

Knowledge of Contraceptive Use among Secondary School Adolescents in Uvwie L.G.A of Delta State

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Authors' contributions

The authors designed, analysed and interpreted and prepared the manuscript.

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ABSTRACT

Promotion of family planning aims to help female adolescents and youths maintain a strategic distance from undesirable pregnancy. It is imperative to the World Health Organization (WHO) in dealing with the improvement in maternal health and is central to accomplishing the sustainable development goal. This study was carried out to assess the knowledge of contraception among adolescents in Uvwie L.G.A of Delta State, Nigeria. Three hundred secondary school adolescents (12-18) were selected using the multi-stage sampling technique. A semi-structured questionnaire was administered to 300 students and Chi-square was used to determine the association between identified factors and contraceptive use in the study population at a 95% confidence interval and p-value of 0.05 was considered statistically significant. The study showed that more than 50% (208) of the research participants have an existing knowledge of contraceptives, 133(63.9%) of them got the information from their friends/peers. One hundred and thirty six (45.33%) of the respondents were reported to be sexually active. However, most of them said contraceptives were used for preventing Pregnancy and STI's. The study showed that their knowledge about contraception was relatively poor. Teaching on Health care, Health Education and Reproductive health should be improved.

Keywords: Knowledge; contraceptives and adolescents.

1. INTRODUCTION

Contraception is a method adopted in the prevention of pregnancy, it is also known as birth control or fertility control [1]. Contraceptives are used to achieve pregnancy prevention and birth control globally [1]. The use of contraceptives in developed countries, Europe and USA have contributed to a reduced maternal mortality and morbidity among women of reproductive age [2]. However, contraceptive use among women in developing countries is contrastingly poor in comparison to developed countries [3]. The relatively low use of contraceptives and contraception observed in middle and low income countries in Sub-Saharan Africa and Asia have been shown to contribute to the high rates of maternal mortality and morbidity in these regions [4]. It is estimated that approximately 16 million adolescents aged 15 to 19 become pregnant each year, constituting 11% of all births worldwide [5]. Complications during pregnancy and childbirth are consistently the second cause of death for girls aged 15 to 19 years old [5]. Young girls who become pregnant are at high risk of abridged education [6], and thus limited economic prospects [5,7]. About 222 million women who want to avoid pregnancy in developing countries are not using a modern birth control method [8]. Birth control use in developing countries has decreased the number of deaths during or around the time of pregnancy by 40% and could prevent 70% if the full demand for birth control were met [9]. Available birth data shows great differences in the rates and prevalence of pregnancy between regions and countries [5]. Factors such as age, social economic status, religious, believes and social exposures have been reported to influence contraceptive use positively or negatively [10].

The average rate of teenage births ranges from the highest in Sub-Saharan Africa (143 per 1000 adolescent females), followed by the Americas (68), the Middle East and North Africa (56), and East and South Asia and the Pacific (56), to the lowest rates in Europe (25) [5]. Babies of teen mothers are 50% more likely to be stillborn, die early, or develop acute and long-term health problems [5]. In developing countries, maternal mortality is high, with 440 deaths per 100,000 live births, with the figure reaching as high as 920 in sub-Saharan Africa [5]. This study was carried out to investigate existing knowledge and perception of contraception among adolescents

with respect to their sexual behaviour, in order to evaluate their understanding of sexuality, contraception and factors influencing the use of contraceptives in Uvwie L.G.A of Delta State, Nigeria.

