Ejaculating Responsibly: Students' Awareness, Perceptions, Experiences, and Human Rights Implications of Coitus Interruptus in a selected public University in Ghana

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ABSTRACT

Historically, coitus interruptus (withdrawal/pull-out method) is a significant family planning method globally that links traditional practices to modern family planning strategies. Yet, it remains under-researched among students in Ghana. In this study, the awareness, perceptions, experiences, and human rights implications of coitus interruptus among university students in Ghana were explored to contribute to the existing literature. Using an explanatory sequential mixed-methods design that combined a cross-sectional online survey (n =136) with in-depth interviews (n = 20), key findings show that awareness of coitus interruptus was high, significantly influenced by occupation ($p < 0.001$, Cramér's V=0.54) and age ($p=0.003$, Cramér's V= 0.30). Ethnicity influenced perceptions of its usage ($p = 0.043$, Cramér's V = 0.44). Younger students reported inconsistent experiences and moderate satisfaction, while the older participants displayed polarised views, emphasising both autonomy and scepticism. Misconceptions regarding safety and Sexually Transmitted Infection prevention were prevalent. About 65% considered coitus interruptus a personal choice, with 13% connecting it to human rights.

Keywords: **Coitus Interruptus, Experiences, Perceptions, Sexual and Reproductive Rights, University Students**

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INTRODUCTION

Coitus interruptus, also known as the “withdrawal” or "pull-out method," (Mofokeng, 2021), is a traditional contraceptive practice in which the male partner withdraws before ejaculation to prevent sperm from entering the female reproductive tract (Altshuler & Blumenthal, 2020). This ancient fertility control method persists across cultures and eras, even with modern contraceptive advancements (Guen, 2021) and remains common among young people although less effective than modern contraceptives (Lampiao, 2014). Socioeconomic factors, including social status, wealth, and power dynamics, have also been shown to influence its use since poorer or less empowered groups rely more on Coitus interruptus (Salih, 2024). Withdrawal continues to be a common contraceptive method despite the presence of modern options, mainly due to factors such as accessibility, affordability, cultural acceptance, and worries about side effects (Simetinger, 2025). The preference of coitus interruptus varies across the globe due to fertility intentions, contraceptive access, and abortion availability, with significant usage among adolescents in Turkey, Romania, and the Czech Republic (Fruhauf et al., 2021) and Mosul (Salih, 2024) with misinformation and limited knowledge perpetuating reliance on this traditional method.

In Africa, some young people still view withdrawal as viable options despite misconceptions about their effectiveness and safety (Otang-Mbeng, 2020). Some studies indicate that withdrawal is seen as a sign of trust in relationships but does not offer protection against STIs (Matson et al., 2012). Additionally, the use of withdrawal as a substitute for condoms among young adults in Uganda reflects how cultural values and relationship dynamics influence contraceptive choices, raising public health concerns, especially regarding HIV exposure and condom negotiation Higgins et al. (2014). Research on coitus interruptus among university students in Ghana is scarce. Prior studies have examined this method within different demographics, including poor urban settings (Bawah et al., 2021) and young Ghanaian women (Keogh et al., 2021). Additionally, data from the 2008 Ghana Demographic and Health Survey highlighted factors related to contraceptive discontinuation among women of reproductive age (Modey et al., 2014).

Research in Ghana shows that while awareness of modern contraceptive methods is high, usage remains low, with only 26.7% of sexually active senior high students and 58.1% of female university students currently using them (Anyomi et al., 2024). Factors such as education, religion, and marital status significantly affect attitudes towards contraception, while social stigma hinders open discussions and access (Agyei-Sarpong, 2025). The discourse on "ejaculating responsibly," with respect to withdrawal as popularized by Blair (2022), advocates for shifting contraceptive responsibility to men, thereby alleviating the burden of pregnancy risk and contraceptive management on women (Shahvisi, 2020). However, men often leave contraceptive decisions to women, compounded by structural barriers such as limited male-centered methods and insufficient sexual health knowledge (Caddy et al., 2023). Coitus interruptus has a failure rate of 18% to 28% in normal use and 4% in perfect use (Awadalla, 2020), while its reliability is further marred by the presence of sperm in pre-ejaculatory fluid and the challenges surrounding effective withdrawal (Koilpillai et al., 2024). It also fails to offer STI protection (Robinson, 2025). Despite its unreliability, coitus interruptus remains pertinent in discussions surrounding reproductive autonomy and gender equity (Demir et al., 2021), signifying its relevance to contraceptive security. This is particularly relevant among university students, who balance autonomy and peer influence in contraceptive choices. Understanding their views is crucial for dispelling myths and enhancing culturally relevant sexual and reproductive health education. This study thus examined the

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awareness, experiences, perceptions and sexual reproductive rights dimensions of coitus interruptus among students to enhance the literature in this area.

Theoretical underpinnings

This study is situated in Robert Connell's Theory of Gender and Power (Connell, 1990); the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975); and the reproductive justice framework (Ross & Solinger, 2017). According to Robert Connell's Theory of Gender and Power, the sexual division of labour, power, and emotional norms (cathexis) are three interconnected systems that support gender inequality as a social construct. This theory emphasises the unequal distribution of labour, authority, and emotional relationship dynamics while highlighting how societal systems uphold male dominance, making gender inequality frequently "invisible" in everyday living. Additionally, by using this theory, gender issues relating to coitus interruptus are recognised as a "power-over" relationship essential to comprehending coitus interruptus as a sexual and reproductive rights concerns among the study population.

