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Trends in contraceptive use among female adolescents in Nigeria: Evidence from the Nigeria Demographic and Health Survey

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Audu Alayande[1], Danimoh A Mustapha[2], Islamiyat A Nuhu[3], Gregory C Umeh[4], Tijani J Maji[5]

Maternal Health Cluster, United Nations Population Fund, United Nations House, Plot 617/618, Diplomatic Drive, Abuja, Nigeria[1]; Department of Community Medicine, College of Medical Sciences, Gombe State University, Gombe, Nigeria[2]; College of Health Sciences, Igbinedon University Okada, Benin City, Nigeria[3]; World Health Organisation, Kaduna, Nigeria[4]; Maternal New Born, and Child Health (MNCH2), Programme, Kano - Nigeria[5]

***For Correspondence:** Email: *alayande@unfpa.org*

Abstract

Available evidence indicates that only 2.1 percent and 1.2 percent of married (or in union) adolescents in Nigeria are using any method and modern method of contraceptives respectively. This has contributed to the estimated 1.2 million induced abortions done annually of which 60 percent were unsafe. The study examined data from the 2013 and 2018 Nigeria Demographic and Health Survey for trend on the knowledge and use of contraceptives by all women, currently married and sexually active unmarried women aged 15-19 years in between surveys. There was an increase of 144% ($p<0.05$) in Family Planning (FP) discussion during health facility visit, 50% increase in FP utilization rate ($p<0.05$), 97% increase in FP demand satisfied by modern methods ($p<0.05$) and 7% reduction in total unmet need ($p>0.05$) among currently married women 15-19 years. It also showed a 50% ($p<0.05$) and 86% ($p<0.05$) reduction in the current use of contraceptives and unmet need among sexually active unmarried women 15-19 years, respectively. None of the adolescents adopted Long-acting methods (LAM), Intrauterine device (IUD), and female sterilization contraceptive methods. We recommend an inclusive and youth-friendly, client-centered contraceptive services and information for adolescents notwithstanding their marital status. *(Afr J Reprod Health 2021; 25[5]: 61-68).*

Keywords: Contraceptives, adolescents, sexual reproductive health, Nigeria

Résumé

Selon les données disponibles, seulement 2,1 % et 1,2 % des adolescents mariés (ou unis) au Nigéria utilisent toutes les méthodes et méthodes modernes de contraceptifs respectivement. Cela a contribué à l'estimation de 1,2 million d'avortements induits chaque année, dont 60 pour cent étaient dangereux. L'étude a examiné les données de l'Enquête démographique et santé nigériane 2013 et 2018 sur les tendances relatives aux connaissances et à l'utilisation des contraceptifs par toutes les femmes, qui sont mariées et sexuellement actives entre 15 et 19 ans. Il y a eu une augmentation de 144 % ($p<0,05$) des discussions sur la planification familiale (PF) lors de la visite des établissements de santé, une augmentation de 50 % du taux d'utilisation de la PF ($p<0,05$), une augmentation de 97 % de la demande de PF satisfaite par les méthodes modernes ($p< 0,05$) et une réduction de 7 % du besoin total non satisfait ($p> 0,05$) chez les femmes actuellement mariées de 15 à 19 ans. On constate également une réduction de 50 % ($p<0,05$) et de 86 % ($p<0,05$) de l'utilisation actuelle de contraceptifs et des besoins non satisfaits chez les femmes célibataires sexuellement actives de 15 à 19 ans, respectivement. Aucun des adolescents n'a adopté des méthodes d'action longue (MLD), dispositifs intra-utérines (DIU) et des méthodes contraceptives de stérilisation féminine. Nous recommandons un service de contraception et d'information à l'intention des adolescents, axé sur les jeunes, et ce, malgré leur état matrimonial. *(Afr J Reprod Health 2021; 25[5]: 61-68).*

Mots-clés: Contraceptifs, adolescents, santé sexuelle en matière de reproduction, Nigéria