2. METHODOLOGY

2.1 Study Area

The study was conducted in public and private secondary schools located in Uvwie L.G.A of Delta state. Uvwie L.G.A is located in the area roughly between longitudes 5.40' and 5.50' East of Latitudes 5.30 and 5.50 North. Uvwie local government area is one of the twenty-five LGAs situated in Delta state, South-south geopolitical zone of Nigeria. The headquarters of the LGA are in the town of Effurun and the LGA shares borders with Okpe, Udu, Ughievwen, Okere, and Itsekiri. Uvwie LGA is made up of a number of towns and villages which include Effurun, Ekpan, Ugbokodo, Jeddo, Ughoton, Opete, Enerhen, Ugbomoro, Ugbolokposo, Okwetata, Okpaka, Okwuamowah, Okuireroh, and Ugboroke. It is an urban settlement with an estimated population of 279,408 inhabitants with the area primarily occupied by members of the Uvwie sub-division of the Urhobo ethnic group. The Uvwie dialect of the Urhobo language is commonly spoken in the LGA while the religion of Christianity is extensively practiced in the area. The Ovie of Effurun is one of the traditional rulers found in Uvwie LGA while the notable landmarks in the area include the Federal University of Petroleum Resources and the Petroleum Training Institute in Effurun. Uvwie LGA has a vibrant trade sector and hosts a number of markets such as the Uvwie Modern market and the Effurun main market where a variety of commodities are bought and sold. The LGA is also blessed with abundant deposits of Crude oil and natural gas with the activities of oil mining and refining firms in the area contributing immensely to the economy of the area. Other important economic activities undertaken by the people of Uvwie LGA include fishing, farming, and wood carving. There are 8 school districts consisting of 148 secondary schools in Uvwie local government area. It is a gateway town in and out of the city of Warri; also it is a border town to Osubi Airport in Osubi. There is a scarcity of important information on the determinants and prevalence of contraceptive utilisation among teenagers in Delta state

Nigeria. Knowledge of these factors will help identify the challenges to contraceptive use and contribute to the improvement of the health outlook of adolescents and young women.

2.2 Study Population

The study population consisted of 3,750 male and female adolescents between 10-19 years in secondary schools, located in Uvwie Local Government Area of Delta state.

2.3 Study Design

Descriptive cross-sectional study design was adopted for this study to assess the perception, knowledge and factors associated with the use of contraceptive among the adolescents.

2.4 Sample Size Determinant

The WHO's proportion formula for sample size determination $n = (Z^2pq)/d^2$ in health studies as stated by (Kasiulevičius et al., 2006),

Where n = the minimum sample size.
 Z = standard normal deviation, usually set at 1.96 corresponding to 95% confidence interval
 d = degree of accuracy desired (usually set at 0.05).
 p = proportion of sexually active unmarried youths as previously reported by Ahmed et al., (2016) = 77% (0.77)
 $q = 1 - p$
 $n = (1.96)^2 \times (0.77 \times (1-0.77)) / 0.05^2$
 $= (1.96)^2 \times 0.23 / 0.0025$
 $= 0.6803 / 0.0025$
 $= 272.13 \sim 272$

A non-response rate of 10% (27) was added to the estimated sample size to give a total sample of $272 + 27 = 299$. The sample was subsequently rounded off to the nearest hundred making the sample size 300

2.5 Sampling Method

A multi-stage sampling method was used to select a sample of (300) participants for the study. At the first stage, a simple random sampling was used to select (13) secondary schools. There were eight (8) school districts in the local government area indicated with alphabets (A-H) based on the comprehensive data that was collected from the ministry of education containing all the secondary schools in the L.G.A of interest. Each of the selected

schools were used as a stratum taking the populations of SS1 – SS3 from each selected schools.

Second stage: The total population of each individual stratum was identified via the list of all the students in secondary classes from each secondary school identified to obtain a sampling fraction for proportionate allocation of the sample size using the formula for proportionate allocation.

Final stage: A sample of 300 were purposively selected from the study population of 3750 which was obtained from the class register of the schools sampled, and the sampling ratio was $(300/3750 = 0.08)$. From the ratio calculated, students were selected at random from the sample size of each of the schools until the required number was achieved.

2.4 Ethical Consideration

Ethical approval to conduct the study was obtained from the Ethics committee of the University of Port Harcourt. Signed informed consent forms were also obtained from prospective study participant before they were included in the study. All personal information collected during the study were kept confidential and findings of the study was strictly used for academic purposes only.

2.6 Data Collection

Three hundred (300) questionnaires were administered to 300 respondents and all 300 questionnaires were retrieved.

