https://dx.doi.org/10.4314/dujopas.v10i3c.15
ISSN (Print): 2476-8316
ISSN (Online): 2635-3490
Dutse Journal of Pure and Applied Sciences (DUJOPAS), *Vol. 10 No. 3c September 2024*

Reasons for Contraceptive Discontinuation Among Women of Reproductive Age in Kano, Nigeria: A Qualitative Study

Aisha Aliyu Abulfathi[1], Fatima Lawan Bukar[1], Mohammed Abubakar Abiso[2], Sadiya Haruna Warshu[3] , Zara William Wudiri [1], Mohammed Tahir Bolori[1], Taofik Ademola Oloyede[1]

[1]Department of Community Medicine,
University of Maiduguri,
Borno State.

[2]Department of Family Medicine,
University of Maiduguri,
Borno State.

[3]Department of Community Medicine,
Yusuf Maitama Sule University
Kano, State.

E-mail: aishaaliyuabulfathi@gmail.com

Abstract

Women's attempts to achieve their desired levels of fertility are hindered when they stop using contraceptives, which could lead to unwanted pregnancies. This study aimed to assess reasons for contraceptive discontinuation among women of reproductive age in urban and rural areas of Kano State, Nigeria. Qualitative data were collected in urban and rural communities of Kano State in February to May, 2022 from women of reproductive age group, their male partners, family planning service providers, and community and religious leaders. Focus group discussions (FGD), and key informant interviews (KII), using multi-stage sampling methods explored previous experience with contraceptive use, fertility consequences and reasons for contraceptive discontinuation. Following data collection, digitally recorded data were transcribed verbatim, translated, and coded using thematic analysis through an inductive approach. Study reported the high discontinuation rates and identified side effects as the primary reason for discontinuation, with injectable contraceptives being the most commonly discontinued method. Other reported reasons for contraceptive discontinuation by respondents in both urban and rural groups were: method failure, intention to get pregnant, health concerns, husband disapproval, methods not available, inconvenience to use and interference with body structure or functions. The high contraceptive discontinuation poses significant risks of unintended pregnancies and unsafe abortions, thereby increasing maternal morbidity and mortality rates in Kano State. These consequences emphasize the need for family planning interventions that incorporate quality of care in service provision to address contraceptive discontinuation. Engaging men and other social influencers in family planning programs and services will help gather support for contraception, rather than focusing exclusively on women.

Keywords: Contraceptive discontinuation; Urban and Rural; Family planning; Contraceptive side effects;

Author for Correspondence

INTRODUCTION

The use of contraceptives does not only benefit health-related outcomes, like improved mother and child health (Starbird, Norton and Marcus,2016), but it also, enhances girls' and women's educational and economic outcomes (Canning and Schultz,2012). Global trends have shown an increase in contraceptive uptake, however, many women, approximately one out of three, discontinue their method within a year (Ali, Cleland and Shah, 2012; Castle and Askew, 2015), it has been hypothesized that aspects related to family planning (FP) services, such as care quality, are linked to the discontinuance of contraceptives (Nanda,2011). Determinants of contraceptive discontinuation include the type of method used, side effects, age (younger women are more likely to discontinue than older women), number of living children, fertility intentions (women wanting to space their children are more likely to discontinue compared with women who have completed childbearing), and a change in marital status (Ontiri,2020). Discontinuation appears to be less consistently associated with the number of methods available Cutherell,2017), socio-economic factors including education (Ontiri,2020; Hewaida,2016; Agrahari, Mohanty and Chauhan,2016), urban-rural residence (Hewaida,2016), husband's disapproval (Burke and Ambasa-Shisanya,2012), and cost or lack of access to the method (Hewaida,2016; Agrahari, Mohanty and Chauhan,2016; Burke and Ambasa-Shisanya,2011). Contraceptive discontinuation is an important determinant of contraceptive prevalence, as well as unintended pregnancies, and other demographic impacts as it increases the unmet need for family planning (FP) (Jain and Winfrey, 2017).

