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SCHOOL OF PUBLIC HEALTH

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UNIVERSITY OF GHANA, LEGON



CONDOM USE DECISION-MAKING AMONG MALE UNDERGRADUATE STUDENTS OF THE UNIVERSITY OF GHANA

BY

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INTEGRI PROCEDAMUS

THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF PUBLIC HEALTH DEGREE

FEBRUARY, 2025

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DECLARATION

I, Dionne Nyadu-Addo, declare that this work is a result of my independent work under supervision. References to other works have been duly acknowledged. This work has not been submitted for an award for any degree in this institution or at other universities elsewhere.



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DEDICATION

I dedicate this work to my parents, Dr. and Mrs. Nyadu-Addo, for their immense support and motivation in my academic pursuits.



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I give all praise to the Almighty God for His grace, wisdom and strength to complete this study. I wish to extend my sincerest appreciation to Prof Emilia A. Udofia and my supervisor, Dr Adom Manu, for their guidance and tutelage throughout this work.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
AJOL	African Journals Online
HIV	Human immunodeficiency virus
IMB	Information-Motivation-Behavioural Skills
SRH	Sexual and Reproductive Health
STIs	Sexually Transmitted Infections
UGCS	University of Ghana Computing System
WHO	World Health Organisation



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ABSTRACT

Background: Sexual health among university students is a major public health concern, with many engaging in risky behaviours that increase their risk of STIs, including HIV. Although condom use is widely promoted, its consistent use remains low owing to social, psychological, and behavioural factors. In Ghana, awareness of condoms' protective role is high, yet their actual usage is inconsistent, particularly among young men. Factors, such as low perceived STI risk, condom dissatisfaction, and partner dynamics, influence this behaviour. Understanding these influences is crucial for developing targeted interventions. This study examines condom use decision-making among male undergraduates at the University of Ghana.

Objective: This research sought to examine the dynamics of condom use decision making among male undergraduate students at the University of Ghana.

Methods: A descriptive, quantitative, cross-sectional study was conducted among 435 male undergraduate students residing in halls of residence at the University of Ghana, Legon Campus. Data were collected using structured self-administered questionnaires. Descriptive statistics were used to summarise key variables, and associations between factors influencing condom use decision making were tested using Pearson's chi-square test and logistic regression analysis with STATA version 18.

Results: The study involved 400 male undergraduate students at the University of Ghana, Legon Campus. The prevalence of condom use was 77.08% for the last sex, but only 34.03% reported consistent use. In terms of information accessibility, 71.75% of respondents relied on social media for condom-related information, yet 68.50% had never participated in condom use programs. Regarding motivation, only 24.25% were very motivated to use condoms consistently, and 38.25% were neutral about whether condom use signified responsibility. Regarding behavioural skills, 62.25% had never received condom use training and only 28.75% actively negotiated condom use. While access to information was associated with condom use

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(COR = 2.0; 95% CI = 1.31 – 3.06; p = 0.001), motivation and behaviour showed no significant association.

Conclusion: The study revealed that while condom use during last sex was relatively high (77.08%), consistent use remained low (34.03%). Key factors influencing condom use decision-making included access to information, motivation, and behavioural skills. Well-informed students were more likely to use condoms, but motivation and behavioural skills did not show a significant association with consistent use. Barriers, such as reduced pleasure, trust in a partner, and lack of condom negotiation skills, contributed to inconsistent use. Strengthening sexual health education, improving condom accessibility, and enhancing behavioural skill training are essential to promoting safer sexual practices among students.

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CHAPTER ONE

INTRODUCTION

1.1 Background

Sexual health among university students is a crucial public health issue due to the transition from family units to independence which increases the likelihood of engaging in risky sexual behaviours that may lead to sexually transmitted infections (STIs), including human immunodeficiency virus (HIV). (Tamenmrat et al., 2020). Although condom use is globally recommended for safer sex, the decision-making process surrounding its use has been complex and further exacerbated by a constantly changing social environment. Evidence suggests that, although condom use is important, various factors complicate its consistent use. The evolving social landscape, characterised by digital technology's pervasive influence and exposure to explicit content, shapes students' attitudes and behaviours towards safe sex practices as they explore their boundaries (Van Oosten et al., 2017).

Young adults aged 20-24 in higher education exhibit behaviours that increase their risk of sexually transmitted infections, including HIV (Asante et al., 2016). According to Avuvika et al. (2017), this age group is more likely to engage in risky sexual behaviours, such as having multiple partners, engaging in transactional sex, using illicit drugs, and having unprotected sex. Unprotected sex refers to sexual intercourse without a condom or when a condom is used but fails because of tears or slips (Schiller 2023). Condom use among sexually active youth in various countries, ranges from 4% to 52.4% according to Wong (2017).

Ghana similarly faces the challenge of inconsistent condom use. Awareness of condoms' protective role against HIV is relatively high, with 82% of young men and 76% of young women aged 15-49 years acknowledging their benefits (Statistical Service, 2015). Nevertheless, actual use remains low with only 45% of young men and 25% of young women reported consistent condom use (Statistical Service, 2015). More recent, evidence suggests that seven out of ten Ghanaian males of reproductive age, do not use condoms during sexual activities (Okyere, 2024).

Several factors have been identified as contributing to inconsistent condom use, such as low satisfaction with condom use, low perceived personal risk of STIs, condom fatigue, having a persistent sexual partner, and low self-efficacy in condom use (Ajayi et al., 2019). Despite these

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factors, when used correctly and consistently, condoms are a safe and highly effective method for preventing the transmission of STIs, including HIV and unplanned pregnancies (WHO, 2022).

The inability to translate awareness into action poses a serious threat to both individuals and society, highlighting the need for immediate and targeted interventions and educational initiatives. To address this pressing issue, this study aims to investigate the factors that influence condom use decision-making among male undergraduate students at the University of Ghana. By gaining insights into the underlying determinants of this knowledge-action gap, this research seeks to inform the development of tailored interventions and educational strategies aimed at promoting safer sexual practices within this vulnerable population. Through a comprehensive understanding of these factors, this study endeavours to contribute to efforts aimed at bridging the gap between awareness and action in condom use behaviour among university students.

This study is guided by the Information–Motivation–Behavioural Skills (IMB) model, which posits that individuals must be adequately informed, motivated, and equipped with the necessary behavioural skills to adopt preventive health behaviours such as consistent condom use (Fisher & Fisher, 1992). This framework is particularly relevant as it enables the examination of how these components interact to influence condom use decision-making among male undergraduate students.

1.2 Problem Statement

Despite 86% of Ghanaian males aged 15–24 comprehending the efficacy of consistent condom use for HIV prevention, only 37% demonstrate regular adherence to this practice (Ghana Statistical Service and ICF, 2023). This striking contrast between awareness and action presents a critical public health challenge, especially among university students who are prone to engaging in risky behaviours (Asante et al. (2016.)

The disparity between knowledge and action is of concern for university students as it contributes to several public health issues, notably the continued transmission of STIs, including HIV, and unintended pregnancies. Despite awareness and education on safe sex practices, the inconsistency in applying this knowledge, such as irregular condom use, exacerbates these health risks. This gap between understanding and behaviour can lead to higher rates of STI transmission, unintended pregnancies, and the spread of drug-resistant HIV strains, making it a critical area for targeted public health interventions. (Asante et al., 2016). This

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suggests that knowledge alone may be insufficient to drive consistent condom use behaviour, thereby necessitating an exploration of the interaction between information, motivation, and behavioural skills.

1.3 Study Objectives

1.3.1 General Objective

To examine the dynamics of condom use decision-making among male undergraduate students at the University of Ghana.

1.3.2 Specific Objectives

a. To estimate the prevalence of condom use among male undergraduate students at the University of Ghana.

b. To examine the relationship between information accessibility and condom use decision-making among male undergraduate students at the University of Ghana.

c. To assess the association between motivation and consistent condom utilisation among male undergraduate students at the University of Ghana.

d. To assess the relationship between behavioural skills and condom use among male undergraduate students at the University of Ghana.

1.4 Research Questions

To address the objectives of this study, the following questions were posed:

a. What is the prevalence of condom use among male undergraduate university students at the University of Ghana?

b. How does having access to sexual health information affect condom use among male students?

c. What motivates male undergraduate students to use condoms?

d. What behavioural skills influence condom use decisions among male undergraduate university students?

1.5 Significance of the Study

The investigation of condom use decision-making among male undergraduate students at the University of Ghana is important for public health and HIV prevention. Using the information-motivation-behavioural skills (IMB) model as a guiding framework, this research provides an

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understanding of the intricate factors that shape condom use behaviours within this demographic, significantly contributing to the existing literature on sexual health promotion strategies (Liu et al., 2014). This study contributes to existing literature by providing context-specific evidence on how information, motivation, and behavioural skills influence condom use decision-making among male undergraduate students in Ghana.

The results of this study hold promise for informing targeted interventions aimed at promoting consistent condom use among male undergraduate students. By exploring predictors within the IMB model, such as information, motivation, and behavioural skills, interventions can be customised to address specific gaps and enhance condom use behaviours in this population (Jiang et al., 2019). Stakeholders, including university health services, policymakers, public health practitioners, and male undergraduate students, benefit from these insights.

Understanding the factors that influence male undergraduate students' decisions to use condoms can provide insights that are applicable to other male populations, including those not enrolled in school. Studies conducted by Davids et al. (2021) and Teye-Kwadjo et al. (2017) highlighted the importance of emotional and logical processes in the decision-making process regarding condom use among adolescents, which can also be relevant to young males outside of the university setting. These findings justify resource allocation towards research endeavours that focus on preventive strategies and health promotion initiatives, ultimately contributing to mitigating the spread of HIV and other sexually transmitted infections within vulnerable populations, such as young male adults in sub-Saharan Africa (Darteh et al., 2014).

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CHAPTER TWO

LITERATURE REVIEW

2.1 Identification of Relevant Literature

An extensive search strategy was undertaken to identify pertinent literature published between 2013 and 2024 regarding condom use decision-making among male undergraduate students at the University of Ghana. The search included various databases that covered both international and Ghanaian scholarship such as PubMed, Google Scholar, HINARI, and ScienceDirect, as well as secondary resources, such as African Journals Online (AJOL), ResearchGate, and Google Books, to capture locally published studies and grey literature.

Additionally, the reference lists of the retrieved articles and websites of relevant organisations were thoroughly examined for potential leads. To ensure a targeted approach, the search utilised a combination of core and additional search terms using relevant synonyms and alternative phrases and Boolean operators to broaden the scope while maintaining relevance. The terms utilised are "condom use" OR "safer sex" paired with "decision-making" OR "choices", AND "male undergraduate students" AND "University of Ghana" OR "Ghana" serving as essential location and population identifiers. Despite the thorough development and execution of the search strategy, no relevant articles were identified for an in-depth review. The search was further refined using "condom use" AND "decision-making" AND "male" NOT "female" AND " university students" OR "college students". This identified 74 relevant articles for review on HINARI; however, secondary resources identified 12 relevant articles from Ghana using the former search terms.

The search strategy aimed to ensure that the findings were pertinent to the Ghanaian context and language by restricting the search to English publications, which may have excluded valuable insights. This approach was necessary because of resource constraints and alignment with the specific cultural and linguistic nuances of the research questions. Peer-reviewed journal articles were prioritised as the primary source of information, but dissertations, conference proceedings and grey literature were also considered when applicable to the research objectives.

The distribution of the selected articles by country was as follows: there were 6 articles from North America, five from Europe, 28 from Asia, and 47 from Africa. The distribution of articles within the African continent was as follows: Ghana (12), Nigeria (9), South Africa (14), Kenya (3), Botswana (1), Malawi (2), Zimbabwe (1), Sudan (2), Tanzania (1), Ethiopia (1), and Yemen

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(1). This comprehensive approach lays the groundwork for exploring the intricate interplay of factors influencing condom use decision-making among male undergraduate students, ultimately contributing to the development of targeted interventions and the promotion of safe sex practices within this population. This is particularly relevant to the present study, which seeks to examine condom use decision-making among male undergraduate students at the University of Ghana.

