

Okon, Ephraim Victor

Institute Of Strategic And Development Communication (Isdevcom), Nasarawa State University, Keffi, Nigeria



Assessment Of The Influence Of Social Media On Sexual Behavior Of Adolescents In Selected Universities In Federal Capital Territory, Nigeria

Okon, Ephraim Victor

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(Isdevcom), Nasarawa State University, Keffi, Nigeria



Published by
Research Collab. 2026
India | United Kingdom | South Africa | Cameroon | Tunisia | Morocco

Registration No.: AS-22-0003855

Bhaskar ID: IN-0426-9442QY

Official Website: www.researchcollab.in

Publication Portal: <https://publication.researchcollab.in>

Email: editor@researchcollab.in

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ISBN: 978-81-689872-2-7

E-ISBN: 978-81-689872-3-4

<http://doi.org/10.5281/zenodo.21800570>

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Citation: Okon, Ephraim Victor(2026). *Assessment Of The Influence Of Social Media On Sexual Behavior Of Adolescents In Selected Universities In Federal Capital Territory, Nigeria*, Research Collab.
<http://doi.org/10.5281/zenodo.21800570>

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House for Educational Growth Arena (EGA)



ACKNOWLEDGEMENTS

God has always been merciful to me in more ways than one. Throughout the windy path of this journey, God has kept me safe, sound, and calculated in and out of season. I return all glory to Him. Thank you, Lord, for the gift of life.

I want to express my gratitude to Professor Emmanuel Samu Dandaura, the Executive Director of the Institute of Strategic & Development Communication (ISDEVCOM), and my Supervisor, who has been there for me from the beginning of this process until the end. You have been amazing; your fatherly encouragement, academic guidance, and supervision have not been taken for granted. Your advice was impeccable, and this work bears the imprimatur of your scholarly authority. Your treasured support and mentorship were influential in shaping my thoughts and progression. I cannot thank you enough.

I am also thrilled to acknowledge the constant effort of Dr. Sunday O. Igbaba, my Second Reader. Thank you for your guidance and continuous encouragement. Your exertions, suggestions, superb supervision, and constructive criticism were not only timely but also helped shape the direction of this work. Your reviews, contact follow-ups, and relentless scholarly leadership have strengthened the depth of this research.

Also, to the School of Postgraduate Studies and the Institute of Strategic and Development Communication, thank you for the opportunity and facilities for this study undertaken in partial fulfilment for the Degree of Doctor of Philosophy in Development Communication award.

In a unique way and profoundly too, I would like to appreciate my lecturers, including Prof. Barclays F. Ayakoroma, Prof. Amirikpa Oyigbenu, Prof. Gowon A. Doki, Dr Phillip Umaru, Hajia Lantana Ahmed, Dr Bridget Onochie, Dr. D.J. Chikada, for their leadership, supervision, encouragement, constructive and engaging guidance, shared knowledge, and vast experience throughout the rigorous preparation of this work. I will never forget the memory of Dr. Suru Damisa of blessed memory. You would ever remain evergreen in my mind.

I am also grateful to all the other lecturers in the Institute of Strategic and Development Communication, Nasarawa State University, for their support and guidance throughout this study.

Special thanks to my friends and colleagues in the Institute of Strategic and Development Communication, especially Mr. George Ndukwu, Dr. Erinugha Azubike (Zubi), Prudence Eboagwu-Ijah, Michael Innocent, and Emmanuel. I will not fail to thank my organisation, Population Media Center, for being the springboard for so many professional and academic adventures. Thank you, my Boss, Dr Kriss Barker and the PMC President, William Newton Ryerson. My late Country Representative, Tony Asangaeneng, you opened the doors to me. You are evergreen in my heart.

I will not forget to thank my wife, Joan, and children, Victor Aniebiet-Abasi and Victoria Edikan, for their love and sparing me the time and space to undertake this study.

I also thank, in a special way, Dr. Emmanuel Kendrick, Etima Umoh, Rosemary Udoh, Imran Mohammed, Bar. Justus, for always finding time to review my work, constant support and encouragement, and always assisting me in more ways than one in delivering my tasks.

My sincere gratitude goes to my dear mother, *Etieka Afon Agwo Inyie*, Madam Veronica Victor Okon, and my brothers and sisters – Rita, Cornelia, Nse, Ndifreke, Aniebiet, Ofonbuk, and Uduak. Your priceless and immense encouragement has made a difference. Without this task and academic work, it would have been impossible.

Most of all, my existence will be incomplete to God Almighty without you. Thank you immensely from a grateful heart.

OKON, EPHRAIM VICTOR

NSUK/PG2019/DVC/PH.D 0919693006262

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ABSTRACT

The evolution of information and communication technology and its influences has shaped society, particularly by introducing social media technology. However, the development of various social media to enhance learning opportunities and increase access to information has also paved the way for exposure to illicit sexual content online, and the mismanagement of social sites has been linked to risky sexual behaviour among adolescents. This study assessed the influence of social media on the sexual behaviour of adolescents in selected universities in the federal capital territory as the broad objective. The study population is 21,086 newly admitted adolescents, with a sample size 385. The study is anchored on Albert Bandura's social learning theory, Uses and Gratification Theory, Problem Behaviour Theory, and the Integrated Behaviour Model Theory of Behaviour Change. Data was collected using structured questionnaires and administered online, key informant interviews and focus group discussions. The Likert four-point scale rating was employed, and collated data were analysed using the mean value of 2.50 above to draw inference. The study revealed that all of the respondents, 326 (100.0%), had access to the Internet and operated various social media accounts on various platforms. Findings indicated that prolonged usage, content, peer pressure and online communities significantly influence sexual behaviour. The study recommended, among other things, the design, development, and implementation of sexual and behavioural change educational interventions that will expose adolescents to the danger inherent in negative uses of social media predicting risky sexual behaviours.

Keywords: Social Media, Adolescents, Sexual Behaviour, Federal Capital Territory, Information Communication Technology,

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Globally, the evolution, development and transition from traditional media and communication styles to Information and Communication Technologies (ICTs) have broadened the scope of communication through networking and social media (France & Roberts, 2015). The World Bank and African Development Bank (2018) report states that Africa has over 650 million mobile phone users, while Nigeria has over 101.7 million mobile internet users. According to Blanchard (2011), modern communication technology has undoubtedly turned the world into a global village through the evolution of Web 2.0 to Web 4.0 and the projected Web 5.0 for internet penetration and interconnectivity among the general population.

The Global System for Mobile Communication (GSM) was launched in 2001 in Nigeria and upgraded smart mobile devices with internet capabilities and the technical convergence of computer and mobile networks, creating and opening social media networking sites (Lugano, 2008). Social media embraces related computer-based software technologies developed to aid communication, information, and content sharing by building virtual networks and communities (Lugano, 2008). Similarly, according to Obar and Wildman (2015), social media is a computer-based scientific innovation that encourages the development and circulation of messages, businesses, opinions, expressions, and personal endeavours through visible communication linkages.

In research, social media is generally used as an umbrella term that describes a variety of platforms (Aichner, 2021). According to Tuten and Solomon (2015), “Social media are the online means of communication, conveyance, collaboration and cultivation among interconnected and interdependent networks of people, communities, and organisations enhanced organisational capabilities” (pg. 3). Social media is a collective term for websites, webpages and applications focusing on communication, community-based input, interaction, content sharing and collaboration. People use social media to interact with friends, families, and online communities.

Social media comprises internet-based websites or social network sites that translate communication into conversation among individuals, corporate bodies, and communities. Social media includes WhatsApp, MySpace, Facebook, Twitter, WhatsApp, Baidu, Tieba, and Pinterest (Kaplan & Haenlein, 2010). Others are Snapchat, Weibo, Viber, Flickr, Google+, 2go, Instagram, YouTube, Tumblr, LinkedIn, Gab, and We Chat. These platforms create opportunities for content creation and sharing.

Social media networking structure consists of individuals, or organisations called ‘nodes’, connected by one or more specific types of interdependencies, such as friendship, kinship, common interest, financial exchange, dislike, sexual relationships or relationships of beliefs, knowledge, or prestige (Asemah & Edegoh, 2012). Social networking sites (SNSs) provide the best medium to explore the vast area of knowledge and for users to regularly interact and share content with peers, friends, families, and other users whose interests are similar to theirs and with whom they then interact and exchange comments, private messages, and pictures, among other things at cost-effective rate compared to the traditional media (Asemah & Edegoh, 2012; Chan & Ghose, 2014; Danah & Nicole, 2008; Sherry, 2011).

Nigeria is the largest in the African internet market, with social media networking penetration at about 28 million. Out of the over 115 million mobile telephone subscribers in Nigeria, 35 million are users of Smartphones, with Facebook as the most used by users aged 13 to 65 at 90%, WhatsApp at 86%, and YouTube at 82, % among others. In Nigeria, the proportion of individuals using the Internet increased from 0.06% to 3.6% between 2000 and 2005, and after that, it increased from 24% to 32.9 between 2010 and 2012. The percentage increased from 32% to 69.9% between 2017 and 2022 (World Bank & African Development Bank, 2023).

Social media has been widely used, particularly by Nigerian adolescents and youth, since its inception, starting with Facebook in 2003 (Kamaku & Mberi, 2014). The near affordability and easy

access to various social networking sites have transformed the thought of a global village into a reality whereby billions communicate through social networking sites. The number of teenagers who access the internet doubled to 45% in 2018, with another 44% claiming to go online at least several times a day (Anderson & Jiang, 2018). Despite all sociological benefits, social media or social network sites have regrettably contributed to social and psychological effects among adolescents in several countries, including Nigeria. According to a Business Day (2013) survey report, social media accounted for, by far, more traffic of Nigerian young adults to sex-related activities as the primary attraction (Nwagwu, 2017).

As a matter of concern, the influence of social networking penetration in Nigeria via social media cannot be ignored, given its capacity to uplift or diminish human capital development, societal norms and values and others. The emergent social networking driven through social media illustrates negative and positive sides. Numerous benefits have been obtained through distant communication via social media networking sites. Eke and Odoh (2014) argue that students use social networking sites in collaboration with companions, connect with their schoolmates for online study, talk about genuine national issues, watch movies, etc.

The negative influences of social media may include cyberbullying, risky sexual experimentation, internet addiction, sleep deprivation, sexting, promoting individuality and secrecy and exposing adolescents to sexually explicit materials (SEMs) and others (Akinwale, 2010). According to Asemah, Okpanachi, and Anyigba (2013), social media exposure negatively impacts undergraduate students' social, economic, and educational welfare at Kogi University, Nigeria. In addition, the associated risks with the wrong use of social media lead to having multiple sexual partners and sexting.

Empirical findings of Hennessy (2009) reveal a nexus between adolescents' attitudes and sexual activities and sexual content in media. Prospective relationships between prior exposure to sexual content in the media and subsequent changes in sexual behaviours lead to HIV/AIDS and other sexually transmitted diseases (National Agency for the Control of AIDS, (2022). This indicates that

engaging in risky sexual behaviour gleaned from social media could negatively influence and jeopardise the sexual health of adolescents (Thephtien & Celyn, 2022; Thomas et al., 2023).

In contextualising sexual health and risky sexual behaviour, the term sexual health is frequently used in the applied context of sexual education and health promotion and communication in line with the aims of the study. The World Health Organization (WHO) (2022), pg. 6, states that:

Sexual health is a state of physical, emotional, mental, and social well-being concerning sexuality; it is not merely the absence of disease, dysfunction, or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences free of coercion, discrimination, and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected, and fulfilled.

Adolescents' healthy sexuality involves communicating effectively with family, peers, and others as well as possessing accurate knowledge of sexual health, understanding the risks, responsibilities, and outcomes of sexual actions, possessing skills needed to take action to reduce their risk, knowing how to access and seek sexual health information while maintaining healthy relationships (Mckellar & Sillence, 2020). Healthy teenage sexuality is central to well-being and entails an active search for identity, values, goals, and behaviour (Halpern, 2010). Healthy and positive attitudes toward sexual health are significantly associated with better general overall health for teenagers. However, risky sexual behaviours are also prevalent among teenagers (Hensel et al., 2016).

According to (Heywood et al., 2015), initial engagement in sexual activity and behaviour is a normal and expected aspect of adolescent development, which usually takes place during adolescence or young adulthood and marks the beginning of an individual's sexual and reproductive life. The majority of these first sexual connections are with the opposite sex (Diamond, 2004; Diamond & Lucas, 2004; Horne & Zimmer-Gembeck, 2005).

Siebenbruner and ZimmerGembeck (2007) reviewed published longitudinal studies. They found that early sexual intercourse before the age of 16 years is more likely to lead to other adolescent risky sexual behaviour, such as a higher number of sexual partners and inconsistent contraception use. Early sexual intercourse before the age of 16 is associated with other sexual risk-taking behaviours, which can result in unplanned pregnancies and sexually transmitted diseases (McClelland, 2012; Magnusson et al., 2012).

Adolescent sexual risk-taking has been conceptualised in various ways: early age at first intercourse, multiple sexual partners, type of partner or length of relationship, frequency of intercourse, consistency of condom use, and sexual intercourse and alcohol/drug use (Valois et al., 1997; Brown & Venable, 2007). Risky sexual behaviour is commonly referred to as any activity that increases one's risk of acquiring sexually transmitted infections and experiencing unintended pregnancies (Sserwanja et al., 2023). These behaviours include non-use of condom during sex, having multiple sexual partners, having early-age first sex, substance use during sexual encounters, transactional sex or having sex in exchange for cash or in-kind compensation and having sex without consent (Thepthien & Celyn, 2022; Thomas et al., 2023).

Consequently, there are various ways that sexual risk-taking has been measured. While these can be considered an aspect of risk-taking, it has been argued that these do not measure the construction as sexual risk-taking usually involves a combination of these behaviours (Potard et al., 2008; Kuoritti & Kosunen, 2009; Morrison et al., 2009; Heywood et al., 2015). For that reason, the implication is that it might not be straightforward to have a clear-cut definition of risky sexual behaviours for adolescents (Casey & Beadnell, 2010). Heywood et al. (2015) opine that adolescents engage in many different sexual behaviours, and it is a long-winded task to understand which behaviours may be deemed risky.

Behaviours are generally deemed risky if the negative consequences outweigh the positives (Moore & Gullone, 1996; Gullone et al., 2000). Thus, many explanations of risky behaviours have focused on STIs or unplanned pregnancies. However, this only measures one construct of the behaviour and

does not account for the entirety of the behaviour (Vasilenko et al., 2016). Whereas early sexual intercourse before the age of 16 years has been found to lead to other risk-taking behaviours, it has consistently been found to be a significant risky sexual behaviour for female adolescents (Belgrave & Marin, 2000).

Accordingly, early sexual intercourse before the age of 16 may provide a more robust definition of risky sexual behaviours for adolescents because it leads to other negative consequences (Vasilenko et al., 2016). In the study, adolescent risky sexual behaviour is primarily defined as all behaviours leading to early sexual intercourse, which may likely result in unintended consequences of unplanned pregnancy and sexually transmitted diseases before the age of 21 years, by 100 levels newly admitted adolescents (18 to 21 years) in Universities in the Federal Capital Territory, Nigeria.

The concepts of adolescence, teenagers, youngsters, and youth seem similar but are not the same when defined chronologically, physiologically, and psychologically. Some scholars use these concepts interchangeably (Temple-Smith et al., 2015). By the end of adolescence, physical growth is complete, and adolescents have reached adulthood height. Cognitively, their executive functions are improving, and they can better plan, manage time, and control impulsive behaviour. They can make independent decisions and delay gratification to reach goals. They become more separated from their family and have values. Relationships also become more stable during this time (Issues Related to Sexual Behaviors in Adolescence, 2014).

Adolescence is a unique developmental period due to rapid and intense physical, cognitive, emotional, and social changes. Adolescents undergo growth and maturation of reproductive, musculoskeletal, neuro-developmental, endocrine, metabolic, immune, and cardio-metabolic systems. Adolescence is a delicate phase of hasty physical, emotional, and cognitive development (Erikson, 1967).

The Canadian Paediatric Society (2003) defines adolescents as young adults between 10 and 19, although the age range is often loosely defined. According to the World Health Organisation (2022),

adolescents constitute people between 10 and 19 years of age. It may be defined differently in different countries, with “adolescents” starting at 12 years. Late adolescence also includes those up to 21 years of age. The adolescence stage is a puberty transitional period to adulthood, extending over the teen years and terminating legally at the age of maturity. With the widening gap between the onset of puberty and the age at which mature adult roles are attained, researchers have proposed that the term ‘adolescence’ be applied to those aged between 10 and 24 years (Temple-Smith et al., 2015).

Adolescence is when the adolescent develops impressions and perceptions of life, seeks role models and identifies behaviours as right or wrong or worthy of emulation. This phase of life is critical in psychosexual and psychosocial development. The adolescence stage comes with various biopsychosocial changes, including developing a system of values, such as sexual values (Abdullahi & Abdulquadri, 2018).

Several factors influence adolescent sexual behaviour. According to Irwin and Millstein (2016), these behaviours are triggered by the environment and social interactions, particularly from solicited and unsolicited information and content sharing via social media. 28% of adolescents in Nigeria are sexually active, and the median age of sexual debut is about 15 years (Envuladu, 2017).

Social media networking increases online sex solicitation among students (Kimemia & Mugambi, 2016). O’Keeffe & Clarke-Pearson (2011) posit that about 20% of teens have sent or posted nude photographs and videos of themselves on social media platforms. Hayes (2010) attributes the increased access to sexually explicit music, sex images and videos, sex texting and online sex solicitation among students to various online platforms.

Most adolescents throughout the world engage in sexual intercourse by age 20, whether married or unmarried (UNFPA, 2016). Empirical studies of Gitonga, Sinyard and Gachuiiri (2012), Shiferaw et al. (2011), and Kabir et al. (2004) in Africa and Nigeria revealed a geometric increase in the incidence of sexually transmitted infections associated with increased sexual activity among adolescents.

Findings show that social media influences sexual behaviours such as kissing, touching genitals, and vaginal, oral and anal sex. Frequent social media use is associated with an increase in all types of sexual behaviours (Romo, 2017; Olumide & Ojengbede, 2016). Ahiataku (2016) substantiates the survey findings of O’Keeffe & Clarke-Pearson (2011) in Ghana, reporting that about 69% of undergraduates have received sexually explicit photos or messages while 38% sent sex messages. They posit that emerging adults adjudged to be biologically mature to engage in sexual activities are socially immature to engage in responsible sexual behaviour due to the level of reproductive health illiteracy displayed through their vulnerability to sexual misdemeanours.

Adolescence is a delicate phase of hasty physical, emotional, and cognitive development (Erikson, 1967). Adolescent sexual behaviour is influenced by several factors, especially in an era controlled by solicited and unsolicited information and content sharing via social media, which play significant roles in their social, academic, and developmental activities. During the transition from childhood to adulthood, adolescents establish behaviour patterns and make lifestyle choices that could affect their current and future health (El Achhab, 2016). The social learning theory (Bandura, 1977) argues that behavioural changes are driven by social context learned through observation. Olumide and Ojengbede (2016) opine that adolescents learn by observation.

Adolescents are in high danger of risky sexual behaviours and reproductive health problems. However, according to Cale and Lussier (2016), these problems are not considered health priorities by young people with lower morbidity, mortality, and better knowledge than older and adult age groups. Adolescents have limited access to reproductive health services and risks. Thus, their reproductive health strategies demand a multi-sector and integrated approach for interventions on risky and unsafe sexual behaviours (Cooper et al., 2014). The alarming rate of sexual behaviour and activities associated with social media has spurred scholars to interrogate its nexus and influence on adolescents, which, according to the World Health Organisation (WHO, 2022), constitutes people between 10 and 19 years of age.

In Nigeria, some studies have found that sexually positioned websites are among the most widely visited by adolescents (Abdullahi et al., 2013; Akinwale, 2009; Asekun-Olarinmoye et al., 2014; Igbo et al., 2012; Kunnuyi, 2011). Social media has dramatically presented a medium and channel for sexual misdemeanour, behaviour, experiences, and negative influences (Karikari et al., 2017).

The study anchors on the fact that demographic studies on the effect of social media as a factor influencing adolescents' risky sexual behaviour are scarce in the Federal Capital Territory, Nigeria. Earlier studies focus on Western countries and other African countries. The unique socio-cultural, religious, and economic factors in Nigeria, which houses about 69.5% of the adolescent population in Africa (WHO, 2022), presents a unique opportunity to research these gaps in the literature and contribute to knowledge as these factors influence how adolescents engage with social media and how this, in turn, affects their early initiation to sexual behaviour.

The study sets out to provide a wide-ranging and systematic explanation of the influence of social media on the risky sexual behaviour of adolescents in selected universities in the Federal Capital Territory, focusing on 100 level newly admitted undergraduate adolescents (from 18-21 years) considered vulnerable to negative social media influence. The study is both timely and necessary to fill the empirical gap due to individual and situational differences and environmental and cultural factors influencing the behaviour of adolescents.

1.2 Statement of the Problem

Most adolescents own mobile phones for texting and messaging through social media platforms (Dilci & Eranıl, 2018). Adolescents in Nigeria, particularly those in selected universities in the Federal Capital Territory, embrace the proliferation of digital platforms as a primary means of social interaction and information sharing (Baseline, 2022). While social media provides opportunities for connectivity and access to information, it also influences and propagates negative behaviour among adolescents as a result of high accessibility to sexual content.

World Health Organization 2020 report identifies Africa and Nigeria, particularly with high adolescent exposure to explicit sexual content or age-inappropriate materials. This is evident in the

geometric increase in the use of social networking sites for self-presentation, watching pornographic videos and other sex-related movies rather than for educational or related information purposes.

Empirical findings from (Akinwale (2009), Kunnuyi (2011), Igbo et al. (2012), Abdullahi et al. (2013), Asekun-Olarinmoye et al. (2014) and others in Nigeria reveal that sexually positioned websites are among the most widely visited by adolescents aged less than 25 years (Nwagwu, 2017). Hence, a more significant part of adolescents' emotional and social growth occurs whilst engaged in social media.

Invariably, the inability of most adolescents to negotiate safe sex, the delayed onset of sexual activities, and the lack of adequate, reliable, and relevant information on sex education present factors in social media influences on adolescent sexual behaviour. Consequently, most parents and school administrators in Nigeria have had ubiquitous reservations about Internet-based applications and cable television, primarily due to a lack of security and restriction of adolescent access to social media networking platforms.

Consequently, there is an urgent need to investigate the extent of social media usage and the most commonly assessed platforms, the types of explicit or age-inappropriate sexual content adolescents are exposed to, the extent of influence on their attitudes to sexual activity and risky sexual behaviours and perceptions regarding sexuality, relationships, sexual health, and the knowledge of the psychological impact of exposure to the sexual content of social media amongst others.