Introduction

Adolescents are those in the age group 10-19 years, which constitute 22 percent of Nigeria's population[1]. Although there are vast differences in their sociodemographic characteristics. They are classified into early (10-14 years) and late (15-19years) adolescents. While there is a shortage of data on early adolescents, most surveys capture data on late adolescents[2-4]. The Sexual and Reproductive Health and Rights (SRHR) challenges amongst adolescents are known and documented in various global, regional, and national conventions, protocols, charter, and strategic plans[5-9]. These include child marriage, early sexual debut, unplanned pregnancy, unsafe abortion, maternal

morbidity and mortality, Sexually Transmitted Infections, and Human Immunodeficiency Virus (STI/HIV) and gender-based violence. All these are driven by inequality, poor education, poverty, and other socio-cultural factors[6]. The 1994 International Conference on Population and Development Programme of Action (ICPD PoA) in line with other conventions agreed to ensure SRHR for all and provide the information and services, including family planning for its fulfilment[5,6,9]. Still, recent evidence has indicated that adolescents only constitute 3.6 percent of family planning (FP) clients in Kaduna, Nigeria[16]. Also, only 2.1 percent and 1.2 percent of married (or in a union) adolescent in Nigeria are using any method and modern method of family planning, respectively[10]. This trend would have contributed to the estimated 1.8 to 2.7 million abortions that occur annually in Nigeria[11] and the 1.2 million induced abortions committed annually of which 60 percent are unsafe[12].

Inadequate access to reproductive health Information Education and Communication (IEC) materials and services has been the bane of the knowledge gap seen among adolescents[13]. Although this may be changing with the advent of social media, presently, the level of knowledge is moderate (>50%)[13]. The 2013 Nigeria Demographic and Health Survey (NDHS) reported that only 67.0 percent of currently married adolescents have heard of any method of contraceptive. This is higher in the urban area, amongst those with more than secondary school education and in the highest wealth quintile[2]. A reversal of knowledge was observed between two DHS in Ghana (2003 – 2008) in which adolescents not currently using any modern methods but knew any source of such methods dropped from 41.0 percent to 0.0 percent[14].

Although, globally, there has been a rapid improvement in the use of family planning methods among adolescents in the last two decades, with a median change rate of about 5 percent annually[15]. The modern Contraceptive Prevalence Rate (CPR) among this age group is still low in Nigeria (7.8%) and some Africa countries like Ethiopia (24.1%), and Burkina Faso (11.2%)[16,17]. Comparison between surveys showed the CPR has remained unchanged among sexually active adolescents in Burkina Faso (11% between 2003 and 2010) and Nigeria (8% between 2008 and 2013)[16]. There was, however, only a 3 percent point increase reported among 19-year-old Egyptians between 1992 and 2005[15]. Recent evidence from available surveys shows that the upward trend in some countries like Kenya, Tanzania, and Uganda have stagnated or even reversed[15].

Nevertheless, the current use of contraceptives is higher among sexually active, unmarried adolescents than among married youth, with a difference of 22% in Kazakhstan and 41% in Nigeria[15,16]. Another report indicated an increase of 7.8 times, 2.3 times, and 43.7 times among those unmarried compared to those in a union in Burkina Faso, Ethiopia, and Nigeria, respectively[16,17]. A comparison of the 2003 – 2008 DHS in Ghana showed an increase in ever use of contraceptives of 14.5 percent among sexually active adolescents[14]. Although, the general trend in developing countries indicated a shift from traditional methods towards modern methods[15]. However, in Ghana, the use of modern methods increased by 5.5 percent and that of traditional methods by increased by 59.6 percent between surveys[14]. Also, the current use of any method increased by 8.0 percent; any modern method increased by 2.6 percent, and any traditional method increased by 7.8 percent points[14]. An increase of 3.2 percent (from 7.0% in 2003 to 10.2 % in 2011) in the use of modern FP method with an average annual increase of 0.4% was also reported from Southwest and Northwest Nigeria[18].