2.2 The Evolution and Development of the IMB Model

The Information-Motivation-Behavioural Skills (IMB) Model, developed by Jeffrey D. Fisher and William A. Fisher in the early 1990s, has become a fundamental framework for comprehending and encouraging health behaviours (Fisher & Fisher, 1992). Initially designed for AIDS prevention, this model comprises three core components: information, motivation, and behavioural skills (Fisher et al., 1994). In this study, the IMB model is adopted as a theoretical framework to explain condom use decision-making among male undergraduate students at the University of Ghana. The model is particularly relevant as it provides a structured basis for understanding how information, motivation, and behavioural skills interact to influence condom use behaviour. Fisher and Fisher's seminal work laid the groundwork for subsequent research and refinement, exemplified by their paper "The Information-Motivation-Behavioural Skills Model: A General Social Psychological Approach to Understanding and Promoting Health Behaviour" (1992).

Studies by To et al. (2020) and Cai et al. (2013) underscored the effectiveness of the IMB model in promoting adherence to health behaviours, such as inhalation therapy for chronic obstructive pulmonary disease and consistent condom use among high school students in China. Similarly, research by Choi et al. (2014) and Farooq et al. (2019) demonstrated the model's utility in predicting and fostering self-management behaviours such as diabetes care among older adults in Korea as well as security behaviours among students. Recent studies, including that by Ge et al. (2022), have amalgamated the IMB model with other theoretical frameworks, such as the Protection Motivation Theory, to address specific health concerns like pregnancy weight management, showcasing its adaptability and versatility.

Despite its effectiveness, the IMB model has faced criticism for not fully encompassing all key predictors of behaviour, such as external factors and social determinants of health (Cooperman et al., 2015). Critics argue that the model may not directly measure an individual's motivation to engage in a particular behaviour, potentially limiting motivation assessment (Suwarni et al.,

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2017). Despite these criticisms, the IMB model has exhibited flexibility and efficacy in comprehending and predicting various health and behavioural outcomes across diverse populations and contexts, ranging from smoking cessation to HIV care (Kwitonda, 2020; Seif et al., 2019).

In conclusion, the IMB model's evolution and development have cemented its status as a valuable framework for understanding health behaviour changes. By integrating information, motivation, and behavioural skills, the IMB model offers a holistic approach to promoting positive health behaviours and enhancing health outcomes across different populations and health conditions.

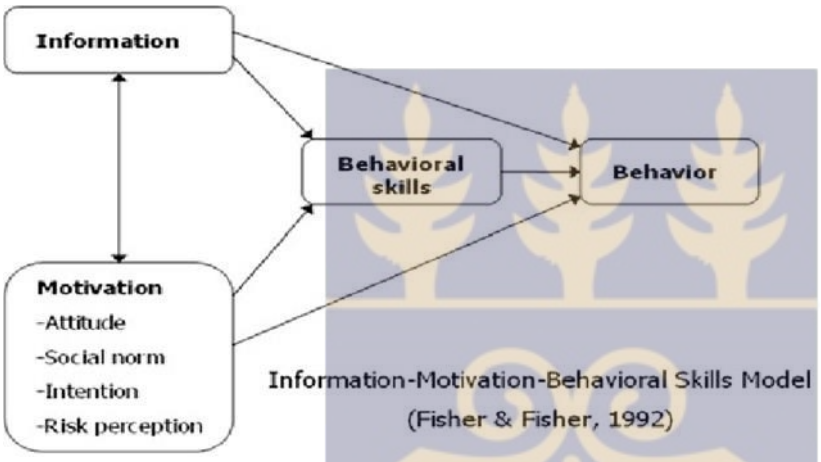


Figure 2.1: The Original IMB Model

2.3 The Conceptual Framework for the Study

Developing a conceptual framework based on the IMB model for investigating condom use decision-making among male undergraduate students at the University of Ghana involves incorporating key aspects of the IMB model to direct the research process. The IMB model suggests that health behaviour change is influenced by information, motivation, and behavioural skills (Yang et al., 2020) and is adopted in this study as a theoretical framework to explain condom use decision-making among male undergraduate students at the University of Ghana.

The initial step was to evaluate the information component within the IMB model. This involved assessing the knowledge levels of male undergraduate students at the University of Ghana regarding condom use, STIs, and the importance of safe sexual practices. Research by

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Deng et al. (2022) and Jiang et al. (2019) emphasised the importance of information in promoting health behaviours.

The second step is to analyse the motivation aspect among male students. This entails evaluating their attitudes, beliefs, and perceptions towards condom use. Studies by Aventin et al. (2021) and Jiang et al. (2019) have highlighted the critical role of motivation in influencing condom use behaviours among adolescents and specific populations.

The final step is to focus on the behavioural skills component. This includes assessing the practical abilities and self-efficacy of male undergraduate students in negotiating condom use and engaging in safe sexual practices. Research by Huy et al. (2015) and Camilleri et al. (2015) has underscored the significance of behavioural skills in promoting health behaviours.

In conclusion, developing a conceptual framework based on the IMB model for studying condom use decision-making among male undergraduate students at the University of Ghana involves integrating information, motivation, and behavioural skills components to guide research and intervention strategies in promoting positive health behaviours.

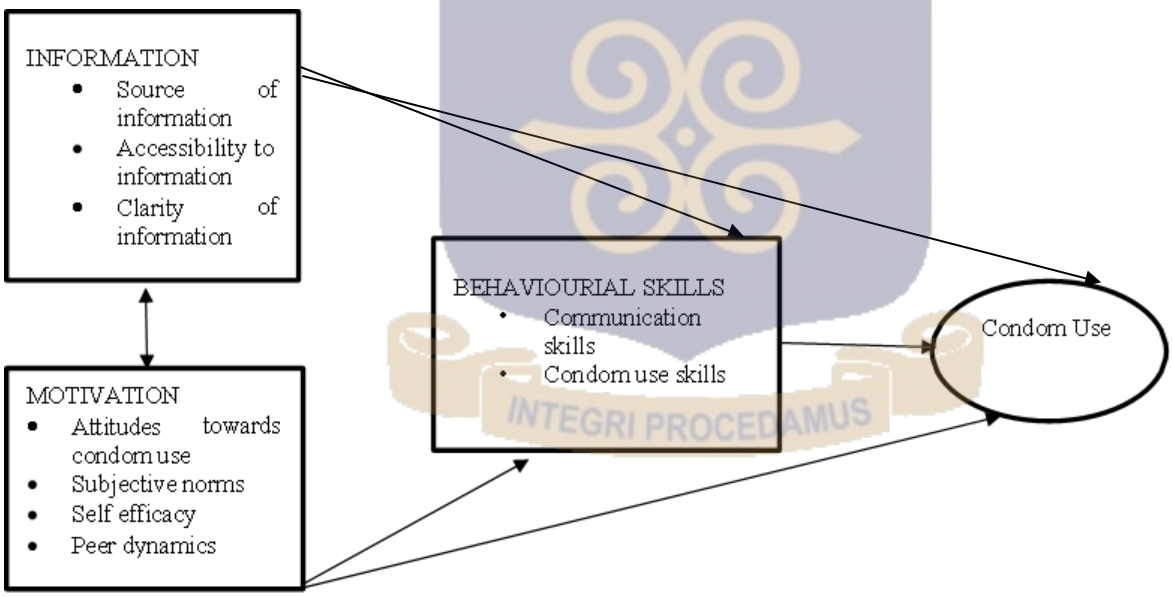


Figure 2.2: Conceptual Framework of the Factors That Influence Condom Use Decision-Making Among Male Undergraduate University Students

2.4 Prevalence of Condom Use Among Male Undergraduates

The use of condoms among male undergraduate students varies significantly worldwide. Studies from multiple countries have suggested inconsistent condom use behaviour. In Southern Brazil, a study reported a prevalence rate of 61.4% for condom use during the last sexual

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intercourse (Parajuli et al., 2021). This figure differs substantially from other countries, such as China, Canada, the United States, and Ethiopia, where studies have shown varying prevalence rates of 44.2%, 47.2%, 63.8%, and 55.8%, respectively (Parajuli et al., 2021). These findings clearly illustrate the lack of uniformity in condom use among male undergraduate students across different regions. Therefore, a nuanced understanding of the factors that influence condom use behaviour is needed, along with tailored approaches to promote safe sex practices in each region.

Research in various African countries, including Malawi and South Africa, has shown that there is regional variation in condom use behaviour among young adults. In Malawi, the prevalence of condom use among young adults is reported to be 55.8% (Jimu et al., 2022). However, South Africa has a wider range, with lifetime prevalence estimates for condom use during heterosexual anal intercourse varying between 29% and 97.5% (Nyoni & James, 2022). These disparities within a single continent emphasise the complexity of condom use behaviour and the importance of conducting context-specific research.

Research conducted in Ghana specifically examines condom use behaviour among young adults within a national context. Hagan et al. (2021) investigated the relationship between exposure to family planning messages and consistent condom use among never-married men. Their findings revealed that exposure to such messages correlated with consistent condom use, but this effect was less pronounced for men aged 35 and above compared to those aged 15-24. This suggests a potential generational shift in attitudes towards safe sex practices.

This suggests a potential generational shift in attitudes towards safe sex practices. Additionally, Asante et al. (2016) reported that while 84% of their undergraduate participants were sexually active, only 48% used condoms during their most recent encounters. These studies highlight the need for targeted interventions focused on promoting consistent condom use among male undergraduate students. Understanding the factors influencing condom use behaviour within specific regions such as Ghana is crucial for developing effective strategies to reduce the risk of sexually transmitted infections and improve sexual health education in university settings. By addressing the regional variations in condom use prevalence, we can work towards promoting safer sexual practices among young adults globally.

2.5 The Role of Information on Condom Use Decision-Making

Information is vital for making well-informed decisions, serving as the foundation that steers individuals towards sound choices (Rimawi & ALMasri, 2021). Decision-making is a

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knowledge-intensive process in which access to accurate and pertinent information is essential for making informed decisions (Deng et al., 2022). Acquiring knowledge equips individuals with the insights, facts, and understanding necessary to evaluate situations, assess options, and select the most appropriate course of action (Ciccio et al. 2014). Educational initiatives (Wong et al., 2021), targeted campaigns (Jiang et al., 2019), and access to information (Rimawi & ALMasri, 2021) affect condom use decision-making among male university students. This aligns with the Information–Motivation–Behavioural Skills (IMB) model, which emphasises the role of information in influencing health behaviour.

Educational initiatives play a critical role in shaping the information in the IMB Model, particularly in the context of male university students' decision-making regarding condom use (Wong et al., 2021). These interventions aim to equip individuals with vital knowledge about sexual health, condom use practices, and STI prevention, ultimately affecting their decision-making processes (Deng et al., 2022). By improving their knowledge through educational initiatives, male university students can gain a deeper understanding of the importance of condom use in safeguarding their sexual health and preventing STIs (Deng et al., 2022). These interventions empower students to make well-informed decisions concerning their sexual health and behaviours (Shay & Lafata, 2014). Studies have indicated that educational interventions have a positive impact on knowledge acquisition, leading to a better understanding of treatment options, benefits, and potential risks, which consequently influence decision-making processes (Elwyn et al., 2013).

Implementing targeted campaigns is crucial for effectively influencing information in the IMB model (Jiang et al., 2019). These campaigns deliver tailored messages that enhance knowledge acquisition and promote informed decision-making about condom use (Nkobodo, 2014). By raising awareness about the importance of condom use as both a contraceptive and a barrier against STIs, these campaigns aim to shape students' attitudes and behaviours towards condom use (Nkobodo, 2014). They also help overcome specific barriers, such as negative attitudes towards condom use, empowering individuals to make informed decisions about their sexual health (Mantell et al., 2020). Studies have shown that targeted campaigns effectively promote behavioural change by highlighting motivational factors and behavioural skills in the target population (Bashir et al., 2022). Consequently, these campaigns enhance knowledge acquisition and influence condom use decision-making among male university students, playing a crucial role in promoting safer sexual practices and improving sexual health outcomes within this population.

