

Emergency Contraceptive Practices Among Sexually Active Female Students in Selected Tertiary Institutions in Kaduna State, Nigeria

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Abstract

The study investigates issues on emergency contraceptive practices among sexually active female students in selected tertiary institutions in Kaduna State. Data were collected quantitatively from self-identified sexually active female students selected across three tertiary institutions in Kaduna State. The selection of respondents resonates purposive sampling method as respondents were selected based on certain known characteristics such as being sexually active and ensuring that various faculties are represented. Findings from the study revealed a relatively high level of awareness about the existence of emergency contraceptives (EC). However, the level of use is low compared to the high number of respondents who reported engaging in unprotected sex. Both modern and traditional forms of ECs are being used by students. However, others would not use EC due to the perceived fear of side effects, religious/traditional convictions and lack of availability. This exposes sexually active young people to the risk of unwanted pregnancies and the resultant effects of unsafe abortions. The study, therefore, recommends implementation of policies that will help promote the use of ECs by people who engage in risky sexual activities.

Keywords: Contraceptives, Emergency Contraceptive, Sexual activity, STIs, Tertiary institutions and Unwanted pregnancy.

Introduction

The increase in incidences of unwanted pregnancies resulting from unprotected sexual intercourse among young people have raised great concern across the globe. There has been a geometric increase in the incidences of unwanted pregnancies and unsafe abortions among young adults the world over. Each year, about four million adolescents resort to abortions and at least two million more young women are left with chronic illness or disability which could result to life-long suffering, shame or abandonment (Ramos, 2011). This figure can be reduced with an increase in the use of contraceptives, including Emergency Contraceptives (EC) (World Health Organisation (WHO), 2018). This scenario is even worse in countries like Nigeria where abortion is illegal and punishable by law except for therapeutic reasons. The restrictive law against abortion in Nigeria has made young people who are pregnant to seek for abortion in clandestine conditions which could result in adverse health problems such as damage to the reproductive system of the woman, physical disability or at worse death.

Abortions account for 20 - 40 percent of maternal deaths and tens of thousands suffer from chronic and sometimes irreversible health consequences (Abiodun & Balogun, 2009). The National Demographic and Health Survey (NDHS)(2019) reported about 19 percent of women aged 15-19 years to be pregnant in the preceding year of 2018 in Nigeria. These concerns have led to varying levels of technological developments regarding contraceptives that are expected to promote the practice of safe sex. Various forms of contraceptives have been identified to protect the individual from the contraction of Sexually Transmitted Infections (STIs) and unwanted pregnancies.

Young people are found to exhibit risky sexual behaviours by engaging in unprotected sexual activities without much concern for the outcome of such decisions such as unwanted pregnancy (Ebuehi, Ekanem & Ebuehi, 2006; Zaggi, 2014; Kolawole, Abubakar & Zaggi, 2015). The consequences of unwanted pregnancy are often detrimental to the students' educational progress and future career. This typified by the unfriendly environment the Nigerian society provides for young girls who get pregnant outside wed lock. Such girls are often exposed to shame and ridicule and sometimes even forced to withdraw from the school. Considering these challenges, most students with unwanted pregnancy could resort to abortions, usually in unsafe ways, and consequently resulting in adverse health effects.

Students in tertiary institutions are considered a high-risk category in terms of reproductive health. Tertiary institutions give students a high degree of freedom and provide social platforms such as hostel parties, social meetings, as well as less restriction from parents and guardians thereby resulting in students meeting and interacting with others of the opposite sex. For example, a study conducted by Zaggi (2014) among students in a tertiary institution in Kaduna state, reveals that students meet and initiate sexual relationships in school easily than when at home with their parents. The study further reveals that such relationships often expose students to the dangers of engaging in risky sexual activities. The lack of use, incorrect use or failure of contraceptives during sex exposes young people to the risk of unwanted pregnancy, this risk could be reduced if not eradicated by the correct use of ECs. The study seeks to achieve the following objectives:

- i. To explore the level of awareness of the existence of emergency contraceptive methods among students in tertiary institutions in Kaduna State.
- ii. To examine the level of use and types of emergency contraceptives used by students in tertiary institutions in Kaduna State.
- iii. To explore the reasons for the non-use of emergency contraceptives by students in tertiary institutions in Kaduna State.

