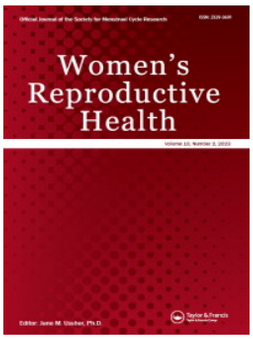

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"Family Planning Is Not a Bad Thing": A Qualitative Study of Individual Level Factors Explaining Hormonal Contraceptive Uptake and Consistent Use Among Adolescent Girls in the Kintampo Area of Ghana

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ABSTRACT

Pregnancy among adolescent girls is a public health problem globally and especially in developing countries. Its occurrence can be prevented with the correct and consistent use of effective contraceptive methods. This study explored the personal determinants of hormonal contraceptive uptake and consistent use among adolescent girls as evidence for informing effective hormonal contraceptive use interventions among them. In-depth interviews were carried out among 16 girls aged 15 to 19 years with hormonal contraceptive experience between April and June 2022 in Kintampo, Ghana. Results showed that knowledge on hormonal contraceptive types and sources of obtaining them, organizing hormonal contraceptive uptake and self-efficacy in getting access, hormonal contraceptive use decision-making, and disclosure of hormonal contraceptive use were important factors explaining uptake and consistent hormonal contraceptive use among adolescent girls in this study. Also, coping mechanisms and skills for accessing and using hormonal contraceptives, attitude toward hormonal contraceptives, and risk perception toward pregnancy influence the uptake and consistent use of hormonal contraceptives. Participants in this study were resilient and highly in favor of hormonal contraceptive use. They have demonstrated that it is possible for adolescent girls to use hormonal contraceptives and use them consistently if interventions are targeted at their attitude to hormonal contraceptives, their self-efficacy, decision-making skills, coping skills, and pregnancy risk perception, among others.

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Introduction

Pregnancy among adolescents is a public health problem, especially in developing countries (Guttmacher Institute, 2020; World Health Organisation, 2020a). In sub-Saharan Africa, about 50% of annual pregnancies are in adolescent girls aged 15 to 19 years (Guttmacher Institute, 2020). The Ghana Maternal Health Survey of 2017 reported childbearing among 14.4% of girls aged 15 to 19 years (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and Macro International, 2018). Percentages of childbearing adolescents increased with age (from 3% among girls aged 15 years to 32% among 19-year-old girls) and differed by place of residence (18% in rural areas vs. 11% in urban), region (from a low of 7% in Greater Accra to 19% in Western Region), level of education (35% for no education vs. 4% for secondary education), and wealth quintile (2.7% for highest vs. 21.1% for lowest quintiles). The Brong Ahafo Region, where this study was carried out, was one of the regions with the highest rate of childbearing adolescents, at 16% (Ghana Statistical Service [GSS) Ghana Health Service [GHS] & ICE International, 2015). In the Kintampo area, a survey of 793 male and female adolescents in 2011 showed that as many as 40% of both male and female adolescents were sexually active. Among them, more than 30% had either experienced a pregnancy or impregnated a partner (Boamah et al., 2014). The notable disparities in pregnancy rates among the different groups of adolescents in the country call for targeted interventions for pregnancy prevention.

Pregnancy- and childbirth-related complications are noted as the primary cause of death among adolescent girls worldwide (World Health Organisation, 2020a), and their children have increased risks of low birth weight, preterm delivery, and poor neonatal outcomes (Ganchimeg et al., 2014). Teenage pregnancy also results in school dropouts, potentially leading families into poverty (Rosenberg et al., 2015). In addition, most teenage pregnancies are unintended, and pregnant girls have reported negative responses from their surroundings including lack of support; refusal of their male partners to accept responsibility; threats of being disowned by family; and stigmatization from friends, family, and even health care providers (Anima et al., 2022, Engelbert Bain et al., 2019; Kotoh et al., 2022, Krugu et al., 2017, Kumi Kyereme et al., 2014). These, among other reasons, lead many girls to abort their pregnancies, often in unsafe ways with negative health consequences and sometimes even death (World Health Organisation, 2021, Engelbert Bain et al., 2019). About 5.6 million adolescent pregnancies are aborted every year globally (Guttmacher Institute, 2020).

Abstinence from sexual intercourse is the surest way to prevent pregnancy, and African religious and cultural norms emphasize abstinence from sex until marriage. As such, efforts for pregnancy prevention mostly center around abstinence promotion (Baku et al., 2018, Anarfi & Owusu, 2011). This limits the level of sexual and reproductive health education received by young people both at home and at school (Baku et al., 2018, Awusabo-Asare et al., 2017). However, sexual desire, which is part of human biology, peaks at adolescence and makes abstinence from sexual intercourse not a practical approach among all adolescents. In addition, some girls participate in sexual intercourse for financial and material gains or out of pressure from friends, ignorance, and misinformation (Boamah-Kaali et al., 2016; Krugu et al., 2017). This makes pregnancy

prevention interventions that concentrate on abstinence only not the best approach for all groups of girls (Boyer, 2018; Buse et al., 2016).