2.7 Data Analysis

The data was collected, analysed and presented in tables and figures, continuous variables are presented as mean and standard deviation, while discrete variables were presented with frequencies and percentages. The chi-square statistic was used to assess the relationship between perception, identified factors and contraceptive use. Data analysis was done with the SPSS v20 software package at a 95% confidence interval and a p-value less than 0.05 was considered statistically significant.

3. RESULTS

Table 1 contains the sociodemographic data of the respondents. There were 135 (45.0%) male

respondents and 165 (55.0%) female respondents. The mean age of the respondents was 16.3±1.4 years, of the 300 respondents, 85 (28.33%) were between 10 – 15 years old, 215 (71.67%) were between 16 – 19 years old. Three (1%) of the respondents were Muslims, while 297 (99.0%) were Christians.

Table 1. Sociodemographic information of respondents

	Frequency (n = 300)	Percent (%)
Age Group		
10 – 15	85	28.33
16 – 19	215	71.67
Mean Age (± SD)	16.3±1.4 years	
Gender		
Male	135	45.00
Female	165	55.00
Religion		
Christian	297	99.00
Muslim	3	1.00

Table 2. Source of information of contraceptives

Source of information	Frequency	Percent (%)
Friends/Peers	133	63.9
Health facility	2	1.0
Television	23	11.1
Radio	2	1.0
Internet	11	5.3
Family member/ Partner	13	6.3
Poster/ Banner	5	2.4
School	19	9.1
Total	208	100

Of the 208 respondents who had knowledge of contraceptives, 133 (63.9%) of them got information of contraceptives from their friends/peers, 23 (11.1%) got the information from television, 2 (1.0%) learnt about it from the radio, 11 (5.3%) got the information through the internet, 19 (9.1%) of the respondents were taught about it at school while 2 (1.0%) got information of contraceptives at health facility (see Table 2).

Table 3 shows the knowledge of contraceptives of the male and female respondents. Among the male respondents, 92 (68.15 %) had knowledge of contraceptives and 43 (31.45%) did not have knowledge of contraceptives. Among the female respondents, 116 (70.30%) had knowledge of

contraceptives while 49 (29.70%) did not have knowledge of contraceptives. No significant difference was observed in the knowledge of contraceptives between both male and female respondents ($\chi^2 = 0.16$; $p = 0.6871$).

Table 4 shows the uses of contraceptives as shown by both the male and the female respondents. Generally, 95 (45.67%) of the participants shown that contraceptives were utilised to prevent pregnancy, 89 (42.79%) indicated that contraceptives were utilised to prevent pregnancy and STI's, while 24 (11.54%) indicated that contraceptives were utilised to prevent STI's.

Among the male respondents, 17 (18.48%) indicated that contraceptives were utilised to prevent sexually transmitted infections (STI's) only, 33 (35.87%) showed that contraceptives were utilised to prevent pregnancy, while 42 (45.65%) indicated that contraceptives were utilised to prevent pregnancy and STI's. Among the female respondents, 7 (6.03%) indicate that contraceptives were utilised to prevent STI, 47 (40.52%) indicated that contraceptives were used to prevent pregnancy and STI's while 62 (53.45%) indicated that contraceptives were utilised to prevent pregnancy. The difference in the knowledge of contraceptives utilisation between both genders was significant ($\chi^2 = 10.67$; $p = 0.0048$).

Table 5 shows that among respondents between 10 – 15 years, 41 (48.24%) indicated that contraceptives were used to prevent pregnancy, 23 (27.06%) indicated contraceptives were used to prevent STI's and 21 (24.71%) was used to prevent pregnancy and STI's. Respondents between 16 – 19 years responded accordingly on the uses of contraceptives; 68 (55.28%) indicated prevention of pregnancy and STI's, 52 (42.27%) indicated prevention of pregnancy and 3 (2.43%) indicated to prevent STI's. The responses between both groups on the use of contraceptives was significant ($\chi^2 = 35.76$; $p < 0.0001$).

Responses on who contraceptives are meant for by the respondents between 10 – 15 years include; 15(17.65%) indicating males only, 18 (21.18%) indicating females only and 52 (61.18%) indicating males and females. Among the respondents between 16 – 19 years, 8 (6.50%) indicated females only, 9 (7.31%) indicated males only and 106 (86.19%) indicated

male and females alike. The difference in the knowledge on who contraceptives are meant for between the different age groups was significant ($\chi^2 = 35.76$; $p < 0.0001$).