Research Questions

To achieve these objectives, the study is designed towards answering the following research questions:

- i. What is the level of awareness of the existence of emergency contraceptive methods among students in tertiary institutions in Kaduna State?
- ii. What is the level of use and the types of emergency contraceptives used by students in tertiary institutions in Kaduna State?
- iii. What are the reasons for the non-use of emergency contraceptives among students in tertiary institutions in Kaduna state?

Conceptual Clarification

Emergency Contraceptive

The WHO (2005) defines emergency contraceptive as a back-up method for contraceptive emergencies used by a woman within the first few days after engaging in unprotected sex to prevent an unwanted pregnancy. ECs help to protect against pregnancy but do not protect against STIs. According to Haggai (2003), ECs are either drugs or devices used to prevent pregnancy within the first few days of unprotected sexual intercourse. Emergency contraception is also referred to as "morning-after pill", "post-coital contraception" or "second chance contraception" (Tilahun, Assefa & Belachew, 2010). Emergency contraception is primarily a female method of contraception and its primary use is to reduce the need for abortions and the negative maternal health consequences associated therewith. Levonorgestrel-only pills (postinor-2) and combined oral contraceptives are reported to be the most common methods used globally (Lemma, 2009; Ezebialu & Eke, 2013). Emergency contraceptives are similar to birth control pills; however, they contain higher hormonal doses. In the context of this study, emergency contraceptive is used to refer to any method (modern or traditional) used to prevent an unwanted pregnancy after engaging in unprotected sexual intercourse. Unprotected sexual intercourse could be a result of the lack of contraceptive use or the failure of contraceptives during sex. Failure of contraceptives could be due to condom break during sex or failure to take the day-to-day birth control pills.

Awareness and Use of Emergency Contraceptive Among Students in Tertiary Institutions in Nigeria

Despite the widespread campaigns on the need to use contraceptives before, during or after sexual intercourse to protect against STIs and unwanted pregnancy, there has been reported low use among young sexually active people. A study conducted by Zaggi (2014), among students in a tertiary institution in Kaduna State, reveals only 38 percent of sexually active students involved in the study reported using any form of contraceptive before, during or after sex. The need to encourage the use of contraceptives, in this case, emergency contraceptives, has made Non-Governmental Organisations (NGOs) such as the Nigerian Consortium on Emergency Contraception (NCEC) to launch campaigns in collaboration with other health stakeholders in 1998 by developing strategies to increase the use of and accessibility to emergency contraception across Nigeria. Through this effort, the Society

for Family Health (SFH) in 2001 became a major distributor of emergency contraceptive, especially postinor-2 in Nigeria.

Postinor-2 has been identified by Ezebialu and Eke (2013) as the common brand of emergency contraceptive pills used in Nigeria. The product contains a total of 1.50 milligrams (mg) for levonorgestrel. Some labelling requirements advice that dosage should be taken in two pills (each of 0.75 mg), 12 hours apart. However, evidence has shown that taking both pills at the same time is equally effective. If a progestin-only product is not available, a less desirable alternative known as the Yuzpe regimen employs commonly available combined oral contraception pills that contain both estrogen (ethinyl estradiol) and progestin (levonorgestrel). This regimen is generally taken in two doses, 12 hours apart, with each dose containing 100 micrograms (mcg) of ethinyl estradiol and 500 mcg of levonorgestrel (Wambugu, 2013).

Studies such as Alemayehu (2006), Zaggi (2014), Zaggi and Dambo (2019), have associated the lack of contraceptive use among young people to the forms of sexual relationships that young people engage in. Alemayehu (2006) in his study among high school students in Ethiopia as well as Zaggi (2014) in a survey among students in a tertiary institution in Kaduna State found that girls who engage with multiple sexual partners are most likely to engage in unprotected sexual intercourse, especially when one or all their partners are older. Zaggi and Dambo (2019) in a qualitative study among students of Federal Polytechnic Kaduna, Kaduna State found that girls who engage in transactional sex sometimes lack agency in negotiating the use of contraception during sex. Given these limitations, girls are often exposed to risk associated with unprotected sex such as unwanted pregnancy and consequently unsafe abortions that could result in adverse health effects. It is expected that cases as this could be avoided using emergency contraceptives which could be taken within 72 hours after unprotected sex (Kolawole, Abubakar & Zaggi, 2015).

