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Reproductive health knowledge and sexual behaviour of male apprentices in automobile repair workshops in Ibadan, Nigeria

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Summary

Although many surveys have been conducted on the reproductive health knowledge and sexual behavior of secondary school students in Nigeria, limited data are available on their male counterparts who are out-of-school. This survey explored the reproductive health knowledge and sexual behavior of male apprentices working in automobile repair workshops in Ibadan North Local Government Area, Nigeria. A multistage stratified random sampling technique was used to select 325 male apprentices from seven of the twelve political wards in the study area. The study participants were interviewed by means of a standardized questionnaire. The majority of the respondents (65%) were aged less than 20 years. Almost all (95%) knew of at least one contraceptive; the most popular being the male condom (87%), followed by the pill (75%). More than half (52%) of those who knew of any contraceptive heard about it from the mass media (radio, TV and newspaper). A significant association was found between respondents' ages, level of education and reproductive health knowledge. Fifty two percent of the entire sample had ever visited a health facility to obtain a contraceptive service, 48% had not. Seventy five percent of the respondents had ever had sex, 25% had not. The mean age of sexual debut was 16 years. A large majority (76%) reported that they had sex during the month preceding the study. The frequency of sex during the period under consideration ranged from one to five times with a mean of two. Only fifty-seven percent used a condom during their last sexual episode. In conclusion, although many male apprentices were aware of contraceptives, few used them, thereby increasing their risk of undesirable consequence of unprotected sex.

Keywords: *Male adolescents, reproductive health knowledge, sexual behaviour, contraceptives, out-of-school adolescents*

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Résumé

Bien que plusieurs études ont été menées sur les connaissances en sante reproductives et les comportements sexuels des adolescents du secondaire au Nigeria, des donnees limitées collectées des adolescents non-scolarisés sont disponibles. Cette étude visait d'explorer les connaissances en santé reproductive et les comportements sexuels des apprentis mecaniciens au Nord d'Ibadan, Nigéria. Une technique multi stage sur des échantillons stratifiés était utilisée pour sélectionner 325 males apprentis de 7 - 12 cadres de la zone d'étude. Les participants à l'étude étaient interviewés par un questionnaire standard. La majorité des participants (65%) était âgé de moins de 20 ans. Presque tous (95%) connaissaient au moins un moyen de contraception; le plus populaire était le condom masculine (87%), suivis par la pillule (75%), plus de la moitié (52%) de ceux qui onnaissaient n'importe quell moyen de contraception en ont entendu parler a la masse média (radio, TV, et journaux). Une association importante était retrouve entre les ages, le niveau d'éducation et les connaissances en santé reproductive de participants. Cinquante-deux pour cent ont déjà visite un centre de santé pour obtenir un service de contraception, 48% ne l'ont pas fait. Soixante-quinze pour cent des participants ont déjà eu des rapports sexuels, 25% ne l'ont jamais eu. L'âge moyen du début de l'activité sexuelle était de 16 ans. La grande majorite (76%) reportait qu'ils ont eu des rapports sexuels le mois precedent l'étude. La fréquence des rapports sexuels au cours de la période considérée était de 1-5 fois avec une moyenne de deux. Seulement cinquante-sept pour cent ont utilisé un condom lors de leur dernier rapport sexuel. En conclusion, bien que plusieurs apprentis fussent sensibilisés sur les moyens de contraception, peu les utilisaient, augmentant ainsi leur risque des conséquences indésirables des rapports sexuels non protégés.