The TRA asserts that behavioral intention, influenced by attitudes and perceived social norms, is a crucial predictor of behavior. In the context of sexual health, positive attitudes towards risky behaviours and the belief in social approval may drive individuals to adopt methods like coitus interruptus as contraception despite the high failure rate and risk of contracting STIs. The TRA framework aids in examining how university students' beliefs and peer expectations shape their contraceptive choices. It is acknowledged for its predictive power regarding voluntary behaviors, with applications in public health, consumer behavior, and social psychology. The use of TRA informed the design of the study's research instruments. It highlights the importance of understanding how various factors like age, occupation, and ethnicity affect perceptions of coitus interruptus, providing a nuanced context for analyzing TRA constructs in reproductive decision-making.

The use of the 1994 reproductive justice framework expands the discourse beyond the "pro-choice vs. pro-life" debate, focusing on the social, political, and economic factors affecting black women's reproductive health that also relates to the current study. Although it advocates human rights, highlighting bodily sovereignty, sexuality, and reproduction rights for marginalized populations it is also relevant in the context of the current study. The use of this framework seek to address concerns regarding coitus interruptus use as a way to uphold individuals' reproductive rights to have or not to children, emphasizing the need for resources that allow all individuals to achieve self-determination.

From a rights-based perspective, the connection between these three theories (Theory of Gender and Power, the Reproductive Justice framework, and the Theory of Reasoned Action), illustrates how larger societal influences impact individual sexual and reproductive choices. The integration of these theories in the study also illustrate how macro-level social institutions, such as gender roles, influence contraceptive choices including coitus interruptus. The TRA elucidates the psychological processes behind these choices while reproductive justice, being an intersectional human-rights framework, emphasises individuals' rights to have or not to have children by choice.

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MATERIALS AND METHODS

Study design

This study utilised an explanatory sequential mixed-methods design, comprising two phases: a quantitative survey of university students followed by qualitative in-depth interviews with a subgroup of participants (Creswell & Creswell 2017). This design was deemed appropriate because the qualitative data enriched the quantitative findings, offering deeper insights than a single approach could provide.

Study setting

The study was conducted in a large public university in Ghana with a diverse student population. This university was randomly selected. The university's identity was anonymized in line with the ethics approval requirements.

Study Population

The study population comprised students enrolled at the main campus of a public university in Ghana during the 2021/2022 academic year. Participants were drawn from all academic levels and diverse programs to capture a range of perspectives. The focus was on sexually active students, estimated at 15,566 individuals drawn from a preliminary WhatsApp pool of 'yes or no responses' to the question "are you sexually active"? A purposive sampling approach was used to target this group, which ensured relevance to the research objectives.

Sampling of respondents and Selection of participants

A total of 15,566 respondents screened as sexually active and eligible to participate in the study were invited online. Statistically, the minimum sample size of 375 participants was estimated using the Raosoft sample size calculator (Raosoft, 2025). This tool is widely used in survey research because it incorporates parameters such as confidence level, margin of error, and population size to generate reliable sample estimates. Although the statistically estimated target population was 375, only 136 respondents voluntarily completed the survey, resulting in a low response rate that raises concerns about representativeness and statistical power. For the qualitative phase, twenty (20) participants comprising 10 married and 10 unmarried but sexually active students (involving 10 males and 10 females, across all levels) were purposively selected for in-depth interview to ensure certainty of sexual activity. Data collection ended at 20 interviews when thematic saturation was reached.

Adherence to the principles stated in the Declaration of Helsinki

This study was conducted in accordance with the principles stated in the Helsinki Declaration, which sets ethical standards for global research, emphasising risk-benefit analysis to protect participants' rights and well-being during informed consenting (Carlson et al., 2024). In line with the 2024 updated version, issues relating to data privacy and AI usage were addressed.

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Informed consent for participation

Participation in the study was voluntary, with confidentiality and the right to withdraw from the study at any time without penalty assured. For the quantitative phase, respondents provided online written consent (yes/no tick) before accessing the questionnaire. In the qualitative phase, informed verbal consent was obtained from all the participants through phone interviews, which was the primary method of data collection. The institution in which the study was conducted gave formal ethical approval for this consent process (UEW/ODSA/PERSONAL/VOL.1/001).

Data collection

Two trained research assistants with backgrounds in Health Education assisted with the data collection after a five-day training that focused on: research overview, item-by-item review of the specific data collection instruments, techniques of data collection, research ethics, data quality, logistics and fieldwork management. The quantitative data were collected through an online questionnaire distributed via social media, requiring institutional email login for authentication. The questionnaire, designed and validated based on Boparai et al. (2018) and Taherdoost (2022), underwent a pilot test among 50 sandwich students to refine its structure. To ensure privacy, students were encouraged to change passwords after logging in and access to sensitive information was limited to specific personnel, maintaining data confidentiality and anonymity.

The survey conducted over 14 weeks during the first semester of the 2021/2022 academic year received 136 responses. In the second semester, qualitative data were gathered through one-on-one phone interviews, each lasting about 30 minutes, with a total of 20 participants to achieve thematic saturation. The interviews followed a guide developed based on a theoretical framework and literature exploring the implications of coitus interruptus on contraceptive choices and bodily autonomy. The guide was pilot tested with ten students, ensuring refinement in line with the COREQ checklist for qualitative research reporting, which organizes factors such as research team, methods, context, findings, and analysis.