Contraceptive discontinuation has a significant effect on a country's fertility, with up to 30% of unintended births resulting from contraceptive method failure (Cavallaro *et al*.,2019). Data from developing countries have attributed 28% - 64% of total fertility rate (TFR) to discontinuations from reasons other than the desire for pregnancy (Cavallaro *et al*.,2019; Bradley, Croft and Rutstein,2011). Possible outcomes of accidental pregnancy while using any contraceptive method include the pregnancy ending in miscarriage, stillbirth or abortion; the pregnancy is continuing or has ended in a live birth, which is reported as unwanted, mistimed or wanted (Bradley, Croft and Rutstein,2011). The reproductive consequences of method-related discontinuation are assessed in terms of reproductive or contraceptive outcomes in the 12 months after discontinuation. The outcomes are: no new method has been adopted but no pregnancy has occurred and the woman is classified as "at risk"; switched to another method; a current pregnancy or live birth occurred (Ali and Cleland,2010).

The contraceptive dynamics situation in countries in sub-Saharan Africa, such as Tanzania, Ghana and Ethiopia, reveals that over 30% of users discontinue contraception within the first 12 months and over 60% discontinue within 36 months for reasons such as side effects and inconvenience of the methods (Ali, Cleland and Shah, 2012). Side effects and health concerns are the leading reasons for discontinuation of modern methods. A study carried out in Pakistan found that elimination of the discontinuations caused by the side effects could increase contraceptive continuation rates (at 12 months) by 10%, whereas elimination of method failure could increase contraceptive continuation rates (at 12 months) by 6% (Mahmood and Naz,2012; Wambui, Alfred and Khasakhala,2022), understanding the reasons that affect the discontinuation of family planning use is crucial to ensuring that women and couples attain their long-term fertility desires. Kano State has one of the poorest maternal and child health indices in Nigeria and women in the northern part of Nigeria are less empowered than their southern counterparts (Aliyu,2020; Ibrahim,2019). This study aimed to assess reasons for contraceptive discontinuation among women of reproductive age in urban and rural areas of Kano State, Nigeria.

The use of contraceptives not only improves health outcomes, such as better maternal and child health (Starbird, Norton, and Marcus, 2016), but also enhances educational and economic opportunities for girls and women (Canning and Schultz, 2012). Despite global increases in contraceptive uptake, about one in three women discontinue their method within a year (Ali, Cleland, and Shah, 2012; Castle and Askew, 2015), often due to factors related to family planning (FP) services, such as care quality (Nanda, 2011).

Key determinants of contraceptive discontinuation include the type of method used, side effects, age (younger women are more likely to discontinue), number of living children, fertility intentions (those spacing children are more likely to discontinue), and changes in marital status (Ontiri, 2020). Discontinuation is less consistently linked to the number of methods available, socio-economic factors such as education (Ontiri, 2020; Hewaida, 2016; Agrahari, Mohanty, and Chauhan, 2016), urban-rural residence (Hewaida, 2016), husband's disapproval (Burke and Ambasa-Shisanya, 2012), and cost or lack of access (Hewaida, 2016; Agrahari, Mohanty, and Chauhan, 2016; Burke and Ambasa-Shisanya, 2011).

Contraceptive discontinuation significantly impacts contraceptive prevalence, unintended pregnancies, and other demographic outcomes, as it increases the unmet need for FP (Jain and Winfrey, 2017). Up to 30% of unintended births result from contraceptive method failure (Cavallaro et al., 2019). In developing countries, 28%-64% of the total fertility rate (TFR) is attributed to discontinuations for reasons other than the desire for pregnancy (Cavallaro et al., 2019; Bradley, Croft, and Rutstein, 2011). Accidental pregnancies while using contraception can result in miscarriage, stillbirth, abortion, or live births that may be unwanted, mistimed, or wanted (Bradley, Croft, and Rutstein, 2011).

In sub-Saharan Africa, over 30% of users discontinue contraception within 12 months, and over 60% within 36 months, mainly due to side effects and method inconvenience (Ali, Cleland, and Shah, 2012). Addressing side effects could increase continuation rates by 10%, and eliminating method failure could boost rates by 6% (Mahmood and Naz, 2012; Wambui, Alfred, and Khasakhala, 2022). Understanding these factors is crucial for helping women and couples achieve their long-term fertility goals. Kano State, with some of Nigeria's poorest maternal and child health indices, presents significant challenges, especially as women in northern Nigeria are less empowered than those in the south (Aliyu, 2020; Ibrahim, 2019). This study aims to assess the reasons for contraceptive discontinuation among women of reproductive age in urban and rural Kano State.