Next to abstinence, the use of effective contraceptives can prevent unwanted pregnancy. Research has shown, however, that the use of contraceptive methods among sexually active adolescent girls is low in developing countries (Guttmacher Institute, 2020). In Ghana, in 2017, 9.8% of sexually active girls aged 15 to 19 years were using any contraceptive method, compared to 6.9% who used any modern method of contraception including oral contraceptive pill (1.1%), intrauterine device (0.1%), injectables (1.3%), implants (1.7%), and male condom (1.6%) (Ghana Statistical Service [GSS] Ghana Health Service [GHS] & ICE International, 2015).

Considering the negative effects that adolescent pregnancy places on the adolescent, her family, and society at large, it is prudent to put in place strategies to curb the occurrence of unwanted teenage pregnancy through the promotion of correct and consistent contraceptive use among sexually active adolescents. So far, scientific research on contraceptive use, especially in developing countries, has mostly focused on condom use (Smith, 2020). Yet condoms are less reliable for pregnancy prevention compared to hormonal contraceptive (HC) methods (World Health Organisation, 2020b) and has numerous practical challenges with its use, including male partners' perception of it reducing sexual pleasure (Raidoo et al., 2020). Also, patriarchal views on gendered roles make men responsible for decisions on the number of children to have, giving women less autonomy over their own initiatives for contraceptive use (Afful & Attom, 2018). So, most girls depend on the willingness of their partner and their negotiation skills for condom use (Boamah et al., 2014). However, a lot of girls in the Ghanaian setting usually lack these negotiation skills (Krugu et al., 2017); this makes women-controlled methods a better alternative for adolescent girls. Our article focuses on the use of HC to prevent pregnancy among adolescent girls.

For HCs to effectively prevent pregnancy, they must be used correctly and consistently. But correct and consistent contraceptive use is low in developing countries (Chandra-Mouli et al., 2014, Guttmacher Institute, 2020). It is critical then to explore the factors that influence the initiation of, as well as factors influencing the correct and consistent use of, HC methods. Initiating HC use vs. consistent use of HCs are mediated by several overlapping but also different factors including personal and external level factors. We have previously reported on the personal and external barriers to initiating HC use among adolescents who have never used HC methods in the Kintampo area of Ghana (Boamah-Kaali et al., 2021). In the current article, we focus on the individual factors—or personal determinants—that enable the consistent use of HCs among adolescents in the Kintampo area who have experience with HC use. External factors influencing HC use will be discussed in detail in a forthcoming article (Boamah-Kaali et al., upcoming).

Previous studies on determinants of HC methods use report age, level of education, knowledge of contraceptive methods (Blackstone et al., 2017; Bolarinwa et al., 2020; Chola et al., 2020; Mahato et al., 2020; Kapasia et al., 2022), having clear plans for the future, communication with a partner about contraception use, desire to use birth control, and a desire to prevent unintended pregnancy as factors for contraceptive uptake (Bain et al., 2021; Blackstone et al., 2017; Nalwadda et al., 2010). In addition, fear of pregnancy, worries about carrying a pregnancy, worries about the cost of caring for a

baby, and fear of abortion complications have been positively linked to HC uptake (Nalwadda et al., 2010). Specifically, for long-acting contraceptive methods, perceptions about their reliability and long duration of action positively influence their uptake (Mahato et al., 2020).

Besides literature, theories can be useful for further clarifying potential determinants of contraceptive use and are essential for planning evidence-based interventions (Eldredge et al., 2016). Our study benefited from a brainstorm of some constructs of the theory of planned behavior (TPB) and the health belief model (HBM) in identifying the possible determinants of correct and consistent HC use among adolescents with HC use experience. The TPB postulates that behavior is determined by five constructs, including intention, attitude, subjective norms, and perceived behavioral control (Ajzen, 1991). For our study, it implies that adolescents would use HCs if they have a high motivation to use (intention), if they have positive attitude toward HC use (attitudes), if people around them support HC use or use HCs themselves (subjective norm), and if adolescents have the confidence to use HCs (perceived behavioral control). The HBM also posits that individuals are likely to indulge in a health-related behavior (i.e., HC use in our case) to prevent a disease or a health condition (i.e., unwanted pregnancy in our case), if they believe that they are at risk for and susceptible to the disease or health condition (i.e., risk of unwanted pregnancy in this case), if the effects of the disease or health condition are severe (i.e., perceived severity of negative effects of unwanted pregnancy in this case), and if the benefits outweigh the cost if the said disease is prevented (i.e., benefits of preventing early pregnancy through HC use) (Janz & Becker, 1984).

Research on the individual-level factors that influence the use of contraceptives are usually based on the assessment of the influence of demographic factors (Kungu et al., 2020; Nanigopal et al., 2022; Wuni et al., 2018), which cannot be changed but can be used to tailor interventions. Personal social-psychological factors influencing HC use are amenable to change for intervention purposes, but limited data on this exist globally and even more so in Ghana. Therefore, this study contributes empirical data on the determinants of HC use specifically by qualitatively studying the individual-level or social-psychological factors that influence the initiation and consistent use of HCs among adolescent girls in the Kintampo area of Ghana. Knowing these determinants of HC uptake and consistent use would provide a template for future interventions aimed at informing adolescents about the use of HCs and assist them in making informed decisions with the goal of promoting better sexual health and reducing the occurrence of teenage pregnancy among them.

