# Knowledge and Perception of Health Care Providers as Correlates to the Provision of Contraceptive Services to Adolescents in Abuja, Nigeria

Article by Catherine O. Agbede<sup>1</sup>, Omotayo A. Amodemaja<sup>2</sup>, John I. Akinoye<sup>3</sup>, Adebayo M. Mustapha<sup>4</sup>

<sup>1</sup>Department of Public Health, Babcock University, Ilishan-Remo, Nigeria E-mail: agbedec@babcockuni.edu.ng<sup>1</sup>, tayoamode@gmail.com<sup>2</sup>

#### Abstract

**Objective:** This study sort to determine the levels of knowledge, perception, and practice of healthcare providers as correlates to providing contraceptive services to adolescents in Abuja, Nigeria.

**Methodology:** This study adopted a descriptive cross-sectional survey design guided by a behavioral theory. A 38-item semi-structured questionnaire was used to collect data from 139 healthcare providers by multistage sampling technique, validated at Cronbach alpha 0.82. Data collected were analyzed using IBM SPSS version 23 to compute descriptive and inferential statistics which were statistically tested at a 5% level of significance.

**Results:** Majority (72.7%) of participants were females with 69.80% having knowledge of modern contraceptives below average ( $5.50\pm1.47$ ). More than half, 55.30% ( $26.55\pm5.73$ ) had a positive perception towards providing contraceptive services to adolescents. Respondents had 56.10% positive perceived barrier; 61.80% positive perceived self-efficacy while 53.30% negative perceived benefit of providing contraceptive services to adolescents. A total of 58.30% of participants ( $12.87\pm5.42$ ) were providing contraceptive services to adolescents. There was a significant relationship between knowledge and practice (r= 0.335; p=000) and Perception and practice (r= 0.494; p=000) of health care providers.

**Conclusion:** The provision of contraceptives to adolescents by healthcare providers was shown to be inadequate. Knowledge of modern contraceptives and perception were major factors in the provision of contraceptive services to adolescents. In-service training and workshops can reinforce these factors thereby increasing the provision of these services to adolescents.

Keywords: Knowledge, Perception, Healthcare providers, Adolescents, Contraceptives.

#### Introduction

Unintended pregnancy among adolescents between 10-19 years poses a major global health challenge in low and middle-income countries. More than fifty percent of adolescents begin sexual interactions earlier than the age of 18; <15 years for females and <16 years for the males <sup>[1]</sup>. Approximately 21 million adolescents below 15 to 19 years become pregnant in developing regions and as a result, over 3 million unsafe abortions occur annually <sup>[2]</sup>. Complications such as eclampsia, birth weight, low puerperal endometritis, infections and contribute significantly to maternal mortality and morbidity <sup>[3]</sup>. The successful provision and adoption of contraceptives among adolescents is a crucial

approach to prevent increased unintended pregnancy and to enhance their health status <sup>[4]</sup>.

Many Adolescents who are willing to prevent pregnancy are using any not modern contraceptive method. In 2018, majority of young girls 97.1% (Married and Unmarried) in Nigeria were not utilizing any method of contraception, only 2.9% are currently using at least one method of contraception and only 2.4% are on one form of modern contraceptive method<sup>[5]</sup>. According to the report, the proportion of unmarried teenagers between 15-19 years presently using at least one modern contraceptive method is 22.2 percent with majority 2.5 percent and 16.5 percent using oral contraceptive pill and male condom respectively<sup>[5]</sup>.

Bylaws and regulations binding the provision of contraceptive services to adolescents, age and

civil status of adolescents, prejudice, discouraging attitude and practice of providers and the inability of healthcare providers to recognize adolescent rights and demands are factors that preclude adolescent's right to utilize available contraceptive services <sup>[6, 7, 8]</sup>.

Majority of health providers restrict adolescents from requesting any contraceptive method based on age (58%), parity (41%) and marital status (22%)<sup>[9]</sup>. Fifty percent of health workers in Ibadan, Nigeria have poor perception to contraceptive use in adolescents as they felt it encourage sexual intercourse at a very young age while in another qualitative study, providers possessed good attitude towards counseling of HIV-positive clients in the most appropriate method available <sup>[10, 11]</sup>.