Introduction

Adolescents and youth (AY) constitute a significant portion of the world's population. Over one and a half billion people are between the ages of 10-24 years representing about 30% of the world's population. By the year 2025, the population of AY is projected to reach nearly 2 billion [1]. AY are among the healthiest segment of any population. They have

survived many diseases of early childhood and are decades away from the infections associated with ageing [2]. Yet, many AY die prematurely. According to the World Health Organization [2] every year an estimated one million male and female adolescents lose their lives mostly through accidents, suicide, violence, pregnancy-related complications and other preventable or treatable illnesses. The threats to the health of young persons stem primarily from their behaviour. Among the behaviours of concern, none had attracted greater attention during the last decade than the involvement of adolescents in risky sexual activities. This concern is underscored by the fact that young persons are disproportionately affected by the undesirable consequences of risky sexual practices including unwanted pregnancy, illicit abortion, sexually transmitted infections (STI) including HIV [3, 4, 5]. For example, in 2003, about 5 million persons became newly infected with HIV, half of whom were persons aged 15-24 years [5].

In Nigeria, several studies confirm that the reproductive health needs of many AY are unmet. For example, one study found that by age 13 years over a quarter of a sample of secondary school students has had sexual intercourse; 33% of the female and 26% of the male students had exchanged sex for money, food or shelter [6]. The study by Amazigo and colleagues [7] showed that 40% of high school students had ever had sex but only 17% used a condom during the most recent sexual encounter. Another study of patients attending an STI clinic showed that the peak prevalence (65%) of HIV infection was among those aged 21-30 years [8], most of who were probably infected during adolescence. In 1999, 10% of young women aged 20-24 years were infected with HIV compared with 5.4% of adults aged 25 years and above [9].

However, the bulk of the available data on the sexual behaviour of young Nigerians were derived from surveys of students in secondary schools [6-7, 10-13] and tertiary institutions [14] primarily because students are readily accessible. Limited attention has been paid to the study of the reproductive health knowledge and sexual behaviour of the out-of-school youths as a whole. Among the out of school youth as a group, there are even fewer data on the reproductive health behaviour of males than females [15-16]. For example, some studies have assessed the reproductive health behaviour of female apprentices [15] and hawkers [16]. Not enough attention has been paid to the study of the male out-of-school youth due to the assumptions that these boys are disruptive, aggressive and difficult to work with [17]. There is also a general

belief that boys will somehow learn about reproductive health through experimentation. The consequence is the neglect of the reproductive health needs of the out-of-school male in Nigeria. However, on a global level, a number of studies have assessed the reproductive health behaviour of male adolescents including those who are out-of-school [18-19]. Findings from studies among never-married male adolescents in Tehran, Iran [18] and Recife Brazil [19] showed that 28% and 49% of the respondents had respectively had sexual intercourse; only 26% of sexually active Brazilian youth reportedly used any form of contraceptives while a substantial proportion of the Iranian sample held reproductive health misconceptions regarding condoms, STI and AIDS. These data indicate the need for interventions directed at this population. This article presents data from a survey on the reproductive health knowledge and sexual behaviour among one of the out-of-school male young population (apprentices) working in the automobile repair workshops in Ibadan, Nigeria.

Materials and methods

Setting and study population

Ibadan North Local Government Area (LGA), the setting for the study, is one of the five administrative units in Ibadan, a metropolis of approximately 3 million persons, the majority of whom are Yoruba, the dominant ethnic group in South-western, Nigeria. Ibadan serves as a regional, economic, cultural and educational centre in southwestern Nigeria. The study population are young persons who were apprentices working in the automobile repair workshops. An apprentice is a young person who learns a vocation, such as repair of vehicles, tailoring or shoe making, under the direct supervision of an instructor who operates in the informal sector of the Nigerian economy. Typically, apprenticeships are part of small businesses where learning is largely informal. Apprenticeships are conducted in workshops, but the owners have no government recognition, registration or support. Instructors request for money from apprentices at inception of the training as a form of tuition, which is paid by parents or guardians. The duration of apprenticeship varies depending on the level of education and age at entry.