Methods

Setting

The present study was conducted in the Kintampo area (Kintampo North Municipality and Kintampo South District) of Ghana with an estimated population of 179,736 of which the adolescent population (15–19 years) numbers 19,045 (male, 49.7%; females, 51.3%) (Kintampo Health & Demographic Surveillance System, 2021). In 2011, 67% of the 311 sexually active adolescents in a survey of 793 male and female adolescents stated to have ever used a contraceptive method with only 13% using HCs (Boamah et al., 2014).

Study Design

An explorative qualitative study using semi-structured in-depth interviews was conducted among adolescent girls aged 15 to 19 years between April 2019 and June 2019. An in-depth interview approach was chosen because this was the first time exploring the subject matter in the study area. The method offered us the opportunity to generate in-depth data on personal opinions, thoughts, experiences, and feelings of adolescents on the subject of HC use, which would have otherwise been difficult to do with other more confirmatory data collection methods such as prestructured surveys.

Study Population and Selection Criteria

The study population comprised adolescent girls who had HC use experience (excluding girls with exclusive emergency pill experience). Girls who were using HCs at the time of the interviews and girls who had discontinued the use of their HCs less than 3 months prior to the interviews were included. The length of 3 months of use discontinuation was chosen to avoid recall bias (Khare & Vedel, 2019).

Recruitment

Recruitment was done from the family planning clinic at the Kintampo municipal hospital, a senior high school, two dressmaking parlors, and 10 households in Kintampo town. Prospective participants were identified at the various locations by the study team through nurses, a schoolteacher, and owners of dressmaking parlors, respectively. Those recruited from the households were identified using the database of the Kintampo Health and Demographic Surveillance System (KHDSS). Whenever the research team met a prospective participant, they introduced themselves as researchers from the Kintampo Health Research Center who were researching HC use among adolescents. The study team did not know ahead of time the HC use status of girls referred from the school and dressmaking parlors. All such prospective participants met were individually and privately asked by the interviewer whether they had any experience with HC use. Prospective participants who were 15 to 19 years old and who indicated that they were currently using or had recently used an HC method from all the recruitment sources were asked whether they would be willing to consent to join the research.

In terms of recruitment from households, 10 girls who had previously been part of a contraceptive use study involving our study team (Boamah et al., 2014) and were still in the age bracket of 15 to 19 years (10/793) were purposively selected using contact information that was obtained from the KHDSS. After contacting them, it turned out that 8 of the 10 girls contacted who had stated in the previous study that they used HCs were actually consistently using emergency contraception and therefore could not be included in the study. In the end, only two were included in the study.

With regard to recruitment from a secondary school, a senior high school was randomly selected out of three senior high schools in Kintampo using the lottery method. Fifteen girls were contacted through referral by a teacher. Twelve informed the research team that they were not using HCs. The 3 girls out of the 15 who used HCs were asked to join the study. Subsequently, two fashion academies were approached, as these are

places where there are numerous young apprentices. Out of 12 girls approached, only 3 reported use of HCs and they all accepted the invitation to be included in the study. All the eight girls from these recruitment venues who met the inclusion criteria were informed about the study objectives (i.e., gathering information on factors that influence HC use among young women) and procedure (i.e., face-to-face in-depth interviews). They were then introduced in the study and were given a day to decide whether they were willing to participate in a 1-hour interview on their experiences with their HC use. All eight girls ended up participating in the study.

Subsequently, finding more girls who were using normal HCs (and no emergency contraception) and willing to disclose their HC use became a challenge and so the study team resorted to recruiting from the family planning clinic at the Kintampo Municipal Hospital. The nurses were requested to refer girls who came for family planning services and met the study's inclusion criteria. The family planning clinic is not allowed to share any personal information of patients. Therefore, when a girl came in for her contraceptive method, she would be asked by the nurses whether she was interested in participating in a research activity among adolescents with HC use experience. Upon agreement from the girls, the research team was informed by the clinic to schedule an interview with the girl following her visit. Ten girls who agreed were referred to the study team for an interview. Of these 10, one had to leave in the middle of the interview to take care of a younger sibling, and another girl ended up not wanting to join the study because she felt the subject area was too sensitive. The remaining eight were included in the analyses. Recruiting from the family planning clinic was the most effective method of recruitment because the nurses already had knowledge on their age and contraception use. In the end, a total of 47 girls were approached following the recruitment procedures described above, and 16 girls were included in the study.

Ethics Approvals, Data Collection, and Consenting Process

The Kintampo Health Research Center Institutional Ethics Review Committee (FWA number 00011103) and the Ethical Review Committee, Psychology and Neuroscience at Maastricht University (Reference number ECP_04_09_2012_S23) granted ethical approval for the conduct of this research. Interviews were carried out by a female social scientist with a master's degree in public health from Kintampo Health Research Center and a master of science student from Maastricht University. Interviews were done in quiet places under trees, around school buildings, in dressmaking parlors, in a church yard, and in a quiet room at an adolescent health corner. Interviews lasted an average of 40 minutes (range, 20–60 minutes) and were tape-recorded. Prior to starting the interviews, participants were allowed to ask questions on their rights and responsibilities as study participants. They were assured of anonymity (names were not recorded, but participants were given unique study IDs that would make it impossible to relate any information to individuals) and private storage of their audio recordings on password-protected computers, accessible only to study staff. They were informed that only group data would be shared with the scientific community. Participants were also told that they were free not to answer questions they were not comfortable about or to stop the interview at any time without any explanation.