Methodology

Study settings
Kano State, located in North-Western Nigeria, has 44 Local Government Areas (LGAs) — 8 urban and 36 rural. One urban LGA and five rural LGAs were selected for the study.

Study design
A narrative study design was used.

Study population
Women of reproductive age, their male counterparts, family planning service providers, and community and religious leaders in the study area.

Sample technique
Purposive sampling method was used, to explore the respondents' perspectives on contraceptive discontinuation.

Data collection
Data collection included FGDs with women and KIIs with their partners, community and religious leaders, and family planning providers. Recruitment ceased upon reaching data saturation, from FGDS and KII's (table 1), members of the population who possess certain characteristics or experiences were identified and they are willing to share their experiences and information were approached. Respondents were contacted through phone calls and convenient venues at set dates and times were arranged. Data collection was conducted from February to May 2022. Written informed consent was obtained from the respondents to conduct and audio-record the data collection sessions. The FGD respondents (females and males) were in groups of 6-10 per session, and the sessions lasted for 45 to 60 minutes. The criteria used for the selection of male participants were; males that are married and living in the study area for at least six months. Key informant interviews were also conducted with the heads of the family planning service units of the health facilities, and religious and community leaders in the selected urban and rural communities of the urban and rural LGAs respectively. A total of thirty-five KII was conducted, shown in table 1.

Table 1: Summary of Sampled Respondents by Type of Qualitative Method

Qualitative Method	Selected participants in the urban and rural areas	Urban Area (Number of sessions conducted)	Rural Area (Number of sessions conducted)	Total
FGD	Women of reproductive age (8 per focus group)	4	5	9
FGD	Male partners (8 per focus group)	4	5	9
KII	Representative of FP service providers	5	13	18
KII	Religious leaders	2	9	11
KII	Community leaders	1	5	6

Thematic Analyses approach was employed for qualitative Analyses and it was done manually using Microsoft Word and Microsoft Excel. All FGD and KII recordings were transcribed verbatim in their original languages, the method required a set of codes, domains, or themes to subsequently categorize the data collected.

This study was approved by the Health Research and Ethics Committee of Aminu Kano Teaching Hospital (AKTH/MAC/SUB/12A/P-3/VI/3338). Participants gave informed written consent to participate in the study. The protection and confidentiality of participants were ensured by conducting data collection sessions in private settings, maintaining confidentiality, and limiting access to study information to only authorized personnel.

RESULTS

Respondents' Understanding of Contraceptive Discontinuation
The majority of respondents from urban 30 and rural 38 groups had a good understanding of contraceptive discontinuation even though a few had misconceptions. Responses from the FGDs discussants include, " *From my understanding contraceptive discontinuation is a way by which a woman will select a method of spacing her children's in-between births, start family planning*

and then stop." (35-year-old businesswoman Urban FGD) "*Starting family planning and then stopping*" as discontinuation (33-year-old civil servant woman FGD rural). A family planning service provider (FRSP) in the urban area, stated: "*What I understand with contraceptive discontinuation is, some women that started family planning and later stopped*."(KII FPP Ur3, women,40 years).

Another FPSP from the rural area said" *It is like a woman is using an Implant contraceptive method and later changed to another method and as a result, she got pregnant that is how I understand contraceptive discontinuation*."(KII FPP Rr2, women,42 years).

More than half of the family planning service providers from urban (3) and rural (8) groups reported that women in their community frequently discontinued contraceptive methods, some women switched to another method while some abandoned the method completely. In the urban group "*women frequently discontinue any methods when they discover they are experiencing irregular bleeding and some due to the complaint from their husbands.*" (KII FPP Ur1, women, 35 years) While in the rural group" *they frequently come to change to another method if they experience any side effects but most especially those that are taking family planning pills.*" KI (FPP Rr4, women, 40 years) And a few (3) among the family planning service providers from the rural group mentioned they have less frequent contraceptive discontinuation. Among FPP one of them reported that" *there are few clients that discontinued contraceptives in this health facility.*" (KII FPP Rr7, women, 42years).