However, empirical studies and theoretical frameworks assessing the cause-impact nexus between social media and its influence on adolescents' risky sexual behaviours are scanty in FCT Nigeria. On the other hand, there is no empirical evidence of the influence of social media on the sexual behaviour of adolescents in universities in the Federal Capital Territory, Nigeria. Investigating these impact relationships is vital. Sexual risk behaviour is a significant public health concern in Nigeria, mainly due to the increasing cases of sexually transmitted infections (STIs), risky abortion and teenage pregnancy.

1.3 Aim and Objectives of the Study

The study's broad aim is to investigate the effect of social media on the risky sexual behaviour of 100 levels of adolescents in selected universities within the Federal Capital Territory, Nigeria. The specific objectives are:

- i. To determine the most commonly assessed social media platforms by 100 levels of adolescents in selected universities in the Federal Capital Territory, Nigeria.
- ii. To ascertain types of explicit, age-inappropriate sexual content on social media, 100 levels adolescents are exposed to in selected universities in the Federal Capital Territory, Nigeria.
- iii. To assess the influence of social media exposure on risky sexual behaviours of 100-level adolescents in selected universities in the Federal Capital Territory, Nigeria.
- iv. To Investigate the role of social media peer interactions and online communities on adolescents' sexual behaviour in selected universities in the Federal Capital Territory, Nigeria.
- v. To determine the effect of social media prolonged usage on risky sexual behaviour of 100-level adolescents in selected universities in the Federal Capital Territory, Nigeria.

1.4 Research Questions

- i. Which are the most commonly assessed social media platforms by 100-level adolescents in selected universities in the Federal Capital Territory, Nigeria?
- ii. What are the types of explicit, age-inappropriate sexual content on social media 100 levels adolescents are exposed to in selected universities in the Federal Capital Territory, Nigeria?
- iii. How does social media exposure influence the risky sexual behaviours of 100-level adolescents in selected universities in the Federal Capital Territory, Nigeria?
- iv. What is the role of social media peer interactions and online communities on the sexual behaviour of 100-level adolescents in selected universities in the Federal Capital Territory, Nigeria?
- v. What is the effect of prolonged social media time usage on risky sexual behaviour of 100-level adolescents in selected universities in the Federal Capital Territory, Nigeria?

1.5 Scope of the Study

The study focuses on understanding the influence of social media on adolescent sexual risk behaviour, which is expected to contribute significantly to online sex education and behavioural change programmes and interventions. The study critically evaluates the influence of social media on the initiation of early sexual behaviour by adolescent undergraduates within the age bracket of 18-21 years, newly admitted into the first year (100 levels) at the start of the 2022/2023 academic session, and who are social media compliant.

The geographical scope of the study is six selected universities in the Federal Capital Territory (FCT-Abuja), Nigeria. The study adopts specific criteria in selecting subject universities to guard against data omission and ensure uniformity in the presentation. The identified and selected six universities for the study are duly recognised by the National University Commission (NUC). Universities that were not recognised or that ceased operation at any point during the study period were excluded. Universities that had problems with NUC within the period under review were excluded. This selection process led to the sampling of the African University of Science and Technology (AUST), Baze University, Nile University, Philomath University, University of Abuja, and Veritas University.

1.6 Significance of the Study

The influence of social media leading to risky sexual behaviour of adolescents in FCT, Nigeria, could become an enormous burden to the stakeholders in the educational system, parents, and guidance. The findings of the study will help educate adolescents on the healthful use of social media and, as such, bridge the knowledge gap on the influence of social media on risky sexual practices. It will inform policymakers and governmental and non-governmental organisations working on young undergraduates' sexuality issues.

The study findings will provide policymakers at the national, regional, and State levels and other relevant agencies with evidence-based data on addressing adolescents' sexual issues. The results of this study would also help the university community in designing appropriate sex education that would help students with their sexual behavioural challenges.

The guidance and counselling unit of the university community would also be able to use the results of this study to develop a guideline for addressing some of the risky sexual behaviours that may be influenced by social media use. This will also enable health workers to design interventions targeted at addressing risky sexual behaviour among adolescents. Health workers would also use the findings to make decisions in improving sexual health among adolescents.

The study will contribute to the evolving research and assist parents and guardians in identifying software features that fascinate adolescents with social media use. Also, this study will be beneficial to parents in arousing interest in what their children do with their phones and being more careful with their time on social media. It will provide helpful information on how to train and help their children on the positive use of social media and undertake the role of monitoring the pattern and the use of social media at school and home.

The findings will benefit stakeholders in the Nigerian educational system in planning and designing course content that will aid a better understanding of the use of social media among adolescents in Abuja, Nigeria. The school counsellors will benefit from this study since they work closely with students with emotional and psychological issues. This would help the school counsellors to identify areas to operate with when encountering social media problems in counselling students.

The study will be of benefit to the researcher and future researchers by providing valuable data on the existing knowledge on the influence of social media on the sexual behaviour of adolescents in Abuja, Nigeria. Moreover, it will fill the gaps the current study may leave unaddressed.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

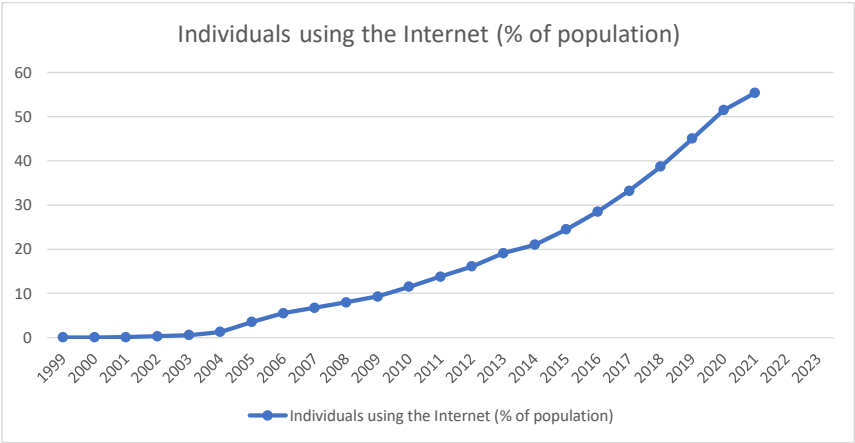
2.1.1 Social Media

The evolution of modern social media networking can be traced to the 1997 Six Degrees webpage. The Six Degrees web features allow users to create content and a profile, share information, and network with friends and acquaintances. Over the decades, social media has geometrically evolved from Web 2.0 to Web 4.0 and the projected Web 5.0 (Blanchard, 2011; France & Roberts, 2015; Hinton & Hjorth, 2013).

The adaptive and evolving nature of social media and social networking sites are constantly updated to provide quality information and accessible communication channels. This evolution has brought about astronomical expansion in information and communication technology (ICT). Verster (2010) opined that social media has recently taken a prime position in ICT and thus has become the primary source of internet interaction and collaborative efforts among people. Pavlik and MacIntoch (2015) revealed that social media is growing steadily and rapidly. The status of social media usage among adolescents in Nigeria indicates a high utilisation rate, especially with respect to YouTube, Facebook, LinkedIn, WhatsApp, Pinterest, 2go, Instagram and Twitter, making business, politics, education, sports, and social life effortless.

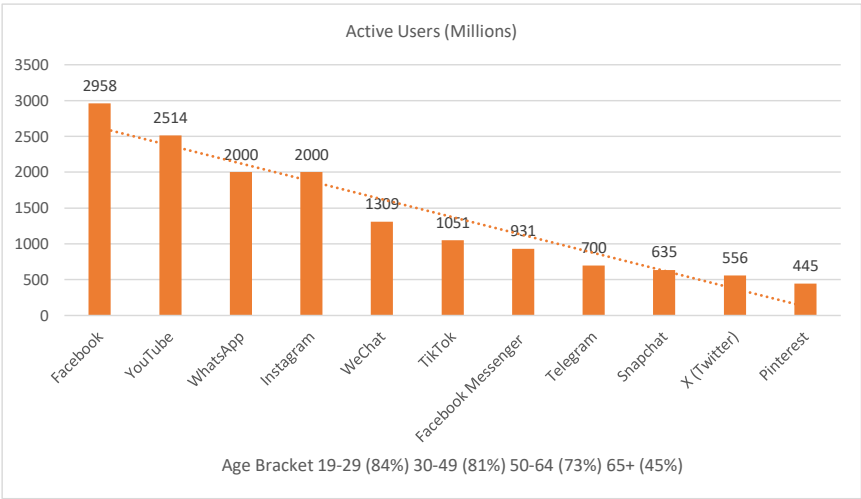
Social media technologies have several advantages through which innovative interaction, collaboration, information, and content are shared and created (Harris & Rea, 2009). These characteristics show social media's significance and influence in reshaping adolescents' social, educational, and developmental growth. According to Akhuetie, Uzobo and Ogbeide (2017), solicited or unsolicited readily available information has intruded into adolescents' learning time and habits globally. It is undisputed that these applications are changing virtually everything now more than ever. The Internet facilities, especially the use of social media, have become a tool, particularly for risky sexual behaviour and for teen sexual predators whose online profiles often attract aggressive

sexual predators. Empirical findings revealed that most people initiate sex in their youthful years (Benotsch et al., 2013; Olumide & Ojengbede, 2016). Hence, the healthy sensation of seeking admiration, affection, love, and care from others is natural in adolescents as they grow.



Source: World Bank Development Index (2023)

Figure 1: Individuals Using Internet Percentage of the Population in Nigeria



Source: Nigerian Communication Commission (2022)

Figure 2: Users of Various Social Media Platforms

The various social media platforms create a conducive space for young adults to engage in expression and discussion of all forms of sexuality, which may lead to satisfying these needs without the traditional oversight of parents and family members (Galupo et al., 2014). Empirical findings of Hayes (2010), Ashiekpe and Uganda (2017), Brown and L'Engle (2009), Kujuni (2012), Amoo et al. (2013); Asrese and Mekonnen (2018) reveal that social media usage is not limited to communication purposes, but has dramatically presented a medium for a sexual misdemeanour, behaviour, and experiences. Behaviours related to communication and level of interactions are significantly influenced by the selected medium's social media presence (Karikari et al., 2017).

In Nigeria, while WhatsApp has the most users, most adolescents consider Facebook, TikTok, and Snapchat the most important social media platforms they use, followed by Instagram and Facebook. Also, it has been estimated that 37.3% of the African population uses social media, with about two hundred million people subscribed to Facebook across Africa; 17 million are said to be based in Nigeria and 16 million are in South Africa (Internet Users Statistics for Africa, 2019).

Regionally, internet users in sub-Saharan Africa are the lowest, with a median of 41% across six countries: Nigeria, Kenya, Ghana, Senegal, South Africa, and Tanzania (Pew et al., 2018). Nigeria had 92.3 million users in 2018, and this number is expected to grow to 187.8 million by 2023 (Clement, 2019; Internet Users Statistics for Africa, 2019).

2.1.2 Social Media and Mental Health

The review of most of the empirical literature on social media and mental health relates specifically to Facebook and Instagram (Alam et al., 2011; Ajayi, 2010; Galupo et al., 2014; Idakwo, 2010). According to the National Alliance on Mental Illness (NAMI), as cited in Amoo, Adetoro and Olawole-Isaac (2020), 1 in 5 teenagers aged 13-18 have or will have a mental illness. NAMI estimates that 11% of those with a mental illness will cope with a mood disorder, such as depression or bipolar disorder, and 8% will be diagnosed with an anxiety disorder, like General

Anxiety Disorder (GAD), panic disorder, obsessive-compulsive disorder, or social anxiety disorder. These mental health challenges leave significant impacts on diagnosed and undiagnosed teens (NAMI). Approximately half of the teens with a mental health challenge drop out of high school, and while suicide is the second leading cause of death for youth aged 10 – 24, 90% of those who die by suicide have a mental health illness (National Centre for Injury Prevention and Control, 2017).

Twenge et al. (2017) and Shafer (2017) opine that a 33% increase in the number of teens from 2010 to 2015 who felt useless, joyless, lonely and had signs of a depressive illness positively correlated with the gematric increase in smartphones ownership when economic, schoolwork and unemployment stressors were factored out. Social media use promotes risky behaviours regarding mental health, including replacing time for face-to-face conversations and increasing sedentary behaviours, two identified protective factors against mental illness (Strickland, 2017).

Strickland (2017) reports that chat rooms and gaming social media reduced the risk of depressive symptoms while those that promoted image sharing increased narcissistic behaviour, a risk factor for mental illness. Time spent on social media significantly and positively correlates to the number of depressive symptoms a social media user has and the anxiety levels a social media user perceives (Lin et al., 2016; Twenge et al., 2017; Woods, 2016).

By implication, the more time one spends on social media, the more depressive symptoms and higher levels of anxiety are reported. Access to social media has also been shown to be a mediator in ten reports of anxiety symptoms; when access to social media, including texting, was removed, teens reported considerable increases in their levels of anxiety (Woods, 2016). Overall, individuals who spent more than two hours online per day were significantly more likely to have suicidal risk factors (Twenge et al., 2017). Allcott, Braghieri, Eichmeyer, and Gentzkow (2019) reveal that a control group who voluntarily deactivated Facebook accounts for one month reported small but significant improvements in well-being, happiness and life satisfaction. Users who deactivated accounts also self-reported lower levels of depression and anxiety compared to the control group (Allcott et al., 2019).

2.1.3 Social Media and Self-Esteem

Adolescence is when individuals start forming a sense of personal identity, and social comparison can be a part of creating that identity (Weinstein, 2017). Social media platforms such as Instagram and Facebook offer a self-comparison right from the beginning, with how many friends or followers each user has, similar to an online popularity contest (Fox & Moreland, 2015). Teens use one of two types of comparisons on social media: upward comparisons, seeing themselves as inferior to others or downward comparisons, seeing oneself as better off or superior (Wickham & Acitelli, 2005). While downward comparisons are associated with increased levels of self-esteem and decreased levels of anxiety, upward comparisons are associated with an increased number of depressive symptoms and decreased levels of self-esteem (Burrow & Rainone, 2017; Steers et al., 2005).

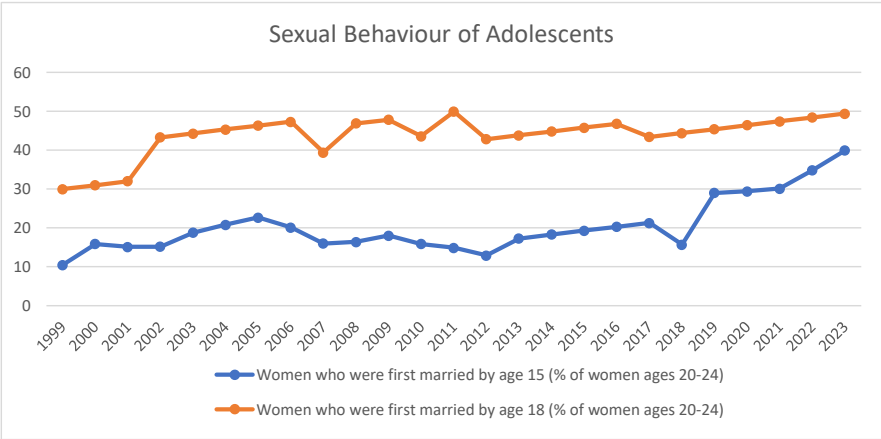
Passive browsing of social media, studied explicitly on Facebook, led to reports of negative self-image, regardless of time spent online. This may show how a social media consumer uses social media, which is important in creating a positive self-identity (Walsh, 2017). Social media has both a positive and negative impact on an individual's self-esteem. Presentation of self on social media is linked to the perception of peer acceptance and level of belonging, as can be directly indicated by the number of likes or comments a social media post may receive (Wright et al., 2018). Young adult social media users are more likely to "like" a post or picture that already shows a favourable response by other users, whether they genuinely care for it or not, representing false liking behaviour (Burrow & Rainone, 2017; Wright et al., 2018).

False presentations of self, in liking behaviour or posting behaviour, correlate to increased levels of anxiety, stress and depression symptoms, most notably when users have a premeasured low sense of self-esteem (Shapiro & Margolin, 2014; Wright et al., 2018). High levels of self-esteem and increased satisfaction with life and purpose of life scores were mediating factors in presenting false liking behaviours, demonstrating that if a young adult had positive self-esteem and high purpose in life score, they were less likely to use erroneous presentation behaviours (Burrow & Rainone, 2017; Wright et al., 2018).

2.1.4 Sexual Behaviours

Adolescence is a critical time for sexuality Ebert, (2015), and sexual health is an integral part of the overall health of adolescents (Temple-Smith et al., 2015). Mentally and physically safe sex can positively support adolescents’ development to be independent, socially competent, and self-esteemed, even though early sex happening in inappropriate contexts could have negative consequences (Temple-Smith et al., 2015). Adolescent sexual behaviour is influenced by several factors, especially in an era controlled by solicited and unsolicited information and content sharing via social media. According to Klein et al. (2017), in the USA, 1 in 4 adolescents aged 10 – 17 years and nearly 7 million children are at high risk of sexual intercourse, unprotected sex, drug use and alcohol use. This results in high mortality rates among adolescents.

In recent decades, adolescent sexual relationships have become more varied than previously casual encounters; assisted by social networks, this has made changes in the sexual lives of adolescents. In addition to regular dating, online assisted hooking has become a part of their dating practice. Hooking up is funding a casual partner that may tend to a regular partner, with little or no expectation for future romantic commitment as regular dating does (Fortunato et al., 2010; Garcia et al., 2019; Temple-Smith et al., 2015).



Source: Author (2023)

Figure 3: Sexual Behaviour of Adolescents

2.1.5 Adolescence

Adolescence is a period of transition from childhood to adulthood, during which the individual undergoes significant biological, psychological, and social changes. The development of sexuality, though it begins at conception, gets shaped during this period. The changes occurring differ in males and females, not just in terms of biopsychosocial organisation but also in sexual behaviour and functioning.

Adolescent sexuality is, although highly acknowledged, quite complex and needs in-depth understanding. Challenges faced by adolescents include being vulnerable to risky sexual behaviours, unprotected sex, nonconsensual sexual interactions, sexually transmitted infections, stigmatisation from society, and so on. In developing countries such as Nigeria, adolescents deal with additional challenges with higher risks associated with early marriages, unplanned pregnancies, sexual abuse, patriarchy, and insufficient information regarding sexual behaviour and risks (Hegde et al., 2022).

Sexuality is a core aspect of being human throughout the lifespan. However, it has significance during adolescence with the onset of puberty, which is characterised by maturation of the reproductive organs and an increase in sex drive. Secondary sexual characteristics, such as pubic and axillary hairs in males and females, are expressed in adolescents. In males, enlargement of genitals, facial hair, and masculine shape appear. In females, breast development, first menstruation (known as menarche) and a female body shape occur (Fortenberry, 2013; Kar et al., 2015).

Adolescent sexuality is a normative process in development with the potential for positive or negative consequences (Feldmann & Middleman, 2002; Odii et al., 2020). As well as physiological development, adolescents are struggling with the development of sexual identity, early intimate relationships, challenges associated with peer group expectations, and the influence of social media and broader societal messages about sex all shape adolescents' understandings about sex and sexuality (Feldmann & Middleman, 2002; Odii et al., 2020).

The study aims to review the nuances of adolescent sexuality, particularly in FCT, Nigeria, to ensure appropriate culturally sensitive yet scientifically sound intervention programmes. The study focuses primarily on the early and late adolescents constituting a vital proportion of the Sub-Saharan African and Nigerian populations. In Nigeria, over 62% of the population is under 25 years old (32% are 10-24) (National Bureau of Statistics 2018). The median age is 17.9 years.

Adolescence is a critical time when young people are particularly susceptible to their peers' and friends' presence and opinions. Salvy, de la Haye, Bowker, and Hermans (2012) observed that the presence of friends and peers was tied to increased physical activity and, therefore, higher levels of well-being in adolescents. The presence of one's friends may also increase risk-taking behaviour (Gardner & Steinberg, 2005). Having successful and healthy friendship networks is also crucial for social development and well-being (Best, Taylor, & Manktelow, 2015).

2.1.6 Stages of Adolescence

Adolescence occurs in three stages: early, middle, and late sexual and other physical maturation during puberty results from hormonal changes in the body. Cognitive and socio-emotional changes also affect how adolescents relate to others and the world around them.

Early Adolescence: Early adolescence occurs between ages 10-13, though it can begin a year or two earlier, especially for girls. This stage is marked by physical growth and changes. Adolescents typically experience a growth spurt at the beginning of this stage. An adolescent may grow several inches during a growth spurt in a few months. They begin to grow hair under their arms and on their genitals. Cognitively, their thinking tends to be very egocentric, and they can feel insecure or think they are constantly being judged. They also feel an increased need for privacy.

Middle Adolescence: Middle adolescence occurs between ages 14-17. Physical changes continue during this stage. Males may experience voice-cracking or vocal changes as the voice becomes lower. Females may notice menstrual periods becoming more regular. Teens become more interested in or curious about romantic and sexual relationships. Teens at this stage are developing their sense of independence and may experience more disagreements with their parents.

Late Adolescence: Late adolescence occurs between ages 18-21. By the end of this stage, physical growth is complete, and adolescents have reached adulthood height. Cognitively, their executive functions are improving, and they can better plan, manage time, and control impulsive behaviour. They can make independent decisions and delay gratification to reach goals. They become more separated from their family and have values. Relationships also become more stable during this time (Issues Related to Sexual Behaviour in Adolescence, 2014).

2.1.7 Psychosocial Development of Adolescents

The physical changes that signal the start of adolescence occur alongside psychological and social changes that mark this period as a critical stage in becoming an adult. Several models or theories have placed adolescence in a period of human development from birth to death. Most of these are stage models—with each stage completed before the individual moves on to the next. Each model identifies a different set of tasks as defining adolescence.

Freud focuses on psychosexual development, seeing adolescence as a recapitulation of the development of sexual awareness in infancy. Piaget focused on cognitive development, witnessing the growth of abstract thinking abilities, and making the transition to independent adult functioning possible. Most recently, Erikson identifies the tensions around the development of personal identity as central to the notion of adolescence. A more helpful model is the biopsychosocial approach, which acknowledges that adolescence has biological (puberty and sexual development) and psychological and social elements.