Studies on adolescent's knowledge of modern contraceptives show that majority still express concerns regarding the effect of using contraception at an early age before marriage. These misconceptions could have resulted from inadequate contraceptive counseling and poor practice from health care providers <sup>[12]</sup>. Health workers require adequate knowledge and encouraging attitude to contraceptive use among young women in other to provide appropriate methods that will result in decreased unintended teenage pregnancy globally<sup>[13]</sup>.

There are paucity in literature on healthcare provider's knowledge, attitude and perception in providing contraceptive services to adolescents, this study made a difference from previous studies by applying the Health Belief Model (HBM) as a theoretical framework because it is a psychological model developed and tested to forecast human behavior and influence extended use of contraceptive <sup>[14]</sup>. The study seeks to investigate the knowledge, perception, and practice of health care providers as correlates to providing contraceptive services to adolescents.

Therefore, the study proposes the following hypotheses

- 1. There is a significant relationship between knowledge of health care providers on modern contraceptives and providing contraceptive services to adolescents.
- 2. There is a significant relationship between the perception of health care providers and their practice in providing contraceptive services to adolescents.

# Materials and methods

#### Study design, population, and location

This study adopted a descriptive crosssectional design that made use of a quantitative method of data collection from February to March 2020. Multistage sampling technique was used to select participants from the study. In the first stage, purposive sampling was used to select primary health centers in Abuja Municipal, Bwari, Gwagwalada and Kuje Area Councils, Abuja. Simple random sampling technique was then used to select a total of 139 health care workers from the area councils. Questionnaires were administered with the aid of research assistants who were properly trained to collect data from the health care providers providing family planning services in Primary Health Centers, Abuja.

#### **Inclusion criteria**

Participants included for this study were consenting medical doctors, medical volunteers, family medicine residents, nurses/midwives, pharmacists, community health workers involved in family planning.

#### **Exclusion criteria**

Participants excluded for this study were medical doctors, medical volunteers, family medicine residents, nurses/midwives, pharmacists, community health workers who do not consent to answer the questionnaire.

#### Instrument for the study

A 38-item semi-structured questionnaire with reliability of 0.82 was used to collect information from respondents; each section represented a variable to be studied and was developed from the objectives of the study. The questionnaire was divided into four sections: section A addressed Socio-demographics of respondents such as age, gender, religion, marital status, work experience, and academic qualification, section B assessed knowledge on modern contraceptive among healthcare providers, section C determined the perception of health care providers in providing contraceptive services to adolescents and section D assessed the practice of healthcare providers in providing contraceptive services to adolescents. The Health Belief Model (HBM) was considered as a theoretical framework during development of the questionnaire for this study.

#### **Measures of variables**

The Socio-demographic characteristic of participants in this study includes; age, gender, marital status, working experience, religion and academic qualification and position at the facility.

In Section B, 10 questions having dichotomous answers (yes or no) were used to measure health care provider's knowledge of modern contraceptives on a 12-point rating scale. The answer "yes" was coded as one (1) while the answer "no" was coded as zero (0).

In Section C, 14 questions were used to collect information on the perception of health care providers in providing contraceptive services to adolescents on a 42-point rating scale. Perception was measured on a Likert scale with responses ranging from *Strongly Agree, Agree, Disagree and Strongly Disagree* coded from 0, 1, 2, and 3 respectively depending on the correctness of the question.

The Practice of health care providers in providing contraceptive services to adolescents was measured on a 21-point reference scale having 7 questions and a Likert scale ranging from *Not at all, Rarely, Occasionally and Very often.* Responses were assigned scores of 0, 1, 2, and 3 respectively depending on the correctness of the question.

## Data analysis

Data obtained from correctly filled questionnaires were coded, analyzed and interpreted using descriptive statistical methods and statistical package for Social Science (SPSS) version 23.0. Summaries of descriptive statistics such as frequency, mean, standard deviation were derived and presented using tables, figures, and charts for lucidity. Also, correlation was used to determine the relationships between variables of different sections.