Among the respondents, 208 (69.33%) shown that they had knowledge of what contraceptives are, while 92 (30.67%) shown that they had no knowledge of contraceptives as shown in Fig. 1.

Table 3. Knowledge of contraceptives by gender

Knowledge of contraceptive use	Male	Female	Chi-Square (p-value)
Yes	92 (68.15)	116 (70.30)	$\chi^2 = 0.16$ (0.6871)**
No	43 (31.45)	49 (29.70)	
Total	135 (100.0)	165 (100.0)	

**Differences observed are not statistically significant ($p < 0.05$)

Table 4. Uses of contraceptives according to respondents by gender

What contraceptives are used for	Male (n=92)	Female (n=116)	Chi-square (p-value)
To Prevent pregnancy	33 (35.87)	62 (53.45)	$\chi^2 = 10.67$ (0.0048)*
To prevent pregnancy and STI	42 (45.65)	47 (40.52)	
To prevent STI	17 (18.48)	7 (6.03)	
Who contraceptives are used for	Male	Female	Chi-square (p-value)
Male	14 (15.22)	10 (8.62)	$\chi^2 = 2.93$ (0.2311)**
Female	9 (9.78)	17 (14.66)	
Male and Female	69 (75.00)	89 (76.72)	

*Differences observed are statistically significant ($p < 0.05$)

**Differences observed are not statistically significant ($p < 0.05$)

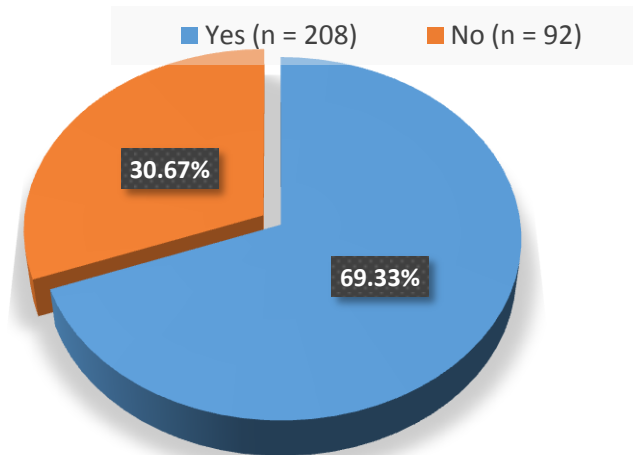


Fig. 1. Knowledge of contraceptives in respondents

Table 5. Uses of contraceptives according to respondents by age group

What contraceptives are used for	Age Group (years)		Chi-square (p-value)
	10 – 15 (n =85)	16 – 19 (n = 123)	
To Prevent pregnancy	41 (48.24)	52 (42.27)	$\chi^2 = 35.76$ (0.0001)
To prevent pregnancy and STI	21 (24.71)	68 (55.28)	
To prevent STI	23 (27.06)	3 (2.43)	
Who contraceptives are used for			Chi-square (p-value)
Male	15 (17.65)	9 (7.31)	$\chi^2 = 17.44$ (0.0002)
Female	18 (21.18)	8 (6.50)	
Male and Female	52 (61.18)	106 (86.18)	

*Differences observed are statistically significant ($p < 0.05$)