According to Albert Bandura's social learning theory promulgated in 1973, behavioural changes are driven by social context learned through observation. The ripple effect or the reward from these kinds of aggressive or tranquil behaviour influences the behavioural formation of adolescents. Bandura noted that adolescents imitate adults' aggressive actions witnessed in contrived social settings. Adolescents learn by observation; behaviour portrayed on these social media platforms by individuals and the reward they receive without suffering consequences influences the adolescent's formative sexual and social life

(Olumide & Ojengbede, 2016). It is the stage where the adolescent develops impressions and perceptions of life, seeks role models, and identifies behaviours as right or wrong or worthy of emulation.

Psychological changes- In early adolescence, young people gradually develop abstract thinking and the ability to use internal symbols or images to represent reality. In contrast to the more childish, concrete thinking, objects must represent “things” or “ideas” for solving problems. Abstract thinking enables us to think hypothetically about the future and assess multiple outcomes. One needs to know whether the young person they are communicating with has a poorly or well-developed capacity for abstract thinking, as this capacity is essential if they are to give informed consent to treatment and be able to manage chronic illness regimens independently. It is essential to recognise the interactions of psychological developments with puberty, particularly in the context of a developing sense of sexuality and body image. Body image and self-esteem are vulnerable to differences in the timing of puberty among peers and to the physical effects of chronic illnesses.

Social Changes- Adolescence is usually described as a period in which independence is achieved. It is more accurate, however, to talk about a change in the balance of autonomy and dependence with other parts of the young person's system (parents, peers, community, and even health professionals). The timing of these changes depends on the different social and cultural expectations of the young person's environment. Whereas puberty and cognitive development are largely biologically determined, the more significant part of psychological and social development will depend on environmental and sociocultural influences.

In non-Western cultures, the social and psychological domains may be markedly truncated. It may be hard to remember our childhood accurately, but few people forget their adolescence. As adolescents redefine themselves about others, they begin to move to a position where they define other people about themselves. This way of thinking about oneself means that it can be hard to understand the impact of behaviour on others or to feel concern for how others might be affected by behaviour. Knowledge that has been “handed down” by adults is given little value. Adolescents may firmly believe no other person can have a clear (Christie & Viner, 2005).

Physical Development - Puberty is a critical component of adolescence. It can occur between the ages of 9-15. It typically lasts 3.5 years. Adolescents experience hair growth under their arms and near the genitals and body hair. Males begin to grow facial hair. Muscle mass growth occurs in males and females, though it is more pronounced in males. Females may notice breast development, while males may see an enlargement of the testicles. There are changes to both the primary and secondary sex characteristics. Females may start their menstrual period at around age 12, though this can vary significantly from person to person. Males experience their first ejaculation, usually during sleep. Adolescents typically enjoy being physically active and may enjoy sports, dance, and drama (Issues Related to Sexual Behaviors in Adolescence, 2014).

Psychological development occurs against a background of rapid physical change, including puberty, puberty growth spurt, and accompanying maturational changes in other organ systems. Both boys and girls pass through identifiable stages of development of secondary sex characteristics (Tanner stages). The shift from prepuberty to total reproductive capacity may take as little as 18 months or as long as five years. At age 13 years, boys can manifest the entire range. Although girls seem to enter puberty long before boys, the earliest sign in boys (increasing testicular volume) begins at a mean age of 12, only six months after girls develop breast buds (the first sign of puberty). (Christie & Viner, 2005).

According to Akhuetie, Uzobo and Ogbeide (2017), solicited or unsolicited readily available information has intruded into adolescents' learning time and habits globally. The Internet facilities, especially the use of social media, have become a tool, particularly for risky sexual behaviour and for teen sexual predators whose online profiles often attract aggressive sexual predators. Empirical findings revealed that most people initiate sex in their youth (Benotsch et al., 2013; Olumide & Ojengbede, 2016).

Hence, the healthy sensation of seeking admiration, affection, love, and care from another person is natural in adolescents as they grow. The various social media platforms create a conducive space for young adults to engage in expression and discussion of all forms of sexuality, which may lead to

satisfying these needs without the traditional oversight of parents and family members (Galupo et al., 2014).

2.1.8 Developmental Tasks of Adolescence

During adolescence, young people will negotiate puberty and the completion of growth, take on a sexually dimorphic body shape, develop new cognitive skills (including abstract thinking capacities), create a clearer sense of personal and sexual identity, and develop a degree of emotional, private, and financial independence from their parents.

Table 2.1: Developmental Tasks of Adolescents

Adolescence	Biological	Psychological	Social
Early adolescence (Ages 10-13)	Early puberty (girls: breast bud and pubic hair development, the start of a growth spurt; boys: testicular enlargement, the opening of genital growth)	Concrete thinking but early moral concepts; progression of sexual identity development (sexual orientation); possible gay peer interest; reassessment of body image	Emotional separation from parents; start of strong peer identification; early exploratory behaviours (smoking, violence)
Mid-adolescence (Ages 14-17)	Girls: mid-late puberty and end of growth spurt; menarche; development of female body shape with fat deposition. Boys: mid-puberty, spermatarche and nocturnal emissions; voice breaks; start of growth spurt	Abstract thinking, but self still seen as “bulletproof;” growing verbal abilities; identification of law with morality; start of fervent ideology (religious, political)	Emotional separation from parents; strong peer identification; increased health risk (smoking, alcohol, etc.); heterosexual peer interest; early vocational plans

Late adolescence (Ages 18-21)	Boys: end of puberty; continued increase in muscle bulk and body hair	Complex abstract thinking; identification of the difference between law and morality; increased impulse control; further development of personal identity; further development or rejection of religious and political ideology	Development of Social autonomy, intimate relationships development of vocational capability, and financial independence
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Source: McIntosh, Helms, and Smyth (2003)

2.1.9 Culture and Sexuality in Adolescence

Humans, being social beings from the dawn of civilisation, have formed and revised a set of norms appropriate to the time and region to abide by for smoother functioning of society. Culture plays a vital role in an individual's holistic development. Today, the world is a hub of diverse cultures, and they continue to influence us in different areas of our lives, including adolescent sexuality. However, certain attitudes toward sexuality were universal in youth like hygiene and general behaviour of the sexual partner were significant factors; the use of condoms was considered to be stigmatising and a sign of lack of trust, penalties and rewards for sex, gender stereotypes determined social expectations which had a detrimental effect on behaviour, and communication about sex were some of the common themes found across almost all the cultures (Denis, 2013).

Studies comparing the sexual development of adolescents in collectivist and individualistic societies have revealed disparities in adolescent sexual development. Adolescents who were raised in collectivist societies, as compared to those from individualistic cultures, were more conforming and sensitive toward social as well as sexual norms, thus being more conservative about sexual decision-

making. Regardless, ethnic minorities face similar challenges as the target of social discrimination and are at risk of adverse sexual health outcomes like early sexual initiation, unprotected intercourse, unplanned pregnancies, and infections (Boislard et al., 2016)

2.1.10 Adolescent Sexual Behaviour

Sexuality is a physical, emotional, social, erotic, spiritual and biological expression through mannerisms. Sexuality is a broad term with diverse historical contexts and applications. According to Nwagwu (2015), sexuality is more than just the act of sex or gender. It is a complex idea that involves physical makeup, self-image, and feelings (Benson, 2011). Sexual development is a normative adolescent task (Beyers et al., 2015). However, adolescent engagement in sexual behaviours may involve physical, emotional, and social risks. Adolescent sexual behaviours may occur online via computers or other connected devices and platforms such as smartphones, social media, and mobile applications (apps). These sexual behaviours can have intentional and non-intentional consequences.

As such, adolescent participation with these mobile technologies can result in the viewing of pornography (Brown & Bobkowski, 2011), sending, receiving, or forwarding nude or semi-nude images, or sexting (Kachur et al., 2013), and sexual solicitation (Whittle et al., 2013), all of which can result in sexual activity (Luder et al., 2011; Temple & Choi, 2016; Whittle et al., 2013). Multiple kinetic and non-kinetic factors contribute to these sexual behaviours and risks, such as developmental level of gender, sexual orientation, physical, emotional and development. (Kachur et al., 2013), peers (Cookingham & Ryan, 2016), and cultural and sexual expectations (Hatchel & Subrahmanyam, 2015). Adolescents develop a sense of their sexuality and sexual identity, which eventually leads to the display of certain sexual behaviours (Giles, 2008). Sexual behaviours include sexual activities or practices that refer to how an individual expresses their sexuality (Nwagwu, 2015).

Sexual activities are usually intended to display one's sexuality and often to gain the sexual attention of others. Strategies to find or attract partners include sending messages, making constant calls to stay in touch, and so on, and these are all part of sexual activities (Nwagwu, 2015). Apart from the natural

sexual response patterns inherited and manifested by every human being, sexual behaviour among adolescents can be determined by many factors, including the types of influence that society exerts on the individual (Hayes, 1987). This influence results in various levels of sexual activities ranging from mild to high risk and solitary or social sexual indulgences (GPA, 1994).

Social media expose adolescents to various forms of sexual opportunities, such as creating linkages with possible partners and the availability of sexual content. Media has generally been linked to sexual indulgences (Rideout et al., 2010). Adolescents use a variety of media and increasingly engage with these media on diverse platforms and are, therefore, exposed to encountering various sexual content across these platforms.

Social media and social networking sites allow adolescents to continue creating and maintaining peer relationships at all hours. Adolescents also make up 89% percentage of social media and social networking site users (Lenhart & Madden, 2015). Adolescence is a delicate phase of hasty physical, emotional, and cognitive development (Erikson, 1967). Adolescent sexual behaviour is influenced by several factors, especially in an era controlled by solicited and unsolicited information and content sharing.

According to Mesele et al. (2023), risky sexual behaviours are often seen as positive or rewarding. Insufficient sex education in early adolescence, including the lack of proper sex education in schools (Feldmann & Middleman, 2002; Odii et al., 2020) some traditional cultures in which sexuality is limited to discuss (Kar et al., 2015) (Mesele et al., 2023), and breaking of social structure in early adolescence contribute significantly to factors increasing risky sexual behaviours among adolescents (Feldmann & Middleman, 2002; Odii et al., 2020).

2.1.11 Adolescent Online Sexual Practices

Sexual self-presentation can advance to more explicit sexual behaviours online, such as sexting. Thirty-nine per cent of adolescents ages 13 to 19 report sending sexually suggestive messages, and 48% have received these messages (Kachur et al., 2013). Factors that reportedly contribute to sexting include peer pressure, seeking attention, initiation of sexual activity, and coercion; 70% of

sex requests come from a romantic interest, 20% from a friend, and 10% from threats or extortion (Bass, 2016).

Sexting can have serious social consequences. Adolescents are often unaware of how quickly images can be distributed online (O’Keeffe & Clarke-Pearson, 2011). Adolescent nude pictures or videos are often swapped around the school without consent; sharing these images is a crime, even when voluntarily shared between two minors, and can result in child pornography charges and registration as a sex offender (Bass, 2016). These images leave digital footprints that can remain online indefinitely and impact reputations and future opportunities (Bass, 2016; O’Keeffe & Clarke-Pearson, 2011). The spread of these images can result in shame, social exclusion, anxiety, depression, and suicide, as well as drug and alcohol use (Bass, 2016; Hatchel & Subrahmanyam, 2016; Morelli et al., 2016).

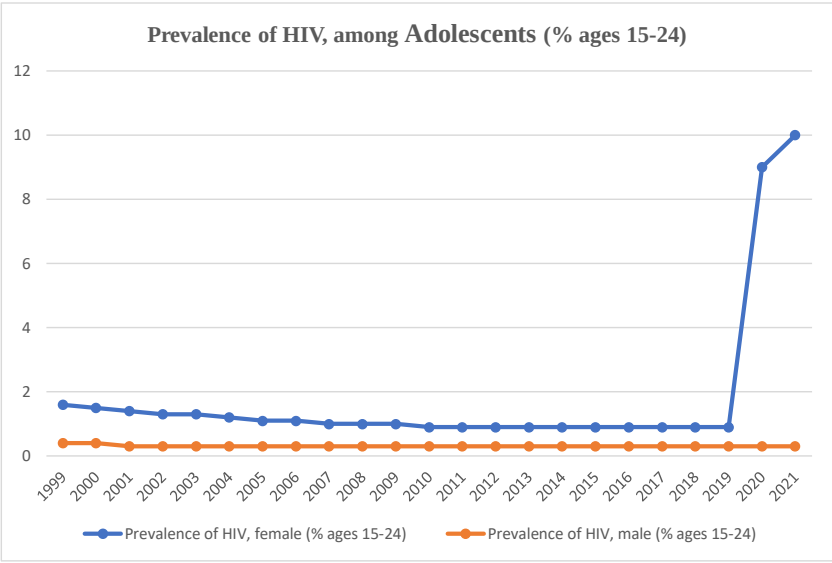
Social consequences of sexting include sexual activity. Adolescents who had sex have more than seven times the odds of having ever had sexual intercourse and are 1.32 times more likely to be sexually active than those who do not sext (Temple & Choi 2016). Sexting is associated with unprotected sex, sex after drinking and drug use, oral sex, and an increased number of sex partners (Bass, 2016).

2.1.12 Adolescents and Risky Sexual Behaviour

Risky sexual behaviour is commonly referred to as any activity that increases one’s risk of acquiring sexually transmitted infections such as HIV/AIDS and experiencing unintended pregnancies (Epstein et al., 2008). These behaviours include non-usage of condom during sex, having multiple sexual partners (more than one partner), early age at first sex, substance use during sexual encounters, transactional sex or having sex in exchange for cash or in-kind compensation, and having sex without consent (Thephtien & Celyn, 2022; Sserwanja et al., 2023; Thomas et al., 2023),

These risky behaviours are on the rise among Nigerian youth, particularly among undergraduates in urban areas (Yakubu & Salisu, 2018; Odimegwu & Somefun, 2017; Aboki et al., 2014). This is especially troubling given the extraordinary prevalence of HIV in this highly-populated country and

the fact that almost half of the 35.3 million people worldwide living with HIV contracted the virus through sexual transmission before the age of 25 (Federal Ministry of Health: National HIV & AIDS and Reproductive Survey, 2012; Patton et al., 2010). (See Figure 4).



Source: Federal Ministry of Health: National HIV & AIDS and Reproductive Survey, 2012

Figure 4: Prevalence of HIV among Adolescents (% ages 15-24)

Multiple sexual partners - According to Epstein and colleagues (2014), adolescents are more likely than adults to report having had multiple sexual partners in the recent past (Epstein et al., 2014). Adolescent males are more likely than adolescent females to report multiple sexual partners and multiple concurrent partners (Richwood et al., 2015). The number of lifetime sexual partners among adolescents is strongly related to the length of time since the first partner (Adebanji, 2008).

Cross-Generational Sex refers to relationships between older men and younger women, even though some cross-generation relationships include older women and younger men. In the first type of relationship, young women are usually below the age of 20 years, and their male partners are at least 10 years older.

Gregson and his colleagues argue that the risk of infection with HIV increases with the age of a partner (Gregson et al., 2002). On the other hand, Epstein and colleagues observe that gender, age, and economic disparities increase risky sexual behaviour and reduce a young woman's ability to negotiate safer sexual behaviours (Epstein et al., 2014). Research has shown that girls who become pregnant or present with induced abortions have much older partners on average (Kurz, 2002).

Condom Use at Last Sexual Intercourse - Condoms remain an effective way to prevent the contraction of STIs and prevent unintended pregnancies. Despite the protective benefits associated with the use of condoms during sexual intercourse, it is not highly patronised among sexually active individuals (Shafii et al., 2007). A study conducted by Exavery and colleagues (2011) in Tanzania found that the prevalence of condom use at the last sexual intercourse among sexually active respondents between the ages of 10 and 19 years ranged from 14% to 56%, with an overall prevalence of 39% (Exavery et al., 2011).

Also, results from the 2003 Ghana Demographic and Health Survey revealed that 89.9% of women aged 15 years and above in the rural areas and 84.8% of women aged 15 years and above in the urban areas reported not using a condom during last sexual intercourse (Baiden et al., 2012). Furthermore, in a study conducted in Ghana among sexually active youth (aged 15–19 years), only 28% reported using condoms the first time they had sex, and 30% reported using condoms during their last sexual intercourse (GSS et al., 2014).

2.1.13 Socio-Demographic Characteristics of Adolescent Risky Sexual Behaviour

Gender and Risky Sexual Behaviour - A cross-sectional gender-based study by Mahdavian and Zolala (2016) shows that attaining a higher educational level increased the risk of adverse sexual behaviour in boys. Boys who have a mother at home and are sometimes without work were discovered to reengage less in risky sexual behaviour (Alimoradi et al., 2017; Tarkang et al., 2018). In girls, having permissive or authoritarian parents was found to increase the risk of sexual behaviours. The same study also indicates that both boys and girls were more likely to engage in sexual behaviours when they engaged in leisure activities (Alimoradi et al., 2017; Tarkang et al.,

2018). Research into the gender differences concerning risky sexual behaviour among adolescents in Catalonia found more prevalence among boys than girls. The study reveals a significantly higher number of students who had one-time sexual relations, 82% of boys and 63% of girls (Wendy & Cohan, Lorena, Naudeau, Sophie, McGinnis, 2008).

Factors related to unsafe sexual activity in boys were noted to be foreign origin and alcohol consumption. Among girls, only foreign origin was a significant risk factor. Alcohol consumption was also a risk factor in boys (Wendy & Cohan, Lorena, Naudeau, Sophie, McGinnis, 2008). Evidence from a study in Spain by Gil-Lacruz (2016) on gender and risky sexual behaviour found condom use and alcohol consumption to be linked to risky sexual behaviour among male youth.

Other factors linked to risky sexual behaviour were being in relationships and the number of sexual partners an individual had (Gil-Lacruz, 2016). Letamo (2011) sought to show the association between gender role attitudes and risky sexual behaviour to support the assertion that moderate gender roles are linked to safer sexual practices. The data showed that traditional gender role attitudes were not significantly associated with the risky sexual behaviour of non-use of condoms and engagement in multiple sexual relationships. This suggests that there was no significant difference between people who hold traditional and egalitarian gender roles (Letamo, 2011).

Gender differences have been particularly reported to show males indicating more positive consequences as opposed to females following their most recent sexual experience. Other factors associated with this finding are the theory of sexual double standards, men's likelihood of experiencing orgasm and the nature of the relationship with a sexual partner (Vasilenko et al., 2008)

Age at Sexual Debut - Sexual activities among youth have been reported to be on the increase worldwide. During the transition from childhood to adulthood, youth establish behaviour patterns and make lifestyle choices that could affect their current and future health (El Achhab et al., 2016). Most youths throughout the world engage in sexual intercourse by age 20, whether married or unmarried (UNFPA, 2016). The youth are in high danger of risky sexual behaviours and reproductive health problems. However, these problems are not considered health priorities by young people with

lower morbidity, mortality, and good knowledge than older and adult groups (Cale & Lussier, 2016). They have limited access to reproductive health services and risks. Thus, their reproductive health strategies demand a multi-sector and integrated approach to risky and unsafe sexual factors and behaviours (Cooper et al., 2014).

In Ghana, the median age for women between 20 and 24 is 18.4 years, and for men, it is 20 years. However, some initiate sex as young as ten years in some societies, although earlier ages of onset have been reported (Boislard & Zimmer-gembeck, 2012). The age at which young adults begin sexual activities is of significant public health importance, as it has been found to expose them to potentially risky sexual outcomes both in the short and long term (Sandfort et al., 2008). This is evident in Nigeria's increasing rate of adolescent mothers (See Figure 5).

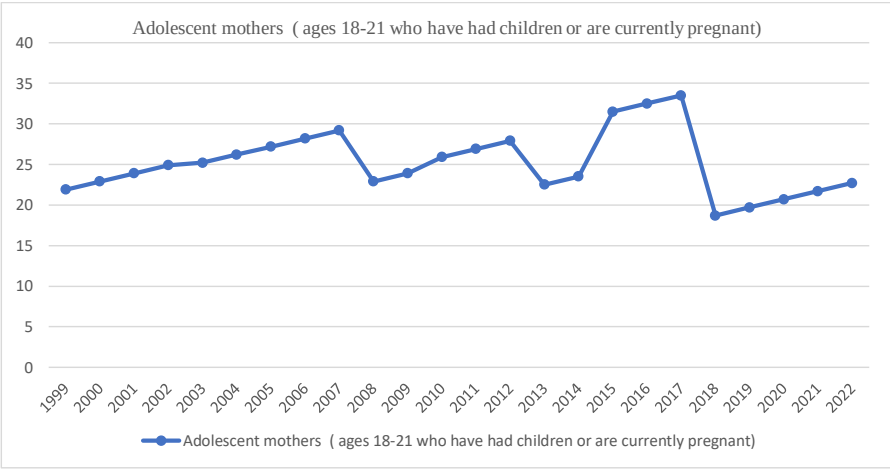


Figure 5: Adolescent mothers (% of women ages 15-19 who have had children or are currently pregnant)

2.1.14 Gender Differences in Adolescent Online Behaviours and Parental Practices

Researchers suggest that adolescents’ online behaviours, sexual risks, and parental protective practices are gender-specific. Female adolescents use social media more than males and are more likely to use smartphones to instant message and text (Frison & Eggermont, 2016; Herring & Kapidzic, 2015; Pujazon-Zazik& Park, 2010). Female adolescents are more likely to post sexualised

pictures (Daniels & Zurbriggen, 2016), sext (Sadhir et al., 2016), experience unwelcome sexual solicitation (Herring & Kapidzic, 2015), and receive unsolicited explicit sexual content (Sevcikova et al., 2015). Compared to adolescent boys, girls experience more pressure or coercion to sext, and recipients may have the intent to blackmail the sender with these sexual images (Choi et al., 2016).

In contrast, adolescent males disclose personal information and location and talk explicitly about sex (Herring & Kapidzic, 2015; Sasson & Mesch, 2016). They collect sexting images of females (Walrave et al., 2015) and may use smartphones to record and share images of themselves performing sexual acts (Bobkowski et al., 2016). Empirical findings suggest that parental protective practices are gender-specific, given that mothers are more likely to discuss appropriate online content with adolescents (Pew Research Centre, 2015; Valcke et al., 2010). Evidence also shows that mothers tend to employ mediation practices directed primarily toward girls (Nikken & Jansz, 2013).

2.1.15 Control Measures and Parental Protective Practices to Reduce the Use of Social Media by Adolescents

Parental protective practices can mitigate factors that contribute to adolescent online risks. Parents' relationships with adolescents and their peer-related friendship groups and practices such as monitoring online activities and restricting access and content can enhance protection and control of online behaviours. Although effective, these practices are affected by parenting style and challenge to oversight. Parental technology skills, remote access, and deceptive adolescent practices hinder parental oversight.