Sampling procedures

A multistage stratified random sampling technique was used to recruit the study participants. Seven of the twelve political wards (i.e. the smallest political unit) in the study area were randomly selected. The study team enumerated all workshops in which

automobile repair services were provided and found that there were 146 eligible workshops there. The study team contacted the leaders of the association of each automobile group to discuss the purpose of the study and solicit their support. In addition, the team obtained permission for the conduct of the study from each instructor of the enumerated workshops. All 325 male apprentices aged between 12 and 24 years who were available in the workshop on the day of visit and gave verbal informed consent were invited to participate in the study.

Measures

A 44-item questionnaire was developed and used for data collection. The questionnaire elicited demographic information, reproductive health knowledge and sexual behaviour. The questions in the questionnaire were first written in English and later translated into Yoruba, the language widely spoken in the study area. Translation of the questions was considered necessary because of the investigators' assumption that majority of the study participants would have limited education and would consequently not be able to discuss meaningfully in English. The questionnaire was field-tested to enhance its validity and reliability. Five young male research assistants (RA) were trained on data collection procedures and interpersonal skills. The RA conducted face-to-face interviews with each respondent inside the workshops and at times that were convenient for the respondents. The face-to-face interview was preferred over self-completed interviews because previous studies showed that even secondary school students could not read survey questions on reproductive health, resulting in high non-response rates [11]. Secondly, many apprentices have limited formal education; therefore, the majority would have been unable to read survey questions. Verbal informed consent was obtained from each apprentice by explaining that the data collected would be used for research purposes, that the data collected would be kept confidential, and that participation in the survey was voluntary. Verbal informed consent was considered sufficient because the authors assumed that the respondents were emancipated youth who could provide consent for themselves. Issues relating to importance of privacy were discussed during the training that the authors provided for the interviewers. Privacy was ensured during interviews because interviewers visited and conducted interviews in shops at times such as evening period when apprentices were less busy attending to

customers. In situations when the workshops were not conducive, interviews were conducted in a suitable nearby locations such as under a tree within the mechanic village. All the 325 apprentices found in the 146 workshops on the day of visit to each workshop who were invited to participate in the study agreed to do so.

Data analysis

Each questionnaire administered was reviewed in the field for completeness. They were later collated and numbered serially. Open-ended questions were coded by the RA and entered into a computer. The analysis performed was descriptive using the EPI-INFO software developed by the Centres for Disease Control and Prevention, Atlanta, USA.

Table 1: Demographic characteristics of male apprentices in automobile services in Ibadan (N=325)

Variable	No	%
<i>Age (in years)</i>		
13-16	67	20.7
17-20	143	44.1
21-24	115	35.2
<i>Education</i>		
Primary	129	39.8
Secondary	190	58.6
Post secondary	3	0.9
Quranic	2	0.6
<i>Religion</i>		
Christian	130	40.4
Islam	189	58.7
Traditionalist	1	0.6
Atheists	2	0.3
<i>Ethnic group</i>		
Yoruba	308	95.7
Ibo	6	1.9
Hausa	5	1.6
Efik, Ijaw	3	0.9
<i>Type of apprenticeship</i>		
Mechanic	105	32.4
Panel beaters	76	23.5
Painters	76	23.5
Blacksmiths	22	6.8
Car upholstery	22	6.8
Battery repairer	21	6.5
Vulcanisers	21	6.5

Results

Demographic profile

The profile of the respondents is shown in Table 1. Their ages ranged from 13-24 years. None of the respondents had ever been married. Secondary

education was the highest level attained by the majority (58.6%) of the respondents. There were more Muslims (58.7%) than Christians (40.4%) and a large majority (95.7%) were Yoruba. Concerning their type of vocation, the main apprentice groups were mechanics (32.4%), followed by panel beaters (32.4%) and painters (23.5%).

condom, abstinence 20.8%, and faithfulness to an uninfected partner 4.0%; 11.8% said they would be careful in selecting their partners.