Methods Specific Discontinuation

The majority of the family planning service providers from the urban (4) and rural (10) groups reported women discontinued more implants, injectables and pills than other methods of contraceptive. One of the FPP reported that: "*those that used the implant are the ones that usually complain to discontinue or seek for removal of the implant method then follows those taking pills at times if they skip some days and they have problems of bleeding, they also stop the methods.*" (KII FPP Ur4, women, 35 years) A respondent in the rural reported:" *The injection method is the one that usually woman discontinues, then pills; now the majority of the women prefer to use either injection or implant and only 2% of women are using pills for family planning.*"(KII FPP Rr5, women, 40 years).

Fertility Consequences Following Contraceptive Discontinuation

As regards fertility consequences following contraceptive discontinuation, the majority of respondents from both groups (28) urban and rural (35), reported: that getting pregnant, induced abortion, live birth, abandoned method, and miscarriage were the major consequences following discontinuation. A family planning service provider from rural reported that: "*They typically got pregnant after discontinuing; I came across some women who begged for abortions; another woman waited for me to terminate her pregnancy for more than three hours; one man threatened to have his wife not deliver the baby and ask for an abortion because she forgot to take her injection. I also attempted to convince the man, and could you imagine that they had used contraception for almost ten years without being pregnant? But he persisted, and he later warned that if she gives birth, he won't take care of everything for such naming ceremony as well as other activities*." (KII FPP Rr1, women,39 years).

Another FPP from the urban group reported that: "*Some women who went more than a year without conceiving would appear apprehensive, although some women taking contraception will become pregnant right away. Some women enjoy their pregnancies, whereas others do not. Some will beg you to terminate the pregnancy, and some may bring their husbands along. Some women also experience miscarriages*." (KII FPP Ur6, women, 40 years).

A woman in the urban group added "*To be honest, I used the injection for three months before stopping for nine months at a time. After that, I became pregnant, and the pregnancy ended in miscarriage*." (FGD,28-year-old housewife) A woman in the rural group reported that: "*They typically got pregnant after discontinuing; I came across some women who begged for abortions; another woman waited for me to terminate her pregnancy for more than three hours; one man threatened to have his wife not deliver the baby and ask for an abortion because she forgot to take her injection*." (FGD, 40-year-old civil servant woman).

Reasons for Contraceptive Discontinuation

Most of the reasons for contraceptive discontinuation that were reported by respondents thirty in urban and thirty-eight in rural groups were: method failure (got pregnant while using the method), intention to get pregnant, side effect/health concerns, husband disapproval, methods not available, inconvenient to use and interference with body.

Irregular bleeding

The majority of women from urban thirty-one and thirty-five from rural groups mentioned; that those women discontinued contraceptives because of irregular bleeding. A report from one of the family planning service providers in a rural group reported "*The only issue or complaint we've had from clients is that they experience irregular bleeding after utilizing contraceptive methods, particularly the implant. We've informed them of this, but they've continued to complain and stop using it*." (KII FPP Rr4, women, 40 years).

Also, focus group discussions of women in urban and rural groups more than forty mentioned irregular bleeding as a main reason for discontinuing contraceptives. One woman reported that: "*After using contraception for two years, I began experiencing irregular bleeding, so I went to the hospital and complained about it seven times before I stopped using it*." (FGD, 36-year-old, women tailor) Another woman from the rural group reported: "*After I attempted the two-month injectable treatment for irregular bleeding and went back to the hospital, where I was given drugs to control the flow after my period resumed normal, and my husband suggested that I switch to an implant. Even though I continued to have irregular bleeding, I tried the implant method next. I was also given another drug to regulate the blood, but I was unable to continue, so I stopped*." (FGD, 38-year-old, housewife).

Got pregnant while using contraceptives (method failure)

A woman reported: "*When my bleeding became irregular around five months ago, I stopped. I visited the hospital, but it did not stop, so I became pregnant*." (FGD, 42-year-old businesswoman) A in the rural group reported that: *"While utilizing an injectable method of contraception, I became pregnant."* (FGD, 38 years woman farmer) Another woman from the rural group mentioned: "*I was using contraceptives when I became pregnant, and it wasn't a planned pregnancy*." (FGD,28 years, old civil servant).