The WHO Medical Eligibility Criteria (MEC) had assured of the general safety of all methods of contraceptive use for adolescents [19]. Therefore, the goal of the provision of contraceptive service for all as a component of the Sustainable Development Goal 5 target seven on universal access to SRH[20]. must be pursued diligently. In line with the above, Nigeria has endorsed several conventions, protocols, and policies at the global, continental and national levels[5,8] to improve access and utilization of reproductive health services by adolescents including teachings on Family Life and HIV Education (FLHE)[5,8,21]. There are also several ongoing demand generation interventions in the media, including behavioral change communications materials and the orientation of duty bearers to provide adolescent-friendly services to all.

This study, therefore, examined the two most current national data from the Nigeria DHS on the knowledge and use of family planning services by sexually active adolescents for five years. This provides evidence on trends in access to FP information, service demand and utilization by all adolescents to guide improved programming for the attainment of universal access to SRHR by 2030.

Methods

Permission to use the data for secondary analysis was sought and obtained from the National population commission. The study is based on secondary data from the 2013 and 2018 Nigeria DHS. These are standard population surveys conducted every 5-years using a closed-ended semi-structured questionnaire. The sample selection was in two stages using the 2006 population census enumeration areas (EAs). In the first stage, 1,400 EAs were selected with probability proportional to EA size. The EA size was the number of households residing in the EA. A household listing operation was carried out in all selected EAs, and the resulting lists of households served as a sampling frame for the selection of households in the second stage. In the second stage's selection, a fixed number of 30 households were randomly selected in every cluster through equal probability systematic sampling, resulting in a total sample size of approximately 42,000 households. In the survey, only the pre-selected households' respondents were interviewed by the research assistants. To prevent bias, no replacements and no changes in the pre-selected households were allowed in the implementing stages[3].

The eligible respondents for these surveys included women aged 15–49 years. Individual respondents were selected within households in various enumeration areas across the country. Questionnaires were pretested and administered by trained interviewers under the supervision of experienced researchers. A total of 38,948 (97.6% response rate) eligible women 15-49 were interviewed in 2013 and 41,821 (99.3% response rate) were interviewed in 2018.

This study reviewed responses from adolescents age 15-19 years. There were 7,820 of them in 2013 and 8,448 in 2018, constituting 20.1% and 20.2% of the total eligible women age 15-49 years, respectively. Data were extracted on the knowledge and use of contraceptives by all women, currently married or unmarried and sexually active women[5]. The data analysis was done using SPSS version 20. A chi-square test was used to test the significance of the relationship between selected demographic variables and the use of modern contraceptives.

Results

The study covered 7,820 and 8,448 adolescents 15-19 years in 2013 and 2018, respectively. Forty-two percent in 2013 and 45.8% in 2018 of the adolescents in both surveys were from rural areas and had up to secondary school education (44.9% in 2013, 50.7% in 2018). They were all sexually active, of which 2,251 (28.9%) and 1,927 (22.8%) were currently married in 2013 and 2018, respectively. There was a significant increase (144%) between surveys in the number of adolescents that discussed Family Planning (FP) during their visits to a health facility. The reverse was the case for exposure to FP messages in the electronic / print media and during a home visit by health workers. The lack of data in the 2013 survey on FP messages through the phone did not allow for a comparison of trend on this medium.

There was a significant decrease of more than 50% in the current use of contraception by all women and sexually active unmarried women age 15-19 years. Conversely, there was a more than 50% increase in the use of modern contraceptives by currently married women. There was significant decrease in the unmet need for child spacing among currently married and sexually active unmarried women by 7 percent and 86 percent respectively. The FP demand satisfaction increased by 97 percent among currently married women but decreased by 54 percent among sexually active unmarried women. These differences were statistically significant. An increase was observed in the use of most FP methods by sexually active unmarried women, except for the male condom and traditional methods. No client adopted the female sterilization method, while IUD and LAM were not adopted by all sexually active unmarried women.