Eligibility Criteria

Participation in the study was restricted to fully registered students from the 2021/2022 academic year to ensure relevance and accuracy regarding student life and sexual health practices. Exclusions included non-registered individuals and students under 18 years, primarily for ethical reasons, to protect their vulnerability and the complexities in obtaining consent.

Data analysis

Quantitative data were cleaned and coded in Microsoft Excel and analyzed using Stata Version 14.0. Descriptive statistics summarized background characteristics, while Chi-square tests and Cramér's V were used to assess associations between variables. The qualitative data were analyzed thematically. Audio recordings were transcribed verbatim and coded manually. Codes were grouped into categories, which were refined into themes and subthemes aligned with the research objectives. To enhance reliability, two independent coders reviewed a subset of transcripts and resolved discrepancies through discussion and consensus.

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RESULTS

Background Characteristics of Respondents

The majority (64.7%) of the respondents were aged between 21–26 years, indicating a mix of mature and younger students. The majority were Christians (92.6%), reflecting national demographics, and the ethnic diversity suggests cultural norms may influence practices (Table 1).

Table 1: Background Characteristics of Respondents

Variable	Frequency	Percentage (%)
Age Group		
18–20	9	6.6%
21–23	28	20.6%
24–26	32	23.5%
27–30	19	14.0%
31 and above	48	35.3%
Gender		
Female	61	44.9%
Male	75	55.1%
Religion		
Christianity	126	92.6%
Islam	7	5.1%
Traditionalist	2	1.5%
African Mission	1	0.7%
Marital Status		
Single/Not Married	100	73.5%
Married	29	21.3%
Cohabitating	4	2.9%
Separated	2	1.5%
Dating	1	0.7%
Level of Study		
First Year	25	18.4%
Second Year	15	11.0%
Third Year	50	36.8%
Fourth Year	21	15.4%
Graduate Level	25	18.4%
Occupation		
None	54	39.7%
Teacher	37	27.2%
Trader	16	11.8%
Others*	29	21.3%
Ethnicity		
Akan	80	58.8%
Ewe	30	22.1%
Ga-Dangme	6	4.4%
Others**	20	14.7%

Source: Author's Field Data (2022)

*Others include Farmer, Entrepreneur, Coach, Designer, etc.

**Others include Dagaari, Frafra, Mole-Dagbani, Sissala, and Fante.

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Association Between Background Variables and Awareness of Coitus Interruptus

Chi-square tests and Cramér's V were used to examine associations between students' background characteristics and awareness of coitus interruptus. The awareness of coitus interruptus was high, with younger participants citing school-based education as their knowledge source, while older respondents mentioned peers or media. Further results indicate that occupation was the strongest and most significant association with awareness ($p < 0.001$, Cramér's $V = 0.54$). Age was also a substantial factor, with an association ($p = 0.003$, Cramér's $V = 0.30$), indicating that older students were more likely to be aware of the method. Level of study showed only a weak, non-significant association (Cramér's $V = 0.19$). Other variables, including gender, religion, marital status, and ethnicity, had no meaningful associations with awareness.

Age and other factors of perception

Perceptions of coitus interruptus differ by age. Younger students aged 21–26 (9 students) exhibited less awareness and familiarity with the method, often citing school-based reproductive health education as their main information source. In contrast, older students over 31 years (49 students) were more aware and familiar, learning about it from peers or media. They expressed greater caution regarding its risks, including unintended pregnancy and dependence on partners, highlighting the method's limitations and ineffectiveness compared to the younger students, who were more confident in its effectiveness (Figure 1).