A study on the awareness and practice of emergency contraception among university students in Port Harcourt, South-South Nigeria by Ojule, Orij and Georgewill (2008) reveal a low-level awareness of the modern emergency contraceptives with only 20.4 percent of the respondents reported being aware of its existence. However, the study revealed the use of traditional forms of emergency contraceptives as a concentrated salt drink, stout beer, or having an enema after unprotected sex. Attahir, Sufiyan, Abubakar and Haruna (2010), in their study on emergency contraceptive among female adolescents in Rigasa community in Kaduna State, reported the use of robin blue (dye) by inserting it in excess in the vagina before or immediately after sex. Respondents in this study also reveal that lime mixed with coke or potash could be used as emergency contraception. Also, medications not intended to be used as emergency contraception such as metronidazole, was reported to be used to prevent pregnancy after unprotected sex. Other traditional forms of emergency contraceptives used by young people as reported in similar studies include, spiritual waist and armbands, urinating immediately after unprotected sex

(Zaggi, 2014), club soda, gaseous drinks (Idonije, Oluba & Otamere, 2011), herbal concoctions, hot drink (Akani, Enyidah & Babatunde, 2008). Although these forms of emergency contraceptives are widely used by young people, there is no proven efficacy.

Theoretical Framework

This study is guided by the rational choice theory. This theory has its roots in the classic school of criminology and was developed by an Italian social thinker, Cesare Beccaria (Devine, 1982). However, the theory has been applied to other spheres of life to explain the choices that people make in their everyday social life. Central to the argument of the rational choice theory is the assumption that individuals are motivated by their wants and goals and are driven by personal desires. Being that individuals cannot attain all they desire; they are forced to make choices regarding their goals and the means of achieving them. In doing so, individuals must anticipate the outcomes of alternative courses of action and calculate which action is best. In the end, rational individuals choose the course of action that is likely to give them the greatest satisfaction.

In this case, it is argued that students in tertiary institutions experience a high level of personal freedom and social interactions, these offer them the opportunities for permissive lifestyles including a high level of sexual networking. From this perspective and the idea of the rational choice theory, human behaviour is a carefully calculated action meant to achieve defined goals, irrespective of perceived consequences. Within this context, the use or non-use, as well as the type of emergency contraceptive used by students after unprotected sex, could be assumed to be a calculated action meant to achieve defined goals irrespective of the consequences. In this case, choices could be influenced by the perceived benefits or side effects of emergency contraceptives as well as the perceived efficacy of emergency contraceptive methods. Considering the foregoing discussion, the study seeks to explore the level of emergency contraceptive use among female students in selected tertiary institutions in Kaduna State as well as the types of emergency contraceptives being used by students in these institutions.

Methodology

Data for the study were collected from three randomly selected tertiary institutions in Kaduna State; Kaduna State University (KASU), College of Nursing and Midwifery Kafanchan (CON) and Kaduna State College of Education Gidan Waya (COE). Quantitative data were collected from female students who self-identified to be sexually active and were registered in these institutions at the time of the study. A respondent is considered sexually active in this study if she has engaged in sexual intercourse within the preceding six months to the time of data collection. An initial survey was conducted in these institutions where female students were randomly issued with an information/consent form, with details of the study and at the end, they were asked to state if they were sexually active and were willing to participate in the study. Those interested in the study were asked to indicate their phone numbers for further contact during the questionnaire distribution

phase. From the information retrieved, 279 sexually active respondents were selected for the study across the three institutions; 67 from KASU, 167 from COE and 45 from CON. The selection of this sample across the three institutions was informed by the numbers of students that met the selection criteria as well as indicated interest to participate in the study. In the selection process, purposive sampling was used to ensure that students from different faculties in the school were represented in the sample.

Data were collected using self-administered semi-structured questionnaire. The questionnaire was constructed in English language which is the official language in all the selected institutions used by both staff and students. The questionnaire was structured in three sections: the first section contained questions on the socio-demographic variables of respondents, the second section addressed the awareness of students on the existence of emergency contraceptives and the third section contained questions on the use or non-use as well as the types of ECs used by students. Selected respondents were contacted and given questionnaires to complete and return immediately or later as would be convenient for the respondents. A total of 270 completed copies of the questionnaire were retrieved. It is on these retrieved copies of questionnaire that the analysis for the study was based. Data collected was first checked for consistency and finally edited for missing values. The data were coded and transferred to the Statistical Package for Social Sciences (SPSS) software (version 20) for analysis. Data were analysed by using univariate data analysis and presented in frequency tables.