Table 1: Awareness and intention to use contraceptive methods by women age 15 – 19 years in Nigeria

Indicator	Category	Percentage % (n) 2013 NDHS (n=7820)	2018 NDHS (n=8448	Point Difference	Increase/ decrease	Chi square Statistics	P value
Correct knowledge of the fertile period	All women	ND	15.1(1276)	-	-	-	-
Exposure to family planning messages	Radio	24.0 (1877)	19.9 (1681)	-4.1	-17.0	40.03	0.00001
	Television	12.6 (985)	11.3(955)	-1.3	-10.3	6.45	0.011104
	Newspaper / magazine	4.0 (313)	2.2(186)	-1.8	-45.0	44.30	0.00001
	Mobile phone	ND	1.7(144)	-	-	-	-
Contact of nonusers with family planning providers	% of women who were visited by fieldworker who discussed FP	2.2 (161)	1.0(82)	-1.2	-54.5	32.68	0.00001
	% of women who visited a health facility in the past 12 months and who discussed FP	1.6(117)	3.9 (320)	2.3	143.8	81.59	0.00001

Note: all indicators and terms are as defined in the 2018 NDHS. ND = No data
Significant level at $p<0.05$

Discussion

We found a significant increase in the knowledge and use of family planning services among sexually active adolescents over five years in Nigeria. The study showed an increase of 144% in FP discussion during health facility visit, 54% in FP utilization rate, 97% in demand satisfaction rate and a 7% reduction in unmet need among currently married women 15-19 years in between the 2013 and 2018 surveys. The report also showed a 54% and 86% reduction in the current use of contraceptives and total unmet need among sexually active unmarried women 15-19 years, respectively. The improvements result from an improved value orientation and commitment of health workers to provide contraceptive counselling and services to adolescents[22]. Nevertheless, systemic and socio-cultural challenges of access to contraceptives by unmarried adolescents still abound in some communities, especially for long-acting methods[16,22]. This situation is contrary to the rights and obligations of the State to provide access to youth-friendly contraceptive services and comprehensive programme to prevent unsafe abortion as enshrined in article 16 of the African Youth Charter[9]. More has to be done to ensure that all women, irrespective of marital status, have access to the information, education, and means to enable them to decide freely and responsibly on the number and spacing of their children to reduce maternal and child morbidity and mortality[5,6].

At the ICPD conference in 1994, nations agreed to ensure universal access to SRH information and services[5]. Twenty-five years down the road, the percentage of women 15-19 years who visited a health facility in the past 12 months and discussed FP increased by 144% in between the surveys, as indicated in Table 1. This corroborates previous reports of the improved willingness of health workers to provide contraceptive counselling and services to adolescents, notwithstanding their marital status[22]. This situation was not the case with their exposure to FP messages in the media and during a home visit by health workers, which all decreased by more than 10 percent. These findings indicate inadequate access to various information, education and communication materials in the media, including during home visits among adolescents, as documented in another study[13]. A higher reduction in FP knowledge in-between surveys was reported from Ghana[14]. The negative trend of FP knowledge, which may translate into poor utilization, may debar Nigeria from meeting its