Financial constraint /cost

One of the family planning providers from an urban group reported that: reported that "*All of these services are free, but if the supplies run out, they purchase them from the market for no more than ₦ 200 for the injection and₦ 500 for the implant. In the event of insertion, they must also purchase surgical gloves for ₦ 200 and jik, total of ₦ 500 including cotton*." (KII, FPP Ur3, women, 40 years) Another family planning service provider from the urban group reported that: "*All of these services are, in fact, free. However, if the goods are out of stock, we used to go and purchase them for no more than ₦ 200 for injection and ₦ 500 for implants*." (KII, FPP Ur1, women, 35 years).

A family planning service provider in the rural group reported: "*We live in a tiny village or hamlet, and the health facility is nearby, so everyone can trek there to receive healthcare services. As a result, cost or financial constraints cannot be a significant factor that can lead to the termination of contraceptives.*" (KII, FPP Rr6, 45 years old).

Received counselling on contraceptive method side effect

Family planning service provider from the rural group mentioned that: "Particularly *during group ANC, counselling or health education helps or plays a part in reducing the number of women who stop using contraceptives, during four of the ANC visits, we also provide health talks on family planning to help women understand the value and advantages of family planning, and after they successfully give birth, they will ask to be put on the method of their choice*." (KII, FPP Rr6, 45years) Compared to the urban group that reported, "*Counseling and health education are very significant since we used to explain to them the many procedures, we had available, their adverse effects, and how long they would last*."(KII, FPP Ur3, 40-year-old).

Husband's disapproval

Family planning service providers from the urban group reported that: "*In addition to asking his wife to entirely stop using the technique of contraception, a husband has the option of making this adjustment on his own*." (KII, FPP Ur3, 40-year-old) Another rural group reported that: "*Some women come to us to have their implants or IUDs removed because their spouses object to the method of contraception*." (KII, FPP Rr2, 42-year-old).

Method switched

Four family planning service providers and twenty-eight women from urban and three FPSP and thirty-two women in the rural areas concurred that most women frequently switched from one technique to another, particularly if they suffered negative effects of contraceptive methods. A family planning service provider from an urban group reported that: "*They frequently come in for method changes or to stop using contraceptives*." (KII, FPP Ur5, 41-year-old) Another from a rural group reported that: "*Changing from one form of birth control to another is something that most women do very frequently*." (KII, FPP Rr 2, 42-year-old).

A housewife from the urban group reported: "*I tried pills for a month before stopping because I wasn't consistent with them. I then went to injectable for two months before switching to implants, which my friend recommended was the best, so I'm currently using it*." (FGD, 29-year-old housewife) A tailor from the rural group reported: "*Before learning that it was improper in Islam, we stopped using our withdrawal procedures and instead began using implants*." (FGD, 25-year-old tailor).

Decision makers on the uptake of contraception

Decisions on the uptake of contraception were self/wife, husband/partner, family and relatives, and health care worker; the majority of respondents were fifty women, forty-two partners, and seven religious and four community leaders in both urban and rural groups. One of the men from the urban group reported: "The *decision to utilize contraception was made by my wife and me because she had trouble giving birth to our last child.*" (FGD, Ur1,43-year-old man) Another man reported: "*To avoid adverse effects, I administered the customary approach to my wife ten days after her period. Because every time she gave birth, they used to make CS, and this happened approximately three times, causing me a lot of pain and costing me around ₦120, 000 every CS, I decided to adopt this traditional way for myself, and she supported my choice*." (FGD, Ur3,40-year-old man).

A man from a rural group reported that: "*I am the one who decides whether or not to use contraceptive techniques*." (FGD, Rr1,55-year-old man) A woman from an urban group reported that: "*It is my own decision to uptake contraception.*" (FGD, Ur3, 43-year-old civil servant) A woman from the rural group reported that "*I told him about my plan and he agreed to use contraceptives when I suggested it, so we immediately began doing so*." (FGD, Rr 5, 39-year-old business).