Results of the Findings

To find out the level of emergency contraceptive awareness, respondents were asked to mention if they have heard of any method of emergency contraceptives. It is important to note that awareness in this context does not reflect knowledge on how emergency contraceptive work. Awareness is used to indicate if respondents have ever heard of at least one method of emergency contraceptives.

Table 1: Awareness of Emergency Contraceptives

Response	Frequency	Percentage
Yes	202	74.8
No	68	25.2
Total	270	100.0

Responses indicate a high level of awareness among respondents in the selected institutions as 74.8 percent indicated being aware of the existence of at least one method of emergency contraceptive (Table 1). Respondents were asked to indicate if they have had unprotected sex and the frequency of engaging in unprotected sex within the last one year before the time of the study as shown in Table 2.

Table 2: Engagement in and frequency of unprotected sex within the last one year

Ever engaged in unprotected sex	Frequency	Percentage
Yes	253	93.7
No	17	6.3
Total	270	100.0
Number of Unprotected Sex	Frequency	Percentage
One time	64	25.3
Two times	80	31.6
Three times	36	14.2
More than three times	73	28.9
Total	253	100.0

Findings of the study reveal a high level of risky sexual practice among respondents as majority (93.7 percent) of respondents reported having unprotected sex within the last one year. This is worrisome due to the reported spread of STIs among young people. Although they could use emergency contraception to protect themselves against pregnancy, emergency contraceptives do not protect against STIs and if used wrongly, without the right timing, it could also fail to protect against unwanted pregnancy. Understandably, that young people involved in unprotected sexual intercourse could be doing so with their partners whom they trust, it is expected that using other forms of contraceptives such as condom could also improve the level of protection against both unwanted pregnancy and STIs. Interestingly, 6.3 percent of the respondents reported not engaging in any form of unprotected sexual intercourse within the last one year.

A comparison of the number of respondents who indicated in Table 1 that they were not aware of any form of emergency contraceptive (74.8 percent) and the number of respondents in Table 2 who reported engaging in unprotected sex (93.7 percent), shows the possibility of respondents who engage in unprotected sexual intercourse without using any form of emergency contraceptive to protect against pregnancy. This could be due to a lack of awareness of the existences of ECs. Also, as indicated in Table 2, majority (74.7 percent) of the respondents who had engaged in unprotected sex, has done so at least twice in the preceding year (31.6 percent had unprotected sex twice; 14.2 percent, three times and 28.9 percent, more than three times).

To determine the level of emergency contraceptive use among respondents, they were asked to indicate if they had used emergency contraceptives before and the number of times, they have used within the last year.

Table 3: Used of ECs and Frequency of Use within the last one year

Ever used ECs	Frequency	Percentage
Yes	146	54.1
No	124	45.9
Total	270	100
Frequency of using ECs	Frequency	Percentage
One time	36	24.7
Two times	22	15.1
Three times	12	8.2
Four times	11	7.5
Five times	48	32.9
Six times	4	2.7
Seven times	7	4.8
More than seven times	6	4.1
Total	146	100.0

All respondents (including those that have never engaged in unprotected sex) were asked to indicate if they had ever used emergency contraceptives before. It is expected that respondents could use other forms of contraceptives during sex and still use ECs after sex as a backup plan to protect against unwanted pregnancy. Majority of the respondents (54.1 percent) indicated they have ever used emergency contraceptives after sexual intercourse. Of this category, the majority, 75.3 percent have used ECs at least two times, while 24.7 percent reported using ECs only once within the preceding year (Table 3).

Respondents were given a list of emergency contraceptive methods (both modern and traditional) and asked to indicate as many as they have used, and also indicate in an open space provided, other forms of emergency contraceptives they have used before (especially traditional forms of ECs). Respondents were asked to select as many methods because it is expected that some respondents would have used more than one of the methods. Therefore, the total frequency could appear to be more than the number of respondents who reported ever using ECs (146 respondents) as reflected in Table 3. In this regard, percentages in Table 4 are derived by dividing the frequency of each method by 146 (the number of respondents that have used ECs before, see Table 3) then multiplied by 100.