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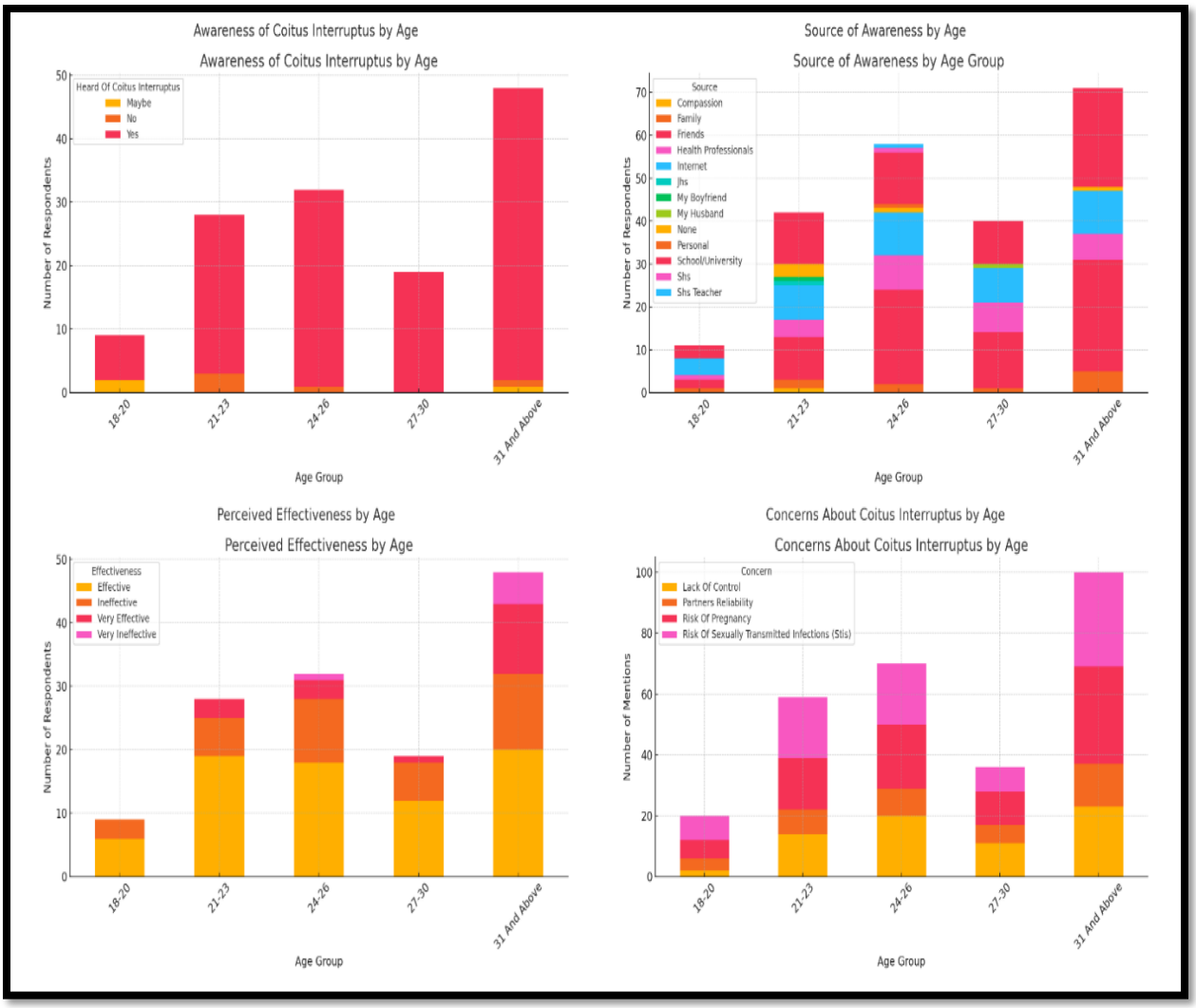


Figure 1: Age and other factors of perception.
Source: Author's Field Data (2022)

Level of study and other factors of perception

Coitus interruptus awareness was high (70%) across varying educational levels, with sources of knowledge differing across groups. Graduate and fourth-year students primarily obtained information through formal education, whereas third-year students were more influenced by peers. While 90% of students believed the method could prevent pregnancy, graduate students expressed the most skepticism, highlighting concerns about withdrawal failure and lack of STI protection.

Result of the Chi-square and Cramér's V score on perception

Perceptions of coitus interruptus varied among students across occupational groups, with teachers (72%) displaying greater awareness compared to unemployed students. Teachers primarily gained their knowledge from formal education, while unemployed students rely more on peer sources. Further analysis of the associations between demographic factors and perceptions of coitus

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interruptus using Chi-square tests and Cramér's V showed that age had a statistically significant but weak correlation with perception ($p = 0.03$, Cramér's $V = 0.25$), indicating differing views among younger and older students. Ethnicity showed a strong association ($p = 0.04$, Cramér's $V = 0.44$), reflecting the impact of cultural values on choice. Occupation also correlated strongly (Cramér's $V = 0.37$), although not statistically significant. Gender, religion, study level, and marital status were not significantly associated with perceptions of coitus interruptus.

Age group, occupation and preferred family planning method experiences

Participants perceptions and experiences with coitus interruptus revealed age-related differences. Younger students reported inconsistent use, often due to experimentation, with moderate satisfaction. In contrast, older students (31 and above) had a higher personal usage but expressed mixed satisfaction; approximately 58% pointed out drawbacks like reduced control and health concerns. Most respondents across age groups reported no history of STIs, though a few cases were noted among those aged 24–26 and over 31. The use of coitus interruptus varied among different student occupational groups. Sports Coaches and prison officers reported higher usage and satisfaction, while teachers and unemployed students showed less use and lower satisfaction. STIs were rarely experienced, although some misunderstood the method as a preventive measure.

The data suggests that occupational background influences both the frequency of use and perceptions of the method's effectiveness. Occupation and formal education are significant predictors of coitus interruptus use for family planning among the participants, with comprehensive sexuality education enhancing contraceptive knowledge. Higher education is associated with better reproductive health outcomes and the adoption of modern contraceptive methods. However, no significant correlation was found regarding other causal factors influencing the choice of coitus interruptus beyond access to formal education.

Emergency contraceptive pills (48%) were the most preferred family planning method among respondents, followed by coitus interruptus (25%), Male Condoms (12%) and birth control pills (10%), indicating a mix of natural and pharmaceutical preferences. Other methods (5%) including like Implants, IUDs and surgical methods, were rarely mentioned and less favored, potentially due to concerns regarding side effects or procedural hurdles. The data imply that students prefer familiar and accessible methods, while the low usage of long-acting and reversible contraceptives points to insufficient knowledge and access, suggesting a need for targeted education and counseling.

Sexual Reproductive Rights Implications

About 65% of the participants viewed coitus interruptus as a personal choice rather than a sexual reproductive rights issue, with 22% undecided due to context and potential coercion. Only 13% linked it to human rights focusing on autonomy and relationship dynamics. The results indicate a limited framing of coitus interruptus as a human rights issue, alongside a growing awareness of its cultural, ethical, and informational connections to reproductive choices.