A man from the rural group reported "*We once visited Danmasara General Hospital with my wife expecting her eleventh child and the doctor suggested we use contraceptives so we could take a break. Once everyone had consented, she administered the contraceptive injection*." A religious leader from a rural group reported: "My *wife made the decision to use the current technique of contraception, and before we started, we sought guidance from a health professional. We were aware of each method's adverse effects as well as which one was the most effective*." (KII, Rr 4, religious leader). The urban group reported that: "*Only one of my wives is currently giving birth; the others have stopped. I used to sit down with my wives and discuss the significance and advantages of contraceptives, and I would tell them that anyone who agrees to accept them has the right to do so*." (KII, Ur2, Community leader (dagaci)) The rural group reported: "*My wife gives birth every year, so we decided to visit the hospital and consult with medical personnel because our faith also allowed for giving space so that the mother and kid may grow stronger and healthier before the next delivery*." (KII, Rr6, Community leader (dagaci)).

Type of health facility utilized by household

The majority of respondents (thirty-one) from urban and thirty-five in rural groups utilized public health facilities and twenty-one said to utilized private health facilities in both the urban and rural groups. Women from rural groups reported that "*I generally, visit either a public hospital or a private hospital to acquire my contraceptives, although the former is free and the latter charges for the services.*" (FGD, Rr3, 38-year-old woman). Woman from the urban group reported that: "*The government hospital is where I got my contraceptives*." (FGD, Ur2, 40-year-old woman).

DISCUSSION

The injectable method of contraception was reported to have more discontinuation in the interviews in urban and rural groups. However, the explanations for this higher discontinuation rate (injectable) in the urban group may be method-specific because the method is easily discontinued. A higher discontinuation rate than what was noted in this study was reported for injectables in Uganda & Zimbabwe (Bengtson, 2013), Indonesia (Sznajder,2017), and Tanzania (Safari,2019). These differences could be because some of the research was hospital-based and was conducted among only HIV-infected women (Bengtson, 2013), and in a rural setting (Safari,2019).

In this study, the contraceptive discontinuation rates for pills among the urban group were much lower than the rural groups. The reasons for obtaining similar findings comparable to those obtained from another study conducted in Kano may be a result of the similarity of the cultural background where the two studies were conducted as well as the utilization of similar methodology by both studies. Higher contraceptive discontinuation was reported in Ghana (Emefa, Richmond and Richard, 2014), Tanzania (Sato et al.,2020), rural Tanzania (Safari,2019). and Switzerland (Evens, Sambisa and Curtis,2011). Setting specific and methodological differences may be responsible for the different rates reported by the different studies.

This study found that the method-specific discontinuation for implants has been reported more in the urban and rural groups. The finding from this study was reported lower than what was earlier reported in Kano (Aliyu,2020), these differences may be due to increased state-level awareness creation and programmes on family planning over the last two years spanning between the 2 studies. IUDs were reported to have more discontinuation for the urban and rural groups communities, during the interviews, many of the family planning service providers reported that the DCR was quite high for IUDs as nearly half of the women who attend their family planning clinics discontinue the method.

As regards contraceptive behaviour after discontinuation, method switch was more common in both the urban and rural groups. This was corroborated by most of the family planning service providers and the women in both urban and rural communities during the interviews. There were comparable findings from other studies in Kano (Aliyu,2020), and Ghana (Emefa, Richmond and Richard, 2014).

Abandoned methods of contraception were more mentioned in rural compared to urban communities, The more reported of abandoned contraceptive methods in the rural counterpart may lead to a high fertility rate and consequences such as an increased abortion rate (Chofakian,2019). This may be explained by the fact that the urban group may have had better access to family planning centres and women in the rural area had lower educational status than their counterparts in the urban group.

The implant method was chosen by the majority of women who switched to another method of contraception in both urban and rural communities. Another important consequence of discontinuation noted in this study was pregnancy. Compared to the rural group, twice the respondents in the urban group became pregnant after contraceptive discontinuation. A similar study in Kano reported a much higher prevalence of pregnancy following discontinuation (Aliyu,2020).