Reproductive health knowledge was further analysed by assigning one point each to the correct answers in the questionnaire. This was used to

Table 2: Contraceptives known by male apprentices in automobile workshops in Ibadan, Nigeria (N=325)

	Male contraceptives*		Female contraceptives*		
	No	%	No	%	
Condom	283	87	Pills	42	17.8
Abstinence	3	0.9	Spermicides	22	9.3
Withdrawal	2	0.6	Abstinence	4	1.7
Unspecified drugs	104	32	Diaphragm	3	1.3
Salt, lime	2	0.6	Female condom	3	1.3
			Injection	4	1.7
			Traditional (rings, amulet)	3	1.3
			Concoctions	52	22
			Use of antibiotics	103	43.6

*Multiple responses are included

Reproductive health knowledge

The majority (95.1%) had heard about at least one method of pregnancy prevention. Most (52.4%) of those who knew of any contraceptive received such information from the mass media (Radio, TV, Newspaper); others (18.4%) heard about contraceptives from health workers, friends (44.3%), patent medicine attendants (6.4%) adults (4.2%), adverts on bill boards (2.1%), itinerant drug sellers (1.9%) and religious institutions (0.6%). With regards to the knowledge about STI in which multiple responses were provided, gonorrhoea was known by the majority (79.3%), followed by HIV/AIDS 256 (78.8%) and syphilis 19 (5.8%). Other perceived STI mentioned were craw-craw (15%), magun (9.2%), diabetes (2.7%) and yellow-fever (2.1%). Male condom (87%) and pills (17.8%) were the most popular male and female contraceptives known to respondents (Table 2). A majority (70%) knew that using the condom could prevent unwanted pregnancies and STIs including HIV/AIDS, 30% did not.

With respect to the period at which an adolescent girl is most likely to be pregnant if she has intercourse, 46.2% mentioned within two weeks after menstruation, 40.14% said during menstruation and 13.6% said within one week before menstruation. Concerning ways of preventing sexually transmitted infection, majority 63.4% correctly mentioned use of

construct a 19-point reproductive health knowledge score. Respondents who scored 0-5 points were categorized as having "poor" knowledge, those who obtained 6-9 points were considered as having "fair" knowledge and those with greater than 9 points were listed as having "good" knowledge. Using this classification, the majority (72%) had "fair", 15% had "poor" and 13% had "good" knowledge of reproductive health. On further analysis to ascertain significant relationship, it was observed that age influenced health knowledge ($p < 0.05$) (Table 3).

Table 3: Association between knowledge of reproductive health and age of male apprentices in automobile services

Knowledge of reproductive health	Total	Age group		
		13-16	17-20	21-24
Poor	47(15)	22 (46.8)	16(34)	9(19.1)
Fair	232(72)	38 (16.4)	111(47.8)	83(35.8)
Good	45(13)	7(15.6)	16(35.6)	22(48.8)
Total	324	67	143	114

% are in brackets

$\chi^2 = 26.6$

Df=4

$p = 0.01$

Sexual behaviour

The majority of the respondents (79%) reported that they had a female romantic friend, 21% did not. Among those with such friend 39% reportedly had one, 28% had two, 14.1% had three and 19% had more than three girlfriends. Older respondents aged 21-24 years had significantly more (45.7%) number of female friends than younger ones aged 13-16 years (13%) and those aged 17-20 years (41.3) ($p < 0.05$) (Table 4).

Table 4: Association between number of girlfriends and age of male apprentices in automobile services in Ibadan, Nigeria

Number of girlfriends	Total	Age group		
		13-16	17-20	21-24
One	100 (39)	17(17)	49(49)	34(34)
Two	74(28.9)	8(16.7)	36(48.6)	30(40.5)
Three	36(14)	6(16.7)	15(41.7)	15(41.7)
More	46(19.1)	6(13)	19(41.3)	21(45.7)
Total	256	37	119	100