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QUALITATIVE FINDINGS

Table 2 presents the characteristics of 20 interview participants

Table 2: Background Characteristics of Participants

Variable	Frequency	Percentage (%)
Age Group		
24–26	2	10
27–30	7	35
31 and above	11	55
Gender		
Female	10	50
Male	10	50
Religion		
Christianity	15	75
Islam	5	25
Level of Study		
Second Year	4	20
Third Year	5	25
Fourth Year	8	40
Graduate Level	3	15
Occupation		
None	10	50
Teacher	7	35
Others	3	15
Ethnicity		
Akan	10	50
Ewe	5	25
Ga-Dangme	3	15
Fante	2	10

Source: Author's Field Data (2022)

Thematic analysis for the choice of family planning method

The thematic analysis identified five key considerations in participants' preferences for family planning methods: men's versus women's perspectives, agreement/dissent between partners, safety and STI prevention, convenience and ease of use, effectiveness with some doubts about reliability, and a preference for natural or non-invasive methods as alternatives to biomedical options (Table 3).

Table 3: Thematic analysis for the choice of family planning method

Themes	Example Response
	While some men find coitus interruptus challenging to utilise consistently, others feel competent and secure in its application.
Men's versus women's perspectives	Women are anxious due to the high perceived risk of pregnancy associated with coitus interruptus, because its

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	effectiveness mostly depends on the male partner's ability to effectively withdraw.
Agreement/dissent between partners	Participants of the Catholic religious faith viewed coitus interruptus as a sin against the natural purpose of the sexual act hence causing disagreements between partners.
Safety / STI Prevention	because it's safe and prevents further risk to the other partner, by not taking too many contraceptives
Effectiveness	not effective
Convenience / Ease of Use	very easy to use and less expensive
Natural / Non-invasive	It's natural, and it's the most appropriate method

Source: Author's Field Data (2022)

The participants' quotations vividly demonstrate anxiety, mistrust, pleasure loss, religious conflict, and power asymmetries within relationships. For instance, some participants recounted their experiences as follows:

> *"I have never been successful with coitus interruptus. On many different occasions that I tried it, my partners came back pregnant. I refused responsibility because I pulled it off them before releasing"* (Male student 1, age 23 years).

> *"I have always been anxious during sex anytime we practice* the pull-out method *due to the two unwanted previous pregnancies I had, which were both associated with failure of the method, because I relied on my ex-boyfriend's ability to effectively withdraw, but at the peak of the act, they failed to come out early and hence poured everything inside me, making me pregnant"* (Female student 1, age 24 years).

> *"My wife always wants me to ejaculate inside her because, according to her Catholic faith, coitus interruptus, condom use or any form of contraception are sins against God's natural purpose for sexual acts; this sometimes leads to disagreements between us when we need to take precautions to prevent unwanted pregnancies"* (Male student 2, age 36 years).

> *"I prefer the withdrawal method because it's safe and has no side effects like the other family planning methods, which have many side effects and complications"* (Female student 2, age 32 years).

"I have been married for the past five years with two children, aged three years and 1 year. My partner and I have always used the withdrawal method to space our children because I am allergic to all the artificial family planning methods" (Female student 3, age 25 years).

> *"Why should I release outside my own wife if sex is meant to be enjoyed most at the peak? On a few occasions that I tried it, we did not enjoy the sexual act to the maximum; besides, I find it difficult to control myself in practicing this method when the sperm are coming."* (Male student 3, age 30 years).

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> "The *withdrawal method has failed me many times, leading to unwanted pregnancies and STIs----so, for me it's ineffective and should not be recommended to anyone as a family planning method"* (Male student 4, age 24 years).

Thematic Analysis on Human Rights

Participants view coitus interruptus as a human rights issue affecting autonomy and consent, reproductive rights, informed choice, and partner influence (Table 4). Autonomy is linked to pregnancy and STI prevention, while reproductive rights emphasize mutual decisions. Access to information and personal choice are deemed crucial, with concerns about power dynamics arising from partner disagreements. The findings highlight human rights considerations by extending participants' perceptions of coitus interruptus beyond medical concerns. The study also examined gendered responsibility in withdrawal, noting a gap in understanding male perceptions of this method as responsible, even as women report a higher incidence of negative outcomes from method failure.

Table 4: Thematic Analysis on Human Rights

S/N	Themes	Example Response
1	Attitudes	Search for reliable contraception option male partner's control and responsibility for withdrawal
2	Subjective norms	partner preferences for coitus interruptus
2	Behavioral intentions	the perception of trust and intimacy between partners.
4	Autonomy and Consent	Relying on coitus interruptus to prevent pregnancy Using coitus interruptus to protect oneself against STIs
5	Reproductive Rights	The partners have the right to practice during sexual encounters Every individual has the right to be born.
6	Right to Information and Choice	Life is a choice of available opportunities, so if one chooses coitus interruptus as a family planning method, it is the person's right. by taking it seriously

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		They should suggest it.
7	Partner Influence / Power Dynamics	imposing on other partners' rights if the two partners do not have a consensus Your partner might want to get pregnant.