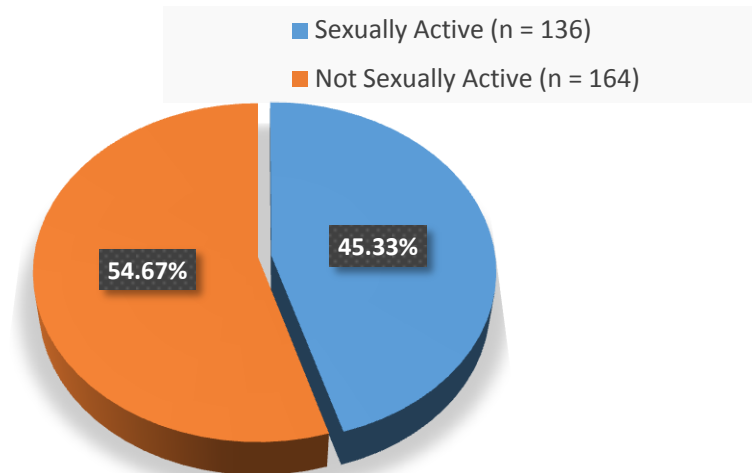


Fig. 2. Sexually active adolescents

Of the 300 adolescents, 136 (45.33%) were sexually active and 164 (54.67%) were not sexually active as shown in Fig. 2.

4. DISCUSSION

The study showed that more than half (69.33%) of the adolescents had knowledge of what contraceptives were and their uses. The result showed that (68.15%) of male and (70.30%) female respondents alike had knowledge of contraceptives and their uses. This is consistent with the findings of Nwankwo et al. [11] which reported that a high proportion (>60%) of adolescents in secondary schools had knowledge of contraceptives and their uses. Najafi et al. [10] also reported a high proportion of adolescents had good knowledge of contraceptive use in high school in India. This may be attributed to the ease of accessing information as seen in the current century where information is readily available especially through social media interaction and with the increasing ease of access to internet facilities, knowledge on particular things or events are easier [12]. A study by Kothe et al. [13] reports that the knowledge of contraceptives among adolescents maybe attributed to their intention to become sexually active. The desire to become sexually active may influence the need to use contraception to prevent consequences (such as pregnancy) of been sexually active [14]. However, knowledge of contraceptives among adolescents reported in studies carried out in other parts of the country were relatively lower ranging from 40 – 55% [18-20]. The observed difference may be attributed to the differences in locale and the peculiarities which are different in urban and rural areas [11]. The knowledge of

contraceptives between urban, semi-urban and rural areas have been reported to be greatly different and declines from urban to rural locales [10].

Although a high proportion of the adolescents knew what contraceptives were, only 45.67% knew that contraceptives are used mainly for preventing pregnancy, while 42.79% showed that contraceptives were used for prevention of pregnancy and sexually transmitted infections. This is similar to the findings of Olubayo-Fatiregun [15] which reported that at least 30% of adolescents have no idea what contraceptives are and its uses. It has been reported that knowledge of contraceptives and contraception among adolescents in developing countries of the world is proportionately low compared to adolescents in developed countries of the world [3,16,21]. The knowledge of contraceptives observed among adolescents in developed countries due to better standards of healthcare and health education obtainable in these countries which is in stark contrast in comparison with the level of socio-community health education in Sub-Saharan African settings [8,17]. Though most of the adolescents indicated that contraceptives are meant by male and females alike, 53.45% of the female respondents showed that contraceptives were used for preventing pregnancy in contrast to less than half of the male respondents which gave similar responses on the use of contraceptives. While a significant proportion of the respondents 42.79 % indicated that contraceptives were used for the prevention of pregnancy and sexually transmitted infections. This may be attributed to the fact that the most common and easily accessible form of contraception among adolescents in developing

countries is the condom, especially the male condom [8,11,16].

The finding of this study showed that most of the respondents (63.9%) got information on contraceptives from their peers with only 1.0% (2/208) getting information from health institutions. This is in contrast with studies in the U.S reporting that at least 40% of adolescent get information on contraceptive use from health institutions, however, more than 50% of them also rely on their peers for information on contraceptive use [3,8]. Generally, adolescents tend to trust their peers to help them out in so called "grey areas" in the use of contraceptives due to fear of rebuke from their parents or health workers in health institutions which is a common occurrence in countries like Nigeria [10,19].

5. CONCLUSION

It was observed that more than half of the adolescents interviewed had a knowledge of what contraceptives were and their uses. However, few of the respondents showed that contraceptives are mainly for prevention of pregnancy, while others thought contraceptives could be used for preventing pregnancy and STI and this is an indication of a poor knowledge on what contraceptives are used for. There is need for improvement on adolescent health education and reproductive health.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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