Parents influence adolescents relationally through education regarding online risks, active participation in online activities, and the modelling of appropriate behaviour (Rafla et al., 2014). Parental relational practices extend beyond adolescent children to adolescent friendship groups. Adolescents are influenced by a broader network of adults outside their immediate family (Ragan et al., 2014). Parents act as mentors to friends of their adolescent children (Shakya et al., 2012) and directly and indirectly exert social control over these friends (Ragan et al., 2014).

Adolescents' friends are influenced by parental knowledge and behaviours (Rulison et al., 2015) and enhanced protection through awareness of adolescents' activities (Cleveland et al., 2012). Moreover, parental involvement online can deter predatory grooming (Whittle et al., 2013). Empirical findings suggest that online restrictions and monitoring of online activities support relational practices. Parental monitoring is defined as attention to and tracking of activities and whereabouts of the adolescent (Cleveland et al., 2012). Parents "friend" adolescents on social media to gain account access (Mullen & Hamilton, 2016, p. 165).

Protective Practices may include and are limited to monitoring emails and social media use, installing online tracking software on devices, setting limits on access to mobile phones and time spent online, and restricting devices to specific locations such as common areas (Bass, 2016). Parental mediation includes strategies designed to mitigate risks (Nikken & Jansz, 2014) and refers to practices parents use to guide and regulate media usage (Nikken & Oprea, 2018). According to Nikken and Jansz (2014), mediation practices include active mediation with instructive communication and explanations, restrictive mediation that exercises control over media time and content and co-use or watching together, and supervision or direct oversight of online activities.

Parents can also leverage smartphones and online privileges as a discipline (Yardi & Bruckman, 2011). Sixty-five per cent of parents have digitally grounded their adolescents (Pew Research Center, 2016). In a survey of 1,637 parents of adolescents ages 13 to 17 years, 60% reported checking adolescent websites and social media profiles, 48% reviewed adolescents' messages, 39% used parental controls such as filters, and 40% talked with adolescents about online content (Anderson, 2016). This oversight is essential, as parental rules online can mitigate risks for real-life meetings with online contacts (Van den Heuvel, Van den Eijnden, Van Rooij, & Van de Mheen, 2012).

Despite evidence that protective practices mitigate adolescent online sexual risks, many parents find it challenging. Parents may only be aware of online access with their knowledge, such as at school, and adolescents often look for ways to circumvent rules (Len-Rios et al., 2016; Yardi & Bruckman, 2011). Furthermore, parents' online knowledge and expertise level may be lower than their adolescent children's (Leung & Lee, 2016), and they may underestimate risks. Evidence shows that some parents

falsify their adolescents' ages to facilitate access to social media (O'Keeffe & Clarke-Pearson, 2011). Deceptive practices of adolescent children can further hinder parental protective practices. Technology-savvy adolescents go to great lengths to avoid parental presence on social media, and mobile technologies may further facilitate these practices (Mullen & Hamilton, 2016). Mobile technologies such as smartphones, social media, and mobile applications allow adolescents to disable notifications, delete texts, and hide search histories, contacts, photos, and mobile apps (Hamilton, 2015).

Deceptive practices increase sexual risks, as online predators prey on adolescents who hide social media use from parents (Bass, 2016). The proliferation of adolescents' access to smartphones further amplifies these challenges. Access to smartphones may encourage unsupervised activities online, which can be inaccessible to parental oversight (Livingstone & Smith, 2014). Mobile apps pose further challenges to parental practices. With apps, adolescent online activities are more difficult to track, and they can circumvent data plans; apps may not show up on phone bills or have message limits or fees (Barth, 2015; Bass, 2016; Mullen & Hamilton, 2016).

Parents' knowledge of and ability to effectively access and utilise information technology may impact their ability to mitigate risks effectively. Given the online generational divide, many adolescents have more advanced technology skills than their parents (Rafla et al., 2014; Valcke et al., 2010). Adolescents with better technology skills have emancipated themselves from parental authority online, essentially shifting power relations (Yardi & Bruckman, 2011).

2.2 Conceptual Review

Risky sexual behaviour among adolescents via social media is on the increase globally, especially in Africa and Nigeria. Asrese and Mekonnen (2018) in Mecha and Bahir, Dar of North-Western Ethiopia, assess the association between sexual behaviour and social media. Findings revealed that social networks predict risky sexual behaviour more than an individual's attributes alone (13%). Also, adolescents belonging to social networks, which approve sexual practices, can be predictive of risky

sexual behaviour. However, this depends on the nature of the social networks and the increased network size of sexual issue discussions (Asrese & Mekonnen, 2018).

Over the past two decades, social media has gained so much growth and fame worldwide that scholars are now interested in examining the causal-effect nexus of these social platforms and their effects on the community (Lemoine et al., 2016). Therefore, social media use has both negative and positive impacts on adolescents. A study by Schnarch (2015) revealed that social media allows one to pursue online relationships without revealing much about themselves. It affords people the luxury of putting up a facade without knowing the truth of one's identity. This is increasingly becoming a popular means of dating, especially in this current generation of 'techie' individuals (Schnarch, 2015).

Adolescent exposure to sexual content in the media is linked to early sexual initiation and risky sexual behaviour (Bleakley et al., 2008; Bleakley et al., 2009; O'Hara et al., 2012), and sexual victimisation, including intimidation and rape (Ybarra et al., 2014). Although sexual media exposure predicts a broadening of sexual engagement among youth, baseline sexual activity also predicts sexual media exposure, illustrating a recursive relationship (Bleakley et al., 2008).

Further, youth who report learning about sex from the Internet demonstrate increased self-efficacy (i.e., belief in one's ability to have sex) and a belief that having sex will lead to positive outcomes. The same study also found that friends who serve as sources of information about sex have a similar influence on self-efficacy and expectancies, suggesting that online sources convey authority similar to that of peers (Bleakley et al., 2008).

Additionally, research conducted after the surge in social media uptake suggests that youth who are more willing to share sexual health information using social media have greater self-efficacy beliefs for condom usage as well as knowledge of risk factors for HIV/STDs (Divecha et al., 2012). These findings demonstrate that adolescents use social media to find and distribute sexual risk-reduction information and highlight the need for further investigation into these practices.

Adolescents use the Internet to satisfy their curiosity about sex (Mishna et al., 2018). Adolescents' online and offline social networks influence their sexual behaviour, personal competencies, and

family factors (Gutierrez Fernandez et al., 2010). Access to social networks brings online learning about sexuality and sexual behaviour (Sklendarova et al., 2018). More than half of the respondents from the three Asian sites reported having learned about sex from the Internet (45-84%) (Lou et al., 2012).

In another study, 70 % of young people reported sending or showing someone sexual pictures of themselves in which they were nearly nude during the last year (Landry et al., 2013). Sklenarova (2018) indicated that 51% of adolescents experienced online sexual activity mostly with peers (84%) but some with adults (Sklendarova et al., 2018). The increase in internet access provides adolescents with new outlets to engage in risky sexual behaviour (Sanchez et al., 2017; Shilo & Mor, 2015; Vandenbosch et al., 2016).

Previous studies revealed that Internet-based sexual activities enhance risky sexual behaviours and other risky behaviours. Those who shared sexual photos online were associated with concurrent sexual partners and substance abuse (Arulogun et al., 2016; Ybarra & Mitchell, 2014) and low self-esteem (Arulogun et al., 2016). Young MSM 'sexters' were more likely to be sexually active and to have anal sex with or without condoms than those who did not engage in sexing (Bauermeister et al., 2014). Adolescents who regularly engaged in sex were more likely to have emotional problems and alcohol use than those who did not (Sevcikova, 2016). Those who had sex practice were more likely to have had sexual intercourse than those who did not (Bukonya et al., 2020a). Those who had a higher degree of pornography addiction were more likely to have risky sexual behaviours in adolescence (Yunengsih & Setawan, 2021).

Adolescents exposed to porn films were more likely to have oral sex (48.3%) and to have multiple sexual partners (11.65%) (Arulogun et al., 2016). Having more than 100 SMS per day was associated with having ever had vaginal sex OR 2.01 (1.02- 3.99) (Landry et al., 2013). Meeting someone online and having sex offline were associated with an early sexual debut (10-14 years old) in Swedish youth (Jonsson et al., 2015). Those who had more access to chat rooms, dating websites and erotic contact websites were more likely to have an earlier initiation of romantic relationships (Vandenbosch et al.,

2016) to experience cyber victimisation (Wright et al., 2018) and face cyber aggression (Mishna et al., 2018). Those who have a connection with adolescents who engaged in risky sexual behaviours were associated with those risky sexual behaviours. In the study by Wang and Muessig, respondents who had a friend in their network who participated in commercial sex were 56 times more likely to follow suit (Wang & Muessig, 2017).

In Africa and Nigeria, being a member of a close-knit camp in which concurrency was the norm was associated with practising concurrency (Yamanis et al., 2016). Social network members who met on the street were more likely to be perceived as having sexual risk (Wenzel et al., 2012). Affiliation with antisocial peers increased the odds of having a first sexual experience early in Ghanaian adolescents. (Bingenheimer, Asante, & Ahiadeke, 2015). Young blacks who engaged in condomless sex showed that they formed a group of friends practising the same behaviour (Young et al., 2018b).

On the other hand, those adolescents who bonded with friends who engaged in healthy sexual behaviour were more likely to do so. In the US, a study found that a 10% increase in the proportion of classmates who used contraception increased the likelihood of individual contraception use by approximately 5% (Ali et al., 2011). In networks where condom use was the norm, study respondents were more likely to use condoms in commercial sex (Wang & Muessig, 2017). Unprotected sex was less likely to occur in dyads where participants had high safe sex attitude scores and in dyads where both members encouraged each other to use condoms (Gyarmathy & Neaigus, 2009).

In another study, homeless adolescents who had prosocial peers in their networks who attended school had jobs and had positive family relationships were less likely to engage in risky sexual behaviour (Rice et al., 2007). Homeless adolescents who had someone on their social network with whom they could talk about love and sex were associated with increased knowledge about HIV and less chance to participate in the exchange of sex for materials (Young & Rice, 2011).

A study in China revealed that adolescent girls with good knowledge of sexual and reproductive health experience regular or late sexual debut (Li et al., 2017). In Tanzania, findings showed increased high-risk sexual behaviour among participants with poor knowledge of HIV/AIDS (Lwelamira et al.,

2016). Findings from a study conducted in Ghana reported no association between HIV risk perception, early sexual debut and condom utilisation. They concluded that adolescents largely do not perceive themselves to be at risk of HIV infection as compared to pregnancy despite their involvement in risky sexual behaviour (Afriyie & Essilfie, 2019). A report on concept analysis found that risk perception in pregnancy stimulates women's sentimental state and affects decision-making around pregnancy and childbirth (Lennon, 2016).

Findings of two studies conducted in developed countries showed a positive correlation between self-efficacy and positive attitudes towards condom utilisation (Oliver et al., 2014) and high sexual efficacy as a strong predictor of condom utilisation (Uribe et al., 2017). A study conducted in Nairobi, Kenya, indicated that 71% of female virgins have a high level of mother-daughter communication (Okigbo et al., 2015). A meta-analysis of studies conducted between 1984 and 2014 also revealed that parental monitoring knowledge and rule enforcement were positively associated with delayed sexual intercourse, greater condom utilisation and increased contraceptive use among adolescent girls (Dittus et al., 2015). Moreover, a qualitative study in a community in Western Kenya also identified sleeping arrangements as a risk factor for risky sexual behaviour among adolescents (Juma et al., 2014).

On peer pressure, findings of a study conducted by (2017) reported that adolescents are likely to have sex if friends in their network and peers are mature, abuse drugs, have a more positive attitude towards childbearing and have liberal values about sex. In addition, a study conducted in Ghana reported that adolescents' relationships with antisocial peers increased their early sexual debut and having more friends was positively associated with multiple new sexual partners (Lingala & Ghany, 2016).

Studies have shown that male adolescents have a higher social media presence than females in previous decades because of earlier forms of technology, such as video or computer games (Lin & Subrahmanyam, 2007). Recently, studies revealed that female adolescents have a higher social media presence than males. According to Giles and Price (2008), this change can be attributed to chatting and downloading music, movies, and fashion. Bonds-Raacke and Raacke (2008) observed that

adolescent girls and boys who communicate on these social media networks are equally divided. On the internet, adolescents engage in a variety of activities, some of which may be potentially addictive (Kss & Griffiths, 2011).

Undergraduates spend more time on Facebook, Twitter and other social media through smartphones, which are now abundant among these youths. Many adolescents cannot go for two to three hours without checking and updating their profiles on these social networks, even to the detriment of other activities such as educational and career pursuits. According to recent research about social media networks and Internet usage, social networking sites like Facebook, WhatsApp, Telegram, Twitter, and Instagram have become so popular that many university students create an account even if they do not want to (Peter et al., 2006). This shows that joining a SNS signifies more than just going on a website; it is a way of fitting in with peers, just like many other types of groups in the university (Peter et al., 2006).

According to Peter, Schouten, and Valkenburg (2006), SNS can be considered predictors of self-esteem and well-being in students, and they have become a fundamental role in student's life. An adolescent stated in a research study by Dr. Danah Boyd at Berkeley University: "If you are not on MySpace, you do not exist" (Boyd, 2007). According to Morahan-Martin and Schumacher, social media addiction is the excessive use of the internet, and the failure to control this usage seriously harms a person's life. In an article in the *Daily Trust newspaper*, Itodo (2011) posits that there seems to be an alarming rate of social networking obsession among students today, a trend that could negatively affect their academic, social, and spiritual lives if not adequately controlled. As such, some youths are such social freaks that they have now carved out for themselves a world of fantasy and illusion detached from reality.

Bello (2012), from their findings, reveals that if the dangerous trend of social media network "obsession" is left unchecked, it could further affect an already collapsing education system in the youths' behaviour. Facebook frenzy has not been heard of. It is expected to see youth chatting in sensitive and highly organised places like churches, mosques, and lecture venues. Some are so carried

away that they keep chatting as they walk along the highway. Attention has been shifted from visible to invisible friends, while important ventures like study and writing are affected in the process.

This phenomenon has become a source of worry to many who believe in knowledge and skill acquisition (McQuail, 2008). Jeong (2005) noted that internet addiction is significantly and negatively related to the behaviour of teens and young adults. Olowu and Sen (2012) indicated that adolescents spend too much time on social networking sites to the detriment of other necessary things, such as their studies and careers.

Ogedebe et al. (2012) inferred that adolescents in the present era prefer social media to other information channels. Most spend much of their time mainly on Facebook and Twitter, ignoring other aspects of life. Olubiye (2012) observed that the bone of contention of social media is the obsessive attitude of youths towards its use. He pointed out that teenagers waste their time through idle chats and other immoral acts. Teenagers are so engrossed in social media networks that they are almost 24 hours online. Even in classrooms and lecture theatres, it has been observed that some are always busy pinging, 2going or Facebooking while lectures are on. The result is that quality time that ought to be spent on academic research and other productive networking is lost.

According to the report 2015, 71% of U.S. teens ages 13–17 use Facebook. Other social media sites used by this demographic group are Instagram (52%), Twitter (33%), Google+ (33%), Vine (24%), and Tumbler (4%) (Maeve et al., 2013). The most popular social media platforms besides WhatsApp in Nigeria include Facebook, YouTube, Instagram, Messenger, Twitter, Telegram, LinkedIn, Snapchat, Skype and Google Hangout (see Figure 4). Some studies have reported a more recent decrease in the enthusiasm of young people's use of Facebook due to increasing adult presence, the stress of managing their reputations on Facebook, and excessive sharing of content by their friends (Maeve et al., 2013). The use of social media in schools to teach students in the academic setting has significantly contributed to expanding students' social knowledge, encouraging peer input on assignments and astute students on the course content. Social media also helps students build their capacity for transparent interactions and create solid relationships among peers.

A study conducted by Junco and Loken (2007) to determine the usage of Twitter, the micro-blogging and social networking platform, can impact college student engagement and grades in the USA. A sample of 125 students participated in this study (70 in the experimental group and 55 in the control group). With the experimental group, Twitter was utilised for various academic and co-curricular discussions. Engagement was measured using a 19-item scale from the National Survey of Student Engagement. The results showed that the experimental group had a significantly more significant increase in engagement and higher semester grade point averages than the control group. This study indicates that experimental evidence Twitter can be used as an educational tool to help engage students and to mobilise faculty into more active participation in academic work.

Similarly, Nwabueze and Doris (2014) examined the influence of social networking on secondary school students in Enugu State, Nigeria. The study used a descriptive survey design. The methodology used for data collection was a questionnaire to 700 male and female students who were randomly selected. The major findings were that there are differences between the genders' uses of social networking sites. Male students visit Facebook, WhatsApp, Blackberry Messenger, Yahoo Messenger, and MySpace more than females for varied reasons.

Twenge et al. (2017) found that the average twelfth grader spends around six hours a day online texting, going on the internet (including gaming), and on various social media platforms. This combined time beats the hours we spend eating, drinking, face-to-face socialisation, and self-grooming activities. In a review of research, Strickland (2017) found that the average American teen spends 3.8 hours a day on social media networks, with one in five teenagers using social media up to six hours a day. Teenager's choice of social media platforms differs among nations. In the United States, YouTube has the most significant number of users, with 85% of teens; Instagram comes in second with 72%, Snapchat third (69%), Facebook fourth (51%), and Twitter fifth (32%) (Anderson & Jiang, 2018).

However, these numbers do not add up to 100% because 71% of teens cite having multiple social media profiles (Anderson & Jiang, 2018). While YouTube has the most users, most teenagers

consider Snapchat the most important social media platform, followed by Instagram and Facebook (Anderson & Jiang, 2018).

Further findings indicate that the method used by an adolescent to access various social media platforms has a significant impact on mental health status. Passive browsing on social media harms mental health (Frison & Eggermond, 2017). Frison and Eggermond (2017) examined self-reported depression scales in teens at two points, nine months apart, finding that passive browsing of Instagram at measure one directly and positively correlated to a depressed mood at measure two. The findings of Allcott et al. (2019) were non-significant to substantiate the findings of Frison and Eggermond (2017) in terms of active and passive use of social media. Frison and Eggermond (2017) also discovered that a depressed mood at measure one predicted posting on Instagram at measure two. Literature suggests that Instagram's use can increase unfavourable life comparisons because it is a more image-driven platform that does not require mutual sharing (one user can follow a profile without that profile following the user back) (Lup et al., 2015; Weinstein, 2017).

Choosing to use a filter or not for your post is a necessary step before each Instagram post, and because the only option for emotional icon feedback is liking, mostly positive images or videos are shared (L'Ecuyer, n.d.; Lup et al., 2015; Weinstein, 2017). The phrase adolescence is for defining self-identity, and teens are prone to social comparisons (Weinstein, 2017). Quitting Facebook altogether for one week positively correlated to overall well-being for heavy and passive users (Tromholt, 2016). Following strangers on Instagram also positively correlates with the number of depressive symptoms a user reports (Lup et al., 2015). Lup, Trub and Rosenthal (2015) opined that teens reported the highest levels of depressive symptoms when 75% - 90% of profiles followed on Instagram belonged to strangers and time online was over 2 hours a day. Following less than 10% of strangers on Instagram proved to be a protective factor against depressive symptoms, even when teens were spending over 2 hours a day on social media (Lup et al., 2015).

Similar findings show a positive correlation between the number of strangers followed and depressive symptoms; the higher the number of strangers followed, the more depressive symptoms were documented (Chassiakos et al., 2016). A user knowing the people they are following, how that person

lives and how they act proves to mitigate negative self-comparisons (Chassiakos et al., 2016; Lup et al., 2015). However, empirical findings of Nwagwu (2015), Onipede (2017), Simons (2016), Bateman, Bonn, Curtis, Shaw, and Simons (2016), among others, revealed that an individual can use a medium, such as a cell phone, while engaging in other non-media activities, multitasking to achieve activities in a short period (Nwagwu, 2015).

Young and Rice (2010) revealed that in Los Angeles, online social networking and the topics discussed on these networks significantly increase sexual risk behaviours since adolescents learn by observation (Olumide & Ojengbede, 2016). Behaviour portrayed on these social media platforms by individuals and the reward they receive without suffering any consequences from these behaviours influence the adolescent's formative sexual and social life (Olumide & Ojengbede, 2016). Young and Rice (2010) employed the logistic models to examine whether the use of online social networking technologies affects HIV/AIDS knowledge, sexual risk behaviours and testing for sexually transmitted infections in Los Angeles. Their result suggests that online social networking and the topics discussed on these networks can significantly stimulate sexual risk behaviours.

Chan and Ghose (2014). Alam et al. (2011) revealed that female adolescents mostly search for long-term partners through online dating sites, while males are mainly interested in building casual relationships. Moreno et al. (2012) in the United States revealed that sexual references on Facebook profiles of college first-year students are associated with their intention to become sexually active. Similarly, a significant nexus between online display of sexual references and risky sexual behaviour was not observed among undergraduate first-year students. The nexus between display status and the likelihood of having engaged in oral sex was observed. The findings of Moreno et al. (2012), in general, suggest that the display of sexual orientations on Facebook is a developmental marker of the emergent adult as a sexual person.

Pieterse and Peters (2012) conducted a study on Dutch adolescents and adults to investigate their video gaming behaviour in order to assess the prevalence of problematic gaming. The sampled population was a representative national panel of 902 respondents. A descriptive survey research design was adopted. The data collection instruments were questionnaires. The results showed that

gaming is generally widespread and popular among the Dutch. Browser games played via the internet were reported as the most popular. Online sports are played by a relatively small part of the respondents. However, considerably more time is spent on these online games than browser, offline casual, and offline games.

Acheaw and Larson (2015) examined the use of social media and its impact on students' academic performance using the descriptive survey design. The study uncovered that a more significant part of the respondents had mobile phones, which likewise had Internet facilities. The study additionally discovered that students utilise web-based social networking sites on their telephones and spend between thirty minutes to three hours daily. What is more, the utilisation of web-based social networking sites influenced the scholastic performance of the respondents. There was a significant association between utilising online networking sites and school performance.

Masaka (2012) examined the impacts of social networking sites on academic performances among university students in Ghana: a case study of St Augustine University of Tanzania (SAUT). Using the triangulation research design, the target population was SAUT students with a Bachelor of Arts in Mass Communication and a Bachelor of Arts in Public Relations and Marketing. The key findings in the studies showed that students reported participating in high-risk internet behaviour.