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Providing accurate and relevant information is of paramount importance for shaping individuals' knowledge, attitudes, and behaviours related to sexual health and condom use (Rimawi & ALMasri, 2021). Research has shown that addressing knowledge gaps, correcting misconceptions, and promoting informed decision-making are essential for effective sexual health education (Elshiekh et al., 2020). Furthermore, the availability of information through various channels such as health services, educational resources, and online platforms enhances knowledge acquisition among university students (Cassidy et al., 2018). Accessible information enables students to remain informed about the importance of condom use, understand the risks associated with unprotected sex, and make informed decisions to protect their sexual health (Espada et al., 2015). By ensuring that accurate and relevant information is readily available, educational initiatives can directly impact the Information Component of the IMB Model, thereby promoting healthier sexual practices among male university students. Thus, access to information plays a crucial role in equipping male university students with the knowledge needed to make informed decisions about condom use, ultimately prioritising their sexual health.

In summary, educational interventions, targeted campaigns, and easily accessible information channels play a crucial role in shaping the Information Component of the IMB Model for male university students' condom use. These initiatives are essential for empowering students to make informed decisions, increase their awareness, and promote positive sexual health behaviours. These findings highlight the importance of information accessibility in influencing condom use decision-making among male undergraduate students.

2.6 The Role of Motivation on Condom Use Decision-Making

Motivation is influenced by a range of factors, including attitudes towards condom use (Elshiekh et al., 2020), subjective norms (Protogerou et al., 2018), self-efficacy (Jiang et al., 2019), peer dynamics (Aventin et al., 2021), and emotional factors (Espada et al., 2015). These factors interact to shape individuals' motivation to engage in safer sexual practices, ultimately influencing their decisions-making regarding condom use.

Attitudes towards the use of condoms have a significant impact on decision-making within the context of the IMB model (Elshiekh et al., 2020). Research has shown that individuals with positive attitudes towards condom use are more likely to have the intention to use them, view them as essential for protecting against STIs, and feel confident in negotiating their use (X. Sun

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et al., 2013). This includes their beliefs (Aggrey-Bluwey et al., 2022), perceptions (Aventin et al., 2021), and feelings about condom use (Espada et al., 2015), which can either encourage or discourage safer sex practices. Conversely, a study of heterosexual college students found that negative attitudes, such as concerns about reduced sexual pleasure or discomfort, were common reasons for not using condoms (Aggrey-Bluwey et al., 2022). Similarly, negative attitudes towards the use of condoms due to perceived reduction in sexual pleasure were reported among Kenyan university student-athletes, indicating the influence of attitudes on condom use decisions (Rintaugu et al., 2020). These findings underscore the intricate role that attitudes play in shaping condom use decisions. Positive attitudes foster safer sex practices, while negative attitudes can lead to the avoidance of condom use. Addressing and reshaping negative attitudes through targeted educational and motivational interventions is essential to promoting safer sexual practices among university students.

Subjective norms, which comprise individuals' perceptions of the expectations and influences of their social surroundings concerning condom use, hold considerable sway in shaping their motivation to engage in safer sexual practices and their decisions regarding condom use (Protogerou et al., 2018). An array of studies has demonstrated the sway of these norms, including research that indicates in Ghana, where cultural norms and social pressures play a crucial role in shaping behaviour, subjective norms can exert a profound impact on individuals' motivation to consistently use condoms (Teye-Kwadjo et al., 2017). Moreover, positive subjective norms, such as social support for condom use from peers, partners, or significant others, have been shown to bolster motivation for condom use among male university students (Kim et al., 2021). When individuals perceive that those around them support and encourage condom use, it can positively influence their motivation to prioritise safe sex practices and adopt consistent condom use behaviours (Camilleri et al., 2015). On the other hand, negative subjective norms or social pressures against condom use may undermine motivation and result in inconsistent condom use behaviours (Kholid et al., 2021). If individuals perceive that their peers or social circles do not support or condone condom use, this can negatively impact their motivation to use condoms and make informed decisions regarding sexual health (Ibrahim et al., 2022). By taking into account the social expectations and influences surrounding condom use, interventions and educational programmes can address subjective norms to enhance motivation and promote consistent condom use behaviours among this demographic (Manyaapelo et al., 2017).

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Self-efficacy is a key factor in motivating individuals to engage in condom use and adopt safer sexual practices, as demonstrated by research conducted by Reis et al. (2013). Encouraging self-efficacy in condom use is vital for enhancing consistent condom use among male university students in China, intending to reduce HIV transmission, as per Chen et al. (2023). People who possess a strong belief in their ability to use condoms effectively are more likely to display confidence in their ability to negotiate condom use, overcome barriers, and participate in actions that protect against STIs, as stated by Espada et al. (2015). A study on the determinants influencing male condom use among university students in Portugal, which followed the principles of the IMB Model, also emphasised the role of self-efficacy in promoting consistent condom use, as highlighted by Reis et al. (2013). In contrast, low self-efficacy may hinder individuals' readiness to use condoms effectively, as mentioned in a study conducted by (Liu et al., 2014). Approaches that concentrate on enhancing self-efficacy, such as providing information, skills training, and support, can have a favourable impact on motivation and empower students to make informed decisions about condom use, according to (Liu et al., 2014). This reflects the role of self-efficacy within the Motivation component of the IMB model in influencing condom use behaviour.

Peers have a significant impact on individuals' attitudes, beliefs, and behaviours, including their motivation to practice safe sex (Aventin et al., 2021). Positive peer influences can enhance individuals' motivation to prioritise safe sex practices, such as consistent condom use, by fostering a supportive environment that encourages healthy behaviours (Aventin et al., 2021). Conversely, negative peer influences can discourage condom use in committed relationships, affecting male university students' motivation to engage in safer sex practices (Aventin et al., 2021). Research conducted in China has demonstrated that peer-led interventions delivered through social media can effectively improve attitudes towards condom use and enhance behavioural skills, highlighting the powerful influence of peer dynamics on motivation (W.H. Sun et al., 2017). Peer groups can provide social support and encouragement and normalise condom use, which can positively impact motivation to engage in protective behaviours (Chambers et al., 2016).

Emotional factors that encompass individuals' feelings, attitudes, and emotional responses can impact their motivation to engage in protective behaviours such as consistent condom use (Manyaapelo et al., 2017). Emotional responses such as fear, anxiety, or comfort levels related to condom use can influence an individual's motivation and willingness to engage in safe sex practices (Aventin et al., 2021). Emotional values, satisfaction, and social perceptions also play

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crucial roles in shaping individuals' decisions and motivations regarding condom use (James-MacEachern & Yun, 2017). Positive emotional responses towards condom use, such as feelings of responsibility, care for oneself and partners, and a sense of empowerment, can enhance motivation for consistent condom use (Fauk et al., 2021). Conversely, negative emotions such as fear, stigma, or discomfort associated with condom use may hinder motivation and decision-making regarding sexual health practices (Manyaapelo et al., 2017).

In summary, the motivation to participate in condom use is influenced by a range of intricate factors such as but not limited to, attitudes, subjective norms, self-efficacy, peer dynamics, and emotional responses. It is essential to understand these factors to effectively promote consistent condom use among male university students and overcome barriers to safer sexual practices.

2.7 The Role of Behaviour on Condom Use Decision-Making

The behaviour of an individual is crucial in mediating the connection between condom use motivation and actual condom use behaviour (Camilleri et al., 2015). Huy et al. (2015) asserted that effective communication skills empower individuals to negotiate condom use with sexual partners, articulate their intentions clearly, and address any barriers to condom use. Camilleri et al. (2015) further highlighted the importance of communication skills in fostering condom use behaviour among diverse populations. These skills facilitate open discussions about safe sex practices, expression of concerns, and establishing mutual understanding with partners, as stated by Huy et al. (2015a). In the African context, where cultural norms and gender dynamics may affect sexual behaviours, communication skills assume even greater significance, as highlighted by Öhman et al. (2015). By enhancing communication skills, individuals can better convey motivation, negotiate condom use effectively, and translate intentions into actions, as supported by Camilleri et al. (2015).

Jiang et al. (2019) emphasised the importance of condom use skills, in predicting consistent condom use behaviour. Huy et al. (2015b) have highlighted that psychosocial factors, including information, motivation, and behavioural skills, that influence condom use behaviour. This underscores the direct impact of condom use skills on the promotion of safe sexual practices. Additionally, research by Liu et al. (2014) supports the idea that behavioural skills, such as condom use skills, are essential in translating information and motivation into preventive behaviour. Liu et al. (2014) found that information and motivation indirectly influenced preventive behaviour through behavioural skills, indicating the critical role of the practical application of condom use skills in ensuring consistent condom use among college

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students. Espada et al. (2015) found that behavioural skills predict behaviour through motivation, as hypothesised by the IMB model, further emphasising the significance of Condom Use Skills in promoting safe sexual practices.

In summary, effective communication and condom use skills are crucial in mediating the interrelationship between motivation for condom use and actual behaviour. Research highlights their significance in negotiating condom use, particularly in culturally diverse situations where they play a vital role in fostering consistent condom use and safe sexual practices.

2.8 Methods Used in the IMB Model

After conducting an extensive analysis of the existing literature, it is evident that a broad range of methodological strategies have been utilised in various studies. A review of 37 articles cited in explaining the IMB model in this study revealed a diverse array of research methodologies. Some scholars have employed quantitative techniques, while others have adopted qualitative approaches and a subset incorporating a mixed-methods framework.

Quantitative methods were widely employed in the 21 reviewed studies. These methods typically entail gathering and examining numerical data to address research questions and test hypotheses. Quantitative methods allow for the quantification of relationships and generalisation of findings through hypothesis testing, providing statistical rigor and broader applicability to research outcomes (TOKLU & Hürsen, 2021). Quantitative data enhance research findings by measuring associations, identifying patterns, and assessing the prevalence of health behaviours (Zhang & Creswell, 2013).

The seven studies reviewed revealed the use of qualitative methods. Utilising qualitative methods in IMB research provides numerous benefits, such as gaining deeper insights into participants' experiences, perceptions, and behaviours (Anwar, 2015). They also offer insights into the motivations and factors shaping health behaviours, providing a comprehensive understanding of their influences (Maxwell, 2022).

A portion of the articles, amounting to 9 in total, used a mixed-methods approach. Researchers gained a comprehensive understanding of health behaviours guided by the IMB model by integrating qualitative and quantitative methods. This integration enables triangulation, where the results from both approaches converge to provide a more in-depth and nuanced understanding of the behaviours (Kibirige et al., 2022). The use of triangulation enhances the

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credibility and dependability of research outcomes, supplying a more comprehensive viewpoint on the elements impacting health behaviours (Dossett et al., 2020a).

The literature review underscores the various research methodologies applied in different studies, along with their respective advantages. However, it also revealed a deficiency in the integration of quantitative and qualitative aspects within individual studies, indicating a significant gap in the combination of methodologies and data triangulation (Smajic et al., 2022). Moreover, the prevalence of single-method studies accentuates the need for enhanced interdisciplinary collaboration and methodological pluralism to investigate research questions from multiple angles and broaden the range of insights obtained (Dossett et al., 2020b). This supports the application of structured methodological approaches in understanding condom use decision-making within the IMB framework.



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CHAPTER THREE

METHODS

3.0 Introduction

This chapter presents the methods and procedures employed in this study. It comprises the study design, study location, study population, sample size, sampling techniques, data collection techniques and tools, ethical considerations, data processing, and analysis.

3.1 Study Design

This cross-sectional study at the University of Ghana employed a quantitative approach to investigate condom use decisions of male undergraduate students. Data were collected using pre-designed questionnaires to capture essential insights for the research.