## **Ethical considerations**

Ethical approval was obtained from Babcock University Health Research Ethics Committee (BUHREC), the Federal Capital Territory Health Research Ethics Committee (FHEC), the Primary Health Care Board, Abuja and the Abuja Municipal Area Council Secretariat (AMAC). Informed consent was also given through verbal communication and written consent forms were signed. Information provided by respondents was kept confidential and there was no penalty for not filling the form or withdrawing at any time.

# Results

# Socio-demographic characteristics of respondents

Of the total number of respondents selected in this study, 46.8% (65) of health care providers worked in Abuja municipal area council, 12.9% (18) were located in the Bwari area council, 5.0% (7) were in Gwagwalada and 35.8% (49) worked within Kuje area council. Mean age of respondents was 34 years with 72.7% (111) of participants being female. Majority, 64.7% (90) of the respondents were married while 69.1% (96) had work experience between 1-10 years. The predominant religious group was Christianity 75.5% (105) while 51.8% (72) of the respondents Diploma the highest had as academic achievement (Table 1).

#### Knowledge on modern contraceptives

The level of knowledge of modern contraceptive among respondents was measured on a 12-point rating scale with mean score 5.50±1.47 valid for 139 respondents (n=139) (Table 3). This can be interpreted that more than two-third 69.80% (97) had below-average knowledge with only 30.2% (42) knowledgeable on modern contraceptives. Most respondents disagreed emergency (74.8%: 104) that contraceptives could last for 6 months after unprotected sex, Less than half of respondents 48.2% (67) knew that long-acting reversible contraceptive (LARC) was the best form of birth control for adolescents while 56.1% (78) reported that there was an increased risk of infertility associated with the use of IUD for adolescents and about 32.4% (45) of respondents believed that contraceptive use among adolescents could cause cancer (Table 2).

## Perceptions of health care providers towards providing contraceptive services to adolescents

The perception of respondents in this study was measured on a 42-point rating scale with mean score  $26.55\pm5.73$  valid for 139 respondents (n=139) (Table 3). Perception was found to be positive as only 55.3% (77) of respondents had positive perception while 44.50% (62) had

negative perceptions towards providing contraceptive services to adolescents. Using the Health Belief Model (HBM), perception was further divided into Perceived barrier, Perceived benefit, and Perceived self-efficacy. Summaries of respondents perceived barrier, benefit and selfefficacy indicated that more than half of the respondents 56.1% (78) had positive perceived barrier where majority of respondents perceived factors such as skills, family members of adolescents and workload as barriers to providing contraceptive services to adolescents (Table 4).

As regards perceived benefit, 53.30% (74) had negative perceived benefit where 41.0% (57) disagreed that the benefit of providing contraceptive services could enable an adolescent have control over his/her sexual and reproductive health and 44.6% (62) stated that counseling adolescents on the importance of contraception could influence the intention to use any modern methods of contraception. (Table 5)

Majority, 61.8% (86) of the respondents had positive perceived self-efficacy to providing contraceptive services to adolescents (Figure 1). The result showed that less than two-third 30.9% (43) had confidence in their ability to provide contraceptives to adolescents while 43.2% (60) agreed that regardless of what their colleagues thought, they would still provide contraceptive services to adolescents (Table 6).

# Practice of health care providers in providing contraceptive services to adolescents

The practice of respondents in this study was measured on a 21-point rating scale with mean score 12.87±5.42 valid for 139 respondents (Table 3). A total of 41% (57) of respondents prescribed contraceptives to adolescents very often while 71.9% (100) responded to have often threatened to report adolescents to their parents if thev requested contraceptives (Table 7). Likewise, 46.8% (65) reported to often refuse to prescribe contraceptives to adolescents who were not married where only 28.8% of respondents adolescents contraception counseled on irrespective of their age. The summary of practice in this study revealed that only 58.30% (81) of respondents provided contraceptive services to adolescents (Figure 2).