Table 4: Types of ECs used by respondents after unprotected sex

Use of Modern EC methods	Frequency	Percentage
Menstrogen	65	44.5
Postinor 2	124	84.9
Copper IUD	11	7.5
Pills and IUD	15	10.3
Others	14	9.6
Use of Traditional EC methods	Frequency	Percentage
Drinking and washing the vagina with salty water	50	34.2
Lime	60	41.9
Potash	10	6.8
Gin	11	7.5
Herbs	35	24.0
Squatting after sex	6	4.1
Taking gaseous drinks	21	14.4

As indicated in Table 4, respondents reported using both modern and traditional forms of emergency contraceptives. Postinor-2 and menstrogen featured as the commonly used modern forms of emergency contraceptives with 84.9 percent and 44.5 percent respondents affirming in this regard respectively. Other forms of modern emergency contraceptives used by respondents were copper IUD (7.5 percent) as well as pills and IUD (10.3 percent). Respondents reported using traditional forms of emergency contraceptives to protect against unwanted pregnancy such as drinking concentrated salty water after unprotected sex and also washing the vagina with salty water (34.2 percent), drinking lime after unprotected sex (41.9 percent), Drinking potash dissolved in water (6.8 percent), drinking gaseous drinks and gin (14.4 percent and 7.5 percent respectively). Also, 24.0 percent of respondents indicated they take some herbal concoctions after having unprotected sex and 4.1 percent indicated that squatting after unprotected sex help to flush out the sperm from the vagina.

Although respondents believe that these traditional forms of emergency contraceptives help to protect against unwanted pregnancy, its potency is yet to be proven scientifically. As such, this could expose its users to adverse health consequences and at its extreme death. This is because of the lack of proper prescription as to the right quantity and the right time to administer it after engaging in unprotected sex.

To ascertain the reasons for the non-use of emergency contraceptives despite their awareness of its existence and the possible risk of unwanted pregnancy, respondents were asked to indicate why they may consider not using emergency contraceptives after unprotected sex.

Table 5: Reasons for non-use of ECs after unprotected sex

Reasons associated with the non-use of ECs	Frequency	Percentage
Leads to an untimely death	58	21.5
Leads to barrenness/infertility	57	21.1
It is a sin	46	17.0
Lack of knowledge	48	17.8
Lack of accessibility	16	5.9
Lack of money	17	6.3
Others	28	10.4
Total	270	100.0

As contained in Table 5, respondents indicated they will not use emergency contraceptives due to its perceived side effects such as death (21.5 percent) and barrenness/infertility (11.1 percent). Others perceived that using emergency contraceptives is a sin (17.0 percent). Other respondents also indicated other factors that could make them not to use ECs to include the lack of knowledge about its existence (17.8 percent), inaccessibility (5.9 percent) and the lack of money to purchase ECs (6.3 percent).

Considering factors associated with the non-use of emergency contraceptives, as reflected in Table 5, there is a possibility that students' ability to make a rational decision towards the use of emergency contraceptives may be hampered by the interplay of these factors among sexually active students. Factors such as the fear of side effects could deter students from using ECs. Students would rather make use of other forms of contraceptives during sex or resort to taking the risk of getting pregnant when they engage in unprotected sex.

Discussion of Findings

Results from the study have revealed a relatively high level of students' engagement in risky sexual practices. Majority of students engage in unprotected sexual intercourse severally, thereby exposing themselves to the risk of unwanted pregnancy and the contraction of STIs. Although emergency contraceptives help to prevent pregnancy, it must be stated that the level of protection provided by EC is limited because it does not protect against the contraction of STIs. Findings from this study reveal a relatively high level of awareness about the existence of emergency contraceptives, there is however a substantial number of sexually active respondents that are not aware of its existence. This lack of awareness would limit the capacity of such students to protect themselves against pregnancy when they engage in unprotected sex or when they experience contraceptive failure during sex. Studies by Fasanu, Adekanle, Adeniji and Akindele (2014), Kolawole, Abubakar and Zaggi (2015), Awoleke, Adanikin, Awoleke and Odunaye (2015), have revealed an increase in awareness and knowledge of emergency contraceptives to have a close association with an increase in utilization.