Table 2: Use of contraceptives methods by women age 15 – 19 years in Nigeria

Indicator	Category	Percentage % (n) 2013 NDHS (n=7820)	2018 NDHS (n=8448)	Point Difference	Increase/ decrease	Chi square Statistics	P value
Current use of contraceptives by all women	Any contraceptive	6.1(477)	2.9 (245)	-3.2	-52.4	98.03	0.00001
	Any modern contraceptive	4.8 (375)	2.4 (203)	-2.4	-50.0	67.83	0.00001
	Any traditional contraceptive	1.3 (102)	0.6 (51)	-0.7	-52.4	21.40	0.00001
Current use of contraceptives by currently married women	Any contraceptive	2.1 (47)	3.2 (62)	1.1	53.8	1.08	0.299288
	Any modern contraceptive	1.2 (27)	2.3 (44)	1.1	91.7	2.88	0.89655
	Any traditional contraceptive	1.0 (23)	0.9 (17)	-0.1	-10	1.43	0.232012
Current use of contraceptives by sexually active unmarried women	Any contraceptive	61.1 (222)	28.3 (88)	-32.8	-53.7	70.17	0.00001
	Any modern contraceptive	49.7 (180)	22.2 (69)	-27.5	-55.3	59.42	0.00001
	Any traditional contraceptive	11.3 (41)	6.0 (19)	-5.3	-46.9	9.91	0.001648
Unmet need for family planning among currently married women	For spacing	13.0 (293)	11.9 (229)	-1.1	-8.5	14.04	0.000179
	For limiting	0.1 (2)	0.2 (4)	0.1	100	0.52	0.46992
	Total	13.1(295)	12.2 (235)	-0.9	-6.9	12.65	0.000377
Demand satisfied among currently married women	Modern method	7.6 (171)	15.0 (289)	7.4	97.4	22.51	0.00001
	Total	13.9 (313)	20.6 (397)	6.7	48.2	4.72	0.029751
Unmet need for family planning among sexually active unmarried women	For spacing	35.3 (128)	64.5 (234)	29.2	82.7	23.96	0.00001
	For limiting	0.0 (4)	1.1 (3)	1.1	110	0.23	0.630829
	Total	35.3 (128)	65.6 (203)	30.3	85.8	11.96	0.000545
Demand satisfied among sexually active unmarried women	Modern method	51.6 (187)	23.7 (73)	-27.9	-54.1	60.22	0.00001
	Total	63.4 (230)	30.1 (93)	-33.3	-52.5	70.67	0.00001

Note: all indicators and terms are as defined in the 2018 NDHS. ND- No data
Significant level at $p<0.05$

FP2020 promise and the SDG goal of universal access to SRH. Nevertheless, new information platforms on social media through the use of phone are increasingly providing additional information access to adolescents. The progress in this could not be compared due to lack of data in the 2013 survey on FP messages through the phone.

The analysis showed an increase of more than 50 percent use of modern contraceptives by currently married women and a significant decrease

Table 3: Types of modern contraceptives use by women age 15-19 years in Nigeria: 2013 and 2018

Methods		Percentage all women			Percentage currently married women			Percentage sexually active unmarried women		
		2013 (n=7820)	2018 (n=8448)	Point Difference	2013 (n=2251)	2018 (n=1927)	Point Difference	2013 (n=363)	2018 (n=310)	Point Difference
Modern	Female sterilization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pill	0.5	0.2	-0.3	0.3	0.1	-0.2	0.4	2.5	2.1
	IUD	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
	Injectable	0.1	0.1	0.0	0.2	0.5	-0.3	0.1	0.7	0.6
	Implants	0.0	0.1	0.1	0.0	0.3	0.3	0.0	0.3	0.3
	Male condom	3.8	1.6	-1.6	0.3	0.9	0.6	40.7	16.8	23.9
	LAM	0.1	0.1	0.0	0.2	0.4	0.2	0.0	0.0	0.0
	Standard days method	0.0	ND	ND	0.0	ND	ND	0.0	ND	ND
	Other	0.3	0.1	-0.2	0.0	0.0	0.0	2.6	0.6	-2.0
Traditional	Rhythm	0.5	0.2	-0.3	0.3	0.3	0.0	4.3	1.7	-2.6
	Withdrawal	0.6	0.3	-0.3	0.6	0.4	-0.2	4.5	3.6	-0.9
	Other	0.2	0.1	-0.1	0.1	0.2	0.1	2.6	0.7	-1.9

Others includes male sterilization, female condom, diaphragm, foam/jelly etc. IUD-Intrauterine device, LAM-Lactation amenorrhea. ND = No data

of about 50 percent in the current use of contraception by all women and sexually active unmarried women age 15-19 years (Table 2). Also, the unmet need for child spacing decreased among currently married women by 8 percent, but increased among sexually active unmarried women by 83 percent during the same period. These changes were statistically significant and of great concern among sexually active unmarried women who are a vulnerable and underserved population group[5]. The modern FP demand satisfaction increased by 97 percent among currently married women but decreased by 54 percent among sexually active unmarried women. These differences were significant.