The research hypotheses for this study revealed a relationship between the two independent variables and the dependent variable. When tested at 5% level of significance, the

study revealed a significant relationship between the knowledge of modern contraceptive among health care providers and providing contraceptive services to adolescents (r= 0.335; p=000). Also, there was a significant relationship between the perception of health care providers and practice in providing contraceptive services to adolescents (r= 0.494; p=000).

## Discussion

The findings of this study revealed that less than half, 30.2% (42) of health care providers had adequate knowledge of modern contraceptives. This is similar to reports where less than fifty percent of health providers had adequate knowledge on the various contraceptive methods [15, 16]. Though health care providers claimed to be aware of the various methods of modern contraceptives, majority 51.8% (72) were not aware of long-acting reversible contraceptive (LARC) as the best form of birth control for sexually active adolescents. According to the World Health Organization (WHO) medical eligibility criteria for contraceptive use, adolescents within ages 10-19 years are exposed to series of unsafe sexual intercourse and therefore, the use of LARC would be the most appropriate method for this key population<sup>[17]</sup>.

Also, 43.9% (61) of respondents indicated an increased risk of infertility associated with the use of IUD for adolescents while majority 67.6% (94) indicated an increased chance of cancer among adolescents who use contraceptive methods. Religious and cultural values of respondents in this region of the world could be attributed to the poor knowledge of contraceptive use on adolescents.

Respondents in this study showed varying perceptions of providing contraceptive services to adolescents. There was a significant relationship between perception and practice p=0.000, which translates that if perception is strong, then the practice in providing contraceptive services to adolescents can be influenced. Less than twothird, 37.4% (52) and 38.1% (53) of respondents identified inadequate skills and presence of adolescent's family members as barriers to contraceptive provision respectively. This is supported by studies that specified inadequate skills and audience of family members during counseling as major barriers in the provision of contraceptive information to adolescents among health workers respectively <sup>[16, 18]</sup>.

Also, less than half 41.0% (57) of respondents disagreed that the benefit of providing contraceptive services could enable an adolescent have control over his/her sexual and reproductive health while 44.6% (62) did not believe that counseling on the importance of contraceptive use could influence the adoption of modern contraceptive methods among adolescents. Similar findings were seen in studies conducted in Nigeria where health care providers disagreed to the benefit of providing contraceptives to adolescents as it enabled the practice of sex before marriage <sup>[19]</sup>.

The practice of HCPs in this study showed that only 58.30% (81) were providing contraceptive services to adolescents. This is similar to a study in Botswana where more than fifty percent of respondents did not provide contraceptive services to adolescents while only less than twothird provided adolescents with the services <sup>[13]</sup>. Also, 46.8% (65) of respondents often refused to prescribe contraceptives to adolescents, this is in contrast with findings from India and Ibadan where health care providers often did not prescribe contraceptive services to adolescents less than 16 and 18 years old <sup>[19, 20]</sup>.

Variables	Respondents in the study N=139			
	Frequency (N)	Percentage (%)		
Area Council				
Abuja Municipal	65	46.8		
Bwari	18	12.9		
Gwagwalada	7	5.0		
Kuje	49	35.3		
Age				
20-29 Years	45	32.4		
30-39 years	64	46.0		
40-49 years	22	15.8		
50-59 years	5	3.6		
60 and above	3	2.2		
Gender				
Male	39	27.3		
Female	101	72.7		
Marital Status				
Single	45	32.4		
Married	90	64.7		
Widowed	4	2.9		
Work Experience				
1-5	49	35.3		
6-10	47	33.8		
11-15	24	17.3		
16-20	12	8.6		
20 and above	7	5.0		
Religion				
Christian	105	75.5		
Muslim	34	24.4		
Academic qualification		•		
Diploma	72	51.8		
Degree	53	38.1		
Postgraduate	14	10.1		
Position at the facility				