3.2 Profile of the Study Area

The University of Ghana, initially established in 1948 as the University College of the Gold Coast, is the largest and leading institution in Ghana. The university's organisational structure, governed by a central administration, includes four colleges and a School of Graduate Studies. The university's dedication to advancing learning and research is further demonstrated by its research institutions and centres, such as the Noguchi Memorial Institute for Medical Research and the Regional Institute for Population Studies. The university boasts a diverse student population of approximately 76,013 students enrolled in various programs in the 2022/2023 academic year (University of Ghana, 2023). It also has affiliations with institutions both in Ghana and abroad. The university has seen a significant increase in international student enrolment, with representation from over 70 countries. Furthermore, 82.1% of students are undergraduates, 13.1% pursue graduate studies programs, and 4.9% pursue sub-degrees (University of Ghana, 2023). According to the University of Ghana Computing System (UGCS), in the 2023/2024 academic year, there were 30,232 male undergraduates on the Main Legon Campus.

The university provides housing options for students through 14 recognised halls of residence and two hostels that accommodate both undergraduate and postgraduate students. Notably, the halls are mixed-gender, with the exception of Commonwealth Hall (exclusively for male students) and Volta Hall (exclusively for female students).

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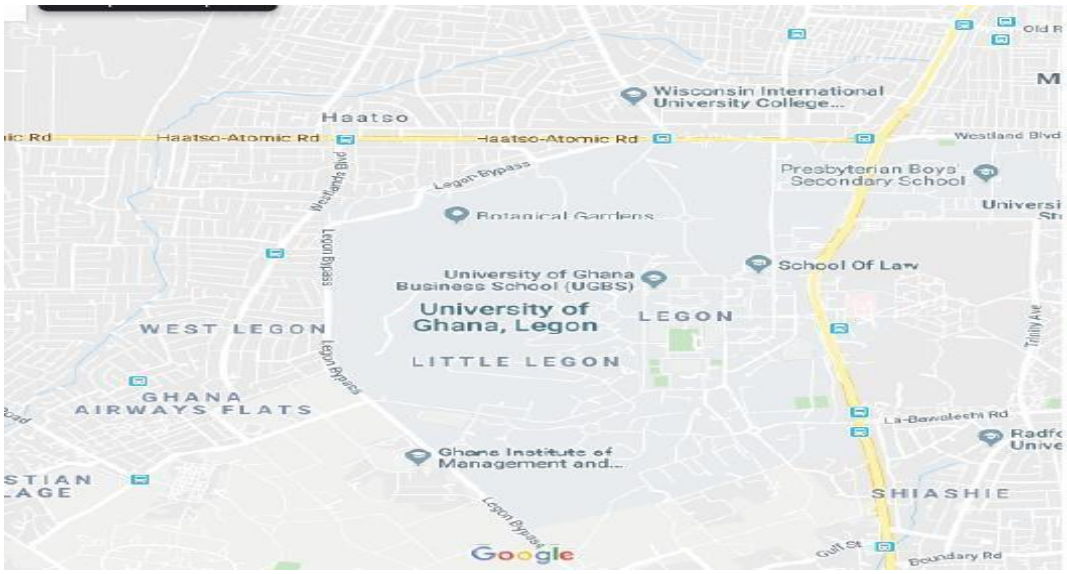


Figure 3.1: A map depicting the study area (Source: Google Map)

3.3 Sampling

The sampling process for this study was designed to ensure the representation of male undergraduate students residing in the halls of residence at the University of Ghana's Main Legon Campus. The process followed a clear, step-by-step approach, from identifying the study population to calculating the sample size and selecting the participants.

3.3.1 Study Population

The target population for this study consisted of male undergraduate students aged 17 – 24 years enrolled in various programmes at the University of Ghana. Specifically, this study focused on those living in the halls of residences on the Accra Campus. As of the 2023/2024 academic year, 30,232 male undergraduate students reside on campus, forming the sampling frame for this study.

3.3.2 Sample Size Calculation

The sample size was computed using Yamane (1967) formula below:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = minimum sample size for the study N = population size

e = Level of precision at 5% (standard value of 0.05)

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Using the male undergraduate residential population of 30,232 on the Main Campus of the University of Ghana as of May 2024, a 95% confidence level and a 5% margin of error, the sample size was calculated as follows:

$$n = \frac{30232}{1 + 30232(0.05)^2}$$

n = 395

Sample size adjustment

The sample size was adjusted upwards using a 10% non-response rate = 39.5 Thus, a total sample size of 435 was estimated.

3.3.3 Proportional Allocation

Given the diverse distribution of male students across different halls of residence, the proportional allocation method was employed to ensure that participants were selected per the size of each hall. The proportion of students from each hall was calculated by dividing the population of each hall by the total male population, and this proportion was then multiplied by the total sample size to determine the number of participants from each hall. The proportional allocation method ensured that all halls of residence were adequately represented, and participants were selected from each hall based on the calculated sample sizes. The table below shows the distribution of the sample size across the halls of residence:

Table 3.1: Sample Size Distribution Per Hall

Hall Of Residence	Total Population of Male	Sample Size
Akuafo	1489	53
Commonwealth	1869,	67
Dr Hilla Liman	1287	4
Dr Jean Akah	1697	61
Elizabeth Frances Sey	1528	54
International Student Hall 1	86	3
International Student Hall 2	156	6
Jubilee	248	9

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Legon Hall	1397	50
Mensah Sarbah	926	33
Professor Kwapong	1497	53

3.3.4 Selection of Participants

Once each hall's sample size was determined, participants were selected using simple random sampling. A list of male students residing in each hall was obtained, and a random number generator was used to ensure fairness and equal opportunity for selection. This process was repeated for all halls of residence until the required number of participants for each hall was achieved.

3.4 Inclusion Criteria

a. Enrolment Status: They must be male undergraduate students from year 2 to 4 at the Accra Campus of the University of Ghana.

b. Age Range: They must be within the typical undergraduate age range of 17–24 years.

c. Language Proficiency: They must have sufficient English proficiency to comprehend and respond to study materials, ensuring clear communication during surveys and interviews.

3.5 Exclusion Criteria

a. Extended Absence: Participants who are unavailable for follow-up due to extended absence from the university, such as internships or prolonged leave, will be excluded to maintain the study's continuity.

b. Incapacitating Illness: Participants with severe or incapacitating illnesses that would impede their ability to participate in the study or complete the necessary data collection tasks will be excluded to ensure safety and well-being.

c. Married undergraduates were excluded.

3.6 Study variables

3.6.1 Dependent variables

The dependent variable was condom use at last sex, measured as a binary variable (Yes/No).

3.6.2 Independent variables

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The independent variables were grouped into four main categories: socio-demographic, informational, motivational, and behavioural factors. Each category is crucial for comprehending the determinants of condom use decision-making.

Table 3.2: Overview of Study Variables by Type

ariable Type	Variable Name	Variable Description	Variable Options	Scale of Measurement
Socio-demographic	Date of Birth	The birth date of participants, helping determine their age.	N/A	Continuous
	Year of Study	Indicates the academic level of participants (from Level 1 to Level 4).	Level 1, Level 2, Level 3, Level 4	Ordinal
	Faculty/School	The specific faculty or school that each participant is enrolled in.	Arts, Sciences, Business, Education, etc.	Nominal
	Relationship Status	Participants' current relationship status affecting their views on condom use.	Single, in a relationship, Married	Nominal
Socio-demographic	Hall of Residence	The hall where participants live on campus, providing insight into their living environment.	Akuafo, Commonwealth, Legon Hall, etc.	Nominal
	Place of Origin (Region)	The geographical region participants come from, offering a look into their backgrounds.	Greater Accra, Ashanti Region, Northern Region, etc.	Nominal
	Religious Affiliation	The religion or belief system participants identify with, which might influence their sexual behaviour.	Christian, Muslim, Traditional, No religion, etc.	Nominal
	Sexually Active	Indicates whether participants have engaged in sexual activity in the past year.	Yes, No	Binary
	Number of Sexual Partners	Counts how many sexual partners participants have had in the past year.	0, 1, 2, 3, 4+	Discrete

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Informational Factors	Educational Programs and Interventions	Captures whether participants have taken part in any sexual health education programs.	Yes, No	Binary
	Sources and Trustworthiness of Information	Looks at where participants get their sexual health information and how much they trust those sources.	Friends, Internet, Health professionals, Family, etc.	Nominal
	Access to Information	Assesses how easy it is for participants to find the sexual health information they need.	Easy, Moderate, Difficult	Ordinal
	Quality and Relevance of Information	Participants' perceptions of how good and relevant the information about condom use is that they receive.	Poor, Fair, Good, Excellent	Ordinal
Motivational Factors	Attitudes Towards Condom Use	Reflects how participants feel about using condoms, influencing their decisions.	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree	Ordinal
	Subjective Norms	Captures the social pressure participants feel about using condoms, based on perceived expectations from others.	Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree	Ordinal
	Self-Efficacy	Measures participants' confidence in their ability to use condoms correctly and consistently.	Low, Moderate, High	Ordinal

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	Peer Dynamics	Explores how friends and social circles influence participants' decisions around condom use.	Low Influence, Moderate Influence, High Influence	Ordinal
	Emotional Factors	Examines how emotions might affect the decision to use condoms.	Low Impact, Moderate Impact, High Impact	Ordinal
Behavioural Factors	Communication Skills	Assesses how well participants can discuss condom use with their partners.	Poor, Fair, Good, Excellent	Ordinal
	Condom Use Skills	Evaluates participants' practical skills in using condoms correctly, including handling.	Poor, Fair, Good, Excellent	Ordinal

3.7 Data Collection Tool

The study utilised a self-administered digital questionnaire to collect data on condom use decision-making among male undergraduates, facilitating independent, candid, and precise responses. Developed through a comprehensive literature review and relevant theoretical frameworks, the questionnaire was refined through a campus-based pilot study. Participants completed the survey using tablet devices or smartphones provided by the Principal Investigator, ensuring a user-friendly and adaptable process. This methodology streamlined data collection and minimised interviewer bias. Participant feedback during the pilot study enhanced the clarity and relevance of the questions. Measures were implemented to ensure that all participants had access to the requisite technology, thus addressing potential barriers. A self-administered digital questionnaire was deemed essential for collecting accurate data and providing a convenient experience for students.

3.8 Data Analysis

Data analysis was performed using Excel and STATA 18 to identify patterns in condom use decision-making among male undergraduate students. Data preparation included cleaning to remove incomplete or inconsistent responses and to ensure readiness for statistical analysis. Descriptive statistics for key demographics, such as age, year of study, and hall of residence, are presented as frequencies, percentages, means, and standard deviations.

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Inferential statistics analysed condom use decision making. Chi-square tests examined the relationships between categorical socio-demographic variables and condom use, while Binary Logistic Regression assessed how socio-demographic, informational, motivational, and behavioural factors predict condom use. One-way ANOVA was used to compare mean differences in motivational or behavioural scores across groups, and Pearson Correlation analysis was used to explore the relationships between continuous variables such as self-efficacy and attitudes toward condom use.

A statistical significance threshold of $p<0.05$ ensured robust findings. Odds ratios (ORs) and 95% confidence intervals (CIs) were estimated during regression analysis to measure the strength of the associations. This structured methodology provided a comprehensive understanding of the factors influencing condom use decision-making among male undergraduate students at the University of Ghana.

3.9 Ethical Considerations

Ethical considerations are fundamental to the integrity of this study, ensuring that the rights and well-being of participants are safeguarded throughout the research process.

3.9.1 Approval from the Ethics Review Board

The research protocol was reviewed and approved by the Noguchi Memorial Institute for Medical Research Institutional Review Board (Protocol No. 00001276) to ensure compliance with ethical guidelines, enhancing the study's ethical rigor and credibility. The plan incorporated quantitative to analyse condom use decision-making among male undergraduate students at the University of Ghana while maintaining ethical standards that protect participants' rights and welfare.

3.9.2 Informed Consent

Informed consent was obtained from all study participants, who were provided with clear and comprehensive information about the study's objectives, procedures, potential risks, and benefits. They were also informed of their rights, including the right to withdraw at any time without penalties.

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3.9.3 Privacy and Confidentiality

Participants' privacy and confidentiality were strictly protected. Identities remained anonymous, and data such as survey responses and interview transcripts were de-identified. Access to personally identifiable information was limited to authorised research team members.