% are in brackets

$\chi^2 = 34.6551$

Df=8

$p = 0.00$

About three quarters (76%) had ever had sex, 24% had not. The average age of first coitus was 16 years. Most (57.6%) of those with sexual experience had their first encounter with a girlfriend, 18.5% with a school mate, 26.7% with a neighbour, 0.8% with a prostitute, 0.4% with a relative but 5.1% did not answer the question. The majority (76%) of the sexually experienced apprentices reported that they had sex during the month preceding the survey. The frequency of sex during the period under consideration ranged from one to five times with a mean of two. Respondents in the age group 17-24 years were found to be more sexually active than the younger counterparts. The relationship between frequency of sexual intercourse and age was significant ($p < 0.05$). However, there was no significant association between the frequency of sex and type of apprenticeship ($p > 0.05$).

Sexually active respondents were asked whether or not they took any step to prevent any undesirable consequence of unprotected sex during their last encounter. More than half (57%) reportedly used a condom, 19% took antibiotics, 3% used traditional methods including charm, 1% had a pill taken by their partners, and 17% did nothing. Their

primary motive for using contraceptive was to prevent pregnancy and STIs in that order. Concerning who initiated the use of contraceptives during the last episode of sex, 84% of contraceptive users did so, 16% was initiated by the female partner.

Slightly more than half (52%) had ever visited a health facility to receive any reproductive health service. The places visited mostly by respondents were patent medicine stores (59.7%), family planning clinics (1.8%), workplaces (6.0%) and private hospital/clinics (32.7%). The reasons for their visits were to purchase contraceptives (54.1%), obtain reproductive health information (31.4%), receive treatment for STI (13.1%), terminate pregnancy for girlfriends (2.8%) and curiosity (2.2%).

Discussion

About two thirds of the survey respondents had secondary education, suggesting that the literacy level of apprentices working in the informal sector of the Nigerian economy is increasing. Similar finding has been reported by Dada and colleagues [20] in their survey of female apprentices Ikorodu, Nigeria. The reason for this is not far-fetched. In the years gone by, majority of the apprentices in the informal sector came from the ranks of those who dropped out of school or those who never attended at all. These days, majority of high school leavers find it difficult if not impossible to secure good jobs or enroll into higher institution of learning due to poor economic situation. Consequently, the apprenticeship system provides an economic option for indigent adolescents.

The Nigerian government has supported the apprenticeship scheme by providing seed grants to selected instructors for training of apprentices. Thus the apprenticeship system has been useful in transferring skills which enable young persons make contribution to the development of the Nigerian economy [21]. However, the lack of regulation in the informal sector fosters economic exploitation of apprentices. For example, apprentices are known to work for instructors for long hours but are paid little or nothing. Apprentices also provide unpaid personal services to their instructors including running personal errands and carrying out domestic chores [15].

It is encouraging that virtually all survey respondents were aware of at least one modern method of contraception, the most popular being the condom. The mass media was the primary source of contraceptive information. The media have played important role in reproductive health education because most homes in Nigeria have access to at least one media. For example, one estimate shows

that 62% of rural and 85% of urban households have radio and that the majority of people living in rural medically underserved communities depend on the radio as their main source of health information [22]. However, the mass media have their own limitations as source of reproductive health information. For example, health information from the media may be misleading, incomplete or completely false. High level of illiteracy and poverty among rural dwellers make use of newspapers inappropriate for this population because the current cost of newspapers is exorbitant by local standard. Operation of TV requires electricity, which is a scarce resource in many rural communities.

Older respondents had significantly higher knowledge of reproductive health than younger ones. This is not surprising given the fact that being older gives an individual greater opportunity of exposure to reproductive health information. The acquisition of knowledge is usually the first stage in the process of changes in behaviour. However, knowledge alone is often not sufficient in itself to produce change in sexual behaviour in most people.

