rate was between 37% and 63.8% while use rate was between 0.7% and 12.5% for the contraceptive methods studied. This latter finding is in contrast to an earlier finding among adolescents in Kwara State, which observed that condom and other contraceptive use rates were as high as 20.6%.¹⁸

The overall induced abortion rate suggests that about 6% of adolescent females in Niger State have abortion each year. Although almost all the abortions took place in hospital settings, only about six out of every ten females in these regions who had abortion experience reported satisfactory outcomes. In addition, about three out of every ten suffered some medical complications resulting in loss of productive days. The remaining one out of every ten died. One prominent observation in the study is that recorded abortion rates were not affected by any background characteristics of the respondents including rural-urban residence.

Our findings, like previous others¹⁹, indicate a high rate of morbidity and mortality from abortion, thus suggesting a continuing need for improvement in access to hospital care. There also exists a need for improved contraceptive counselling for adolescents so as to increase contraceptive use for those who are sexually experienced. Experimental studies outside Africa tend to demonstrate that women in areas with enhanced FP services are more likely to adopt contraceptive methods and less likely to have unplanned pregnancies, thus having little or no need for abortion.^{26,27} In this regard, local health authorities should make provision for effective and free contraceptive choices for adolescents. The policy implication of this result is the need for programmes targeted at adolescents and designed to provide them adequate knowledge on reproductive and sexual issues, change their attitudes about sexual risk and motivate them to undertake behaviours that reduce sexual risk.

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Table 1 Socio-Demographic Characteristics of Adolescents in Niger State, 1997

Characteristic	%
<i>Sex</i>	
Male	48.9
Female	50.9
Unavailable	0.2
<i>Age</i>	
11-13	7.6
14-17	51.2
18-20	33.5
21-25	6.6
Unavailable	1.1
<i>Residence</i>	
Urban	52.9
Rural	47.1
<i>Marital status</i>	
Never married	94.5
Married	2.4
Divorced	0.4
Widowed	0.1
Unavailable	2.6
<i>Ethnicity</i>	
Yoruba	8.0
Ibo	15.5
Hausa	21.0
Gwari	44.0
Ishan, Urobo, etc	3.5
Tiv, Igala, etc	4.0
Unavailable	3.0
<i>Religion</i>	
Christianity	43.0
Muslim	51.0
Traditional	1.6
Unavailable	1.0
<i>Educational status</i>	

Unavailable	1.0
<i>Educational status</i>	
In-school	72.0
Out-of-school	28.0
<i>Family structure</i>	
Monogamy	63.3
Polygamy	34.0
Others	1.3
Unavailable	1.4

Table 2 Percentage Distribution of Respondents by Sexual Behaviour

Variable	%
<i>Ever had sexual intercourse (898)</i>	
Yes	32.7
No	66
Unavailable	1.3
<i>Age at first sexual intercourse (years) (n = 294)</i>	
9–12	14.3
13–16	65.6
17–20	15.3
21–25	1.4
Unavailable	3.4
<i>Age of partner at first intercourse (years) (n = 294)</i>	
9–12	9.8
13–16	48.5
17–20	34.8
21–25	5.7
26 and above	2.1
Unavailable	1.1
<i>Used family planning at first intercourse (n = 294)</i>	
Yes	35
No	65
<i>Had sex with more than one person (n = 294)</i>	
Yes	54
No	42
Unavailable	4

Table 3 Percentage Distribution of Respondents by Knowledge of Family Planning Methods (n = 898)

Variables	Yes	No	Not sure
Pills	51.8	41.4	6.8
IUD	47.9	44.7	7.4
Injections	59.5	33.6	6.9
Foaming tablets	51.2	42.1	6.7
Diaphragm	42.4	50.6	7.0
Condom	63.8	30.0	6.2
Female sterilisation	48.8	43.8	7.4
Male sterilisation	41.9	51.4	6.7
Rhythm	49.3	43.5	7.1
Withdrawal	53.9	38.2	7.9
Others	29.3	60.7	10.0