3.9.4 Minimization of Harm

Efforts were made to minimize distress during data collection by evaluating the sensitivity of survey questions and interview techniques. Participants were informed about available support services throughout the study.

3.9.5 Cultural Sensitivity

Researchers conducted the study with sensitivity to the diverse cultural backgrounds of University of Ghana students. Comprehensive training in cultural competence was provided to ensure respect for participants' values and beliefs, and the methodology was adapted to accommodate cultural differences.

3.9.6 Beneficence and Non-maleficence

The research aimed to advance reproductive health knowledge while ensuring no undue harm to participants. Researchers upheld beneficence and non-maleficence principles, prioritizing participant welfare throughout the study.

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CHAPTER FOUR

RESULTS

4.1 Demographic Information of participants

The demographic characteristics of the study participants are summarized in Table 4.1. Out of 400 respondents, the mean age was 21.46 years (± 2.54), with the majority (n = 186; 46.50%) aged between 21-24 years. In terms of year of study, most participants were in their second year (n = 156; 39.00%). Regarding faculty/school distribution, the highest proportion of respondents was from the Business faculty (n = 88; 22.00%).

In terms of relationship status, the majority of respondents were single (n = 243; 60.75%). Concerning the hall of residence, the most represented halls were James Yankah Hall (n = 58; 14.50%). Regarding the place of origin, the highest proportion of respondents was from the Eastern Region (n = 99; 24.75%). On financial support, the majority of the participants (n = 293; 73.25%) reported not receiving a monthly allowance. Among those who did, the majority (n = 46; 42.99%) received between 600-1000 GHC. In terms of religious affiliation, Christianity was the dominant religion (n = 345; 86.25%).

With respect to access to sexual and reproductive health (SRH) services, the majority of the participants (n = 340; 85.00%) reported having no access. A higher proportion of participants (n = 247; 61.75%) reported not being sexually active. Among those who were sexually active, most (n = 95; 23.75%) had a single partner.

Table 4.1: Demographic Characteristics of Respondents (N = 400)

Variable	Frequency (n)	Percentage (%)
Mean Age (SD)	21.46 (±2.54)	
Age (years)		
17–20	172	43.00
21–24	186	46.50
≥25	42	10.50
Year of Study		
First Year	58	14.50

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Second Year	156	39.00
Third Year	128	32.00
Fourth Year	58	14.50
Faculty/School		
Arts	68	17.00
Business	88	22.00
Engineering	57	14.25
Health Sciences	56	14.00
Sciences	55	13.75
Social Sciences	76	19.00
Relationship Status		
Divorced/Separated/Widowed	2	0.50
In a Relationship	155	38.75
Single (Never Married)	243	60.75
Hall of Residence		
Non-Resident	22	5.50
Akuafo	41	10.25
Kwapong	50	12.50
Commonwealth	42	10.50
Elisabeth Sey	56	14.00
Evandy	11	2.75
Hilla Limann	43	10.75
James Yankah	58	14.50
Legon Hall	24	6.00
Sabah	19	4.75
Jubilee	34	8.50
Region of Origin		

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Oti	11	2.75
Bono (Brong Ahafo)	18	4.50
Northern	37	9.25
Western	19	4.75
Eastern	99	24.75
Volta	79	19.75
Central	42	10.50
Ashanti	47	11.75
Greater Accra	48	12.00
Monthly Allowance		
No	293	73.25
Yes	107	26.75
≤ 599 GHS	28	26.17
600–1000 GHS	46	42.99
>1000 GHS	33	30.84
Religious Affiliation		
Traditionalist	4	1.00
Islam	51	12.75
Christianity	345	86.25
Access to SRH Services		
No	340	85.00
Yes	60	15.00
Source of SRH Services (n = 60)		
Hall Programmes	12	20.00
Church Programmes	19	31.67
Departmental Meetings	11	18.33
Seminars/Workshops	18	30.00

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Sexual Activity Status		
No	247	61.75
Yes	153	38.25
Sexual Partnership Status		
None	252	63.00
Single Partner	95	23.75
Multiple Partners (Different Times)	40	10.00
Multiple Partners (Same Time)	8	2.00
Both	5	1.25

The prevalence of condom use among study participants is summarized in Table 4.2. Among those who had engaged in sexual activity, the majority (n = 111; 77.08%) indicated that they or their partner used a condom during their last sexual encounter. However, when assessing consistency in condom use, only 34.03% (n = 49) reported always using condoms.

Regarding the initiation of condom use, the majority (n = 95; 65.97%) started using condoms before entering university. The influence of alcohol and drugs on sexual activity was relatively low, with most respondents (n = 127; 88.19%) stating that alcohol did not influence their decision to have sex, and 84.03% (n = 121) reporting that drugs did not influence their sexual behaviour.

On condom use consistency, slightly more than half of the respondents (n = 74; 51.39%) admitted to not using condoms with every sexual partner. Among the reasons cited for inconsistent condom use, the most common was reduced pleasure (n = 41; 58.57%). followed by trust in their partner (n = 36; 51.43%) and partner objection (n = 26; 37.14%). Lack of availability (n = 5; 7.14%) and cost (n = 12; 17.14%) were the least cited reasons, indicating that accessibility and affordability were not major barriers to condom use among respondents.

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Table 4.2: Condom Use Prevalence

Variable	Frequency (400)	Percent (%)
Condom use at last sex		
No	33	22.92
Yes	111	77.08
Condom use frequency		
Never	17	11.81
Always	49	34.03
Most of the times	38	26.39
Rarely	23	15.97
Sometimes	17	11.81
Start using condom		
After starting University	49	34.03
Before University	95	65.97
Influence of alcohol for sex		
No	127	88.19
Yes	17	11.81
Influence of drugs for sex		
No	121	84.03
Yes	23	15.97
Use condoms with every sexual partner		
No	74	51.39
Yes	70	48.61
Reasons for not using condoms with every Partner		
Trust partner		
No	34	48.57
Yes	36	51.43
Partner objection		
No	44	62.86
Yes	26	37.14

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Reduced pleasure			
	No	29	41.43
	Yes	41	58.57
Lack of availability			
	No	65	92.86
	Yes	5	7.14
Cost			
	No	58	82.86
	Yes	12	17.14

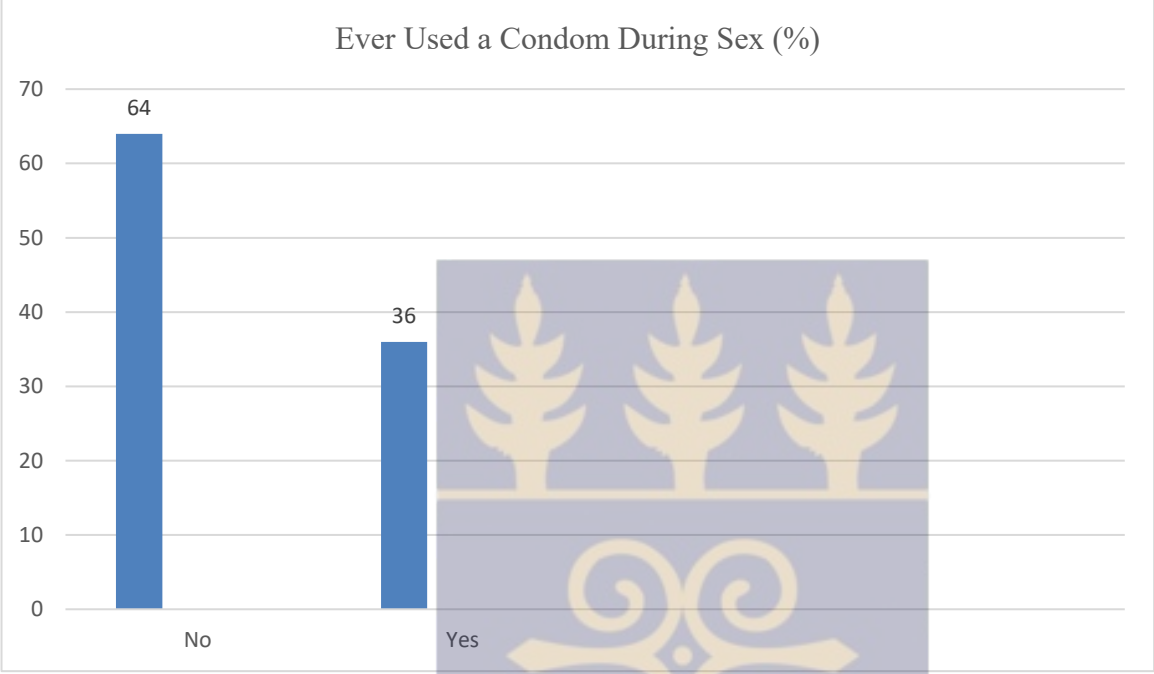


Figure 4.1: Condom Use

Out of 400 respondents, the majority (n = 256; 64.00%) reported never having used a condom during sex, while only 36.00% (n = 144) had ever used one.

4.3 The Role of Information on Condom Use Decision-Making

The role of information in condom use decision-making among participants is summarised in Table 4.3. The majority (n = 287; 71.75%) reported social media as their primary source of information about condoms. However, regarding the sources of condom information participants trusted, school health programs (n = 216; 54.00%) emerged as the most trusted.

Most participants (n = 244; 61.00%) found the information about condoms clear, and a majority (n = 239; 59.75%) reported that accessing such information was easy. However, a significant proportion (n = 274; 68.50%) had never participated in programs about condom use. Satisfaction with condom-related information was relatively high, with more than half of the participants (n = 226; 56.50%) being satisfied. In terms of the impact of information on sexual

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behaviour, more of the participants 28.25% (n = 113) indicated that it influenced them "quite a bit". Majority of the participants (n = 257; 64.25%) reported that the information received helped them stay protected and prevent STIs.

When asked about improvements to condom-related information, most respondents suggested making information more accessible (n = 102; 25.50%). Additionally, more of the participants supported more peer-led discussions (n = 73; 18.25%). Lastly, most participants (n = 201; 50.25%) believed that the information provided addressed their specific concerns and questions.

Table 4.3: The Role of Information on Condom Use Decision-Making

Variable	Frequency (400)	Percent (%)
Sources of information about condoms		
Social media		
No	113	28.25
Yes	287	71.75
School health programs		
No	167	41.75
Yes	233	58.25
Friends/Peers		
No	249	62.25
Yes	151	37.75
Family		
No	310	77.50
Yes	90	22.50
Health professionals		
No	207	51.75
Yes	193	48.25
TV/Radio		
No	313	78.25
Yes	87	21.75
Print media		
No	370	92.50
Yes	30	7.50
Source of information you trust		
Social media		
No	298	74.50
Yes	102	25.50
School health programs		
No	184	46.00
Yes	216	54.00
Friends/Peers		
No	358	89.50

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Yes	42	10.50
Family		
No	324	81.00
Yes	76	19.00
Health professionals		
No	185	46.25
Yes	215	53.75
TV/Radio		
No	355	88.75
Yes	45	11.25
Print media		
No	390	97.50
Yes	10	2.50
Clarity of Information about condoms is?		
Unclear	17	4.25
Neutral	139	34.75
Clear	244	61.00
Access to information about condoms		
Difficult	28	7.00
Neutral	133	33.25
Easy	239	59.75
Participated programs about condom use		
No	274	68.50
Yes	126	31.50
If yes, did it influence you? (n=126)		
A little	9	7.14
Neutral	11	8.73
Not at all	1	0.79
Quite a bit	44	34.92

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Very much	61	48.41
Satisfied with information about condoms		
Dissatisfied	22	5.50
Neutral	152	38.00
Satisfied	226	56.50
Enough information about advantages of condoms		
No	106	26.50
Not sure	111	27.75
Yes	183	45.75
Enough information about the proper use of condoms		
No	114	28.50
Not sure	143	35.75
Yes	143	35.75
Information received about condoms influenced sexual behaviour		
A little	52	13.00
Neutral	135	33.75
Not at all	42	10.50
Quite a bit	113	28.25
Very much	58	14.50
Information received about condoms influenced sexual behaviour and decision-making		
No idea	106	26.50
To stay protected and prevent STIs	257	64.25
Help me to avoid pregnancy	37	9.25
Improvements you suggest for the information provided about condoms		
Better quality information	92	23.00
More accessible sources	102	25.50
More interactive formats	63	15.75
More involvement of health professionals	70	17.50
More peer-led discussions	73	18.25
Information about condoms addresses specific concerns and questions		
No	57	14.25
Neutral	142	35.50
Yes	201	50.25

4.4 The Role of Motivation on Condom Use Decision-Making

The role of motivation in condom use decision-making among participants is summarised in Table 4.4. In terms of motivation to use condoms consistently during sex, a quarter of the participants were moderately motivated (n = 105; 26.25%) to do so. Regarding confidence in overcoming barriers to consistent condom use, about one-third of the participants (n = 126; 31.50%) felt very confident. When asked whether using condoms shows responsibility in sexual

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relationships, the most common response was neutral (n = 153; 38.25%). Concerning the importance of protecting oneself from STIs through condom use, more of the participants (n = 125; 31.25%) viewed it as very important. A similar trend was observed regarding the importance of protecting a partner from STIs, with 36.25% (n = 145) deeming it very important.