All participants provided written informed consent for the interviews and audio recordings ahead of the start of interviews. For participants younger than 18 years, parental consent was sought. (The study objectives and procedures were explained to the person who was regarded by the girls as their legal representative and they were asked whether the prospective participants would be allowed to join the study, to which the parents agreed. No parent showed signs of unawareness or disapproval of their children's HC use.) There were no cultural barriers during the interviews as the interviewer is a native of Kintampo. The participants had the choice to do the interview either in English or in the local language (Twi, a local language spoken and understood by majority of residents). Only one respondent had her interview in English, compared to 15 who had theirs in Twi. Data saturation was reached after the 15th interview and confirmed after the 16th interview. Nurses were then requested not to refer study participants anymore.

Participant Description

Of the 16 adolescent girls who participated in the study, 12 were Christian and the remaining 4 were Muslim. Almost all of them (15) had ever been to school with the highest educational level attained being senior high school. Twelve were still schooling, and four were dressmaking apprentices. Six of them lived with both parents, one lived with a single parent, five lived with a grandparent, two lived with older siblings, and two lived with their husband or boyfriend. All the girls had boyfriends, and one was married at the time of data collection. Although specific questions on pregnancy were not asked, five girls reported to have given birth, and all girls had experienced sexual intercourse (see Table 1 for full information on participant description).

Table 1. Description of study participants.

Variable ($N = 16$)	Frequency (n)	Percentage (%)
Religion		
Christian	12	75
Islam	04	25
Schooling		
Primary school	03	19
Junior high school	07	44
Senior high school	05	31
Illiterate	01	6
Marital status		
Married	01	6
In a serious relationship	15	94
Sexual experience		
Sexually active	16	100
Childbirth*		
Has a child	05	31
Has no child	11	69
Current occupation		
Dressmaking apprentice	04	25
Hairdressing apprentice	02	12
Schooling	10	63
Who respondent resides with		
Both parents	06	37
Single parent	01	6
Grandparent	05	31
Husband/boyfriend	02	13
Older sibling	02	13

*Specific questions on ever being pregnant were not asked.

Interview Guide

A semi-structured interview guide was used for data collection. The TPB and HBM were used to brainstorm potential personal determinants of correct and consistent HC use among adolescents girls. The guide, which was structured in themes, had sections on background characteristics (e.g., age, level of education, relationship status, ethnicity), HC use and adherence experience (including how to make sure the method works), access to HCs (including the easiness or difficulty in obtaining HCs), and personal thoughts and experiences with HC use (including how decision to use was made).

Within each main theme, probing questions were asked to get more in-depth information (e.g., when discussing their experience, interviewers could ask on positive vs. negative experiences). The data collection tool was pre-tested among three adolescents in the study area to test for coherent flow and understanding of the questions and prospective participants' ability to answer the questions before data collection.

Data Analysis

The interviews conducted in Twi (15 in total) were translated and transcribed verbatim into English by the first author. The transcribed interviews were coded and thematically analyzed using a qualitative data analysis software; Atlas Ti. version 8.4.2. The code-tree was generated based on the grounded theory approach (Glaser Barney & Strauss, 2017) using codes based on theoretical constructs. Open coding was done through inductive reasoning. Three interviews were coded by the first and second authors independently (second author was not involved in data collection). To ensure intercoder reliability, back-and-forth discussions were done between the first and second author on the discordant codes. The final codes used for the transcripts were all agreed on by both the first and second authors. Axial coding was used to draw connections between the codes and selective coding used to categorize codes into main and subcategories. Main categories were further grouped into possible themes. Outputs from the coding were summarized iteratively by the first and second author and are shown in the Results section. Summaries that overlapped in content were merged.

Results

The results presented below describe adolescent girls' experiences with HC use and adherence, accessing of HCs, and the personal factors that may influence HC uptake and consistent use.

Correct Use and Adherence to HCs

All the girls in this study had used at least one form of HC method, with three of them having used several different ones. The types used including current methods and methods ever used were a 3-month injection (13 girls), a 5-year subdermal implant (7 girls), and a daily pill (5 girls). The most preferred and consequently used method was the 3-month injection. The next preferred method was the 5-year implant.

With regard to the consistency in using their methods, among those who used the injections, they reported that they always went on the expected date for a repeat dose of their vaccine. Among those who took the daily pill, they made sure to take it daily, as shown below.

> I had to take it consistently. I always remembered to take my pills and I did not encounter any problems. (18-year-old girl)

However, a quarter of the girls were not compliant. It seemed that they quickly and easily switched between methods the moment they started to feel "uncomfortable." Two girls with the implant had discontinued use even though their sexual relationship continued. A few of them ultimately switched to the emergency pill, using it as a regular way of protection, regardless of the side effects, as illustrated in the quote below.

> First of all, I went to the hospital for the family planning injection. […] The three months. So that one kind of prevents the menses from flowing and when that happens, your tummy bloats so a sister of mine told me to stop when the time was up for me to repeat the injection but a friend of mine told me to go for the renewal because the injection will be more beneficial. Those medicines [emergency contraceptive pill] are not safe and I should not take so much of it into my system. … So, I continued with the injection […] but later, I developed headaches and I lost a lot of weight so I decided that I will not do it again. So, I stopped and resorted to using the emergency pill. (18-year-old girl)

> With regard to knowledge on HC types and sources of obtaining them, all the girls we spoke to knew that HCs are used for preventing unwanted pregnancy.