Table 1. Socio-demographic characteristics of respondents

Doctor	6	4.3
Nurse/Midwife	46	33.1
Community Health Worker	82	59.0
Pharmacy Technician	2	1.4
Health Educator	3	2.2

Table 2. Knowledge of respondents on Modern Contraceptives

S/N	Knowledge	YES	%	NO	%
1	Emergency contraceptives can last for 6	34	25.2	74.8	104
	months after unprotected sex				
2	Diaphragm is a shallow, flexible cup made	121	87.1	18	12.9
	of latex or soft rubber that is inserted into				
	the vaginal before intercourse				
3	Implants are thin silicone cups that are	32	23.0	107	77
	inserted into the vagina before intercourse				
	to block sperm from entering the uterus				
4	Hormonal method of contraception can be	58	41.7	81	58.3
	the inform of a vaginal ring				
5	IUD is inserted through the vagina opening	123	88.5	16	11.5
6	Subcutaneous Depot Medroxyprogesterone	120	86.3	19	13.7
	Acetate (DMPA-SC) is a drug for birth				
	control				
7	Depot medroxyprogesterone acetate	17	12.2	72	51.8
	(DMPA)				
8	Long-acting reversible contraceptive is the	67	48.2	72	51.8
	best form of birth control for adolescents				
9	There is an increased risk of infertility	61	43.9	78	56.1
	associated with the use of IUD for				
	adolescents				
10	Contraceptive use among adolescents can	45	32.4	94	67.6
	cause cancer				

Table 3. Mean and Standard Deviation

Variables		Respondents in the study N= 139		
	Rating Scale	Mean	SD	
Knowledge	12	5.50	1.47	
Perception	42	26.55	5.73	
Practice	21	12.87	5.42	

S/N	Perceived Barrier	SA (%)	A (%)	D (%)	SD (%)
1	I do not have proper skills to provide intra-uterine device contraceptive to adolescents	52(37.4)	41(29.5)	23(16.5)	23(16.5)
2	Age does not influence my provision of contraceptive services to adolescents	49(35.3)	49(35.3)	29(20.9)	12(8.6)
3	My culture allows me to provide contraceptives to adolescents	37(26.6)	47(33.8)	28(20.1)	27(19.4)
4	I feel uncomfortable providing contraceptive information to adolescents in the presence of family members	34(24.5)	53(38.1)	21(15.1)	31(22.3)
5	I am always too busy with work and cannot provide comprehensive education and counseling to adolescents	20(14.4)	60(43.2)	50(35.9)	9(6.5)
6	My Religion doesn't permit me to provide contraceptive services to adolescents	28(20.1)	40(28.8)	37(26.6)	34(24.5)

Table 4. Perceived Barrier in providing contraceptive services to adolescents

<sup>a.</sup> Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD)

Table 5.	Perce	eived	benefit	of pro	viding	contraceptive	services	to adolescer	its
----------	-------	-------	---------	--------	--------	---------------	----------	--------------	-----

S/N	Perceived Benefit	SA (%)	A (%)	D (%)	SD
					(%)
1	Contraceptive methods can prevent	83(59.7)	38(27.3)	11(7.9)	7(5.0)
	unwanted pregnancy during unprotected				
	sexual intercourse				
2	Counseling adolescents on the	62(44.6)	61(43.9)	14(10.1)	2(1.4)
	importance of contraception can				
	influence their intention to use any of the				
	modern methods of contraception				
3	Providing contraceptive services can	57(41.0)	50(36.8)	24(17.3)	8(5.8)
	enable an adolescent have control over				
	his/her sexual and reproductive health				
4	Benefits of providing the contraceptive	60(43.2)	49(35.3)	25(18.0)	5(3.6)
	methods overweighs the Side effects				

<sup>a</sup> Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD)

Table 6. Perceived Self-Efficacy in providing contraceptive services to adolescents