Only about half of the respondents have visited a health facility to receive reproductive health services. This is a reflection of the challenges that males face in accessing reproductive health services. Males are more disadvantaged than females with respect to access to reproductive health services. Most females start seeing a health worker for routine reproductive health care services once they become sexually active, and those who become pregnant are linked to the health system through ante-natal, delivery and post-natal services. Men do not have a similar routine channel for obtaining sexual and reproductive health services [23]. Another structural barrier is the fact that the male apprentices are economically dependant on parents and as such may not be able to pay for reproductive health services.

Despite high levels of information about the role of condoms in preventing undesirable consequence of unprotected sex, only 57% of the sexually active respondents used a condom during their last episode of sex. More older than younger respondents reported high number of girlfriends. When this information is interpreted in the context of inconsistent use of condoms, then it raises serious concern about risk of undesirable consequences of unsafe sex with multiple partners including STI and unwanted pregnancies. Although these findings are discouraging, they are not entirely new. Research indicates that the out-of-school youth are generally more sexually active and participate more frequently in risky sexual behaviours than students [24-25]. This

behaviour elevates their risk of infection with STI including HIV which may be transmitted to their partners. Two possible explanations may be offered for this behaviour. First, in Nigeria boys are generally socialized to be sexually aggressive, perceiving sex with many girls as a form of conquest. Boys are typically known to boast about their sexual escapade and may pretend to be sexually experienced in order to gain acceptance among their peers. On the other hand, girls are expected to be naïve. Secondly, more boys than girls are known to use psychoactive substances such as alcohol and tobacco which impair their judgment of risky situations [12]. This attitude may negatively affect the reproductive health of boys in that it encourages them to be involved in risky sexual practices.

Implications for health promotion and education

The results of this study have provided the foundation for developing appropriate interventions to address the reproductive health needs of young male apprentices working in the informal sector. The antecedents factors in the PRECEDE model developed by Green and colleagues [26] may be used to explain the reproductive behaviour of the apprentices. The high level of knowledge about type of contraceptives and the role of condom in disease prevention is a predisposing factor and this is found to be adequate. However, many apprentices with adequate knowledge had not translated this into action because of lack of enabling resources including lack of skills to correctly use a condom or lack of skills to convince a partner to use one. This may be an important barrier given the fact that there are deep-seated negative beliefs about condom use in Nigeria. The influence of other peers involved in risky sexual activities is a reinforcing factor and may have contributed to the persistence of risky activities in this population.

We recommend the following interventions to address the lag between knowledge and practice in this population. Interventions on the mass media that inform young people about reproductive health should be intensified since this is the primary source of respondent's information in this study. Relevant messages can be successfully integrated into popular programs on radio and TV reaching young persons. However, this must be supplemented by other interpersonal approaches such as peer education which have been found to be effective in promoting use of voluntary counselling and testing services for HIV among out of school youths in Nigeria [27]. Peer involvement places the responsibility for reproductive

health education in the hands of young persons themselves. Trained peer educators can distribute condoms and create a social environment that favours full utilization of this product. There is also need to develop educational materials with messages written in Yoruba. This can also be used by peer educators to reinforce messages. The use of professionalized out-reach counsellors recruited from the apprenticeship may help assure the quality of prevention activities and increase accountability. Under this arrangement, each vocation would select a representative who will be trained and paid on a full or part-time basis. In our experience, reliance on volunteer peer educators alone would not achieve the necessary intensity or quality of prevention efforts nor sustain it in the long run [15]. Finally, the instructors also require interventions. A training workshop would be helpful for this group to sensitize them to the vulnerability of male apprentices to reproductive health problems. They also need education to enable them reinforce the information disseminated by the peers.

Conclusion

The reproductive health needs of male apprentices have not received adequate attention from researchers hitherto. This survey of male apprentices working in automobile repair workshops has confirmed that many in this group practice risky sexual activities despite adequate knowledge about the dangers of unprotected sex. Innovative interventions including use of peer education, development of appropriate educational materials and sensitization training for instructors are likely to have positive impact in reducing the risk of exposure to the undesirable consequences of unprotected sex among male apprentices working in the informal sector of the Nigerian economy.

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