> I know that as I am learning this trade, definitely someone will propose to me and if he proposes, by all means we will have sex so that is why I decided to do it to prevent me from getting pregnant. (16-year-old girl)

The majority of participants knew that there are different types of HCs, including the 3-month injection, implants, daily pills, and emergency pills, although hardly anybody could correctly describe how HCs work. The hospital and clinic, as compared to the drugstore, were mostly mentioned as the place to obtain HCs. The majority was aware that it only protects you when you use it consistently and timely.

Organizing for HCs and Self-Efficacy in Getting Access

Almost all the girls indicated that they got their HCs from the hospital instead of the pharmacy, because at the pharmacy you must pay more, and they expect more negative responses and/or are worried about meeting other people. A small majority of the girls indicated they had no difficulties or worries at all when visiting the family planning clinic for the first time. For the large majority, going to the facility for the first time to get the method was difficult because they did not know what to expect, where to go, or how to go about it. Half of the girls stated they were or would be feeling very shy and worried about all kinds of difficult questions that would be asked. A few girls also stated that they were worried that the health care provider would refuse to provide them the method. Almost all girls were escorted by friends, cousins, boyfriends, neighbors, or parents to the various sources (hospital, drugstores) for the first time to access HCs. Subsequently, though, all girls could go by themselves to get their methods without an escort after they got used to the place and felt more comfortable.

> R: On the first day I was very shy but subsequently, I became close to the guy [the pharmacist] so when I go there, I am able to ask him questions and he explains things to me. […] I: Why were you shy? R: If it was Paracetamol that I was going to buy, I could easily go but going there for the first time to buy this medicine is shameful. … Because people have different thoughts. The guy will think that I am a bad girl that is why I have come to buy this pill. So that crossed my mind and it made me shy buy I went to buy it. (19-year-old girl)

HC Use Decision-Making

The majority of the girls made the decision regarding HC use by themselves. For about a third of them, their decision was driven by having already experienced a pregnancy or by already having a child. They were confident that they had made the right decision for themselves by using HCs to protect against pregnancy and securing their future:

> R: You know, because of what happened to my school when I got pregnant, I don't want the same thing to happen to me again with this apprenticeship too. So that is why I decided to use it [a 5-year implant] to protect myself so that I can successfully complete my apprenticeship. […] I: I see. So how did you make the decision to use the family planning? Did someone help you? R: No I made the decision myself. (17-year-old girl)

Among the other girls, their decisions to use and what type to use were based on advice from others (in order of frequency mentioned: friends, mothers, nurses, neighbors, boyfriends or televised advertisement) and driven by a desire to be able to secure their future, by completing their education or a trade they are learning. They mentioned that after the advice to start using a HC method, they visited the family planning clinic, where they were advised on the different types and were provided with their choice.

Disclosure of HC Use

The majority of the girls we spoke to had disclosed their use of HCs to either their partners, mothers, or close friends. In a few cases, other family members (father, sister, cousin) also knew. Most of these girls would not be bothered if others (even those not close to them) know or find out that they use HCs. Reasons for disclosing are that it is not a crime, it is normal, it is not a bad thing (a pregnancy is worse), and it shows responsibility: They are using it to protect themselves and, besides, everyone else does it, as shown below.

> Oh I won't be worried. Everyone else is spoilt. Everyone has a reason why they go in for a boyfriend so I will not be worried. (15-year-old girl)

A few of the girls did not feel comfortable with disclosing their HC use because people may make wrong assumptions regarding their reasons for use and gossip about it; they will be seen as bad, disrespectful, and sleeping around. This group of girls has not discussed contraception with their partners because the partners have not enquired, or the girls were already using the contraceptives before getting into a relationship with the guys.

Coping Mechanism and Skills for Accessing and Using HCs

All girls stated how they cope with diverse unfavorable circumstances in their quest to access or use HCs. When it is about getting the HC, some stated that instead of going

to the drugstore, where they are likely to meet familiar people, they would rather go to the hospital and talk privately with the nurse. Others mentioned having an escort from, for example, friends; writing the name of the drug on a piece of paper or sending someone to get it for them or asking the provider to bring it home; asking their boyfriend/somebody else to get it; going to an older and more experienced seller; or walking away or waiting until the drugstore is empty.

> I: And the pills? How did you feel getting them from the drugstore? R: I used to feel shy. I used to go to places where the dispensers were matured. I: Why was that? R: I was shy. Hahaahaa … anytime I went and met other people, I had to move aside for a while and wait for them to leave before I go to buy, hahahahaaa. (19-year-old girl)

To deal with a non-approving boyfriend, some girls reported using it secretly, and most went ahead to access their HC methods even after they met familiar people at the health facilities.

> R: No, I have never met anyone except today when I saw one of my teachers. I didn't even see her. She was the one who saw and called me to ask what I was doing there. I told her I had come for injection and she left. I: So how did you feel when you saw her? […] I know I wasn't doing anything bad, so there was no need for me to worry. I: Okay, but how did she react? R: I did not see any reaction from her to show that I had come to do something bad. I don't know if it is later on that she will go and talk about me. (16-year-old girl)

When asked what helps them to comply with HC use, it was mentioned that they read the instructions, track their schedule, use long-term methods if they are forgetful, or keep their HC next to an item they use daily.