Burrow and Rainone (2017) found that the brain's reward system was stimulated when looking at a post with a perceived high number of likes, perhaps prompting feelings that the user also likes or should, regardless of the user's true feelings. False liking behaviour is positively correlated to the false presentation of self on social media; by implication, users are more likely to relay a sense of self that they believe acceptable to specific situations or groups rather than present an authentic self-presentation (Wright et al., 2018). Shapiro et al. (2014) noted that creating several versions of true selves is common when matching self-presentation to an intended audience. Self-presentation was often found to be an accurate representation but modified to fit different expectations or intended audiences (Shapiro & Margolin, 2014). Accurate representations of self online are linked to positive

online and offline relationships, a positive sense of community and positive self-esteem (Shapiro & Margolin, 2014; Wright et al., 2018).

Utz et al. (2016) found that personality characteristics, like the need for popularity, could predict social media use and behaviour. The need for popularity predicted behaviours like grooming, strategic self-presentation, profile enhancement and disclosure of feelings while also positively relating to feelings of entitlement, vanity, and narcissism (Utz et al., 2016). Vanity, narcissism, and entitlement, predicted by a high need for popularity, are also correlated with negative self-esteem. The need for popularity predicted social media behaviour better than the need to belong did, verifying that an individual only needs a few intimate relationships to feel like they belong - a positive effect on self-esteem (Utz et al., 2016).

Barry et al. (2017) revealed that adolescents between the ages of 10 and 24 in the USA are more likely to use social media and other mass media than any other age group. Social media drives the entertainment industry in the contemporary era. In recent decades, the percentage of sexually active adolescents has increased geometrically globally. In Britain in the early 1960s, Temple-Smith et al. (2015) revealed that in adolescents aged 15-19 years, only 20 per cent of boys and 12 per cent of girls were sexually active. Studies in the late 1980s and 1990s indicate that 35-50 per cent of adolescents had sexual experience at the end of high school. (Brooks-Gunn & Furstenberg Jr, 1989; Christopher, 2019; Fisher et al., 2020).

According to the National Survey of secondary school students and sexual health Australia 2018, approximately half of the students reported having oral sex, both giving (52%) and receiving (51.4%), vaginal sex (44.4%) and anal sex (12.6%), (Ezer et al., 2019). In Australia, 58.5% had experienced oral sex, 52.0% had experienced vaginal sex, and 15.0% had experienced anal sex (Power, Kauer, Fisher, Bellamy, & Bourne, 2021; Power et al., 2021). These figures showed an upward trend in the sexual behaviour of adolescents in Western countries. In Nigeria, the geometric increase in cis evidence in the percentage of adolescents who were first married by age 15 (% of women ages 20-24) and adolescents who were first married by age 18 (% of women ages 20-24)

The ripple effect or the reward from these aggressive or tranquil behaviours can be accredited to cultural and religious backgrounds, particularly in Nigeria. The findings of Benotsch et al. (2013) revealed that sexting is more likely to influence adolescents to engage in drug abuse and high-risk sexual behaviours, including unprotected sex and sex with multiple partners. Romo et al. (2017) also assessed the linkage between social media use and sexual risk using quantitative methods.

Empirical findings on the use of social media in the daily lives of teenagers revealed mixed results. According to Shuell (1988), learning occurs through interacting with information in the environment and integrating it with information already stored in memory. Banquil, Chuna, Leano, Rivero, Bruce, Dianalan, Matienzo and Timog (2009) reported a negative impact on academic performance, especially among students who use social networking sites. Kirschner and Karpinski (2010) supported these results between students using Facebook and their academic performance. They concluded that students who use Facebook spend fewer hours studying on average than Facebook non-users, resulting in lower mean grade point averages (GPAs). Similarly, Oberst (2010) and Schill (2011) reported that social media sites encourage negative behaviours in students, such as procrastination, alcohol, and the use of drugs. Landry, Gonzales, Wood, and Vyas (2013) in Latin America report that Latino adolescents and teenagers sending and receiving more than one hundred sexual content information are significantly more likely to have vaginal sex.

Frank (2013) corroborates their findings by reporting a relationship between excessive technology use among teens and increased risky sexual behaviours and poorer perceived health. Teens who are hyper-text (send or receive more than 120 messages per day) and hyper-network (3 or more hours on social sites daily) are more likely to be involved with unhealthy technology uses. In the same vein, Elsievie (2017), in Tanzania, using a mixed method, reports that students' abuse of social media technologies results in addiction, indiscipline, poor academic performance, lack of morals, neglect of studies, violence, identity crises, risky sexual behaviour among others. Due to the awful consequences, Donnerstein (2010) opines that social media has become a challenge in today's society.

In Nigeria, some studies have found that sexually positioned websites are among the most widely visited by adolescents (Abdullahi et al., 2013; Akinwale, 2009; Asekun-Olarinmoye et al., 2014; Igbo et al.,

2012; Kunnuyi, 2011). In Ethiopia, a study among preparatory school adolescents reported that more than 77% of the students knew about the presence of sexually explicit materials (SEMs). Most of them (75.5%) had watched SEM films/movies, while more than 73% were exposed to sexually explicit (SE) texts (Habesha et al., 2015). In Kenya, Kimemia and Mugambi (2016) observed that internet facilities increased access to sexually explicit music, sex images and videos, and sex texting. Also, social network services (SNS) increase online sex solicitation among adolescents.

In the bid to checkmate the teenage use of social media, Deptula, Henry and Schoeny (2010), DiClemente et al., Wingood, Crosby, Sionean, Cobb, and Harrington (2002) identify parental monitoring as one of the protective factors in reducing sexual risk behaviours during adolescence. Wight, Williamson, and Henderson (2006), using a longitudinal study, observed that low parental monitoring leads to early sexual activity, multiple sexual partners, and the use of protections. De Graaf, Vanwesenbeeck, Woertman and Meeus (2011) argued that parents with higher levels of parental knowledge of adolescents' whereabouts delayed sexual onset, especially among children (Dittus & Jaccard, 2000).

Empirical findings reveal that adolescents engage in sexual practices through online relationships. These practices include sexual self-presentation and sexting. Adolescents use sexy photographs online to attract potential partners or get attention, often on social media (Fischer, 2016; Herring & Kapidzic, 2015). Adolescent online self-presentations are portrayed through clothing, physical poses, facial expressions, or nudity, and images can be subtle or explicit (Bobkowski et al., 2016).

According to WHO/UNAIDS (2005), adolescents abusing substances are more likely to engage in risky sexual behaviour and stand a higher chance of contracting HIV/AIDS (WHO/UNAIDS, 2005). This is high among the females (see Figure 5). Another study by Wafula and Kaseje (2017) in Kenya reported that 22% of adolescents who had ever had sex had their first sexual encounter between ages 14 and 16. Also, while a more significant proportion of males (69%) and females (72%) used contraceptives during their first sexual encounter, contraceptive use had dropped to 52%. This has given birth to an increase in the percentage of adolescents living with HIV (see Figure 5). Factors

accounting for these were familiarity among adolescents and young adults who had one sexual partner. Other factors, such as alcohol consumption and substance abuse, were cited as contributors (Wafula & Kaseje, 2017).

In Nigeria, over 62% of the population is under 25 years old (32% are 10-24) (National Bureau of Statistics 2018). The median age is 17.9 years. In Ghana, about 5.5 million adolescents (10-19 years) Ghana constitute 22% of the total population (GSS et al., 2014). Surveys conducted on minority youth suggest that sexual activity is initiated at an early age, protective measures such as condoms are not consistently used, and the use of protective measures may decline with age (Hannah-Lise et al., 2012). The youth living in poverty have also been found particularly at significant risk of their high rates of sexually transmitted diseases and adolescent pregnancies. In the absence of adequate medical interventions, educational programmes designed to delay the onset of sexual contact and to encourage the use of condoms when contact occurs are needed to protect young people from exposure to HIV and other sexually transmitted diseases.

Despite the evidence that parental monitoring can mitigate online risks, this data indicates that many adolescents are online without parental oversight. According to Leung and Lee (2016), many parents impose few rules and exert little control or supervision over online adolescent activities (Leung & Lee, 2016). This may have profound implications, as unmonitored online activities increase the risk of adolescent exposure to pornography and sexual predators (Pujazon-Zazik & Park, 2010), and lack of parental evidence suggests that parenting style influences restrictive and monitoring practices.

Parenting style refers to involvement and strictness used by the parent regarding the adolescent (Lau & Yuen, 2013; Yardi & Bruckman, 2011). Valcke, Bonte, De Wever, and Rots (2010) identified four types of parenting styles - Parents with a *permissive* style do not provide explicit boundaries, those who practice the *Laissez-faire* style have low levels of control and involvement, parents adopting an *authoritative* style have clear rules and expectations that adolescents will act in a responsible and self-regulated way, and parents with an *authoritarian* style expect adolescents will follow rules

without explanation through unconditional obedience; an authoritative parenting style with clear rules and expectations is considered more effective.

2.3 Empirical Review

Social networking sites are places where youths can encounter sexual text, photos, and videos and can also create and post materials themselves. Few studies have attempted to determine the effect of such materials on young people's sexual attitudes and behaviour (Asekun-Olarin et al., 2014; Arelogun et al., 2016; Williams, 2016; Collins et al., 2011; Abdullahi & Abdulauadri, 2018).

Agbodo (2017) revealed that social networking sites allow users to mark some information as private, and what is hidden is probably more personal. Adolescents surfing through profiles will not encounter this confidential information, but if it is posted publicly or on the profile of an online "friend", they will, and this is the more typical way of using social networking services.

Patchin and Hinduja (2010) examined the contents of a random sample of 1,475 public Myspace profiles posted in June through August 2006 by individuals describing their ages as 16 or 17 years. Findings revealed that 5.4% posted a picture of themselves in a swimsuit or underwear, and 15.5% included a picture of a family member or friend in a swimsuit or underwear. There are some difficulties interpreting these results; for example, it is unclear whether these photos were sexual. However, the authors noted that the pictures are sexual, and exposure to these photos on others' profiles may also influence normative perceptions regarding sexuality.

A national survey conducted by the National Campaign to Prevent Teen and Unplanned Pregnancy in 2008, cited in Agbodo (2017), indicates that 20 per cent of teens aged 13-19 years have sent or posted nude or semi-nude pictures or videos of themselves. The number of youths that are posting or sending messages that are sexually suggestive but are not necessarily included is approximately double these rates (39%).

A study by Heiberger and Harper (2008) discovered that more than 90% of teens are online, a more significant percentage than any age group. Sixty per cent of teens have a desktop or laptop computer. Eighty-four per cent of young people report having home internet access, and most teens (59%) have

high-speed lines. Very few teens (8 per cent of those with internet access) use the internet to access “virtual worlds,” such as the second city. Notably, 3 per cent of online teens use the internet to get health information, and 17 per cent of online teens use it to get information about sexual health and the health consequences of substance use. The study also showed that girls spend more time than boys and less time game-playing and watching or posting videos.

Kereke and Lucky (2014) adopted the causal-comparative research design to show from a study that many students did not use social media for academic purposes, and 40.81%, 20.40%, and 14.28% of the students were using Facebook, WhatsApp, and 2go/Skype respectively, while undergraduates did not often use Myspace, Twitter, Badoo, and others. Arop et al. (2018) found no significant relationship between students’ management of Facebook, WhatsApp, and Instagram and their academic performance in tertiary institutions.

However, the results from the study of Owan and Robert (2019), using a sample of 2,200 university students, discovered that an average of 626 respondents use social media platforms. The same study also indicated that an average of 345, 195, and 401 students utilise social media often, sometimes, and rarely. It was also found that the utilisation of social media platforms in Cross River State is very high, with about 1,567 respondents using social media platforms often, sometimes, or rarely. It was further discovered that Facebook is the most widely used social media site, followed by YouTube, WhatsApp, Instagram, Twitter, Telegram, Eskimi, Snapchat, WeChat, and Skype in that order.

Some studies showed that there is a link between the exposure of young individuals (adolescents) to sexual media content and their sexual activities (Hoff et al., 2003; Collins et al., 2004; Hennessey et al., 2009). There is also strong evidence that increased sexual activity among individuals (adolescents, most especially) is predicted by the viewing of sexual content in media (Pardun et al., 2005; Brown et al., 2006; Bleakly et al., 2018). Young and Rice's (2010) research elicited data from 201 homeless youths accessing home care services. It was revealed that online discussions on social media can potentially increase or decrease sexual risk depending on the usage of these networks.

This aligns with the results of Chan and Ghose (2014), who discovered that there is a relationship between online information access and HIV transmission. In a Nigerian study, Williams (2016) showed through the finding of a study that sex and age exerted sufficient influence on the sexual behaviour of youths. However, the identity variables seemed only to increase the tendency of younger males to form intimate relationships with partners. It was explicitly conducted on young males who maintain high social relationships with partners.

Thompson and Loughheed (2012) conducted a peer-reviewed exploratory study to determine whether there are communication differences between males and females regarding social networking sites. This study was comprised of two hundred and sixty-eight undergraduate college students, with 76% of them in their first year. Females comprised 53.3% of the participants, and 46.7% were male. The mean age of the participants was 19.10, with a standard deviation of 2.4. The gender differences examined through the social networking site Facebook found that women were more likely than men to report spending more time on the site than they had previously intended, often lost sleep as a result of Facebook, felt closer to Facebook friends than those seen daily, felt that pictures on Facebook caused them to have a negative body image and that from time to time it causes them to feel stressed or addicted to Facebook.

A study by Bonds-Raacke and Raacke (2010) also conducted an experimental study examining gender differences in using social networking sites. This study comprised 201 students from a four-year public east-coast university; only 63 (31%) participants were male, and 138 (69%) were female, compared to the almost equal gender division.

Thompson and Loughheed (2012) revealed that the most popular social network site, with 87% of participants, is Facebook, and 82% used MySpace. The main difference between the male and female use of social networking sites was that males were significantly more likely to use the site for dating purposes. This study also found that males used social networking sites to share more information about themselves than women.

Haferkamp, Eimler, Papadakis and Kruck (2012) also observed that males were more likely to use social networking sites for communication purposes than women. This study also found a significant difference between the privacy of men's and women's profiles. It was found that women were likelier to have their profile set to private than men, with 78% of women having their profile set to private compared to 44% of men.

Given the enormous societal debate on the impact of mobile phone usage on our daily lives, Montag et al. (2015) investigate mobile phone usage in the 21st century by focusing on WhatsApp. The findings proved that WhatsApp accounted for about 20%% of all mobile phone behaviour compared to Facebook. The personality trait extraversion was positively associated with daily WhatsApp use.

Lehmiller and Iorger (2014) likewise researched social networking mobile phone applications and sexual health outcomes among men who have sex with men. The study found that there was no significant mean difference between app users as well as non-users in the frequency of receptive anal sex without a condom. However, the study found that there was a significant and positive relationship between app users with more than one sexual partner and the prevalence of STIs. These findings indicate that app users may be more sexually active on social media platforms where their identity is not quickly revealed (for introverts).

Deursen (2015) conducted an online survey to understand the role of mobile phone usage types, emotional intelligence, social stress, self-regulation, age, and gender on habitual or addictive mobile phone behaviour. The study targeted 386 respondents. It was discovered that habitual mobile phone use is an essential contributor to addictive mobile phone behaviour. People who extensively use their mobile phones for social purposes develop mobile phone habits faster, which might lead to addictive mobile phone behaviour. However, emotional intelligence did not influence habitual or addictive mobile phone behaviour. In contrast, social stress positively influences addictive mobile phone behaviour, and a failure of self-regulation seems to cause a higher risk of addictive mobile phone behaviour.

Magsamen, Dowd, Abuljadail, Alsulaiman and Shareefi (2015) studied the life-span differences in tablets' uses and gratifications (entertainment) for older adults. The study used paper-based and online surveys, including 847 respondents. The study thus confirmed four principal uses of tablets: information seeking, social purposes, style, trend, and leisure. There were established differences among the uses of tablets across the lifespan, with older adults using tablets recording the highest means for information seeking.

In a Chinese context, Chang (2017) sought to analyse the effects of Snapchat usage among young people. The study used an online survey platform by targeting 1,749 respondents. They generally indicated five gratifications (entertainment convenience, attention-seeking, escape, information-seeking and socialisation). The study, in addition, indicated that the youth commonly use Snapchat to chat/connect with friends, share photos and videos, make a story, apply a filter, and save memories, which brings an element of socialisation, convenience, attention-seeking, temporary escape from pressure and responsibilities, and also to seek information.

In Kenya, Warwimbo (2015) sought to investigate the gratifications sought from social media by Kenyan users and leverages for local ICTS development. The study specifically looked to test the audience gratification typologies and the gratifications sought by different Facebook users in the country, and in achieving such conclusive results, the study used two research methods: a descriptive diagnostic survey. The study targeted 384 respondents sampled from approximately 29 million Kenyan Internet users. It was discovered that most users had an active Facebook account, and thus, it was concluded that most users accessed Facebook to read and comment on their newsfeeds and socialise with their peers and friends. The leading gratification factors and the prevailing usage patterns, which were found to be influenced by theoretical constructs, could be leveraged, as discussed, in the design of local ICTs.

Ng et al. (2017). investigated the relationship between Smartphone Use and Academic Performance in a Sample of Tertiary Students in Singapore. This study specifically was interested in using smartphones to support school-related learning and how these activities relate to CGPA. For seven consecutive days, 176 students from three academic programs recorded their daily smartphone use

for learning. It was found that the more students utilised their smartphones for university learning activities, the lower their CGPA. The outcome of this study suggests a need to evaluate and better understand the instructional uses of smartphones for tertiary students.

After controlling for known predictors, Lepp, Barkley and Karpinski (2015) assessed the relationship between cell phone use and actual college grade point average (GPA). Therefore, 536 undergraduate students from 82 self-reported majors at a large public university were sampled, and the findings indicated that cell phone use was significantly and negatively related to actual college GPA after controlling for demographic variables, self-efficacy for self-regulated learning, self-efficacy for academic achievement, and actual high school GPA, which were all significant predictors.

Hansson and Jobe (2016) analysed the daily usage of mobile phones for new activities for Kenyan Elite runners. By using a participatory action research approach where thirty (30) young Kenyan runners' appropriation and day-to-day use of mobile phones were used, the research focused on how the participants used the mobile phones, their applications, and the Web-based software to improve their learning, training, living conditions, and social interactions. This amounted to a total of 346,832 applications that were used (smartphones, launchers, and contacts formed the basic applications). The study findings indicated significant use of communication, cameras, native applications, and applications for running. Mobile phone use was considered a pivotal tool for real-life improvements such as improved learning, awareness of current events, and social interactions for poor people in developing countries.

Recently, Arefin, Islam, Mustafi, Afrin and Islam (2018) sought to understand the impact of mobile phone addiction on the academic performance of business students. The research used primary data. It targeted 247 respondents by using a structured questionnaire. The findings indicated that five (5) mobile phone addiction factors (which included positive anticipation, impatience, withdrawal, daily-life disturbance, and cyber friendship) had a significant relation to the academic performance of the business students of Bangladesh. It was thus suggested that the students need to reduce the intense use of mobile phones to do their daily activities smoothly.

Badawy and Hashem (2015) conducted a study to determine whether social media use impacts students' academic performance. The study concluded that there was no significant relationship between using social media and students' academic performance.

Peter (2015) conducted a study at the University of Lagos, Lagos State, to obtain a bachelor's degree in education administration. The study examined social media's influence on students' Academic Performance. The findings of this study show that many students at the University of Lagos are addicted to social media. The researcher suggested that the use of social media should also be for educational activities; the researcher also suggested that Social Networking Sites (SNS) should create new pages to enhance academic activities.

Mensah (2016) conducted a study on the impact of social media on students' academic performance in Malaysia's Tertiary Institutions. The study aimed to examine the impact of social media on academic performance. The researcher found a significant impact of social media on students' academic performance in Malaysia's Tertiary Institutions. The researcher also concluded that time appropriateness and health addiction have a more substantial influence on students' academic performance.

Siddiqui and Singh (2016) analysed social media's positive and negative aspects. The study focused on education, business, society, and youth. The study's findings show that students can increase the quality rate of collaboration and their knowledge. Simultaneously, it distracts the students. Business can be expanded on social media, but there is a parallel fear of negative comments about the articles by customers on social media. Social media can help people to meet with each other quickly. Social media can addict people. Youngsters can stay in touch with the entire world with a click. However, negative thoughts can come into their minds and increase criminal activities among youngsters.

Aram and Kumar (2018) studied social media's positive and negative effects on society. The study focused on health, education, business, society, and youth. The researchers found that social networking has become routine for everyone and depends on technology. Networking has exposed the quality and rate of coordinated effort for students. Businesspersons use social media to upgrade

their business organisations. Social media has its own merits, which influence people positively. However, it also has demerits which influence individuals negatively.

On a similar note, Ashiekpe and Uganda (2017) research on the effects of social media sexting on adolescents and youth sexual behaviour in Nigeria also revealed that sexting has saturated social media platforms with pornographic content and all social media users are advertently or inadvertently vulnerable to this growing trend. This study further indicated that Nigerian adolescents and youth are reaching puberty earlier and engaging in sexual intercourse earlier than before.

Kyriaki et al. (2013) examine the relationship between Social Networking Site (SNS) usage and personality characteristics and depressive symptomatology. A sample of 143 young adults in Greece varying from 18 to 34 years of age completed four questionnaires on personality characteristics, depressive symptomatology, problematic SNS usage and socio-demographic factors. Inappropriate SNS usage is significantly and positively related to depression and Neuroticism while negatively associated with Agreeableness. However, the problematic use of SNS is not related to Conscientiousness, Openness to Experience and Extraversion, although the latter was found to be negatively associated with depression. Personality variables, depression, and daily average usage account for about 33% of the variance in predicting problematic SNS usage.

McCool, Powel, Roberts, and Taylor (2016) investigated the effect of social media use on children's well-being in the UK. The study used a sample size of 10-15-year-olds over four years (2010 to 2014). They did a Longitudinal Study and estimated the outcome of time children spent chatting on social websites. It was discovered that their time affected how these children handled schoolwork, family issues and friends.

This also affected their school attendants and their lives as a whole. Results showed that more energy is spent on social networks than on their schoolwork and family issues. The above study adopted a Longitudinal Study research design, and the current study used convergent parallel and correlation research designs. This study looked into the social media use by secondary school students in Tanzania and how it can influence learning behaviour. Such results call for more research on the

tradeoffs between social media's advantages and disadvantages. Also, it is essential to empirically explore such factors and how they interact with the educational system. Including teachers, parents and education officers in this research filled the gaps left by the previous study.

Nwabueze and Doris (2014) examined the influence of social networking on secondary school students in Enugu State, Nigeria. The study used a descriptive survey design. The methodology used for data collection was a questionnaire to 700 male and female students, who were randomly selected. The major findings were that there are differences between the genders' uses of social networking sites. Male students visit Facebook, WhatsApp, Blackberry Messenger, Yahoo Messenger, and Myspace more than females for different reasons. Social networking influences students not positively but negatively influences their attitudes and study behaviours.