Source: Author's Field Data (2022)

> *"We already have six children, but my wife does not want to use any family planning methods. Although my wife does not like it anytime, I pull out of her before I release, I am the one who takes care of the home and is responsible for the upkeep of the children, so I have to be more careful to plan my family to prevent unwanted pregnancies".* (Male Student 4, age 42 years).
>
> *"People said the withdrawal method is natural and effective, so my husband and I tried it only once, but it failed us; that is why I became a mother today."* (Female student 4, age 24 years).
>
> *"I know my husband is a womanizer, but he doesn't like protected sex. So anytime we have sex, and I suspect he has an STI, I am very cautious about when he is about to ejaculate, so I push him to release outside me so that the sperm don't enter me to contract any STIs".* (Female student 5, age 28 years)

"My partner is always careful about pregnancy-----and keeps saying he is not ready for a child at this time-----He always pulls his penis out of me before ejaculating anytime we have sex. I am ageing and really need a child. Still, he is not receptive to the idea of having a baby now-----on a few occasions that I forced him to release inside me, he insisted I take an emergency contraceptive to prevent pregnancy". (Female student 6, age 30 years)

Evidence from the current study based on the TRA identifies participants' attitudes, subjective norms, and perceived behavioural intentions as key predictors of the intention to use coitus interruptus as a contraceptive method. Despite being regarded as an ineffective contraceptive method, it is commonly utilised due to its convenience, low cost, and perceived trustworthiness, as outlined in the following narrative responses.

Attitudes towards coitus interruptus

> *"I see this method as a natural and reliable contraception option because it can be used anytime to prevent unwanted pregnancy." (Female student 7, age 31 years).*
>
> *"My lady thinks it is risky and ineffective, so she will always use an emergency contraceptive backup every time we have sex, even if I pull out before ejaculation." (Male student 5, age 28 years)*

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Subjective norms to coitus interruptus

"Though it is the responsibility of the man to pull out of me before ejaculation, I really don't trust the men during intimacy, even if he is my committed partner and suggests we use this method." (Female student 8, age 23 years)

"I became pregnant twice after using this method because, in the first instance, the man couldn't control himself and ejaculated inside me. In the second instance, I really didn't know how it happened because despite him ejaculating outside me, I still became pregnant, and he refused responsibility on the grounds that he ejaculated outside me, so the pregnancy is not his." (Female student 9, age 29 years)

Behavioral intentions to coitus interruptus

"I prefer natural methods of family planning; hence, I always ensure I'm in my safe period before meeting my partner or use the withdrawal method to avoid unwanted pregnancy." (Female student 10, age 25 years)

"Despite my current awareness of its risks of failure and STIs, I still prefer coitus interruptus to the artificial methods because of its convenience and natural nature which does not affect my menses." (Female student 9, age 29 years)

The qualitative responses indicate that participants favour methods they perceive as effective and safe. Contradictory attitudes, such as labeling a method as "risky," "ineffective," "unsafe," and "unreliable" while still using it, highlight the need for clearer and more accessible instructions on the functionality and protection levels of various contraceptives.

DISCUSSION

In this study, Ghanaian public university students' Awareness, Perceptions and Experiences with coitus interruptus was examined. Despite an estimated sample size of 375, yet the approach used to recruit respondents yielded only 136 low response rate which is usually common in such sensitive studies, the specific methodological strategies employed during the study design and data analysis helped to mitigate potential nonresponse bias. The participants in this study have different awareness, perceptions and experiences about coitus interruptus. While all the participants recognise its use, the majority (98%) tend to prefer more effective family methods due mainly to concerns regarding reliability and sexual satisfaction. Due to the low response rate and limited statistical power, the associations found using Chi-square tests and Cramér's V are viewed as exploratory rather than definitive.

The discussion situates the findings within existing literature from Africa and beyond, reinforcing the persistence of misconceptions about STI prevention and the symbolic association of withdrawal with trust. Theoretically, this study integrates Robert Connell's Theory of Gender and Power, Fishbein and Ajzen's Theory of Reasoned Action (TRA), and the 1994 reproductive justice framework to examine gender inequality and reproductive health among university students. Connell's theory posits that labor division and power dynamics uphold gender inequality, rendering it often invisible in society.

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The use of the TRA in this study emphasises that attitudes and perceived social norms shape behavioral intentions, influencing contraceptive choices like coitus interruptus, which carries risks. For instance:

Attitudes towards coitus interruptus

Participants' attitudes toward coitus interruptus vary widely; it is seen as a reliable contraception option by some participants, while others view it as risky and ineffective. This method carries significant cultural, religious, and historical implications. The method was found to be popular among the participants who have limited access to modern contraceptive options, those afraid of contraceptive side effects, those not eligible for modern contraceptive options and those who have religious and cultural values regarding modern contraceptives. Acceptance of coitus interruptus fluctuates, being more accepted in long-term relationships and less so in casual encounters.

Subjective norms to coitus interruptus

Subjective norms regarding coitus interruptus involve social pressures and beliefs that affect a couple's contraceptive choices. Key aspects include the male partner's control and responsibility for withdrawal, trust and intimacy in committed relationships, partner preferences favouring this method over others, and concerns that it may diminish sexual pleasure. These norms highlight the interplay between interpersonal dynamics and the acceptance of withdrawal as a contraception method.