> R: It is important you keep the medication at a place where you keep other things that you use daily. For instance, I used to keep mine at the same place where I keep my body lotion because I use my body lotion daily and when I see it, I remember that I have to take it. So we have to keep it at such places where they will be visible. (19-year-old girl)

Attitude Toward HC Use

As expected, the majority of all girls expressed a (very) positive attitude toward HC use: It protects against unwanted pregnancy, making it possible to complete school, learn a trade, and be able to achieve future ambitions. Most of the girls found the use of HCs so beneficial that they would not yield to any opposition to use from family, friends, religious leaders, or partners. Some stated that even if they should experience side effects with their methods, they will still go ahead to use HCs because they presume that the benefits outweigh the possible side effects. They state: "it is effective and trustworthy."

> As for the family planning, everyone knows it is good. It helps us to prevent pregnancy to be able to learn our trade […] so if you go for a boyfriend and you don't protect yourself, you can become pregnant and you cannot complete your apprenticeship so that is why I agree that the family planning is good for everyone to do it. (18-year-old girl)

However, a few respondents perceived the use of HC as bad, particularly due to unpleasant experiences such as change in menstrual cycle and fear of side effects such

as future infertility, especially related to the use of implants. They seem to prefer the method that still gives them a monthly menstruation. There is also the belief that it is sinful because it means you have sex and/or it would motivate you to have sex with many men.

HC Use Misconceptions and Their Management

About half of the girls we spoke to reported having either witnessing or hearing some unpleasant incidents being attributed to the use of HCs. Participants reported hearing that using HCs could cause cancers or fibroids, destroy the womb or make the womb disappear, cause barrenness, make you infertile or at least cause pregnancy problems, or make people collapse or even die. Specifically referring to the implant, girls reported that it can get lost in the body.

> The reason why we even came to take the implant out is that, there was this lady in our neighborhood who was cooking so she collapsed and by the time she got to the hospital, she was dead. […] Yes, she had also done the implant so we got scared. At the funeral, everyone was saying "family planning," "family planning," so that really scared us. (18-year-old girl)

Other study participants said that different methods of HCs may fit different people, so there is the need for the nurses to check the blood and see what is most suitable for a specific person. Others do not believe the claims attributed to HCs and they think that if a method does not fit, the best thing for one to do is just switch to another.

> I hear a lot of people complain about not having children when you use the family planning, but I don't take those assertions seriously. Other people have done it and yet have given birth so I don't believe it when people say that. We differ from each other. There are some people who would experience extreme weight loss when they use a type that does not fit them. Others also gain a lot of weight. It depends, so when you experience some side effects, you just have to switch to another method that will work well for you. (19-year-old girl)

Pregnancy Risk Perception

All the girls clearly expressed their awareness of the risk and fear of getting pregnant or having a repeat pregnancy (for those already with children) when having unprotected sex, which would interfere with their future plans, and therefore the need to continue to protect one's self as described below.

> Maybe you are in school and you are also in a relationship. You also have sex with the guy so if you don't protect yourself, the guy doesn't also protect himself, you will get pregnant. If you get pregnant now, you will drop out of school, and you can't pursue your dream career. (15-year-old girl)

Future Ambitions

All the girls reported to have plans for a brighter future and are working toward their ambitions of becoming a doctor, a nurse, a soldier, a crime investigating officer, a fashion designer, and so on. For these reasons, they chose to use HCs to prevent having an

unwanted pregnancy, which may interrupt their plans and prevent them from achieving their set objectives for the future. Some were really determined in doing so.

> I: So how about your boyfriend, if he sees it, will you be worried? R: No. I: Why? R: Because he knows I used it to protect myself so that I can progress so he will not say anything. I: But if he should see it and ask you to stop because it is bad, will you stop? R: No then I will rather break up with him. I: Why is that? R: Because I am currently learning a trade, but he is doing nothing. I am the one who can get pregnant not him. If I should get pregnant now, it will affect me but not him. (17-year-old girl)

Discussion

We have explored the individual factors that may explain the initiation and continual use of HCs among adolescent girls in the Kintampo area of Ghana. We found that most of the girls in our study used their contraceptive methods consistently. Only a few had stopped using theirs, while others switched methods from time to time. Several social-psychological factors account for HC use initiation and adherence among the girls—including knowledge of HC types and sources of obtaining them, organizing HC uptake and self-efficacy in getting access, HC use decision-making, disclosure of HC use, and coping mechanism and skills for accessing and using HC—and may explain the uptake and consistent use of HCs among girls in our study. Also, attitude toward HC use, HC misconceptions and their management, pregnancy risk perception, and future ambition influence HC uptake and use consistency among the girls. These are discussed in detail below.