Swidan et al. (2013) investigate the Intensity and the Factors Affecting the Use of Social Network Sites Among the Students of Jordanian Universities. The research design used was mixed-method. For methodology, interviews and questionnaires were employed for the data instrument. The data were qualitatively and quantitatively collected, sorted, analysed, and reported. The qualitative analyses and the quantitative descriptive results showed that the extent of social media network usage is high among university students in Jordan. The research findings were that social media is negatively associated with grades. Two-thirds of the students reported using electronic media while studying or doing homework in class. Consequently, this decreased concentration is detrimental to student performance.

2.3.1 Summary of Empirical Reviews

Authors	Objective	Scope	Technique of Analysis	Findings
Hémono et al. (2023).	Measuring sexual behaviour among in-school youth in Rwanda	Rwanda (youth 12–19 years 1320 participants).	Regression	1723 (28.3%) reported sexual activity. One-third of participants

				considered “sexual intercourse” to include kissing, touching, or masturbation.
Uzobo, and Enoch, (2022)	Examine the implication of social media on education, crime, and communication,	One hundred ninety-five undergraduate students in the Niger Delta University, Bayelsa, Nigeria.	Regression	Social media influences the sexual behaviour of undergraduate
Ashiekpe and Ugande (2017)	Effects of social media sexting on adolescents and youth sexual behaviour in Nigeria	200 undergraduate students in Nigeria	Regression	Social media positively influences adolescents’ sexual behaviours. As such, they engage in sexual intercourse earlier than before.
Ajayi, (2010)	Assess the use of social networking websites among tertiary institution students.	Oyo State, Nigeria	Regression	Social networking positively relates to sexual behaviour.
Adebayo, Udegbe, &	Examine gender, Internet use, and sexual behaviour.	Nigeria	Regression	Electronic media predispose youth to

Sunmola (2006)	Orientation among young Nigerians			risky sexual behaviour.
Iwokagh, Agbana, & Agbana (2014),	Examine new media interventions for adolescent reproduction. And sexual health:	Nigeria	Regression	Electronic media predispose youth to risky sexual behaviour.
Montag et al. (2015)	Investigate mobile phone usage in the 21st century by focusing on WhatsApp.	South Africa	Regression	App users are more sexually active on social media platforms where their identity is not quickly revealed (for introverts).
Lehmiller and Ioerger (2014)	Examine social. networking mobile phone applications and sexual health	South Africa	Regression	Significant and positive relationship between app users with more than one sexual partner and the prevalence of STI

Chang (2017)	Analyse the effects associated with Snapchat usage. Among young people.	China 1,749 respondents.	Regression	The youth commonly uses social media to chat/connect with friends, share photos and videos, make a story, seek attention, and temporarily escape pressure and responsibilities.
Warwimbo (2015)	Investigate the gratifications sought from social media by Kenyan users and leverages for local ICTS development	Kenya384 respondents sampled from approximately 29 million. Kenyan Internet users.	Regression	The youth commonly use social media to chat/connect with friends.
Zhao et al. (2018).	Investigated the relationship between Smartphone Use and Academic Performance in a Sample of Tertiary Students.	Singapore	Regression	Students utilising their smartphones for learning activities lower their grades.

Exavery and colleagues (2011)	Examine social. networking and sexual behaviour among adolescence	Tanzania	Regression	Social media influences the sexual behaviour of adolescents.
Adeoye, O.& Aliu (2012).	Examined prevalence of premarital sexual activities among the youth in a selected private University in	Nigeria.300 students comprised of 176 males and 124 females were randomly	Multiple Regression and Analysis of Variance	Social media increases the prevalence of premarital sexual activities among the youth
Vandenbosch and Eggermont (2012b).	Assess social media Sexual socialisation. Gender	Belgium Adolescents (1,026 respondents (boys mean age=16.41, girls mean. age=16.23)	Quantitative Survey	The higher the level of television viewing, the more boys adopted a sexual leisure mentality.
Lou et al., (2012)	Assess sexually. knowledge, attitudes and behaviours	Hanoi, Shanghai and Taipei (Adolescents and Young adults)16, 554 unmarried respondents (male and female)	Cross sectional	Half of the respondents reported learning about sex from the internet in three cities. The highest

				percentage was in Taipei.
Stulhofer, Busko and Schmidt (2012).	Recreational sex Relationship Intimacy	Croatian students544 respondents (male and female)	Regression	Social media influences recreational sex relationship Intimacy
Kumar et al.(2013)	Sexual contact Academic Achievement	Indian students586 adolescent boys and girls.	Cross sectional study	Social media sexual content increases risky sexual behaviours and reduces academics. achievement
Daneback, Sevcikova and Jezek (2018).	Online sexual materials (images and videos)	Czech Adolescents 1,134 girls from 55 schools	A three-wave longitudinal study	Online sexual Materials influence sexual behaviours
Martyniuk and Stulhofer (2018).	Sexual permissiveness	Croatian high school student online survey n=372 Classroom-based. Survey n=753	Online survey and class room-based survey	Relatively low levels of permissiveness, but primarily teenage men, used extensive pornography.

Romo et al. (2017).	Examine social media use on sexual risk. Parental Monitoring	Hispanic adolescents333 adolescents boys and girls	A cross sectional study	Social media increases risky sexual behaviours. Such as oral, vaginal, and anal,
Sarabia & Estevez (2016).	Sexualised behaviours through social networks	Spain Adolescents 100 of adolescent Facebook profiles	Descriptive	Vulnerability factors reinforced gender disparities and sexualised behaviours.
Lyimo, Todd, Richey, and Njau (2013)	Examine social media use on sexual behaviours	Moshi, Tanzania secondary schools	Regression	Social media increases risky sexual behaviours. Most adolescents start sexual intercourse before the age of 15 without any form of protection.
Bogale and Seme, (2014); Dekeke and Sandy, (2014)	Examine social media use on sexual behaviours	Ethiopia in Nazareth, Addis Ababa, Shedi and Enemay towns	A cross sectional study	Students are sexually active. 33% in Nazareth, 45.6% in Addis Ababa, 24.8% in Sweden and 57% in Enemay have sex with more

				than one sexual partner
Doyle, Mavedzenge, Plummer, and Ross, (2012).	Examine social media use on sexual behaviours	Sub-Saharan Africa	A cross sectional study	High levels of multiple sexual partners and high-risk sex among female and male youths
Patchin & Hinduja (2010).	Assess social media use on sexual behaviours	Ghana1,475 public Myspace profiles	Regression	Sexual content influences sexual behaviours
Abdullahi (2018),	Impact of Social Media on Adolescent Sexuality	Urban Centres Sub-Saharan African Countries	Regression	Social Media Increases Adolescent Sexuality
Adegboyega (2019),	Social Media on Adolescent Sexuality	Youth in Kwara State, Nigeria	Regression	Social media increase adolescent sexuality through an increase in the exchange of erotic messages and watching pornographic films and movies, leading to pre-marital sex.
Nagaddya et al. (2017)	Assess the impact of social media on	Kampala	Regression	Social Media Increases

	the risky sexual behaviours of students,			Adolescent Sexuality
Cookingham and Ryan (2015)	Assess the impact of social media on the risky sexual behaviours of students,	Kenya	Regression	Social Media Increases Adolescent Sexuality
Kereke and Lucky (2014)	Examine the use of social media for academic purposes	Kenya	Regression	Positive nexus between social media and academic purposes
Arop et al. (2018).	Examine the use of social media for academic purposes	Ghana	Regression	There is no causal nexus between social media and academic purposes.
Owan and Robert (2019).	Examine the use of social media for academic purposes among undergraduates	2,200 university students in Cross River State, Nigeria	Regression	Negative nexus between social media and academic purposes
Nwabueze and Doris (2014)	Examined the influence of social networking on secondary school students	examined the influence of social networking on secondary school students in Enugu State, Nigeria	Regression	Negative nexus between social media and academic purposes

2.4 Theoretical Review

2.4.1 The Theory of Planned Behaviour (TPB) (Ajzen, 1991)

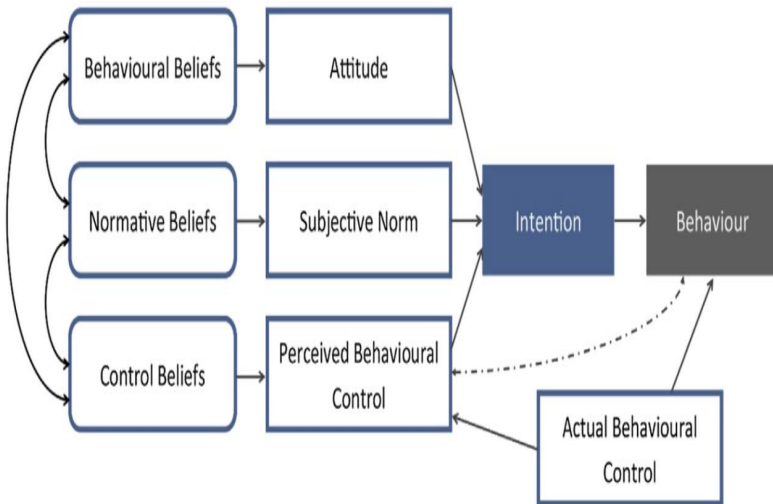
The Theory of Planned Behaviour (TPB), previously the theory of reasoned action (Ajzen & Fishbein, 1980), is one of the most prominent behaviour change models. The TPB has clearly defined constructs and has consistently accounted for considerable predictive validity compared with other health behaviour models (Ajzen, 1991; Conner & Armitage, 1998). The TPB extends beyond the theory of reasoned action to include the concept of perceived behavioural control, as the theory of reasoned action was restricted to predicting volitional behaviours (Lawton et al., 2009; Ajzen, 2011).

The TPB model proposes that behaviour is determined by behavioural intention, which measures a person's motivation to engage in particular behaviours. Intentions are determined by three constructs: attitudes, subjective norms, and perceived behavioural control (Ajzen, 1991). Attitudes are a person's beliefs about the expected costs or rewards of a particular behaviour in a global positive or negative evaluation of behaviour. Subjective norms are people's beliefs about the social pressure they feel from their social group. Perceived behavioural control is a global summary of specific beliefs about the ease or difficulty of performing a behaviour.

Consequently, people intend to engage in behaviours that they evaluate positively (attitude), observe within their social group (subjective norm) and believe it is achievable (perceived behavioural control). The TPB has successfully explained a broad array of health behaviours (Armitage & Conner, 2001; Godin & Kok, 1996; Hatherall et al., 2007; Ravis & Sheeran, 2003), including the use of condoms in sexual health (Albarracín et al., 2001). A schematic representation of the model is shown in Fig. 6

Figure 6: A schematic representation of the theory of planned behaviour.

A meta-analysis found that people are more likely to use condoms if they have previously formed intentions to use condoms, and these intentions derive from attitudes, subjective norms, and



perceived.

Source: Ajzen (1991).

Behavioural control (Albarracín et al., 2001; Gerrard et al., 1996). Interventions aimed at sexual behaviour underpinned by TPB have had successful results. Jemmott and Jemmott (2000) examined

36 controlled interventions, and those that had theoretically prescribed cognitive mediators of behaviour change, including knowledge, beliefs, intention, and self-efficacy, were the most effective.

Interventions that had more significant effects on cognitive mediators were found to have more significant effects on behaviour, including condom use and sexual abstinence. A more recent meta-analysis (Tyson et al., 2014) that examined a broad view of interventions aimed at all types of STIs and pregnancies in heterosexual individuals found that the TPB provides a valuable framework for designing interventions to change heterosexual sexual risk behaviour.

Conversely, the controversy is that adolescents usually engage in unplanned, spontaneous sex. Therefore, it is questionable whether TPB can explain teenage sexual behaviour (Moore, 1995). However, the empirical evidence suggests that these cognitions also predict teenagers' sexual behaviour (Jemmott & Hacker, 1991; Gillmore et al., 2002; Morrison et al., 1998). Gillmore et al. (2002) found support for the theory as a model of the cognitive processes underlying teenagers' decisions to have sex. They found that sexual intercourse was associated with intentions to have sex, and intentions were associated with general attitudes and social norms. There were no significant differences between males and females. This was in line with Morrison et al. (1998), who found that condom use among adolescents related more to attitudes than norms, and the most predictive outcome beliefs were beliefs about potential adverse effects on intimacy rather than the efficacy of condoms to prevent pregnancy or STIs.

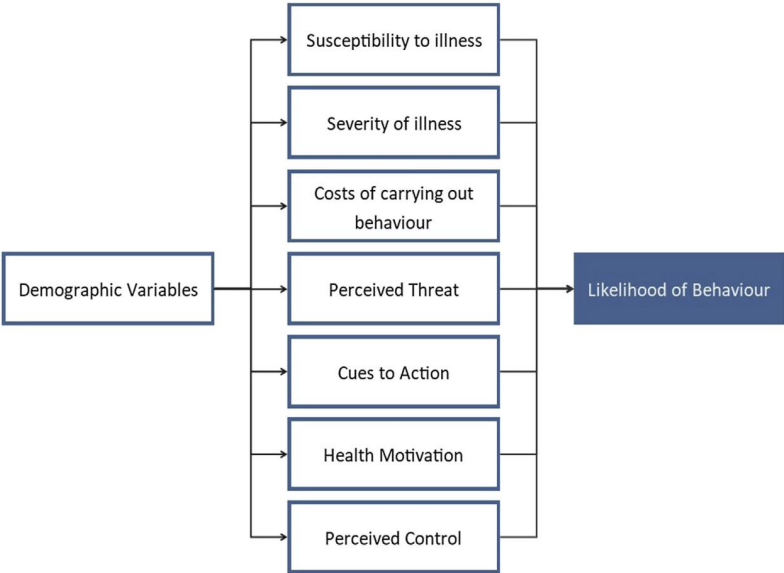
Research has also found that both attitudes and perceived norms predict teenage sexual initiation (Bongardt & Reitz, 2015; Zimmer-Gembeck & Helfand, 2008). Another criticism of the TPB is that it has failed to recognise the emotional aspect of safe sex (Norton et al., 2005). Extending the TPB to include affective attitudes has enhanced the effectiveness of safe sex interventions (Ferrer et al., 2016). Furthermore, safe sex interventions underpinned by TPB concentrate on one behaviour, yet safe sex for adolescents should involve a series of linked behaviours, for example, condom use and fewer sexual partners; TPB interventions that have focused on more than one behaviour have been

more effective (Moore et al., 2006). Taken as a whole, and despite the criticisms discussed here, these studies suggest that the TPB can aid the understanding of teenage sexual behaviour.

2.4.2 Health Belief Model

The Health Belief Model (HBM) by Hochbaum and Rosenstock (1952) predicts health-related behaviour regarding specific belief patterns. A person’s motivation to undertake a chosen health behaviour can be divided into three categories: individual perceptions, modifying factors, and likelihood of action. Individual perceptions affect the perception of illness and the importance of health to the individual, perceived susceptibility, and perceived severity. Modifying factors include demographic variables, perceived threats and cues to action. The likelihood of action is the perceived benefits minus the perceived barriers to the recommended health action. Combining these factors causes a response that often manifests into the likelihood of that behaviour. occurring (Janz & Becker, 1984; Rosenstock & Strecher, 1988).

The HBM proposes that the perception of a personal health behaviour threat is influenced by at least



three factors: general health values, which include interest and concern about health; specific health beliefs about vulnerability to a particular health threat; and beliefs about the consequences of the

health problem (Hochbaum & Rosenstock, 1952). Suppose a person perceives a threat to their health, is consecutively cued to action, and their perceived benefits outweigh the perceived barriers. In that case, they will likely undertake the recommended preventive health action. A schematic representation of the Health Belief model is shown in Fig. 7.

Figure 7: A schematic representation of the Health Belief Model

The HBM has been used to aid the understanding of sexual risk-taking behaviour among various ages (Brown et al., 1991) and cultural groups (Lin et al., 2005). Numerous studies have examined the capacity of the HBM to predict whether sexually active adolescents and young adults will use

Source: Hochbaum and Rosenstock (1952)

protection against STIs during sexual or oral intercourse and found support for HBM in understanding safe sex behaviours (Brown et al., 1991; Laraque et al., 1997; Lin et al., 2005).

HBM has been found to account for 43% of the variance in safe sex intentions in young adolescents (Petosa & Jackson, 1991). Furthermore, Downing-Matibag and Geisinger (2012) demonstrated that the HBM can serve as a valuable framework for understanding sexual risk-taking during casual hookups, as adolescents' assessments of their own and peers' susceptibility to STIs are often misinformed and situational characteristics, such as spontaneity, undermine adolescents' sexual self-efficacy. However, issues with using the HBM and meta-analyses have found mixed results on its effectiveness (Carpenter, 2010; Taylor, 2006). In research utilising HBM, there was no evidence that HBM-based interventions positively improved health outcomes in the United Kingdom (Taylor, 2006).

Furthermore, a meta-analysis of 18 studies found perceived barriers and perceived benefits to be the strongest predictors of behaviour, but perceived severity was weak (Carpenter, 2010). Carpenter (2010) suggested that future research should examine possible mediation and moderation between the core components of the HBM rather than explore direct effects. However, another meta-analysis

of 18 studies investigated interventions based on the HBM to Improve health adherence, with 83% of these studies reporting improved adherence and 39% of studies showing moderate to large effect sizes. However, only six studies explored the model (Jones et al., 2014).

Health adherence to adolescents attending routine STI screenings and taking oral contraception pills has been reported as an issue, and as discussed above, the HBM can assist in understanding adolescents' safe sex intentions (Goyal et al., 2013). Therefore, despite the criticisms discussed here, there is evidence that the HBM can assist in understanding sexual risk-taking behaviour in teenagers.

2.4.3 Social Norms Theory

Social norms theory posits that human behaviours are influenced by routine misperceptions or erroneous perceptions of how other members of social groups and communities think, act, reflect, and take action (Berkowitz, 2004). The Social Norms Theory infers that correcting the misperception of perceived norms will most likely result in a decrease in problem behaviour or an increase in a desired behaviour (LaMorte, W.W., 2019).

Social norms theory aims to understand the environment and interpersonal influences (such as peers) to change behaviour, which can be more effective than focusing on the particular individual to change their behaviour. The primary focus of Social Norms Theory is peer influence and its role in individual decision-making around behaviours.

Peer influences and normative beliefs are significant when addressing behaviours in rural semi-homogenous communities. Peer influences are affected more by perceived norms - viewed as standard in a group, rather than on the actual norm - fundamental beliefs and actions. The gap between perceived and actual is then described as misperception, forming the foundation for the social norms approach (Perkins & Berkowitz, 2004). Several limitations of social norms theory should be considered before using the theory. Limitations of the theory comprise the following:

- i. Participants of an intervention focused on social norms are likely to question the initial message being presented due to their misperceptions. Information must be communicated in a trustworthy way to correct these misperceptions.
- ii. Non-valid data collection at the initial stages of a project can result in unreliable data and poor choice of normative messages. This could undermine the effort of communication and reinforce misperceptions.
- iii. Sources that are not credible to the target population can result in a disagreeable message that undermines the campaign, even if the message is rightly chosen.
- iv. The sum of the message the target population receives must be sufficient to make an impact but not too much so that it becomes pedestrian.

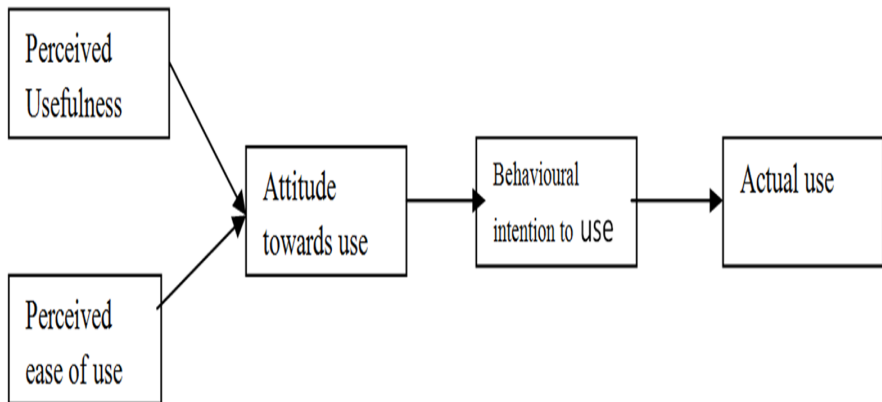
Although these limitations exist, when used correctly, social norms theory could be very effective in changing individual behaviours by focusing on changing misperceptions at the group level. Social norms interventions can be used unaided or in conjunction with other intervention strategies. The most effective social norms interventions have messages targeted to the at-risk populace that are spot on and dominant.

Substantial research and data collection must be invested in understanding the norms in the population of interest to score with messages. Social norms interventions are also most effective when presented in interactive formats like social media platforms that keenly engage the target group (Berkowitz & Perkins, 1986).

2.4.4 Technology Acceptance Model (Davis, 1989)

The Technology Acceptance Model (TAM) is a specific adaptation of the Theory of Reasoned Action developed by Davis (1989) to explain why users adopt or reject an innovative information system. It explains user acceptance and information technology usage behaviour (Ajibade et al., 2017). The TAM adapts four variables - perceived usefulness (PU), perceived ease of use (PEOU), subjective norms (SNs) and computer self-efficacy (CSE) to assess technology acceptance by users.

Figure 8: Technology Acceptance Model (TAM)



Source: Davis, 1989

The Technology Acceptance Model (TAM) theorises that an individual's behavioural intention to adopt an ICT system is determined by two beliefs (PU and PEOU) and that these two critical, independent variables determine behavioural intention to use and actual system use, to use serving as a mediator of actual system use. PU is also seen as being directly impacted by PEOU, meaning that all other things being equal, the easier the system is to use, the more valuable it can be. TAM includes the fundamental assumptions that the behaviour is volitional (voluntary) or at the user's discretion (Davis et al., 1989).

2.4.5 Relevance of Review of Theoretical Models of Risky Sexual Behaviour

This sub-section on theoretical review provides an overview of theoretical models frequently discussed in the literature about adolescents' social media usage and sexual behaviour and health.

The Technology Acceptance Model (TAM) is generally referred to as the most influential, commonly employed, and well-recognized theory in information systems because it is a parsimonious model for predicting user acceptance and has been widely applied by researchers to a diverse set of technologies and users (Venkatesh et al., 2003). The Theoretical Extension of the Technology Acceptance Model

(TAM2) was founded by (Venkatesh et al., 2003) to account for 40% - 60% of the variance in usefulness perceptions and 34% to 52% of the variance in usage intentions.