S/N	Perceived Self-efficacy	SA (%)	A (%)	D (%)	SD (%)
1	I have confidence in my ability to provide contraceptives to adolescents	19(13.7)	43(30.9)	43(30.9)	16(11.5)
2	I have confidence in my ability to counsel adolescents on the uptake of contraceptive methods	20(14.4)	67(48.2)	48(34.5)	4(2.9)
3	Regardless of what my colleagues think, I would still provide contraceptive services to adolescents.	24(17.3)	60(43.2)	35(25.2)	20(14.4)
4	I am confident in my ability to manage the side effects of contraception in adolescents	28(20.1)	64(46.0)	31(22.3)	16(11.5)
a.	Strongly Agree (SA) Agree (A) Disagree (D) Stro	moly Disag	ree(SD)		

Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD)

S/N	Practice	NA (%)	R (%)	O (%)	VO (%)		
1	I prescribe contraceptives to adolescents	27(19.4)	36(25.9)	19(13.7)	57(41.0)		
2	I have threatened to report adolescents to their parents if they request contraceptives	9(6.5)	18(12.9)	100(71.9)	12(8.6)		
3	I have refused to prescribe contraceptives to adolescents who are not married	15(10.8)	33(23.7)	65(46.8)	26(18.7)		
4	I counsel adolescents on contraception irrespective of their age	27(19.4)	36(25.9)	40(28.8)	36(25.9)		
5	I assure adolescents on confidentiality whenever they seek contraceptive counselling	27(19.4)	18(12.9)	61(43.9)	33(23.7)		
6	In counselling, I explain to adolescents how each method of contraception works	27(19.4)	19(13.7)	75(54.0)	18(12.9)		
7	I explain to adolescents what to do if they experience side-effects	19(13.7)	13(9.4)	71(51.1)	36(25.9)		
b. Not at all (NA) Parely (P) Often (O) Very Often (VO)							

Table 7. Practice in providing contraceptive services to adolescents

Not at all (NA), Rarely (R), Often (O), Very Often (VO)



Figure 1. Proportion of Respondent's Perception in Providing Contraceptive Services to Adolescents



Figure 2. Practice of respondents in providing contraceptive services to adolescents

## Conclusion

The provision of quality contraceptives is an important service in ensuring the utilization of modern contraceptive methods among females within reproductive age including adolescents. The findings conclude that majority of health care providers in this study had inadequate knowledge of modern contraceptives. Also, the study revealed negative perceived benefits of health care providers towards the provision of contraceptive services to adolescents. Barriers such as inadequate skills in providing intrauterine, presence of family members and workload were identified in this study.

Further studies should be carried out to identify other factors that influence the provision of contraceptive services to adolescents in other increase the utilization of to modern contraception in the country. There is a need for government and non-governmental agencies to keep health care providers updated in the trend of modern contraceptives available through inservice training and workshops targeted at improving knowledge on the various types and functions of modern contraceptive methods. Also, health care providers should be enlightened on the importance of providing Long-acting reversible contraceptive (LARC) as the best contraceptive.

method for adolescents as stated in the WHO medical eligibility criteria.

## Acknowledgements

The authors acknowledge Dr. Hameed Adeniran, Mr. Oladipo Owoyomi for their guidance and contribution in the study as well as all research assistants who abetted in data collection

## References

[1]. Ayele, B. G., Gebregzabher, T. G., Hailu, T. T., and Assefa, B. A., 2018, Determinants of teenage pregnancy in Degua Tembien District, Tigray, and Northern Ethiopia: A community-based case-control study. *PLoS ONE*, 13(7).

[2]. Darroch, J. E., Woog, V., Bankole, A., and Ashford, L. S., 2016, *Adding It Up: Costs and Benefits of Meeting the Contraceptive Needs of Adolescents* (New York: Guttmacher Institute).

[3]. World Health Organization, 2016, Global health estimates 2015: deaths by cause, age, sex, by country and by region, 2000–2015, Geneva.

[4]. Baldwin, M. K., and Edelman, A. B., 2013, The effect of long-acting reversible contraception on rapid repeat pregnancy in adolescents: a review. *Journal of Adolescent Health*, 52(4), S47–S53.

[5]. National Population Commission and ICF International, 2019, Nigeria Demographic and Health Survey 2018 Key Indicators Report Abuja, Nigeria, and Rockville, Maryland, USA, NPC and ICF.