Behavioural intentions to coitus interruptus

Behavioural intentions regarding coitus interruptus are motivated by the desire for natural and accessible contraception, particularly among younger individuals. Key influencing factors include the method's convenience and cost, safety profile, and the perception of trust and intimacy between partners. Limitations such as the risk of failure and lack of STI protection lead to its use as a secondary method. Contextual factors like age, relationship status, and cultural acceptance also play significant roles. Additionally, psychological aspects, such as ambivalence about pregnancy and attitudes towards condoms, influence its adoption. Overall, coitus interruptus is preferred for its perceived convenience and natural experience, despite awareness of its risks

Linked to the theoretical underpinnings of the study, the qualitative findings of the study shows that behavioral intention, attitude toward the behavior, and subjective norm are interconnected constructs influencing actions like coitus interruptus. Behavioral intention, affected by attitudes and social pressures, governs sexual behaviours, showcasing participants' differences in learning about contraceptive methods between younger and older students, influenced by education and social networks. Misconceptions about STI prevention persist among educated individuals due to societal stigma surrounding STIs and unplanned pregnancies in Ghana, hindering access to accurate sexual and reproductive health information. Similar findings have been reported in an adolescent and young adult populations study (Whittaker et al., 2010), where withdrawal was linked to experimentation and peer influence.

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Additionally, the reproductive justice framework advocates for marginalized populations' rights related to reproduction and bodily autonomy, moving beyond simplistic pro-choice versus pro-life debates. This synergy of theories elucidates how societal structures influence individual sexual and reproductive decisions while advocating for self-determination and equitable access to reproductive resources including Coitus interruptus.

The integration of these complementary frameworks has strengthened the analysis of the paper, particularly regarding autonomy, coercion, and partner dynamics involved in coitus interruptus. From a perspective of reproductive justice, the findings further reveal a correlation between quantitative data and qualitative responses regarding contraception preferences.

Culture, religion, and ethnicity dynamics of coitus interruptus

In this study, it was observed that coitus interruptus is primarily influenced by culture, gender, religion, and ethnicity dynamics. The study participants largely stated that coitus interruptus is an important method of contraception of choice for them despite its documented high failure rate as reported by some previous studies (Demir et al., 2021; Bawuah et al., 2026).

The method was also culturally acceptable because of male decision-making authority, religious beliefs, fear of side effects and problems with modern family planning methods, as well as participants' preferences for natural contraceptives.

Participants viewed withdrawal as "responsible" under conditions of trust, but perceived it as risky otherwise. Some participants held contradictory beliefs, considering certain methods "ineffective" yet continuing to use them. This underscores the need for clearer and professional education on contraceptive methods, tailored to users' socio-demographic contexts. Another key finding was the significant impact of occupation on perceptions, with teachers and coaches showing greater awareness through formal education, while unemployed individuals relied more on peer discussions.

Ethnicity also revealed a strong link to awareness and practice of coitus interruptus, which is influenced by cultural and religious norms that prescribe and affect decisions regarding contraception. This finding was also observed in a previous study by Cory et al. (2025), where some women expressed worries about side effects contraceptives such as infertility hence tend to value the views of peers and male partners to guide their contraceptive choices. These perspectives reveal a blend of beliefs regarding the influence of ethnicity, religion and experiences of stereotyping in contraceptive decisions, including the choice and use of coitus interruptus.

The quantitative results indicated a significant association between ethnicity and perceptions (Cramér's V = 0.44), supported by qualitative findings that demonstrate how norms influenced initiation and satisfaction with coitus interruptus. These results align with previous research (Ndayishimiye, 2021; Thomé, 2022) showing that traditional methods are shaped by community norms and moral beliefs, underscoring the necessity for family planning education that is culturally tailored and age-sensitive.

The participants' qualitative narratives in the current study challenge simplistic views of "contraceptive choice," illustrating how coitus interruptus can express autonomy while simultaneously representing coercion and a violation of sexual and reproductive rights. This

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finding aligns with Eldridge (2011) where people in making contraceptive decisions have to explore the various available options before settling on those that meet their needs.

Age and occupation dynamics of coitus interruptus

Experiences with coitus interruptus differed by age and occupation. Younger users indicated inconsistent satisfaction and greater experimentation, while older individuals had polarized views, showing both autonomy and skepticism about its effectiveness. Misunderstandings about STI/ HIV protection emerged, with some incorrectly linking withdrawal to prevention. Similar misconceptions were observed in rural Uganda (Higgins et al., 2014) and among African American adolescents (Horner et al., 2009) who recognized withdrawal's failure to prevent STIs despite associating it with trust.

Gender and power dynamics of coitus interruptus use

Gender and power dynamics were observed in the decisions on the choice of coitus interruptus. While some men found coitus interruptus challenging to utilise consistently, others felt competent and secured in its use. The high perceived risk of pregnancy associated with the withdrawal method, which mostly depended on the male partner's ability to effectively withdraw, was the main cause of women's anxiety around the use of coitus interruptus. In the context of navigating marital disagreements, it was observed that some female partners insist on ejaculation into the vagina due to their beliefs influenced by Catholic doctrine, which views coitus interruptus and condom use as sinful. Coitus interruptus was also observed at a violation of sexual and reproductive right particularly in situations where both partners are not in mutual agreement for its correct use. This difference in perspectives leads to conflicts, particularly regarding the practices of coitus interruptus as a form of contraception.

Human rights implication of coitus interruptus

Various issues arose from the study which have critical human rights implications, such as the right to health and reproductive autonomy. Its high failure rates and inability to prevent sexually transmitted infections may result in unintended pregnancies, compromising women's control over their reproductive choices as well as the risk of sexually transmitted infections. The method's effectiveness often depends on the male partner's self-control, which can undermine women's agency and disrupt sexual pleasure. Access to accurate information regarding its risks is essential for informed decision-making, but factors like male dominance and cultural or religious beliefs can influence mutual consent for its effective use.