Peer influence on condom use varied, with the highest proportion (n = 119; 29.75%) stating they were sometimes influenced. Majority of the participants (n = 341; 85.25%) reported never experiencing peer pressure to avoid condom use. Regarding knowledge of the risks of unprotected sex, more of the participants (n = 158; 39.50%) felt very knowledgeable. Similarly, when asked about knowledge of the benefits of condom use, more of the participants 35.50% (n = 142) considered themselves very knowledgeable. Also, with respect to past experiences with condom use influencing their current attitude, more than half of the participants (n = 225; 56.25%) indicated no influence.

Table 4.4: Role of Motivation on Condom Use Decision-Making

Variable	Frequency (400)	Percent (%)
Motivated to use condoms consistently during sex		
Extremely motivated	30	7.50
Moderately motivated	105	26.25
Not motivated at all	67	16.75
Slightly motivated	101	25.25
Very motivated	97	24.25
Confidence to overcome Barriers that prevent you from using condoms consistently		
Extremely confident	7	1.75
Moderately confident	94	23.50
Not confident at all	66	16.50
Slightly confident	107	26.75
Very confident	126	31.50
Using condoms shows responsibility in sexual relationships		
Agree	94	23.50
Disagree	60	15.00
Neutral	153	38.25
Strongly agree	38	9.50
Strongly disagree	55	13.75
Is it important to protect yourself from STIs through condom use		
Extremely important	90	22.50

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	Moderately important	96	24.00
	Not important at all	43	10.75
	Slightly important	46	11.50
	Very important	125	s31.25
Is it important to protect your partner from STIs through condom use			
	Extremely important	82	20.50
	Moderately important	96	24.00
	Not important at all	43	10.75
	Slightly important	34	8.50
	Very important	145	36.25
Do your peers influence you to use condoms			
	Always	21	5.25
	Never	98	24.50
	Often	85	21.25
	Rarely	77	19.25
	Sometimes	119	29.75
Pressured by peers not to use condoms			
	No	341	85.25
	Yes	59	14.75
How knowledgeable do you feel about the risks of unprotected sex			
	Extremely confident	38	9.50
	Extremely knowledgeable	54	13.50

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	Moderately knowledgeable	62	15.50
	Not knowledgeable at all	57	14.25
	Slightly knowledgeable	31	7.75
	Very knowledgeable	158	39.50
How knowledgeable do you feel about the risks of the benefits of condom use			
	Extremely confident	27	6.75
	Extremely knowledgeable	54	13.50
	Moderately knowledgeable	92	23.00
	Not knowledgeable at all	46	11.50
	Slightly knowledgeable	39	9.75
	Very knowledgeable	142	35.50
Experienced any negative consequences not using condoms			
	No	365	91.25
	Yes	35	8.75
Past experiences with condom use influenced your current attitude towards using condoms			
	Negatively	52	13.00
	No influence	225	56.25
	Positively	123	30.75

4.5 The Role of Behaviour on Condom Use Decision-Making

The role of behaviour in condom use decision-making is presented in Table 4.5. Regarding confidence in discussing condom use with sexual partners, more of the participants (n = 149; 37.25%) reported being very confident. When asked if they had received education or training on how to use condoms correctly, the majority (n = 249; 62.25%) reported not having received such training, while only 37.75% (n = 151) had.

In making decisions about condom use, the most frequently considered factor was the health consequences of unprotected sex (n = 105; 26.25%). Interestingly, regarding active negotiation of condom use with sexual partners, the highest proportion (n = 115; 28.75%) reported sometimes negotiating. Comfort in discussing sexual health topics, including condom use, varied among participants as nearly half (n = 184; 46.00%) felt very comfortable.

Table 4.5: Role of Behaviour on Condom Use Decision-Making

Variable	Frequency (400)	Percent (%)
ent discussing condom use with your sexual partners		
Extremely confident	47	11.75
Moderately confident	75	18.75

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	Not confident at all	75	18.75
	Slightly confident	54	13.50
	Very confident	149	37.25
ed education or training on how to use condoms correctly			
	No	249	62.25
	Yes	151	37.75
Making decisions about condom use, how often do you consider the following factors?			
	None	40	10.00
	Health consequences of unprotected sex	105	26.25
	Partner's willingness to use condoms	70	17.50
	Peer influence or pressure	63	15.75
	Previous experiences with condom use	47	11.75
	knowledge about condom effectiveness	75	18.75
y negotiate condom use with your sexual partners			
	Always	8	2.00
	Never	92	23.00
	Often	100	25.00
	Rarely	85	21.25
	Sometimes	115	28.75
rtable are you discussing sexual health topics, including condom use, with your sexual partners			
	Extremely comfortable	44	11.00
	Moderately comfortable	108	27.00
	Not comfortable at all	64	16.00
	Very comfortable	184	46.00

4.6 Bivariate and Multivariable analysis between various socio-demographic, informational, motivational, and behavioural factors and condom use decision-making

The data was analysed to determine the association between various socio-demographic, informational, motivational, and behavioural factors and condom use decision-making. A chi-square test and logistic regression were conducted to assess these relationships.

The results revealed a significant association between age and condom use ($\chi^2 = 23.27$, $p < 0.001$). Respondents aged 21-24 years were 2.9 times more likely to use condoms (COR = 2.9, 95% CI: 1.85-4.64, $p < 0.001$), and this association remained significant in the adjusted model (AOR = 2.4, 95% CI: 1.30-4.54, $p = 0.005$). Similarly, respondents aged 25 years and above were significantly 2.8 times more likely to use condoms (COR = 2.8, 95% CI: 1.39-5.69, p =

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0.004), with a stronger association in the adjusted model (AOR = 3.9, 95% CI: 1.36-11.55, p = 0.011).

A significant association was also observed between year of study and condom use ($\chi^2 = 30.42$, $p < 0.001$). Notably, fourth-year students had a significantly higher likelihood of using condoms (COR = 4.4, 95% CI: 2.01-9.87, $p < 0.001$). However, after adjustment, second-year students were less-likely of using condoms (AOR = 0.3, 95% CI: 0.11-0.72, p = 0.008). Relationship status was significantly associated with condom use ($\chi^2 = 5.73$, p = 0.017), with those in a relationship being 1.7 times more likely to use condoms (COR = 1.7, 95% CI: 1.09-2.52, p = 0.017). However, this association lost significance in the adjusted model (AOR = 1.1, 95% CI: 0.59-1.92, p = 0.836).

Also, students who receive monthly allowance had a strong significant association with condom use ($\chi^2 = 41.8$, $p < 0.001$). Respondents who received a monthly allowance were 4.4 times more likely to use condoms (COR = 4.4, 95% CI: 2.78-7.09, $p < 0.001$), and this remained significant after adjustment (AOR = 3.2, 95% CI: 1.77-5.88, $p < 0.001$). Access to sexual and reproductive health (SRH) services was significantly associated with condom use ($\chi^2 = 11.06$, p = 0.001). Those with access to SRH services were 2.5 times more likely to use condoms (COR = 2.5, 95% CI: 1.44-4.04, p = 0.001). However, this association was not significant in the adjusted model (AOR = 0.7, 95% CI: 0.32-1.62, p = 0.423).

Further, sexual activity was a strong predictor of condom use ($\chi^2 = 114.48$, $p < 0.001$). Sexually active respondents were 11.7 times more likely to use condoms (COR = 11.7, 95% CI: 7.19-18.92, $p < 0.001$), with an even stronger effect in the adjusted model (AOR = 17.9, 95% CI: 9.35-34.64, $p < 0.001$). Regarding information on condom use, there was a significant association ($\chi^2 = 10.38$, p = 0.001). Those who were well-informed were twice as likely to use condoms (COR = 2.0, 95% CI: 1.31-3.06, p = 0.001), but this association was not significant after adjustment (AOR = 0.8, 95% CI: 0.41-1.46, p = 0.424).

There was no significant association between motivation ($\chi^2 = 1.76$, p = 0.185) or behaviour ($\chi^2 = 3.43$, p = 0.064) and condom use. Other variables, including faculty/school ($\chi^2 = 9.66$, p = 0.086) and religious affiliation ($\chi^2 = 5.27$, p = 0.072), had no significant association with condom use.

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Table 4.6: Bivariate and Multivariable analysis between various socio-demographic, informational, motivational, and behavioural factors and condom use decision-making

Variable		CONDOM USE		Chi square (P-Value)	COR [95% CI], P-Value	AOR [95% CI], P-Value
		No (%)	Yes (%)			
SOCIO-DEMOGRAPHIC CHARACTERISTICS						
Age				**23.27 (<0.001)**		
	17-20	133 (51.9)	39 (27.1)		**Ref.**	Ref.
	21-24	100 (39.1)	86 (59.7)		**2.9 (1.85-4.64), <0.001**	2.4 (1.30-4.54), 0.005
	25+ years	23 (8.9)	19 (13.2)		**2.8 (1.39-5.69), 0.004**	3.9 (1.36-11.55), 0.011
Year of Study				**30.42 (<0.001)**		
	First Year	44 (17.2)	14 (9.7)		**Ref.**	**Ref.**
	Second Year	118 (46.1)	38 (26.4)		1.0 (0.50-2.05), 0.973	**0.3 (0.11-0.72), 0.008**
	Third Year	70 (27.3)	58 (40.3)		**2.6 (1.29-5.21), 0.007**	0.6 (0.22-1.57), 0.293
	Fourth Year	24 (9.4)	34 (23.6)		**4.4 (2.01-9.87), <0.001**	1.1 (0.33-3.44), 0.903
Faculty/School				9.66 (0.086)		
	Arts	36 (14.1)	32 (22.2)			
	Business	53 (20.7)	35 (24.3)			
	Engineering	43 (16.8)	14 (9.7)			
	Health Sciences	41 (16.0)	15 (10.4)			
	Sciences	36 (14.1)	19 (13.2)			
	Social Sciences	47 (18.4)	29 (20.1)			
Relationship Status				**5.73 (0.017)**		
	Not In a relationship	168 (65.6)	77 (53.5)		**Ref.**	Ref.
	In a relationship	88 (34.4)	67 (46.5)		**1.7 (1.09-2.52), 0.017**	1.1 (0.59-1.92), 0.836
Receive monthly allowance				**41.8 (<0.001)**		
	No	215 (83.9)	78 (54.2)		**Ref.**	**Ref.**
	Yes	41 (16.0)	66 945.8)		**4.4 (2.78-7.09), <0.001**	**3.2 (1.77-5.88), <0.001**
Religious Affiliation				5.27 (0.072)		
	Traditionalist	1 (0.4)	3 (2.1)			
	Islam	38 (14.8)	13 (9.0)			
	Christianity	217 (84.8)	128 (88.9)			
Access to SRH services				**11.06 (0.001)**		
	No	229 (89.5)	111 (77.1)		**Ref.**	Ref.