[6]. World Health Organization, 2020, Adolescent pregnancy, Date of access: 16/03/2020.

https://www.who.int/news-room/factsheets/detail/adolescent-pregnancy [7]. Paul, M., Nasstrom, S. B., Klingberg-Allvin, M., Kiggundu, C., and Larsoon, E. C., 2016, Healthcare providers balancing norms and practice: challenges and opportunities in providing contraceptive counseling to young people in Uganda—a qualitative study. *Global Health Action*, 9, 30283.

[8]. Schwandt, H. M., Speizerm I. S., and Corroon, M., 2017, Contraceptive service provider-imposed restrictions to contraceptive access in urban Nigeria. *BMC Health Services Research*, (1), 268.

[9]. Tumlinson, K., Okigbo, C. C., and Speizer, I. S., 2015, Provider barriers to family planning access in urban Kenya. *Contraception*, 92(2), 143–51.

[10]. Nora, W., Sheree, S., Rebecca, P., Nompumelelo, Y., Jean, B., Ian, S., and Annelies, V. R., 2016, Healthcare provider knowledge, practice, and attitudes towards safer conception for HIV-affected couples in the context of Southern African guidelines. *AIDS Care*, 28(3), 390-396.

[11]. Crankshaw, T. L., Mindry, D., Munthree, C., Letsoalo, T., and Maharaj, P., 2014, Challenges with couples, serodiscordance and HIV disclosure: Healthcare provider perspectives on delivering safer conception services for HIV-affected couples, South Africa. *Journal of the International AIDS Society*, 17, 18832.

[12]. Guzzo, K. B., and Hayford, S. R., 2018, Adolescent Reproductive and Contraceptive Knowledge and Attitudes and Adult Contraceptive Behavior. *Maternal and Child Health Journal*, 22(1), 32–40.

[13]. Tshitenge, S. T., Nlisi, K., Setlhare, V., and Ogundipe, R., 2018, Knowledge, attitudes and practice of healthcare providers regarding contraceptive use in adolescence in Mahalapye, Botswana. *South African Family Practice*, 60(6), 181-186.

[14]. Chernick, L. S., Schnall, R., Higgins, T., Stockwell, M. S., Castaño, P. M., Santelli, J., et al., 2015, Barriers to and enablers of contraceptive use among adolescent females and their interest in an emergency department-based intervention. *Contraception*, 91(3), 217–225.

[15]. Omishakin, M. Y. J., 2015, Knowledge, Attitude and Practice of Family Planning among Healthcare Providers in Two Selected Health Centers in Osogbo Local Government, Osun State. *Women's Health & Gynecology*, 1(2), 009.

[16]. Bratlie, M., Aarvold, T., Skarn, E., Lundekvam, J., Nesheim, B. I., and Askevold, E., 2014, Long acting reversible contraception for adolescents and young adults-A cross sectional study of women and general practitioners in Oslo, Norway. *European Journal of Contraception & Reproductive Health Care*, 19, S189–90.

[17]. World Health Organization, 2015, Medical eligibility criteria for contraceptive use, 5<sup>th</sup> edition, Geneva, WHO.

[18]. Miller, M. K., Mollen, C. J., O'Malley, D., Owens, R. L., Maliszewski, G. A., Goggin, K., et al., 2014, Providing adolescent sexual health care in the pediatric emergency department: views of health care providers. *Pediatric emergency care*, 30(2), 84–90.

[19]. Ahanonu, E. L., 2014, Attitudes of Health Care Providers towards Providing Contraceptives for Unmarried Adolescents in Ibadan, Nigeria. *Journal of Family Reproductive Health*, 8(1), 33–40.

[20]. Wong, L. P., Atefi, N., Majid, H. A., and Su, T. T., 2014, Prevalence of pregnancy experiences and contraceptive knowledge among single adults in a low socioeconomic suburban community in Kuala Lumpur Malaysia. *BMC Public Health*, 14(3), 1.