The theoretical Extension of the Technology Acceptance Model (TAM2) extends the constructs of TAM and includes additional determinants of the TAM's perceived usefulness and usage intention constructs. This model helps to understand how the effects of these determinants change with increasing user experience with the target system over time. TAM2 incorporates additional theoretical constructs spanning social influence processes and cognitive instrumental processes. It explains that the additional constructions - social influence processes (subjective norm, voluntariness, and image) and cognitive instrumental processes (job relevance, output quality and result demonstrability) significantly influenced user acceptance. Tella and Olasina (2014) state that TAM2 perform well in voluntary and mandatory environments.

Thus, studies that adopt the Theoretical Extension of the Technology Acceptance Model (TAM2) research framework consist of some constructs (PU, PEOU, and subjective norm) adapted from TAM2. In contrast, an additional construct of computer self-efficacy is adopted from the Social Cognitive Theory (SCT). The SCT is a significant human behaviour theory propounded by Bandura (1997), which has been applied to computer utilisation and acceptance and general information technology use (Bussey & Bandura, 1999; Omotayo & Folorunso, 2020).

The theory of planned behaviour (TPB) (Ajzen, 1991) and the health belief model (HBM) (Hochbaum & Rosenstock, 1952) are often used in health psychology to provide a theoretical explanation of sexual health and sexual behaviours. The theory of problem behaviour (PBT) (Jessor, 2001; Jessor & Jessor, 1977a) is a commonly used model in explaining adolescent risk behaviour. These three models are reviewed and previously linked with adolescents and sexual health issues studies (Armitage & Conner, 2001; Brown et al., 1991; Tschannm et al., 2002; Whitaker & Miller, 2000).

The biopsychosocial theory of adolescent sexual development explains the multifaceted growth of the individual during adolescence and implies that biological changes that determine biological sex also affect psychological sex (Hegde et al., 2022). Research on risk-taking behaviour and biopsychosocial theory for predicting risky sexual behaviour of adolescents in boarding schools reveals that the model of risky sexual behaviour viewed from biopsychosocial theory could be used as a theoretical basis for carrying out activities related to health-promotive and preventive actions for adolescents, which focuses on individual, family, and peer group factors (Sujita et al., 2015).

Researchers have conducted studies aimed at examining bio-psychosocial-based risky sexual behaviour models that show the relationship between biological maturation, self-perceptions, perceptions of social environment, and spiritual and sexual perceptions of Risky sexual behaviour (Dave & Dave, 2014). However, based on the analysis of the model, the approach used tends to be from a singular perspective or uni-dimensional. In contrast, studies from multiple perspectives have not been widely carried out on the model. Furthermore, researchers have shown interest in conducting further research to develop risk-taking behaviour and biopsychosocial theory model to explain risky sexual behaviour in adolescents in Islamic boarding schools who have different characteristics compared to adolescents in general who are not in Islamic boarding schools (Andayani et al. (2022).

Several studies that analysed the influence on risky sexual behaviour from a multisystemic perspective using ecological theory show that the relationship between systems is transactional and interactional, with each system having a direct and indirect influence on risky sexual behaviour (Kotchick et al. (2001). Freud's psychosexual development theory explains the genital stage, in which the individual indulges in experimentation to discover one's sexuality. It is characterised as a transition from self-directed pleasure as in the phallic stage and directed toward heterosexual pleasure. Freud states that the sexual instinct, which remains quiescent during the latency stage, becomes active in the genital stage. According to him, this need for heterosexual pleasure increases and continues into adulthood (Dennis, 2013).

Other models, such as the self-regulation theory (Kanfer, 1970) and the subjective culture and interpersonal relations theory (Triandis, 1977), have also been used to help understand adolescent risk behaviours. However, there is less evidence that these models can significantly aid the understanding of adolescent risky sexual behaviours, so a detailed examination of these models is not made in the study. Whilst media theory has demonstrated promise as a behaviour change intervention with the potential for cost-effective use with large groups of participants, there is a lack of critical commentary regarding the application of the Social media theory and the use of ‘social norms’ feedback broadly (Dempsey et al., 2018).

2.5 Theoretical Framework

The theoretical framework of the study is underpinned by the Social Learning Theory and Problem Behaviour Theory, which is a psychosocial theory for predicting risky sexual behaviour of adolescents and focuses on risk-taking behaviours in the implication of the study findings on sexual behaviour of adolescents in selected universities in Federal Capital Territory—the study in addition anchors on Users Gratification Theory (UGT). The study applies UGT in the implication of the impact and influence of social media on adolescent behavioural formation.

2.5.1 Social Learning Theory - Albert Bandura (1977)

Bandura’s social learning theory (1977) establishes that adolescents learn from direct experience, observation, and modelling. Some key elements in the theory are Attention, Retention, Motor reproduction and Motivation. According to the social learning theory, three concepts are essential in the learning process: modelling, Intrinsic reinforcement and learning by observing others in a social setting.

Weaknesses of the Social Learning Theory: Bandura’s theory of social learning (1977) rejects the classical and operant conditioning processes. According to Jeffery (1985), biological theorists also argue that the social learning theory completely ignores individuals’ biological states. Secondly,

social learning theory rejects the differences of individuals due to genetic, brain, and learning differences.

Justification of Social Learning Theory: Despite the weaknesses mentioned in the social learning theory, it cannot be ignored in the context in which the theory is formulated; the strength of this theory outweighs its weaknesses for the study. The theory responds suitably to the dimensions of the study, i.e., sexual behaviour. According to Social Learning Theory (Bandura, 1977), adolescents collaborate with peers via web-based networking media stages through perceptions, communications, and different exercises. These may bring about behavioural changes.

Theoretical Application of Social Learning Theory: Social learning theory provides insights into this study that learning behaviour can be influenced by what adolescents observe on social media platforms such as Twitter, Facebook, Instagram, WhatsApp, LinkedIn, and Skype for long-range informal communication. Through this, communication is a highly exceptional manner with the media. Henceforth, they may wind up mimicking activities performed or communicated in the media, both great and terrible, to meddle with their feelings, practices, and states of mind towards learning. As (Myers, 2010) concluded, children develop what they see.

2.5.2 Uses and Gratification Theory (Katz, 1987)

Uses and Gratification Theory (UGT) (1987) builds on a history of communication theories and research. UGT is an audience-centred approach diverging from other media effect theories that question ‘what do media do to people’; UGT focuses on ‘what do people do with media’. The audience chooses media that will satisfy given needs and allow one to enhance knowledge, relaxation, social interactions/companionship, diversion, or escape.

The Strengths of Uses and Gratification Theory (UGT). This lies in its recognition of the potential for audience initiative and activity and attempts to articulate a theoretically more complete notion of audience activity. The theory answers two aspects of the study: the influence of social media and behavioural outcomes on learning behaviour (De Andrea, Ellison, LaRose, Steinfield, and Fiore,

2012). Thirdly, Hanson (2009), expatiating on the theory by McQuail (2010), answers the questions: Why do people use media, and what do they use it for? People use media for related purposes, such as adjustment, information, and identity formation.

The UGT recognises and maintains that the audience has various needs that prompt them to use any media content. The Uses and Gratifications theory was adopted because it was previously used successfully to examine the underlying reasons for media use to satisfy particular needs. It was previously used successfully to understand consumers' motivations and behaviours using traditional media such as TV and radio.

Assumptions of Gratification Theory:

- i. The audience is active, and its media use is goal-oriented.
- ii. The initiative in linking need gratification to a specific medium choice rests with the audience member.
- iii. The media compete with other resources for need satisfaction.
- iv. People have enough self-awareness of their media use, interests, and motives to give researchers an accurate picture of that use.
- v. The audience can only assess Value judgments of media content.

Weaknesses of Uses and Gratification Theory - The study by Katz (1987) discovered some shortcomings in the Gratification Theory. First, the Gratification Theory relied heavily on self-reporting. It does not adhere to some scientific discoveries for modification. Second, the theory was unsophisticated about the social origin of the audience's needs for media. Lastly, the theory needed to be more critical of the possible dysfunction for self and society of certain audience satisfaction.

Justification of Uses and Gratification Theory -The theory stresses how and why the audience uses the media, as cited by Haridakis and Hanson (2009). It also expatiates the theory by McQuail (2010). Therefore, the theory's main point is that there are distinct benefits consumers of social media

messages need or anticipate getting from the media. Otherwise, they may desert the channel and seek alternatives to satisfy their needs. However, the gratification theory answers the study and holds that people are responsible for choosing a particular medium to meet their needs (Katz et al., 1974). This implies that the amount of time invested in social media could affect students' time allocated to studies and their learning outcomes.

Applications for Uses and Gratifications Theory - Internet Usage: Modern communication scholars such as Tomas E. Ruggiero highlight the necessity of UGT in understanding the proliferation and success of computer-mediated communication forms. Ruggiero (2000) states that UGT provides a cutting-edge theoretical approach in the initial stages of each new mass communications medium: newspapers, radio, television, and now the Internet. Furthermore, he argues that new media forms require analysis of potential new uses and gratifications, for example, interactivity, hyper-textuality, asynchronous communication, and demystification.

Application of New Media to the Uses and Gratifications Theory: This has been positive. The introduction of social media through internet-ready Smartphones has provided an outlet for people to use and seek gratification through those sources. Based on the models developed by Katz, Blumler and Gurevitch (1974), individuals can choose to seek out media in one outlet, all within the proscribed categories of need. The only difference now is that the audience does not have to go to multiple media outlets to fulfil each of their needs. The Internet has created a digital library, allowing individuals access to all content from various mass media outlets.

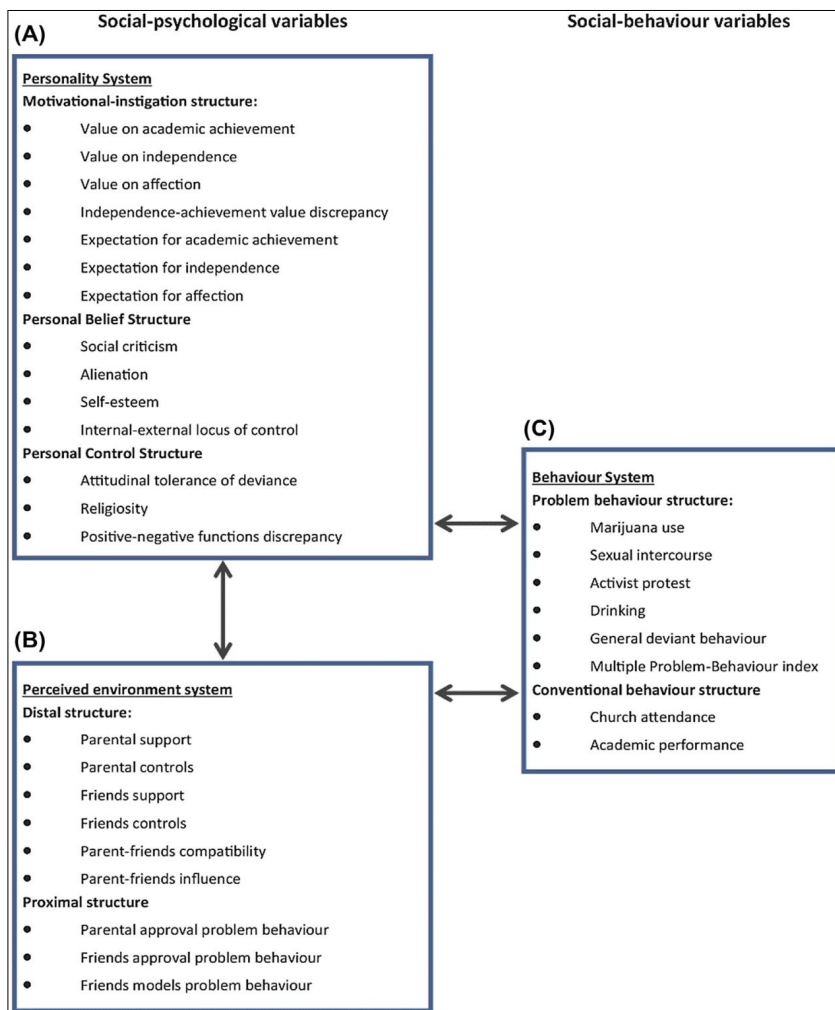
2.5.3 Problem Behaviour Theory - (Jessor & Jessor, 1977a)

Problem behaviour theory (PBT) is a social-psychological framework that helps to explain the development and nature of problem behaviours, for example, risky sex or alcohol use (Jessor & Jessor, 1977a; Jessor, 2001). Jessor (1987) describes problem behaviour as any behaviour That deviates from both social and legal norms. The model comprises three systems of psychosocial influences: the personality system (all social cognitions, personal values, expectations, beliefs, and

values), the perceived environmental system (family and peer expectations), and the behaviour system (problem and conventional behavioural structures that work in opposition to each other).

Demographic and socialisation variables affect the personality and perceived environmental systems and indirectly impact behaviour. The personality and perceived environment systems are viewed as proximal or more direct determinants of behaviour than demographic and socialisation variables. The three systems of the PBT each utilise different variables that either influence the problem (such as risky sex) to occur or decrease the likelihood of the behaviour taking place. When predicting a problem behaviour, each individual's conventional and unconventional behaviours are considered (Donovan et al., 1991). Donovan et al. (1991) define conventional behaviours as socially approved behaviours, while unconventional behaviours are defined as any behaviour that deviates from social norms. Analysing conventional-unconventional behaviours in each of the three psychosocial systems in an individual allows a prediction of future behaviours to be made.

Early research has supported problem behaviour theory as multiple factors as a cluster can influence risky sexual behaviours. Protective factors such as self-esteem and cognition may play essential roles in teenage decision-making and are embedded within social and community contexts (Norman & Turner, 1993). Adolescents with low self-esteem may become sexually active at an early age to help fill a void left by feelings of inadequacy and fear of failure (Bloom, 1990). This cluster of behaviours has also carried into recent research; teenagers who engage in earlier alcohol use significantly predicted risky sex with multiple partners with inconsistent condom use (Mason et al., 2010).



Source: Jessor (2001).

Figure 8: Schematic representation of the original Problem Behaviour Theory model

Furthermore, social norms are all related to sexual risk behaviour and cluster together; risky sexual behaviours in older adolescents can be predicted by higher sensation seeking (personality), lack of communication with parents (perceived environment), and engagement in alcohol use (behavioural factors) (Whitaker & Miller, 2015). However, most studies investigating PBT have only accounted

for one of the three systems or looked at the three individually (Davis, 2002). This means it is difficult to predict future behaviour if all.

Three systems are not investigated together. PBT also does not work for all cultures (Deutsch et al., 2014). The basis of problem behaviour theory is that it works for all groups who engage in deviant behaviour; however, research and development of this theory were initially conducted in a community composed of white individuals with middle-class backgrounds (Jessor, 2001). Therefore, it is challenging to generalise the theory to other subcultures. Despite this, PBT has been shown to account for variations in several different problem behaviours and can help explain risky sexual behaviours for teenagers.

2.5.4 Integrative Model of Behaviour Change (IMBC)

The study was informed by the Integrative Model of Behaviour Change (IMBC) developed by Stevens, Gilliard-Matthews, Dunaev, Todhunter-Reid, Brawner & Stewart (2017), which combines theoretical constructs from social cognitive theory and the theories of Reasoned Action and Planned Behaviour (Fishbein & Yzer, 2003). The IMBC framework is used to systemically examine social media as a correlation of risky sexual behaviour (Fishbein & Yzer, 2003). According to the model, engagement in risky sexual behaviours is a function of attitudes toward the behaviour, normative perceptions about the behaviour, perceived self-efficacy over the behaviour, and resultant intentions to engage in the behaviour.

The Integrative Model of Behaviour Change (IMBC) further articulates that although attitudes, norms, and efficacy should influence intentions to perform a specific behaviour, the relationship between intentions and behaviour is constrained by the extent to which environmental barriers and facilitators intervene. That is, intention should be a strong predictor of behaviour, but only to the extent that an individual has the abilities and knowledge to perform the behaviour and the environmental constraints are not excessive. The IMBC includes media exposure as a predictor of behaviour.

Application of Model- The Integrative Model of Behaviour Change (IMBC) in the study focuses on the pathways between media exposure to intention and behaviour. The study examines the sources of risky sexual information among 100-level undergraduate students with internet access-enabled smartphones and registered social media accounts and which social media platforms and sources are associated with influencing risky sexual behaviours. The study explicitly tests whether social media is an influential source of risky sexual information and emergent behaviours of 100 levels of undergraduate students in universities in FCT, Nigeria (Stevens et al., 2017)

The theories describe the framework under which the media is supposed to operate. They explore the similarities between social media and the audience's perception and opinion. The theories study seeks to determine the correlation between students and their daily usage of social media such as Twitter, Facebook, LinkedIn, WhatsApp, Instagram and Skype and learning behaviour to bring out the effects experienced. The theories also explain how adolescents develop characters and their changes through social media.

These theories explain the simple cause-and-effect analysis between introducing social media to schools and the changes in students' way of thinking, feeling, acting, or believing. Generally, these theories have implications that individuals acquire a diverse and ordered set of behaviours due to exposure to media. Individuals not only learn whether a behaviour is expected and whether it will result in positive outcomes but are also presented with a series of events describing how and when it is appropriate to enact the behaviour. These lessons learned may not always be used until events or circumstances in the environment, such as a kiss, a first date, or such, trigger them.

2.6 Research Gap

Numerous studies have been conducted in the field of social media to address the impact on academic performance, social well-being, business performance, communication, and sexual activities. These studies predominantly focused on Western countries, using diverse scopes, variables, methodology

and datasets. Studies on the influence of social media on the sexual behaviour of adolescents are scanty in Nigeria. A few studies in Nigeria focused on unmarried adults' sexual behaviours. Summary of knowledge gap in terms of:

Western Context: Existing studies on social media and adolescent sexual behaviour are conducted in Western contexts. These studies ignored emerging countries like Nigeria within the increasing presence of various social media platforms. Studies in Nigeria focused on the impact on academic performance, social well-being, business performance, communication, and sexual activities of unmarried adults. These studies also neglect adolescents, who account for about 34.5% of Nigeria's total population. Most extant studies provide cross-sectional snapshots of the nexus between social media and adolescent sexual behaviour. These studies also ignored longitudinal research tracking changes over time, examining the causal relationships, lived experiences and perceptions of Nigerian adolescents regarding how social media influences their sexual behaviour.

Context: Cultural and Religious Factors: Nigeria has diverse cultures and religions. The scanty empirical literature in Nigeria presents yet another rationale for this study to investigate how these cultural and religious factors intersect with social media usage and also shape adolescents' sexual behaviour, a gap that's often overlooked in global studies. The impact of Nigeria's digital divide on adolescents' access to social media and exposure to sexual content is a context-specific issue that requires exploration. This divide across regions and socioeconomic backgrounds of adolescents in Nigeria. The lack of laws and policies regulating media content, particularly sexual education, provides another robust gap for this study to contribute to knowledge.

Scope: Extant studies focus on adolescents broadly, creating knowledge gaps regarding differences in social media influence on the sexual behaviour of late adolescents between age groups 18-21 newly admitted to various universities. This study, therefore, could focus on late adolescent age groups 18-21 freshly admitted to the various universities in the Federal Capital Territory to provide detailed insight. The study comprehensively examines the role of specific social media platforms (e.g., Facebook, Instagram, WhatsApp) and types of content (explicit, educational) influencing adolescents' sexual behaviour.

Methodology: Extant studies focus on cross-sectional impact, limiting the ability to establish causal relationships, thus creating a knowledge gap in rigorous longitudinal studies that can better explore temporal dynamics. Some of these studies focus on a single aspect of sexual behaviour. The study addresses this knowledge gap by employing comprehensive metrics considering attitudes, knowledge, perceptions, and actual behaviours.

It is against this lacuna that the study contextually examines the impact of social media on the sexual behaviour of adolescents in selected universities in the Federal Capital Territory. The study provides deeper insights into how Nigeria's diverse cultures, religions, and regional differences influence adolescents' interaction with social media and its impact on their sexual behaviour. This understanding is essential for tailoring interventions and policies. The study provides longitudinal insight to track changes in social media use and sexual behaviour over time to assess causality and identify trends and patterns.

Scope: The study focuses on specific age groups (late adolescents) and considers gender differences to provide nuanced insights into how social media affects different segments of the adolescent population through different social media platforms for a more comprehensive understanding of which platforms have the most influence and why.

Metrics for Sexual Behavior: Defining and measuring sexual behaviour comprehensively, including aspects such as attitudes, knowledge, risk perception, and actual behaviours, provide a holistic view of the issue.

Policy and Intervention Guidance: The findings of this study would inform the development of policies, educational programs, and interventions that better align with the realities of Nigerian adolescents to promote safer and healthier sexual behaviours. The theoretical understanding of media influence, cultural dynamics, and adolescent behaviour would potentially expand existing theories. The study's findings would have relevance beyond Nigeria, offering lessons and strategies for addressing similar issues in other countries with diverse cultural contexts. In summary, the study provides a well-designed insight into the "Effect of Social Media on Adolescents' Sexual Behavior in

Nigeria," considering the contextual factors, scope, and rigorous methodology to make substantial contributions to knowledge, inform policies and interventions, and advance the understanding of the dynamic interplay between social media and adolescent behaviour in Nigeria's digital age.

CHAPTER THREE

METHODOLOGY

3.1 Research Design

The research design of the study outlines the research methodology. It provides a roadmap for the research procedure and processes in carrying out the fieldwork for data collection, collation, analyses, and presentation of findings. The study adopted a correlational research design and anchored on the survey mixed research method of quantitative and qualitative data collection. According to Leech and Onwuegbuzie (2008), this type of research design is relevant as the study collects and collates data using both qualitative (In-depth Interview) and quantitative (structured questionnaire) data collection instruments. For the quantitative data, this study purposively selected adolescents from the 2022/2023 academic session, 100-level undergraduates between 18-21 years, in six selected universities in the Federal Capital Territory, Nigeria.

Primary data was collected through questionnaires, focus group discussions (FGD) and key informant interviews (KII) to determine the opinions, attitudes, preferences and perceptions of respondents and participants. Secondary data was collated from desk reviews of relevant literature (Anyakoha, 2009). Descriptive thematic analysis was applied to analyse collated data on the impact of social media on the sexual behaviour of adolescents in selected universities in the Federal Capital Territory. The Triangulation method was employed to ensure the robustness and validity of the study. This method embraces qualitative and quantitative data triangulation to implicate adopted theories in discussing findings.