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	Yes	27 (10.6)	33 (22.9)		**2.5 (1.44-4.04), 0.001**	0.7 (0.32-1.62), 0.423
Sexually active				**114.48 (<0.001)**		
	No	208 (81.3)	39 (27.1)		**Ref.**	**Ref.**
	Yes	48 (18.8)	105 (72.9)		**11.7 (7.19-18.92), <0.001**	**17.9 (9.35-34.64), <0.001**
Role of Information on Condom Use Decision-Making				**10.38 (0.001)**		
	Not informed	128 (50.0)	48 (33.3)		**Ref.**	Ref.
	Well informed	128 (50.0)	96 966.7)		**2.0 (1.31-3.06), 0.001**	0.8 (0.41-1.46), 0.424
Role of Motivation on Condom Use Decision-Making				1.76 (0.185)		
	Not motivated	121 (47.3)	78 (54.2)			
	Motivated	135 (52.7)	66 (45.8)			
Role of Behaviour on Condom Use Decision-Making				3.43 (0.064)		
	Negative Behaviour	115 (44.9)	51 (35.4)			
	Positive Behaviour	141 (55.1)	93 (64.6)			

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CHAPTER 5

DISCUSSION

5.1 Introduction

This section discussed the study results in relation to study's limitations.

5.2 Prevalence of Condom Use

This study examined condom use decision-making among male undergraduate students of the University of Ghana, main campus. Out of 400 respondents, the majority (n = 256; 64.00%) reported they had never used a condom during sex, while 36.00% (n = 144) had ever used one. The results showed that among those who had engaged in sexual activity (n=153), the majority (n=111; 77.08%) indicated that they or their partner used a condom during their last sexual encounter. This proportion is higher than the general proportion of 50.2% (n = 109) among sexually active male undergraduate students of Gulu University recorded in a cross-sectional study in Uganda (Otim et al., 2024).

However, when assessing consistency in condom use among respondents of this study only 34.03% (n = 49) reported always using condoms. This was slightly lower than the general proportion of 37.6% (n = 205) of sexually active male university students recorded among 545 male university students in Zhejiang Province (Chen et al., 2023). The disparity between condom use at last sexual encounter and consistent condom use highlights a critical gap between episodic protective behaviour and sustained behavioural practice.

This inconsistency suggests that while male undergraduate students may be aware of the importance of condom use and may use condoms in specific situations, this behaviour is not consistently maintained. This finding contributes to existing literature by emphasising that condom use is not merely a function of awareness or occasional intention, but rather a complex decision-making process influenced by situational and interpersonal factors.The reasons cited for inconsistent condom use included reduced pleasure (n = 41; 58.57%). followed by trust in their partner (n = 36; 51.43%) and partner objection (n = 26; 37.14%). Lack of availability (n = 5; 7.14%) and cost (n = 12; 17.14%) were the least cited reasons, indicating that structural barriers such as access and affordability are not the primary drivers of inconsistent condom use among respondents. Similar barriers to the use of condoms were found in another study among Botswana youth, such as implied lack of trust or faithfulness, long-term relationships need to please the partner and decreased pleasure (Kanda & Mash, 2018). Importantly, this study provides context-specific evidence that even in settings where condoms are accessible, consistent use is undermined by factors such as perceived intimacy, trust, and partner influence. This underscores the need for interventions that move beyond improving access and knowledge to addressing behavioural skills, communication, and negotiation within sexual

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relationships.

5.3 Relationship Between Information Accessibility and Condom Use Decision Making

The findings indicate that while the majority of participants (71.75%) cited social media as their primary source of information about condoms, school health programmes (54.00%) and healthcare professionals (53.75%) were the most trusted sources. Additionally, although 59.75% of respondents found condom-related information easily accessible, a significant proportion (68.50%) had never participated in formal condom use education programmes. While 61.00% of respondents found the information on condoms clear, only 28.25% stated that it had significantly influenced their sexual behaviour. Furthermore, participants who were well-informed about condoms were twice as likely to use them (COR = 2.0, 95% CI: 1.31-3.06, p = 0.001), compared to their counterparts who are less informed, though this association was not significant after adjustment (AOR = 0.8, 95% CI: 0.41-1.46, p = 0.424). These findings highlight a gap between access to information and its translation into behavioural change.

These findings align with previous research, which emphasises that knowledge is a fundamental determinant of health-related decision-making (Deng et al., 2022). According to the IMB model, access to credible and comprehensive information plays a crucial role in shaping individuals' sexual health behaviours (Fisher & Fisher, 1992). However, the current study's findings suggest that despite relatively high self-reported accessibility and clarity of information, this knowledge does not consistently translate into behaviour change. This is consistent with existing literature, which highlights that knowledge alone is insufficient to drive behaviour change without adequate motivation and behavioural skills (Elwyn et al., 2013; Mantell et al., 2020).

The reliance on social media as the primary source of information about condoms raises concerns about the credibility and accuracy of the information students receive. While digital platforms provide easy access to information, they often contain misinformation and lack the depth of professional guidance offered by school health programmes and healthcare professionals (Rimawi & Masri, 2021). Previous studies have demonstrated that structured educational interventions are more effective in fostering positive sexual health behaviours than passive exposure to information (Wong et al., 2021). Thus, the low participation in formal condom use education programmes (68.50%) may have contributed to the limited impact of information on behaviour change in this study. In this context, the low participation in formal condom use education programmes (68.50%) may have contributed to the limited impact of information on behaviour change in this study.

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Moreover, the observed non-significant adjusted association between information accessibility and condom use (AOR = 0.8, p = 0.424) suggests that other contextual factors, such as personal beliefs, peer influence, and cultural attitudes, may play a more decisive role in condom use decision-making than information alone. Previous research has demonstrated that peer-led interventions and culturally tailored messaging enhance the effectiveness of sexual health education (Bashir et al., 2022; Nkobodo, 2014). In this study, participants suggested making condom-related information more accessible (25.50%) and increasing peer-led discussions (18.25%), reinforcing the need for interactive and socially engaging health communication strategies. Importantly, this study provides context-specific evidence that the effectiveness of information depends not only on availability, but also on credibility, engagement, and relevance to students lived experiences.

The findings also have implications for public health interventions aimed at promoting condom use among male university students. While ensuring access to accurate information remains critical, interventions should go beyond information dissemination to include motivational and behavioural skill-building components. Educational initiatives that integrate interactive discussions, peer education, and practical demonstrations may enhance the translation of knowledge into action (Espada et al., 2015). Additionally, leveraging trusted sources such as school health programmes and healthcare professionals to deliver condom education could improve message credibility and effectiveness.

5.4 Association between Motivation and Consistent Condom Utilisation

The lack of a significant association between motivation ($\chi^2 = 1.76$, p = 0.185) and condom use suggests that factors beyond individual motivation may influence condom use decisions. This finding highlights the complexity of condom use behaviour, indicating that motivation alone may be insufficient to ensure consistent utilisation. This contrasts with studies that found strong links between motivation and condom use (Liu et al., 2014), indicating that cultural, social, or educational differences may play a role. While 31.50% of respondents expressed high confidence in overcoming barriers to condom use, prior research suggests that self-efficacy alone does not guarantee consistent condom use, as additional factors like partner negotiation and access to condoms are crucial (Chen et al., 2023)

The 38.25% neutrality in responses regarding responsibility in relationships suggests an opportunity for interventions targeting attitudinal shifts, similar to research on Kenyan university students where

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negative perceptions of condom use due to perceived reduced pleasure affected consistency (Rintaugu et al., 2020). While 29.75% of respondents reported being sometimes influenced by peers and 14.75% experienced pressure not to use condoms, 85.25% reported no pressure. These findings suggest that peer influence and attitudinal factors, although present, may not be sufficiently strong to independently drive consistent condom use in this population. This aligns with studies demonstrating that while peer influence can shape condom use, its impact varies depending on broader social norms (Kim et al., 2021). The findings suggest that while peer influence exists, it may not be the strongest determinant of condom use in this population.

5.5 Assess the Relationship between behavioural skills and Condom Use

The study found that while 77.08% of sexually active respondents reported using condoms during their last sexual encounter, only 34.03% used them consistently. This disparity highlights a gap between episodic condom use and consistent utilisation. This inconsistency aligns with findings from Jiang et al. (2019) and Liu et al. (2014), which emphasize that behavioural skills, including condom use skills, play a crucial role in consistent condom use. The lack of a statistically significant association between behavioural skills and condom use suggests that while some students possess knowledge about condom use, other underlying factors, such as trust in a partner (51.43%) and perceived reduction in pleasure (58.57%), may hinder actual application.

Effective communication skills have been identified as a key determinant in negotiating condom use (Huy et al., 2015a). In this study, 37.25% of respondents felt very confident discussing condom use with partners, yet only 28.75% actively negotiated condom use, indicating a gap between confidence and practice. This suggests that perceived competence may not always translate into actual behaviour in real-life contexts. This supports Camilleri et al. (2015), who highlighted that even when individuals have the necessary skills, external factors, including partner dynamics and cultural influences, may impact decision-making. Additionally, the finding that 62.25% of participants had never received formal training on condom use suggests that targeted educational programs could enhance behavioural skills and increase consistent condom use, as suggested by Liu et al. (2014).

Moreover, the study revealed that nearly half (46.00%) of respondents were very comfortable discussing sexual health topics, yet barriers such as partner objection (37.14%) remained a significant deterrent to consistent condom use. These findings align with Espada et al. (2015), who argued that

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while behavioural skills predict condom use through motivation, additional factors such as partner influence and socio-cultural norms shape actual behaviour. This reinforces the idea that behavioural skills operate within a broader relational and socio-cultural context rather than in isolation.

Strengthening educational interventions that focus on skill-building, negotiation techniques, and addressing partner-related barriers can enhance condom use consistency among university students.

5.6 Limitations of the Study

The findings of this study cannot be generalised to all universities in Ghana, as the study focused solely on male undergraduate students at the University of Ghana. This limits the external validity of the study findings. The cross-sectional study design limits the ability to establish causal relationships between behavioural skills and condom use. This means that only associations, rather than cause-and-effect relationships, can be inferred. Additionally, the reliance on self-reported data introduces the possibility of recall bias and social desirability bias, which may affect the accuracy of responses. These biases may lead to underreporting or overreporting of sensitive behaviours such as condom use.

The study's proportions were not weighted, necessitating cautious interpretation of the findings. Furthermore, limited local research on condom use decision-making among male university students posed challenges in drawing direct comparisons. This highlights a gap in context-specific literature on male condom use decision-making in Ghana. Future studies should adopt a longitudinal approach and include multiple institutions to enhance generalizability and provide deeper insights into the behavioural determinants of condom use. Such approaches would improve the robustness and applicability of future findings.

5.7 Strengths of the Study

The study demonstrates theoretical robustness through the utilisation of the IMB Model, providing a structured and evidence-based framework for analysing condom use decision-making. This strengthens the conceptual grounding of the study and supports the interpretation of findings within a well-established behavioural framework.

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Methodologically, the research exhibits rigour, with a substantial and diverse sample of 400 male undergraduates and the application of quantitative statistical methods, ensuring accuracy, reliability, and representativeness. This enhances the internal validity and general credibility of the study findings.

From a practical perspective, the study elucidates gaps in condom use consistency, negotiation skills, and motivation, offering actionable insights to inform university health programmes and public health interventions aimed at promoting safer sexual behaviours. These findings provide a strong basis for designing targeted interventions that address not only knowledge, but also behavioural and interpersonal determinants of condom use.



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CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

This study examined condom use decision-making among male undergraduate students at the University of Ghana using the IMB Model. While condom use during the last sexual encounter was relatively high, consistent use remained low, revealing a gap between awareness and sustained practice. This highlights a critical disconnect between knowledge and consistent behavioural application. Trust in a partner, perceived reduction in pleasure, and partner objection were key barriers, emphasising the role of relational and attitudinal factors in sexual health decisions.

Information accessibility did not consistently translate into behaviour change. Although social media was the primary source, school health programmes and healthcare professionals were the most trusted. This suggests that credibility of information sources plays a key role in influencing behaviour. The lack of a significant adjusted association suggests that external influences, such as peer norms, may shape behaviour more than information alone.