Health-related issues and side effects were reported as the commonest reasons for discontinuation by respondents in both urban and rural groups these are comparable to results reported in studies from; Kano (Ibrahim,2019), Bangladesh (Huda,2017), Indonesia (Sznajder,2017), rural Tanzania (Safari,2019), and North Ethiopia (Belete,2018).

Another reason for contraceptive discontinuation was husband's disapproval among women in both rural and urban communities respectively. This reason was also reported in Kano (Aliyu,2020), North Ethiopia (Belete,2018), and South Ethiopia (Diserens,2017).

CONCLUSION

During interviews and discussions with family planning service providers, women, partners, and community and religious leaders on contraceptive discontinuation, it was reported that the majority of women who discontinued a method did so mainly because of factors related to side effects, intention to become pregnant, method switch to a more or less effective one and husband's disapproval. The majority of the respondents noted the most common side effect experienced by women to be irregular bleeding.

REFERENCES

Agrahari K, Mohanty SK and Chauhan RK, (2016) 'Socio-Economic Differentials in contraceptive Discontinuation in India' SAGE Open,6(2), p.1-16.

Ali MM and Cleland J, (2010) 'Contraceptive switching after method-related discontinuation: levels and differentials 'Studies in family planning, 41(2), p. 129–133.

Ali MM, Cleland JG and Shah IH, (2012) 'Causes and consequences of contraceptive discontinuation: evidence from 60 demographic and health surveys' World Health Organization, ISBN 978 92 4 150405 8.

Ali MM, Cleland JG and Shah IH, (2012) 'Causes and consequences of contraceptive discontinuation: Evidence from 60 demographic and health surveys' Geneva: World Health Organization.

Aliyu F, (2020) 'Determinants of reversible contraceptive method discontinuation among women of reproductive age in Kano metropolis' A dissertation of the degree of Master of Science Public Health, Bayero University. and family planning,' Lancet,380(9837), p.165–71.

Belete N, Zemene A, Hagos H, Yekoye A et al., (2018) 'Prevalence and factors associated with modern contraceptive discontinuation among reproductive age group women, a community-based cross-sectional study in Humera town, northern Ethiopia' BMC Women's Health, p. 18:190.

Bengtson, A, Kwok C, Salata R and Byamugisha J, et al., (2013) 'Hormonal Contraceptive Use and Discontinuation among HIV infected women in Uganda and Zimbabwe' J Acquir Immune Defic Syndr, 63(4), p. 506–513. doi: 10.1097/QAI.0b013e318293df9e.

Bradley SEK, Croft TN and Rutstein SO, (2011) 'The impact of contraceptive failure on unintended births and induced abortions: estimates and strategies for reduction. DHS Analytical Studies 22' Calverton, Maryland: Macro International Inc.

Burke HM and Ambasa-Shisanya C (2011) 'Qualitative study of reasons for discontinuation of injectable contraceptives among users and salient reference groups in Kenya' African Journal of Reproductive Health, 15(2), p.67.

Canning D and Schultz TP, (2012) 'The economic consequences of reproductive health

Castle S and Askew I, (2015)' Contraceptive discontinuation: reasons, challenges, and solutions' Population Council and FP2020. http://ec2-54-210-230- 186. compute-1.amazonaws.com/wp-content/uploads/2015/12/FP2020.

Cavallaro F, Benova L, Owolabi O and Ali M, (2019) 'A systematic review of the effectiveness of counselling strategies for modern contraceptive methods: What works and what doesn't' BMJ Sex Reprod Health,0:1, p.16. https://doi.org/10.1136/bmjsrh-2019-200377

Chofakian C, Moreau C, Borges A, Santos O et al., (2019) 'Contraceptive discontinuation: frequency and associated factors among undergraduate women in Brazil' Reproductive Health,16, p. 131. https://doi.org/10.1186/s12978-019-0783-9.

Cutherell M, (2017) 'Implications of discontinuation of LARC methods with the remaining need among women in Sindh province, Pakistan' University of North Carolina at Chapel Hill. https://doi.org/10.17615/yskq-6529.

Diserens C, Quach A, Mathevet P, Ballabeni P, et al. (2017) 'Adolescents' contraception continuation in Switzerland: a prospective observational study' Swiss Med J, p.147: w14504.