Findings from the study also reveal the use of modern ECs by respondents, postinor-2 featured as the commonly used modern EC. This could be as a result of its availability in pharmacy stores as well as its easy mode of administration. In line with this, studies by

Zaggi (2014), Ross and Hardee (2012) have related the knowledge and utilisation of contraceptive methods to its level of availability. They argued that the most used methods of contraceptives are those that are readily available to consumers at retail outlets and cheaper prices. In this case, postinor-2 is more available than other forms of ECs as the IUDs. Traditional forms of contraceptives form an important part of contraceptives in Nigeria. The study also reveals that, traditional methods of emergency contraceptives are used by students after unprotected sex. Methods like squatting, ingestion of concentrated salt water, gaseous drinks, lime, potash, gin and herbal concoctions were mentioned by respondents as emergency contraceptives being used.

Babalola (2009) defines traditional contraceptives as plants/items used for birth control or in preventing pregnancy and for the expulsion of the foetus from the womb. It is expected that upon ingestion, these concoctions sterilize the sperm and inhibit implantation by causing disturbances in the oestrogen-progesterone balance of the female body. Although the efficacy of these methods is often only explicated by traditional medicine practitioners and their clients, it is, however, important to emphasize the relevance of traditional contraceptive methods to these clients. Admittedly, most users of traditional contraceptives in Nigeria may lack access to modern contraceptives; they, however, believe that traditional contraceptive methods are products of their forefather's wisdom, which recognises their socio-cultural and religious values and has little or no side effects when compared to modern contraceptives (Adesina, 2013).

Going by the arguments of the rational choice theory, it is believed that individuals will use emergency contraceptives each time they engage in unprotected sex because of its benefit in protecting against unwanted pregnancy. However, there is a need to recognise the study of Reyna and Farley (2006) which reported the need for the examination of social factors that tend to influence the individual's course of action concerning health behaviours. In this study, findings reveal the influences of social factors on students' decision not to use an emergency contraceptive, these social factors include the fear of contraceptive side effects, religious beliefs that contraception is a sin, lack of adequate knowledge as well as inaccessibility to emergency contraceptive methods.

Conclusion

This study has examined emergency contraceptive practices among sexually active female students in selected tertiary institutions in Kaduna State, Nigeria. Findings of the study have shown that the high level of sexual activity among students have detrimental effect on the educational progress of students which include unwanted pregnancies. Most students would seek means of terminating pregnancies and would resort to unsafe abortions that could have adverse effects on their health. Hence, the need to implement policies that will help promote the use of ECs by people who engage in risky sexual activities.

Recommendation

Based on the findings of the study, the following recommendations are made;

- i. There is the need for government health institutions, NGOs and other stakeholders to intensify campaigns that will enlighten and educate young people about emergency contraceptives, available methods and the ways it functions; including the right ways of administration. Such campaigns should ensure wide coverage especially to rural areas, this way a wider population of young people would be enlightened in this regard.
- ii. It is pertinent to improve the accessibility of emergency contraceptives, in terms of availability of diverse methods at close locations and at low prices. Health workers should be encouraged to provide such services to clients irrespective of age and marital status.
- iii. Cultural and religious perceptions concerning contraceptives and the bearing they have on young people's sexual health must also be addressed. This will entail recognising young people as capable of being sexually active, hence, the need to protect them from the adverse effects of unwanted pregnancies.