Motivation, though present, was not significantly associated with condom use, indicating that confidence must be paired with practical skills and supportive social environments. This reinforces the IMB model assertion that motivation alone is insufficient without behavioural skills. Additionally, while respondents reported confidence in discussing condom use, active negotiation remained low, reinforcing the need for improved behavioural skills.

In conclusion, awareness alone does not drive consistent condom use. A more integrated approach that addresses informational, motivational, and behavioural components is required. Addressing attitudinal, relational, and behavioural barriers through targeted interventions is essential in bridging the gap between knowledge and practice among male undergraduate students.

6.2 Recommendations

1. The university should integrate sexual health education into its curriculum, focusing on condom negotiation skills, misconceptions, and attitudinal barriers.
2. The university should also improve access to reliable information by strengthening school health programmes, engaging healthcare professionals, and promoting peer-led discussions.

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3. Future research should assess the long-term impact of IMB-based interventions on consistent condom use and explore socio-cultural influences through qualitative studies.



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APPENDICES

APPENDIX 1 - CONSENT FORM

Title: Condom Use Decision-Making Among Male Undergraduate Students at The University of GhanaPrincipal Investigator: Dionne Nyadu-Addo

Address: School of Public Health Email: dnyadu-addo@st.ug.edu.gh Tel: 0241366990

General Information about Research

Hello, I am <interviewer's name>, and I am collaborating with Dionne Nyadu-Addo, a

Master of PublicHealth student from the School of Public Health at the University of Ghana. Thank you for taking thetime to speak with us. We invite you to participate in our study, which aims to evaluate the prevalenceof condom use among male undergraduate university students and to examine the information, motivation, and behavioural skills components of the IMB Model for condom use decision-making among this group. Your participation is entirely voluntary, and you can withdraw from the study at anytime. To ensure that you have all the necessary information regarding your participation, we are askingyou to read and sign this consent form. If there are any terms that you do not understand, please feel free to ask us for clarification.

Possible Risks and Discomforts

This research is devoid of any physical hazards. Nonetheless, should you experience discomfort or emotional distress while completing the questionnaire, you are at liberty to omit certain questions or revoke your consent.

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Possible Benefits

Participating in this study does not offer any direct advantages to you. Nonetheless, by taking part, you will be indirectly making a valuable contribution to future health interventions and research.

Confidentiality

Participants' privacy and confidentiality will be vigorously protected throughout the entire duration of the research project. All personal information will be thoroughly anonymized and securely stored, withaccess to identifiable data being strictly limited to authorised members of the research team.

Compensation

No money or other forms of remuneration will be provided for participating in this research study.

Voluntary Participation and Right to Leave the Research

Undertaking this study is entirely voluntary. You have the discretion to discontinue your participationat any juncture throughout the study if such is your desire.

Contacts for Additional Information

You are welcome to pose questions to any member of the research team at any time during the study. For additional information or clarification, please reach out to the Principal Investigator, Dionne Nyadu-Addo, by email at dnyadu-addo@st.ug.edu.gh or by phone at 0241366990.

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.ug.edu.gh

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APPENDIX 2 - VOLUNTEER AGREEMENT

The above document describing the benefits, risks, and procedures for the research titled "Condom Use Decision-Making Among Male Undergraduate Students at The University of Ghana" has been explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

_____ _____

DateName and signature or mark of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

_____ _____

Date Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_____ _____

Date Name Signature of Person Who Obtained Consent

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APPENDIX 3 - QUESTIONNAIRE

CONDOM USE DECISION-MAKING AMONG MALE UNDERGRADUATE STUDENTS AT THE UNIVERSITY OF GHANA

Questionnaire for the study

Instructions for Participants

We appreciate your participation in this study on Condom Use Decision-Making Among Male Undergraduate Students at the University of Ghana. This questionnaire aims to gather your perspectives, experiences, and decisions regarding condom use. Please respond with honesty. Your responses will be treated with confidentiality, and your anonymity will be maintained.

General Instructions:

1. This survey is self-administered via a tablet or smartphone. Please ensure you have adequate time and privacy to complete it without interruptions.
2. Carefully read each question and select the most appropriate option.
3. There are no correct or incorrect answers; please respond based on your personal experiences and opinions.
4. Should any question cause discomfort, you may skip it. You retain the right to withdraw from the study at any time without penalties.

Part 1: Demographic Information

Instructions: In this section, we would like to collect some basic demographic information about you. Please provide your responses in the spaces provided or select the most appropriate option.

1. Age (as at last birthday) [ ] [ ]
2. Year of Study:

a. First Year b. Second Year c. Third Year
a. Fourth Year e. Other (Please specify): _____

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3. Faculty/School:

a. Arts b. Sciences c. Social Sciences
d. Business e. Engineering f. Health Sciences

g. Other (Please specify): _____

4. Relationship Status:

a. Single (never married) b. Co-habiting

c. Married d. Divorced/separated/widowed

e. Other (Please specify): _____

5. Hall of Residence_____

6. Place of Origin (Region)_____
7. Do you receive any monthly income or allowance from guardian or any source?

a. Yes b. No

8. Monthly Allowance (GHS): _____
9. Do you have access to sexual and reproductive health services on campus?

a. Yes b. No

9b. If yes, please specify where you access SRH services on campus.
1. _____

2. _____

3. _____

9c. If no, skip question

10. How many sexual partners have you ever had sex with? [ ] [ ]
11. Over the last 12 months, how many sexual partners have you had? [ ] [ ]

Part 2: Condom Use Prevalence

Instructions: This section will ask about your personal experience with condom use. Please answer honestly based on your current and past sexual behaviour. Your answers will help us understand the patterns and frequency of condom use among male undergraduate students.

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Please provide your responses in the spaces provided or select the most appropriate option.



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12. Have you ever used a condom during sexual intercourse?

a. Yes b. No [If No, skip to Q18]

13. The last time you had penetrative sexual intercourse, did you use a condom?

a. Yes b.

14. In the past three (3) month(s), how often did you use a condom during sexual intercourse with your partner.

a. Always b. Most of the time c. Sometimes
a. Rarely e. Never

15. When did you start using condoms?

a. Before university b. After starting university

16. The last time you had sexual intercourse, were you under the influence of alcohol?

a. Yes [1]
b No [2]
c Refused [9]

17. The last time you had sexual intercourse, had you been using drugs to get high before or during sex?

a. Yes [1]
b. No [2]
c. Refused [9]

18. What are the reasons for not using condoms with every partner? (Check all that apply)

a. Trust partner b. Partner objection c. Reduced pleasure

d. Lack of availability e. Cost

f. Other (Please specify): _____

Part 3: Role of Information on Condom Use Decision-Making

Instructions: In this section, we are interested in how the information you receive about condoms influences your decision-making. Please select the sources of information that apply to you, and rate how useful or influential the information has been in your decisions about

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condom use. Please provide your responses in the spaces provided or select the most appropriate option.

19. How often do you access information about condoms?

a. Frequently b. Occasionally

c. Rarely d. Never

20. What is your primary source of information about condoms?

a. Social media b. Health professionals

c. Friends/Peers d. TV/Radio

e. Other (specify): _____

21. How easy is it for you to access reliable information about condoms?

a. Very easy b. Easy

c. Difficult d. Very difficult

22. Do you feel the information you receive about condoms is clear and reliable?

a. Yes b. No

23. Has access to information about condoms influenced your decision to use them?

a. Yes, positively b. Yes, negatively

c. No influence

24. Does lack of access to information discourage you from using condoms?

a. Yes b. No

25. To what extent do you agree with the statement:

"Easy access to information encourages consistent condom use"?

1. Strongly Disagree [ ]
2. Disagree [ ]

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3. Neither agree nor disagree [ ]
4. Agree [ ]
5. Strongly agree [ ]

26. Do you think improved access to information about condoms would change your condom use behaviour?

a. Yes

b. No

c. No Influence

Part 4: Role of Motivation on Condom Use Decision-Making

Instructions: This section focuses on your motivations and barriers related to condom use. Please answer the questions based on what motivates or discourages you from using condoms. This will help us understand the factors that influence your choices. Please provide your responses in the spaces provided or select the most appropriate option.

27. How motivated are you to use condoms consistently?

a. Not motivated at all
b. Slightly motivated
c. Moderately motivated
d. Very motivated
e. Extremely motivated

28. What is your main reason for using condoms consistently?

a. Prevent sexually transmitted infections (STIs)
b. Avoid unintended pregnancies
c. Responsibility in sexual relationships
d. Partner insists
e. Other (specify): _____

29. Does fear of contracting STIs motivate your consistent use of condoms?

a. Yes
b. No

30. How important is it to you to protect yourself from STIs through condom use?

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a. Not important at all b. Slightly important

c. Moderately important d. Very important

e. Extremely important

31. How important is it to you to protect your partner's health through condom use?

a. Not important at all b. Slightly important

c. Moderately important d. Very important

e. Extremely important

32. Has a lack of motivation ever caused you to skip using condoms?

a. Yes

b. No

33. To what extent do you agree with this statement: "My motivation to stay healthy influences my consistent condom use"?

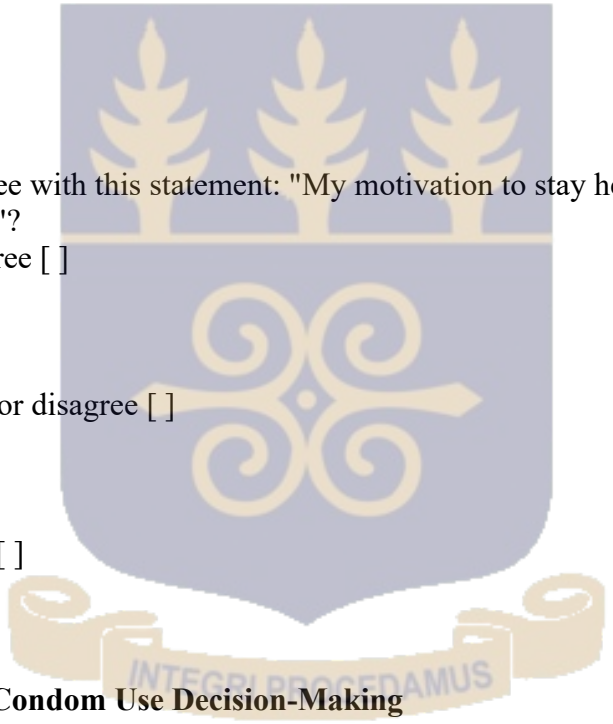
a. Strongly Disagree [ ]

b. Disagree [ ]

c. Neither agree nor disagree [ ]

d. Agree [ ]

e. Strongly agree [ ]



Part 5: Role of Behavior on Condom Use Decision-Making

Instructions: In this final section, we are interested in your behaviors and skills related to condom use, such as communication with sexual partners and negotiation of condom use. Please respond based on your confidence, past experiences, and current practices. Please provide your responses in the spaces provided or select the most appropriate option

34. How confident are you in correctly using a condom?

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a. Not confident at all b. Slightly confident

c. Moderately confident d. Very confident

e. Extremely confident

35. Have you ever received instruction on proper condom use?

a. Yes b. No

36. If yes, where did you receive these instructions?

_____

37. How often do you ensure a condom is worn correctly before engaging in sexual activity?

a. Always b. Sometimes

c. Rarely d. Never

38. How comfortable are you discussing condom use with your sexual partner?

a. Not comfortable at all b. Slightly comfortable

c. Moderately comfortable d. Very comfortable

e. Extremely comfortable

39. Have you ever decided not to use a condom because you were unsure of how to use it properly?

a. Yes b. No

40. Do you feel that your ability to use condoms properly influences your decision to use them consistently?

a. Strongly Disagree [ ]

b. Disagree [ ]

c. Neither agree nor disagree [ ]

d. Agree [ ]

e. Strongly agree [ ]

41. How often do you practice the correct application and removal of condoms?

a. Frequently b. Occasionally

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c. Rarely d. Never

42. What aspect of condom use do you find most challenging?

a. Proper application b. Communication with a partner

c. Checking for damage or expiration d. Disposal after use

e. None