Although an increase of 3.2 percent in the use of modern FP has been reported between surveys from Southwest and Northwest Nigeria[18]. The present report of 54 percent increase in the use of modern contraceptives by currently married adolescents is in contrast to other reports[4,15,17]. Nevertheless, this finding may not be unrelated to the access to services and bias by some health workers to only provide such services within the framework of marriage or union. This position clearly contravenes the right to control fertility through a freely chosen method of contraception, as stated on the Maputo protocol[8]. With the current average annual increase of less than 0.5 percent and the decrease in FP utilization by sexually active unmarried women, a more concerted effort will be needed to remove existing barriers if the rebased mCPR of 27 percent by 2020 and the target of achieving universal access to reproductive health (SDG Goal 3) is to be achieved. These barriers include the unavailability of quality service and the high cost of FP services[5].

Although a slight increase was noticed in the use of implants (0.1 and 0.3 percent) by all women and currently married women, there were either stagnation (Female sterilization, IUD) or a decrease (Pill, injectable, male condom, traditional) in the percentage of other FP method users as indicated in Table 3. Like previous reports from Nigeria and some other countries, an increase was observed in the use of most FP methods by sexually active unmarried women, except for the male condom and traditional methods[15,16]. It also reiterate existing challenges of access and utilization of FP methods by adolescents. This shift from traditional to modern methods of FP had been observed in other developing countries[15]. Also, sexual activity outside marriage increases the demand for contraceptive use, especially in the absence of spousal opposition. The non-adoption of LAM and IUD by adolescents is in line with findings from

some secondary health facilities and providers in Kaduna, Nigeria[16,22]. This finding may be related to fear of side effects and the absence of a regular partner. This situation calls for more awareness creation on the safety of all modern FP methods, including condoms that provide dual protection for all age groups[5,19]. This finding is core to the attainment of universal access to reproductive health services and prevents unsafe abortion for young people[9,20]. No client adopted the female sterilization method in both surveys because of the prevailing socio-cultural and religious beliefs this environment[23].

Conclusion

The improved utilization, satisfaction, and reduction of unmet needs among married adolescents indicate progress towards the attainment of universal access to reproductive health services by 2030. On the contrary, the inadequate exposure to FP messages in the media, the dwindling access and utilization of contraceptives by sexually active unmarried adolescents, and the nonuse of IUD by all adolescents calls for more education to allay fears and increase choices. Service providers must ensure the availability of comprehensive youth-friendly contraceptive services and information for all, including an effective client-centered counselling before and at the time of method selection to help adolescents address their particular needs and make informed and voluntary decisions.

Implications and contribution

Like most other surveys, the 2013 and 2018 NDHS only collected data on late adolescent of 15–19 years of age[2-4]. This finding is a wakeup call to programmers, managers, and service providers for an inclusive and youth-friendly, client-centered contraceptive services and information for adolescents notwithstanding their marital status. There is a need for an innovative approach to providing effective, affordable, and confidential contraceptive services for an adolescent to attain the Sustainable Development Goal of achieving universal sexual and reproductive health.

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Competing interests

The authors declare that they have no competing interests.

Authors' contributions

AA conceived the paper and prepared the first draft of the paper. IAN was responsible for data collection and entry. GU was involved in the report writing. MD and TM reviewed the initial draft. All five authors contributed to finalizing the paper. All authors read and approved the final manuscript.

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