References

- Abiodun, O. & Balogun, R. (2009). Sexual activity and contraceptive use among young female students of tertiary educational institutions in Ilorin, Nigeria. *Contraception*, 79: 146-149.
- Adesina, S. K. (2013). Traditional medical care in Nigeria. *Online Nigeria*, <http://www.onlinenigeria.com/health/?blurb=574>. Accessed on 5th August 2020.
- Akani, C. I., Enyidah, C. E. & Babatunde, S. (2008). Emergency contraception: Knowledge and perception of female undergraduates in the Niger Delta of Nigeria. *Ghana Medical Journal*, 42(2).
- Alemayehu, M. (2006). Assessment of the prevalence of premarital sex and unprotected sexual practice among Gedeo High School Students SNNPR, Ethiopia.
- Attahir, A., Sufiyan, M.B., Abdulkadir, A. & Haruna, M.K. (2010). Knowledge, perception and practise of emergency contraception among female adolescent hawkers in Rigasa Suburban Community of Kaduna State Nigeria. *Journal of Family and Reproductive Health*, 4(1); 15-20
- Awoleke, J.O., Adanikin, A.I., Awoleke, A., & Odanye, M. (2015). Awareness and practice of emergency contraception at a private university in Nigeria. *BMC Research Notes*, 8(215); 1-6.
- Babalola, K.A. (2009). An Examination of the usage of herbal contraceptives and abortifacients in Lagos State, Nigeria. *Ethnobotanical leaflets*, 13; 140-146.

- Devine, F.E. (1982). Cesare Beccaria and the theoretical foundations of modern penal jurisprudence. *New England Journal on Prison Law*, 7; 8-21.
- Ebuehi, O.M., Ekanem, E.E. & Ebuehi, O.A.T. (2006). Knowledge and practice of emergency contraception among female undergraduates in University of Lagos, Nigeria. *East African Medical Journal*, 83(3); 90-95.
- Ezebialu, I. U., & Eke, A. C. (2013). Knowledge and practice of emergency contraception among female undergraduates in South-Eastern Nigeria. *Annals of Medical and Health Sciences Research*, 3(4); 541-545.
- Fasanu, A.O., Adekanle, D.A., Adeniji, A.O. & Akindele, R.A. (2014). Emergency contraception: Knowledge and practices of tertiary students in Osun State, South-Western Nigeria. *Gynecology & Obstetrics*, 4(1); 1-4.
- Haggai, D. N. P. (2003). Emergency contraception: the journey so far. *International Journal of Obstetrics and Gynaecology*, 110; 339–345.
- Idonije, B.O., Oluba, O.M. & Otamere, H. O. (2011). A study on knowledge, attitude and practise of contraception among secondary school students in Ekpoma. Nigeria. *JPCS*, 2; 22-27.
- Kolawole, T.O., Abubakar, M.B. & Zaggi, H. (2015). Emergency contraceptives use among female students at Ahmadu Bello University, Zaria, Kaduna State. *The online Journal of New Horizons in Education*. 5(3); 41-48.
- Lemma, A.D. (2009). Emergency contraception in Addis Ababa: Practice of Service Providers. University of South Africa.
- National Demographic and Health Survey (NDHS). 2019. Key indicators: National Population Commission, Nigeria.
- Ojule, J. D., Oriji, V. K., & Geaorgewill, K. N. (2008). Awareness and practice of emergency contraception among students of University of Port Harcourt, South-South, Nigeria. *Nigerian Health Journal*. 8(1-2); 6-9.
- Ramos, S. (2011). Interventions for preventing unintended pregnancies among adolescents: RHL commentary. *The WHO Reproductive Health Library*. Geneva: World Health Organization.
- Reyna, V.F. & Farley, F. (2007). Is the teen brain too rational? *Science Am Reports*, : 61-67.
- Ross, J. & Hardee, K. (2012). Access to contraceptive methods and prevalence of use. *Journal of Biosocial Science*, First view, 1-18.

- Tilahun, D.F., Assefa, T. & Belachew, T. (2010). Predictors of emergency contraceptive use among regular female students at Adama University, Central Ethiopia. *The Pan African Medical Journal*. 7(16).
- Wambugu, C.J.N. (2013). Factors influencing the use of emergency contraceptive pills among female undergraduate students in Kenya: A Case of Main Campus Hostels of the University of Nairobi. University of Nairobi.
- World Health Organisation. (2005). *Selected practice recommendations for contraceptive use*. Second edition. Geneva.
- World Health Organization (WHO). (2018). *Global health observatory (GHO): Sexually transmitted disease*. Geneva
- Zaggi, H.Y. & Dambo, T.H. (2019). Social influences on the use of contraceptives among students in Federal Polytechnic Kaduna, Nigeria. *African Journal of Management, Social Sciences and Humanities*. 8(2)
- Zaggi, H.Y. (2014). Contraceptive knowledge and practices among students in federal polytechnic Kaduna, Nigeria : An exploratory study. University of Stellenbosch.