Almost all girls in this study were aware of available HC types and where to get them but could not describe exactly how they work to prevent pregnancy. Because of the girls' limited knowledge on the mechanism of action of HCs in pregnancy prevention, some of them could hardly accept the side effects they experienced in using their HCs, especially the change in their menstrual cycle and blood flow. This limited knowledge also fuelled their misperceptions about HC use, such as it causing future barrenness. Some of the girls tended to worry about their personal experiences of the side effects of HCs they used and the unpleasant experiences of other people they knew, leading to their switching methods or stopping their method use altogether. Low levels of contraceptive use have been reported among adolescents who fear the side effects of contraceptives in the literature (Akonor et al., 2021; Ukegbu et al., 2018). Eliason et al. (2014) have also found that being anxious about side effects of contraceptives, on account of limited knowledge on how contraceptives work, is a paramount reason for not using modern contraceptives in rural settings (Eliason et al., 2014). Unfortunately, some of the girls in our study who had experienced some side effects from their regular HCs resorted to using emergency contraceptives. However, the use of emergency contraceptives could have increased side effects with frequent use, compared to regular HC methods (World Health Organisation, 2020b). The girls' preference for emergency contraception as a solution to avoiding side effects of their regular HCs could be a result of ignorance and draws attention to the need for in-depth education on this matter. Awusabo-Asare et al. (2017) note the sketchy nature of all aspects of sexual and reproductive health issues taught in Ghanaian schools, emphasizing that contraception

is the least covered topic among the sexual and reproductive health (SRH) topics taught as part of selected core and elective subjects (Awusabo-Asare et al., 2017). The low level of in-depth knowledge on contraceptives found in this study points to the need to consider comprehensive SRH education as a stand-alone core subject taught in Ghanaian schools to provide Ghanaian youth with the needed information on SRH issues. Other interventions that provide full and comprehensive information on contraceptives, their mechanisms of action, and their side effects may also help adolescent girls in Kintampo and other similar settings to gain deeper knowledge about HCs (Boti et al., 2019; Chandra-Mouli et al., 2019; Norton et al., 2017; Omar et al., 2008; Pazol et al., 2015). Such educational interventions could be delivered during school health talks and via mass media (radio and television) to target out-of-school adolescents as well.

Organizing HC uptake and self-efficacy in getting access also influenced HC uptake and use consistency among girls in our study. Most girls in our study portrayed less self-efficacy in organizing and accessing their HCs from health facilities, at least for the first time. They were mostly shy, especially the first time they visited the health facility or drug-selling outlet for their contraceptives and had to get an escort before going. Most of them feared being judged by health care workers or other adults they might meet, which negatively affected some of them as they had to go back home and come another time or find someone to get it for them. This could delay the renewal of their method and put them at risk of unwanted pregnancy. Adolescents with low self-efficacy have been reported in the literature to be less likely to use contraceptives compared to those with high self-efficacy (Muhindo et al., 2015). A few of the girls, however, said they were confident going to the facility for their methods, even as first-timers. Empirical data suggest that adolescents who portray high self-efficacy to access contraceptives from a health facility more often use their contraceptives consistently (Kahsay et al., 2018; Akonor et al., 2021, Getinet et al., 2022). Positive Youth Development programs such as "It's your game … keep it real" (Markham et al., 2012; Tortolero et al., 2010) foster young peoples' competence and confidence to develop safer sexual behaviors like delaying of sexual initiation, limiting frequency of sex, using contraceptives, and having fewer sexual partners (Gavin et al., 2010). It will be prudent to take adolescents through some of these interventions to build their self-confidence to enable them to be more assertive in making important decisions regarding their SRH.

The girls' innate motivation to decide on contraceptive use initiation in this study may also explain the consistent use of their HC methods. Most of the girls in this study made the decision to use HCs by themselves, showing their assertiveness and autonomy. The theory of self-determination posits that the quality of a person's motivation determines the extent to which they will indulge in and sustain a given behavior. Autonomous motivation, which is central to this theory, argues that having the autonomy and freedom to make choices about important life goals is a strong predictor of behavior (Deci & Ryan, 1985). Most girls initiated their HC use based on their desire to avoid the occurrence or reoccurrence of pregnancy and to complete school or a vocation. This important decision to postpone pregnancy to pursue school or a vocation places them at a vantage point of becoming financially independent and empowered. Several health-related interventions based on the self-determination theory have helped people adapt their behaviors and benefited from improved health outcomes (Silva et al., 2015). It would be prudent to

provide adolescent girls with these kinds of interventions, which will enhance their ability to decide on life issues, including using HCs if need be.

Disclosure of HC use is another important determinant of HC use among the girls in this study. Research shows that adolescent girls who discuss issues related to sex, contraception, sexually transmitted infections, and pregnancy prevention particularly with their parents usually engage in safe sexual behaviors. They are more likely to also use contraceptives consistently (Gbagbo, 2020; Lantos et al., 2019; Widman et al., 2019). Most of the girls in our study had told their parents about their HC use probably because they perceived their parents to be favorably disposed to adolescent HC use. It may also be that their parents encouraged them to use HCs for pregnancy prevention, especially for those who already had a child. The ability of the girls to talk to their parents about their sexual behavior and contraceptive use could also signify a good parent–child relationship at home. Cuidate, a sexual risk reduction program for Mexican youth, reinforces the importance of building parent–child relationships as a way to promote environmental support at home for adolescents' sexual and reproductive health. This fosters adolescents' trust in their parents and enables the discussion of private issues (Villarruel et al., 2010), which could include their use of contraceptives.