The human rights implications of coitus interruptus observed in this current study were also documented in a previous study (Nyinawagaba 2024) include the right to make informed decisions about coitus interruptus, the need for thorough knowledge on coitus interruptus and bodily autonomy. Lack of full sexual pleasure due to cautiousness to ensure ejaculation outside the vagina whilst practicing coitus interruptus may violate the individual ‘rights to full sexual enjoyment’. Samani et al. (2022) argued that although coitus interruptus is a straightforward physical act, its use frequently takes place in the context of injustice and disinformation, raising significant human rights concerns, particularly for women and girls.

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International sexual and reproductive health (SRH) frameworks

Findings of the current study also align in part with the provisions of some International sexual and reproductive health (SRH) frameworks, such as the 1994 International Conference on Population and Development (ICPD) Programme of Action, the Beijing Platform for Action, and the Sustainable Development Goals (SDGs), targets 3.7 and 5.6, that are grounded in human rights law, and seeks to provide universal access to comprehensive care such as family planning, maternal health, and HIV prevention (Khasanova, 2025).

These international sexual and reproductive health frameworks acknowledge coitus interruptus as a traditional contraceptive method, albeit less effective than modern options and without STI protection. The World Health Organization (WHO) and Centre for Disease Control and Prevention (CDC) highlight the importance of proper technique and its limitations, noting a 4% failure rate with correct use and a 22–27% rate in typical use (Curtis et al., 2016). The WHO Family Planning Handbook (WHO, 2025) underscores the cost-effectiveness and universality of coitus interruptus, while the Family Planning Medical Eligibility Criteria indicate no health contraindications, although providing some recommendations to include it as a backup method with hygiene practices and consideration for emergency contraception.

As advocated by the World Association for Sexual Health (WAS) and the International Planned Parenthood Federation (IPPF), the "rights to full sexual enjoyment" are part of sexual rights recognized as fundamental human rights, ensuring pleasurable, satisfying, and safe sexual experiences free of coercion, discrimination, and violence, which are essential for overall health and well-being.

With regards to alternative contraception, emergency contraceptives emerged as the most preferred contraceptive method, followed by condoms which were valued for affordability and dual protection, yet withdrawal was still commonly reported as the first option. This dependence on a natural method, despite doubts about effectiveness, mirrors global findings that couples often choose withdrawal when modern methods are unavailable, unacceptable, or perceived to have side effects (Thomé, 2022). Education interventions should therefore not only promote modern contraceptives but also address persistent myths and normalize conversations about sexual decision-making.

Conclusion

This study examined Ghanaian university students' awareness and experiences of coitus interruptus using a mixed-methods approach to articulate the practices, sexuality, and reproductive rights in the Ghanaian and African context. The findings highlight the significance of this often-overlooked contraceptive method in discussions of reproductive rights in the study area. The results underscore deficiencies in the literature concerning its designation as a "traditional method" and pinpoint the various factors that influence its use and efficacy. The students related withdrawal to sexual autonomy, raising human rights concerns. The findings also align with the theoretical underpinnings used, advocating for rights-based approaches in contraceptive counselling. Given the widespread use of coitus interruptus among the study participants, the practical implications for the university public health unit involve education on its low efficacy against pregnancy prevention and lack of STI protection. Access to accurate information about coitus interruptus is essential for student users to make informed decisions about their sexual and reproductive health

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and rights. Limitations in the design and the sample size used necessitate cautioning readers against overgeneralising the results.

Recommendations

The findings highlight university students' awareness, perceptions and experiences with coitus interruptus in a selected public university in Ghana. In view of the gaps identified in the literature, findings and the limitations of the current study, it is being recommended that future research in this area should involve multiple universities and longitudinal or intervention methods to track attitude changes and the effectiveness of tailored contraception education programmes. Including perspectives from healthcare and family planning experts may improve understanding and inform contraceptive policy and programme decisions in Ghanaian universities.

Strengths

The study highlights its strengths in novelty regarding contraceptive security trends among students at a major public university in Ghana, specifically focusing on coitus interruptus. It explores cultural tensions between traditional conservatism and modernity. The innovative mixed-method data collection, conducted with strong ethical considerations, is recognized as a key asset for generating robust data.

Limitations

The study faces limitations such as a low survey response rate (136 vs. 375 target), affecting representativeness and statistical power. Participant recruitment challenges, stemming from the sensitive subject, could compromise validity and generalizability. I acknowledge that the intentional (purposive) recruitment of only sexually active students may limit representativeness and may bias findings towards individuals already involved in contraceptive decision-making. I also acknowledged this as a methodological limitation of the study. The purposive sampling of sexually active students may also overlook abstainers' perspectives. Nonetheless, this approach was deliberate towards recruiting prospective respondents who had experiences with coitus interruptus and were willing to participate in the study. Furthermore, findings are constrained by the study's single-institution focus, and the reliance on self-reported data raises concerns regarding recall and social desirability biases.

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DECLARATION OF INTEREST STATEMENT

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Data availability statement
The raw data available upon reasonable request from the corresponding author.

Ethics Approval
Ethics approval (***UEW/ODSA/PERSONAL/VOL.1/001***) was obtained from the University of Education, Winneba, and permission (***PF/234476***) from the Registrar of the study setting prior to data collection.

Consent to Publish
All participants consented to the publication of the manuscript with the anonymization of individuals.

Declaration of the use of AI
The research concepts, questions, theoretical framing, and methodological design were developed independently by the author. AI assistance was limited to language editing and formatting support.

Author contributions statement
Sole authored paper.

Competing interests
I have no competing interests in this study.

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