Emefa JM, Richmond A and Richard A (2014) 'Contraceptive Discontinuation and Switching Among Ghanaian Women: Evidence from the Ghana Demographic and Health Survey, 2008'African Journal of Reproductive Health,18(1), p. 84.

Evens E, Sambisa W and Curtis S, (2013) 'Contraceptive discontinuation and unintended pregnancy: an imperfect relationship' Int Perspect Sex Reprod Health,37(2), p.58-66. doi:10.1363/3705811.

Hewaida M. Shazlya A.E, Emarab M.A, Reem A *et al*., (2016) 'Discontinuation of contraception in rural and urban areas in Menoufia Governorate' Menoufia Medical Journal,29, p. 996–999.

Huda FA, Robertson Y, Chowdhuri S, Sarker BK, et al., (2017) 'Contraceptive practices among married women of reproductive age in Bangladesh: a review of the evidence' Reproductive Health, p. 14:69.

Ibrahim MM, (2019) 'An Assessment of Socioeconomic Determinants of Contraceptive Use among Women of Reproductive Age in Tarauni Local Government Area of Kano State, Nigeria' Texila International Journal of Public Health, 7(4).

Jain AK and Winfrey W, (2017) 'Contribution of contraceptive discontinuation to unintended births in 36 developing countries' Stud Fam Plann,48(3), p.269–78.

Mahmood A and Naz SS, (2012) 'Contraceptive use dynamics in Pakistan 2008-09'Islamabad: Population Council.

Mutihir JT, Karshima JA, Kahansim ML, Musa J, et al., (2014) 'Factors associated with use and discontinuation of Implanon contraceptive in Jos, Nigeria' Trop J Obs Gynaecol,31(2),p.90–9.

Nanda K, Morrison CS, Kwok C, Byamugisha J, et al. (2011) 'Discontinuation of oral contraceptives and depot medroxyprogesterone acetate among women with and without HIV in Uganda, Zimbabwe and Thailand' Contraception,83(6),p. 542–8.

National Population Commission (NPC), (2019) 'Nigeria Demographic and Health Survey 2018' Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF. [Nigeria] and ICF.

Ontiri S, Were V, Kabue M, Biesma-Blanco R, *et al.* (2020) 'Patterns and determinants of modern contraceptive discontinuation among women of reproductive age: Analyses of Kenya Demographic Health Surveys, 2003–2014' PLoS ONE,15(11): e0241605. https://doi.org/10.1371/journal.pone.0241605

Safari W, Urassa M, Mtenga B, Changalucha J, et.al., (2019) 'Contraceptive use and discontinuation among women in rural North-West Tanzania' Contracept Reprod Med, 4p.18. https://doi.org/10.1186/s40834-019-0100-6.

Sato R, Elewonibi B, Msuya S, Manongi R, et al., (2020) 'Why do women discontinue contraception and what are the post-discontinuation outcomes? Evidence from the Arusha Region, Tanzania' Sexual and Reproductive Health Matters, 28, p.1-1723321.

Starbird E, Norton M and Marcus R, (2016) 'Investing in family planning: a key to achieving

Sznajder K, Tomaszewski KS, Burke A, Trent M, et al., (2017) 'Incidence of Discontinuation of Long-Acting Reversible Contraception among Adolescent and Young Adult Women Served by an Urban, Primary Care Clinic'J Pediatr Adolesc Gynecol, 30(1), p. 53–57.

the development goals,' Glob Health Sci Pract,4(2), p.191–210.

Wambui Alfred A. and Khasakhala, A., (2022) 'Prevalence of and factors associated with contraceptive discontinuation in Kenya' African Journal of Primary Health Care & Family Medicine,14(1), p.1-11. https://dx.doi.org/10.4102/phcfm.v14i1.2992.

Yideta ZS, Mekonen L, Seifu W, Shine S et al., (2017) 'Contraceptive Discontinuation, Method Switching and Associated Factors among Reproductive Age Women in Jimma Town, Southwest Ethiopia'Fam Med Med Sci Res, 6, p.1. DOI: 10.4172/2327-4972.1000213.