Having a coping skill is useful in proactively addressing issues and dealing with stressful situations and anxieties in life (Berger, 2011; Schwarzer & Knoll, 2004; Skinner & Zimmer-Gembeck, 2009). The girls in our sample exhibited their coping skills in dealing with the difficulty of accessing and using HCs. Their expressed coping skills may explain their HC uptake and subsequent consistent use. They showed a high level of commitment to their HC use and found several means through which to access and use their HC methods in the face of challenging situations and going against the demands of opposing partners. The ability to cope with difficult situations in life shows resilience and defines a person (Straud et al., 2015). Interventions based on cognitive behavioral therapy and social emotional learning, among others, equip adolescents with coping skills and present promising methods of helping them handle their emotional stress, modify risky behaviors, and adopt more healthy lifestyles (Šouláková et al., 2019). These interventions would be worth trying out to support adolescents in Kintampo in dealing with possible stressful situations around their sexual and reproductive health, including their contraceptive use.

Further, a positive attitude toward HCs may explain the girls' uptake and consistent use of their hormonal methods in this study. Most girls were very positive about their HCs and attributed lots of benefits to using their HCs. Although almost all girls had either experienced or knew of the negative experiences of other people who used HCs, the positive attitude of the majority of them toward HCs in terms of how beneficial they are in preventing pregnancy probably helped in the consistent use of their methods. Positive attitudes to contraceptives have been linked to their uptake and consistent use. Literature points to consistent use of the oral pill, for example, among research participants with a positive attitude toward contraceptives (Kiene et al., 2014). Also, the Promoting Change in Reproductive Behaviors of Adolescents (PRACHAR) project in India has demonstrated that promoting positive attitudes toward contraceptives leads to a substantial increase in their uptake and sustained use (Subramanian et al., 2018). In essence, building demand for contraception among adolescents through interventions

such as the PRACHAR project and the ones used in Chile, England, and Ethiopia (Chandra-Mouli et al., 2019) could be beneficial for improving attitudes toward contraceptive use to improve their consistent use among adolescents in Kintampo.

Perceived risk of unwanted pregnancy and fear associated with unwanted pregnancy among girls in this study could also explain their initiation and sustained use of HCs. As was similarly reported in Nalwadda's study in 2010, most of the adolescents in that study used contraceptives because of fear of the occurrence of pregnancy, fear of carrying the pregnancy, and fear of taking care of the baby (Nalwadda et al., 2010). Evidently, most health decision-making theories postulate that people would ideally not engage in behaviors with a high risk of an undesirable outcome (Janz & Becker, 1984). It is therefore not surprising that most of the girls in our sample appreciate their vulnerability to unwanted pregnancy and its consequences and therefore are being proactive in avoiding it.

Strong future ambitions may also explain the girls' consistent use of HCs among the girls. All the girls who participated in this study were learning a trade or were in school. There are more girls in school or vocational training now than before, leading to an increase in age at first marriage in Ghana (Ghana Statistical Service [GSS] Ghana Health Service [GHS] & ICE International, 2015). Because girls spend longer periods in school or their vocational training, they would probably like to postpone pregnancy until after their education or training. Almost all the girls in our study seemed very committed to their schooling or learning of a trade and were bent on successful completion. They reported using HCs so that they can successfully complete their training and secure economic self-sufficiency in future. Chernick et al. (2015) found in their study that adolescents who had clear plans such as finishing college were more likely to use HCs (Chernick et al., 2015). This means that interventions that promise to ignite desire in adolescents to increase their ambition would be very helpful. These interventions could include the use of role models who can inspire and motivate adolescents to reinforce their existing goals and facilitate their adoption of new goals, as demonstrated by Straud et al. (2015), in the use of role models to address the underrepresentation of women in science (Straud et al., 2015). Trying out such promising interventions on adolescents in Kintampo could be very rewarding for the girls, given their commitment to educating themselves for a better future. Role models in this case could also include peers similar to the adolescent girls in terms of ambitions and sociodemographic characteristics who have successfully used their HC methods.

Limitations

Our study is limited in its generalizability because it only involved a small number of adolescent girls in a specific geographical area whose contraceptive use experiences were qualitatively explored. Therefore, inferences based on this study should be carefully made. Also, it was a challenge to find girls willing to declare their HC use from the general population. This could be because the prospective participants probably perceived that they could be judged by the interviewer for using HCs. This means that our results could be biased by only reflecting the voices of girls who are open and convinced about their HC use. However, recruiting girls from different demographic backgrounds minimized any biases. The recruitment difficulties we experienced show how important it is

to openly discuss issues related to adolescents' sexual and reproductive health at the community level to allow adolescents to express their needs for appropriate interventions.

Conclusion

Participants in this study were mostly resilient and highly in favor of HC use. They have demonstrated that it is possible for adolescents to use HCs and do so consistently. There is compelling evidence to suggest that if adolescents in Kintampo are provided with comprehensive sexuality education that provides in-depth information on HCs and their mode of action, including side effects, they will be more informed, which will minimize their fears in relation to perceived and real side effects of HCs. In addition would be for such education to target adolescent girls' attitudes toward HCs, to build their self-confidence to organize and use HCs. This would improve their decision making skills, coping skills and negotiation skills. They also need to be challenged to set high future ambitions and the risks of pregnancies clearly communicated to them. Through the various interventions suggested above, they will be able to initiate and sustain HC use to prevent unwanted pregnancy among them (Fonner et al., 2014).

The result of this study was very useful in generating and testing hypotheses for our quantitative study that tested the relative importance of the identified determinants in this study in predicting uptake and consistent use of HCs among young women (Boamah-Kaali et al., upcoming). It will further inform the content of our intervention development and its implementation in future.

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