3.2. Population, Sample Size and Sampling Techniques

3.2.1 Population of Study

The population of study consist of all undergraduates of universities in the Federal Capital Territory, Nigeria. The Federal Capital Territory hosts nine established and operational universities (private and government). Some criteria were adopted in selecting the subject universities to guard against

data omission and ensure uniformity in the presentation. The National University Commission (NUC) recognises the identified and selected universities for this study. Universities that were not recognised or that ceased operation at any point during the study period were excluded. Universities that had problems with NUC within the period under review were excluded. This selection process supported (6) recognised universities, as presented in Table 3.1below:

Table 3.1: Recognised Universities by the National University Commission (NUC)

S/N	Universities	Address	Status	Established
1	University of Abuja	Gwagwalada	Government	1988
2	Baze University	Plot 686, Jabi Airport Road Cadastral Zone	Private	2011
3	Nile University	Plot 681, Jabi Airport Road Cadastral Zone	Private	2009
4	Veritas University	Bwari Area Council	Private	2007
5	African University of Science and Technology (AUST)	Km 10 Umaru Musa Yar'Adua Road, Galadimawa, FCT	Private	2007
6	Philomath University	Kuje, Abuja	Private	2015

Source: Author’s Compilation (2023)

3.2.2 Sample Size Determination

Sample Size of Questionnaire Respondents - The sample population is newly admitted undergraduate adolescents within the age bracket of 18-21drawn from the selected six (6) Universities in Abuja consisting of Baze University, Nile University, University of Abuja, Veritas University, the African University of Science and Technology (AUST) and Philomath University. The population of undergraduate students at Nile University is estimated at over 6,000 (Academic Planning Unit, 2022/2023 session); the University of Abuja over 55,364 (Academic Planning Unit, 2022/2023 session); Baze University, over 4000 (Academic Planning Unit, 2022/2022 session);

Veritas University over 45000 (Academic Planning Unit, 2022/2023 session), Philomath University over 5000 (Academic Planning Unit, 2022/2023 session) and the African University of Science and Technology (AUST) over 5000 (Academic Planning Unit, 2022/2023 session).

There are over 78,864 undergraduates in the selected six (6) Universities in the Federal Capital Territory. The study uses a mathematical approach to determine the sample size, considering the level of confidence, margin of error, and the variability of the population. Cochran's (1977) mathematical approach determines the sample size from a population of 78,864 and above. The formula is expressed as:

$$n = \frac{N \times Z^2 \times p \times (1-p)}{E^2 \times (N-1) + Z^2 \times p \times (1-p)}$$

Where: n = sample size.

N = the population size (**21,086**).

Z = the Z-score corresponding to the desired confidence level (1.96 for a 95% confidence level).

p = the estimated proportion of the population within the age range of early and adolescents (0.5 for maximum variability).

E = the desired margin of error (0.05).

$$n = \frac{21,086 \times (1.96)^2 \times 0.5 \times (1-0.5)}{0.05^2 \times (21,086-1) + (1.96)^2 \times 0.5 \times (1-0.5)}$$

$$n = \frac{21,086 \times 3.8416 \times 0.25}{0.0025 \times 21,086 + 3.8416 \times 0.25 \times 0.25}$$

$$n = \frac{18,740.9856}{197.1575 + 0.2401}$$

$$n = \frac{18,740.9856}{197.3976}$$

$$n = 18,740.9856$$

$$n = 18,740.9856$$

$$n = 18,740.9856$$

$$n = 18,740.9856$$

$$n = 383.69$$

$n \approx 384$ (approximate sample population) to achieve a 95% confidence level with a 5% margin of error.

Sample Size of Focus Group Discussion Participants: 48 participants were selected randomly to form 6 focus group discussions in the six (6) selected universities in the Federal Capital Territory.

Sample size Key Informant Interview Respondents: Six (6) respondents, specifically lecturers handling (GST 111) Psychology and Anthropology in the six (6) selected universities in the Federal Capital Territory.

3.2.3 Sampling Technique

A purposive or judgmental sampling procedure was adopted to select 384 respondents from the six universities. The purposive sample method was chosen as the most appropriate method for this research.

3.3 Description of the Data Collection Instruments

Inclusion Criteria - Adolescents between the ages of 18 and 21 who are newly admitted into the selected universities in the Federal Capital Territory were included in the study. Both males and females were included in the study. There were no married adolescents during the study.

Exclusion Criteria - The study excluded adolescents below 18 years old and newly admitted into the selected universities in the Federal Capital Territory.

Questionnaires were administered by hand through the FGDs and Google Forms to collate the study data. The questionnaire was formulated based on the research objectives, questions, and hypotheses in chapter one. The structured questionnaire had three sections: “A”, “B”, and “C”. Specifically, questions in section A dealt with demographic information of the respondents, section “B” social media usage and section “C” social media influence on risky sexual behaviours. The items in each construction were structured to address the study's research questions, objectives, and hypotheses directly. In the design of the questionnaires, the five (5) Likert scale method was adopted to collate data for analysis.

Focus Group Discussions - A focus group discussion is an open-ended question whose primary objective is to kindle an informal discussion with participants and other relevant individuals within the study scope to understand their perceptions and beliefs about the research subject (Kothari, 2014). According to Morgan (1997), a focus group is habitually composed of 6-8 homogenous members, which are attached in the appendix. One focus group discussion of 8 randomly drawn newly admitted students was held in each of the selected Federal Capital Territory universities.

The six FGDs consisted of 48 participants who were newly admitted students. Care was taken to ensure that the groups were as homogenous as possible regarding age, admission status, and other relevant characteristics like familiarity. Familiarity had advantages, particularly in reducing initial tension or embarrassment, and homogeneity also reduced the danger of the discussions being inhibited by considerations of status or hierarchy (Campbell et al., 1999). Each discussion lasted between 60 minutes. A focused group discussion guide was used to supplement information from the administered questionnaire.

Key Informant Interviews: According to Campbell et al. (1999), key informant interviews are conversational rather than in a formal question-answer format. These were conducted using a semi-structured interview guide. KIIs focus on selected lecturers in the universities who have knowledge and experience about sexual behaviour in adolescence. They included lecturers handling year one courses, particularly psychology and Anthology. A total of 6 key informants were interviewed. These interviews were used to provide insights into understanding the correlation between social media and sexual initiation among adolescents in selected universities in the Federal Capital Territory. Other advantages included greater detail of information and the opportunity to share and understand the viewpoints of informants and how their beliefs, experiences and vocabularies relate to broader issues.

3.4 Pre-Testing (Piloting)

The pre-test was conducted in 2 universities operational in the Federal Capital Territory (the University of Abuja and Veritas University), where a sample size of 30 was selected through a convenient sampling technique. The collated data was analysed to ensure the questionnaire's and

KII's internal validity. Feedback on the wording of the questions was provided to address issues of ambiguity (Language clarity and structure problems). The Cronbach's Coefficient Alpha was used to test the reliability of the questionnaire and KII instruments through the data collated from respondents. The Cronbach Alpha value of 0.879 for pre-tested questionnaires was statistically significant. They indicate instrument suitability for the study by Nunnally and Bernstein's (1994) theory, which states that Cronbach Alpha must be 0.700 above for the administered instrument to be considered reliable for a meaningful analysis.

3.5 Method of Data Analysis

Descriptive statistical technique and statistical mean were used to analyse respondents' collated dataset. The dataset is presented in tables and quantiles using frequency distribution and percentages. It means to assess social media's influence on the sexual behaviour of adolescents in selected universities in the Federal Capital Territory. Each of the questionnaires was arranged in line with a Likert four (4) points rating scale of strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD), respectively, with various scale values assigned as SA- 4 points, A- 3 points, D- 2 points, SD- 1 point. The Mean was calculated by adding the nominal scale values and dividing it by scaling items of 4 ($10/4 = 2.5$). The score was acquired by dividing the sum of the nominal value by several scaling items. Thus, the nominal value sum is ten, and the scaling item number is 4.

Decision Rule: From the foregoing, items with a mean value of 2.50 or greater were accepted, whereas items with a mean score below 2.50 were not accepted.

3.6 Validity of the Instrument

Validity is the most important characteristic of a test a measuring instrument should possess. It is the degree to which a test measures what it is supposed to measure, consequently permitting appropriate interpretations of scores (Gill & Johnson, 2002). It also involves operationalising concepts or constructs needed to carry out the translations. The questionnaire was meticulously designed, and a pre-test of every question contained in the questionnaire was conducted to ensure that they were valid. The instrument's validity was measured using face validity, and this was done

by two experts from the Institute of Strategic and Development Communication, Nasarawa State University, Keffi, Nigeria, who studied the instrument thoroughly to ensure they were in line with the study objectives.

3.7 Reliability of the Instrument

The reliability test of the study instrument was done using the Cronbach Alpha model. The model tests each questionnaire construct to ensure they are internally consistent with study objectives. The Cronbach Alpha model was adopted to address reliability issues associated with models like test-retest or split-half. 30 copies of the instruments were administered to respondents and tested using Cronbach Alpha's internal consistency. The Cronbach Alpha value of 0.879 for pre-tested questionnaires was statistically significant. Indicating instrument suitability for the study, per the Nunnally and Bernstein (1994) theory states that Cronbach Alpha must be 0.700 above for the administered instrument to be considered reliable for a meaningful analysis. According to Bowling (2002), an alpha of 0.5 or higher is considered the best measure of research validity and reliability. This entails the stability, dependability, and predictability of the instrument.

3.8 Model Specification

The model specifications of this study are based on specified theoretical signs and sizes. The study is quantitative and qualitative and has its source in existing studies and methodologies. The model is drawn from the theoretical foundations of social media's influence on the sexual behaviour of adolescents. To analyse this nexus, descriptive and inferential statistics were adopted to test the study hypotheses. The descriptive tools include tables, aggregative averages of the mean median, and measures of spread and variation like standard deviation.

3.9 Ethical Considerations

Participants were informed about the study's purpose, procedure, and benefits. The sensitivity of the topic of discussion was acknowledged; as such, participants were reassured of the privacy and confidentiality of the information they provided. Participants were informed that their participation was voluntary and that they had a right to refuse to participate or withdraw from the study at any

time. Participants in key informant interviews and FGDs were asked to consent to audio recording their discussions, which the majority declined. They were informed that the recordings of the interviews and discussions would be erased upon project completion for the majority. No monetary incentives were provided.

3.10 Key Variables and Measurement

Table 3.10: Key Variables and Measurement

Variables	Definition	Value	Level of measurement	Analysis
Independent Variables				
Age	Continuous variable indicating the age of the participants	Years	Actual number	Mean, Percentage and Frequency
Gender	Male or Female	Male / Female	Nominal	Percentage and Frequency
Social Media	Platforms (Facebook, Instagram, Twitter, TikTok, WhatsApp)	Self-reported selection	Ordinary	Percentage and Frequency
Duration of Social Media Usage	Continuous social media usage.	Self-reported years or months	Ordinary	Percentage and Frequency

Early Initiation of Sexual Activity	Indicating whether the participant initiated sexual activity before the age of 18	Self-reported initiating sexual activity before the age of 18	Ordinary	Percentage and Frequency
Risky Sexual Behaviours	Indicating engagement in risky sexual behaviours	Self-reported engagement in risky sexual behaviours (unprotected sex, multiple sexual partners, or substance use before sex)	Ordinary	Percentage and Frequency
Psychological Impact	Indicating psychological impact	Self-reported psychological well-being and self-esteem	Ordinary	Percentage and Frequency
Peer Pressure	Indicating peer pressure	Self-reported experiences of peer pressure related to sexual behaviour	Ordinary	Percentage and Frequency
Dependent Variable				
Sexual Behaviour	Indicating sexual behaviours	Self-reported sexual behaviours, including sexual initiation, frequency of sexual activity, contraceptive use, and engagement in risky sexual practices.	Ordinary	Mean, Percentage and Frequency

Source: Author (2023)

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

4.1 Data Presentation and Analysis

4.1.1 Questionnaire Response Rate

The questionnaire was administered digitally through Google form to the newly admitted undergraduate adolescents in the 2022/2023 academic session within the age bracket of 17-21years drawn from six (6) Universities in the Federal Capital Territory, Nigeria, consisting of Baze University, Nile University, University of Abuja, Veritas University, the African University of Science and Technology (AUST) and Philomath University. Of 385 questionnaires administered to respondents, 375, representing 97.40 per cent, were valid, duly completed and resubmitted to the researcher. 375 (97.40%) valid, duly completed, and returned questionnaires were used to assess the influence of social media on adolescents' sexual behaviour.

Table 4.1.1: Questionnaire Response Rate

Response	Frequency	Per cent
Complete	375	97.4
Incomplete	10	2.6
Total	385	100

Source: Author's Survey (2023)

From the results reported in Table 4.1.1, 375 responses (97.4%) were marked as complete, while 10 incomplete responses represented (2.6%) of the total responses. A response rate above 50%, according to Mugenda and Mugenda (2003), is sufficient for a descriptive study. The response rate of (97.4%) for this study indicates successful engagement with the target audience and is considered excellent according to Morton et al. (2012) and Saldivar (2012) response rate rating of 50% (adequate); 60% (good), 70% (very good) 80% and above (excellent) (Agustini, 2018). The high

response rate strengthens our study's credibility, allowing the researcher to draw meaningful conclusions from the results and implement effective follow-up actions.

4.1.2 Demographic Information of Respondents

The demographic information of the respondents obtained through questionnaires is presented in Table 4.1.2

Table 4.1.2 Respondents Gender, Age and University

Variable		Frequency	Percentage
Valid	Male	172	45.9
	Female	203	54.1
	Total	375	100
Male	18	30	17.5
	19	87	50.5
	20	43	25.0
	21	12	7.0
	Total	172	100
Female	18	90	44.3
	19	28	13.8
	20	50	24.6
	21	35	17.3
	Total	203	100
University	African University of	63	16.8
	Science and Technology	63	16.8
	Baze University	62	16.5
	Nile University	63	16.8
	Philomath University	62	16.5

University of Abuja	62	16.5
Veritas University		
Total	375	100

Source: Author (2023)

Table 4.1.2 shows the demographic information of respondents based on gender and age. Gender equity was purposefully considered during the survey study's selection procedure. However, there was no intention to correlate or find the nexus between social media use and gender except merely describing the data. This was done to guarantee equal representation and involvement in the study. The results show that newly admitted adolescents from the selected universities in the Federal Capital Territory participated actively in the study. In this regard, the issue of gender imbalance was not addressed, and it does not affect the credibility of the estimated study results.

Panel A: The results indicated that out of the 375 respondents, 172 (45.9%) were male and 203 (54.1%) were female. The respondents' age range was important in this study; hence, the researcher sought to establish and endorse the suitability of the age range of the respondents.

Panel B: The results showed that the age range of the male participants spread between 18, 19, 20 and 21 years, which were the fitting age ranges for newly admitted adolescents into the selected universities in the Federal Capital Territory. Therefore, the diverse age range provided diverse information on the influence of social media on the sexual behaviours of adolescents. These representations strengthened the study, given that the findings reflected the ideas and opinions of diverse categories of participants at different stages of their development and socialisation. The result in Table 4.1.3 summarises the age variables of the survey respondents.

4.1.3 Respondents Age Distribution

Table 4.1.3 Respondents Age Distribution

Variable	Number	Mean	Median	Standard Deviation	Minimum	Maximum
Age	375	19	19	12.29	18	21

Source: Author (2023)

From the results in Table 4.1.3, the average age of 375 respondents was 19 years. The minimum age was 18 years. The maximum age of the respondents was 21 years. The computation of the standard deviation revealed closeness in the spread of ages. Standard deviation indicates the degree of variability or dispersion in ages within the age range of the respondents from the mean. The standard deviation 12.29 for the age range indicates moderate age variability or dispersion. The age information in this study is crucial in determining the survey's inclusiveness of the right target demographic. The study focused on adolescents newly admitted into selected universities in the Federal Capital Territory. They engaged adolescents to share their experiences as they were the rich informants for assessing the influence of social media on the sexual behaviour of adolescents in selected universities in the Federal Capital Territory.

4.2.1 Key Informant Interview (KII) and Focus Group Discussion (FGD)

Participants Demographics by Gender

Table 4.2.1 Key Informant Interview (KII) and Focus Group Discussion (FGD)

Participants Demographics by Gender

	Universit y of Abuja	Baze University	Nile University	Veritas University	AUST	Philomath University	Total
KIIs	1 (Lecturer)	1 (Lecturer)	1 (Lecturer)	1 (Lecturer)	1 (Lecturer)	1 (Lecturer)	6(Lecturers) 3 Males 3 Females

FGD	8	8	8	8	8	8	48 (Groups)
s	(Newly admitted)	(Newly admitted)	(Newly admitted)	(Newly admitted)	(Newly admitted)	(Newly admitted)	24Males 24 Females

Source: Author (2023)

Table 4.2.1 shows the demographic information KII and FGDs on gender. Gender equities were purposefully considered during the study's selection procedure. This was done to guarantee equal representation and involvement in the study. The FGDs consisted of 24 (50%) males and 24 (50%) females in each group. The results show that KII and FGDs participants from the selected universities in the Federal Capital Territory participated actively in the study. In this regard, the issue of gender imbalance was addressed.

Table 4.2.2 Representation of Respondents by University

Variable	Frequency	percentage
African University of Science and Technology	63	16.8
Baze University	62	16.5
Nile University	62	16.5
Philomath University	62	16.5
University of Abuja	63	16.8
Veritas University	63	16.8
Total	375	100

Source: Author (2023).

The results reported in Table 4.2.2 show the respondents based on university attendance. The respondent's university representations were purposefully considered during the survey study's selection procedure. However, there was no intention to correlate or find the nexus between social media, the sexual behaviours of adolescents, and respondents' university attendance, except for merely describing the data. This was done to guarantee equal representation and involvement of the

selected universities in the study. The results show that the University of Abuja, the African University of Science and Technology and Veritas University have the highest number of respondents, 63(16.8%). Baze University, Nile University and Philomath University collectively accounted for 62 (16.5%) newly admitted respondents. The results suggest that the universities are relatively evenly represented in the number of respondents.

The mean value of 3.498 indicates a fairly balanced distribution of university respondents. The standard deviation of approximately 1.701 suggests moderate variability in university representation; the majority of universities fall within a similar range. The minimum value of 1 indicates that at least one university had the lowest representation, while the maximum value of 6 indicates that at least one university had the highest representation. Overall, the study objective of ensuring a reasonably equal representation of respondents from the selected universities in the Federal Capital Territory was achieved to ensure that the study's findings are representative of the broader population of newly admitted adolescents in the region.

4.3 Respondents' Exposure to the internet, social media, Content, and Usage

Table 4.3 Respondents Exposure to internet, social media, contents, and usage

Internet Access				
		Frequency	Per cent	Cumulative Percent
Valid	Yes	375	100	100
	Mean	1.000	Median	1.000
	Std. Deviation	0.000	Minimum	1.00
	Maximum	1.000		
Social Media Account				
		Frequency	Per cent	Cumulative Percent
Valid	Yes	375	100	100
	Mean	1.000	Median	1.000

	Std. Deviation	0.000	Minimum	1.00
	Maximum	1.00		
Social Media Platforms Accessed				
		Frequency	Per cent	Cumulative Percent
Valid	Facebook	107	28.5	28.5
	WhatsApp	108	28.8	57.3
	Twitter	60	16.0	73.3
	Telegram	21	5.6	78.9
	Instagram	58	15.5	94.4
	TikTok	21	5.6	100.0
	Total	375	100.0	
	Mean	2.674	Median	2.00
	Std. Deviation	1.583	Minimum	1.00
	Maximum	6.00		
Prolonged Social Media Usage				
		Frequency	Per cent	Cumulative Percent
Valid	Daily	219	58.4	58.4
	Weekly	151	40.3	98.7
	Monthly	3	.8	99.5
	Rarely	2	.5	100.0
	Total	375	100.0	
	Mean	1.436	Median	1.000
	Std. Deviation	0.542	Minimum	1.00
	Maximum	4.000		
Sexual Contents				
		Frequency	Per cent	Cumulative Percent

Valid	Yes	370	98.7	98.7
	No	5	1.3	100.0
	Total	375	100.0	
	Mean	1.00	Median	1.00
	Std. Deviation	0.000	Minimum	1.00
	Maximum	1.00		
Hours on social media platforms				
		Frequency	Per cent	Cumulative Percent
Valid	1-2 hours	4	1.1	1.1
	2-4 hours	70	18.7	19.7
	4-6 hours	201	53.6	73.3
	6 hours above	100	26.7	100.0
	Total	375	100.0	
	Mean	3.058	Median	3.000
	Std. Deviation	0.727	Minimum	1.00
	Maximum	4.00		

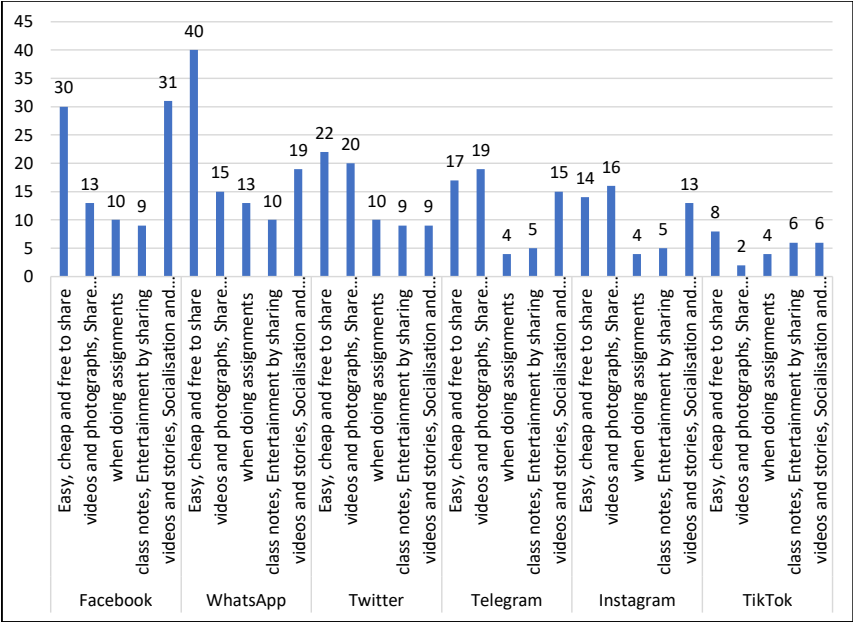
Source: Author (2023)

The results reported in Table 4.3 showed newly admitted adolescents in selected universities in the Federal Capital Territory's exposure to and usage of social media platforms. From the results, it can be inferred that all 375 respondents (100%) have access to the internet and a registered social media account. This indicates that the entire sample population has internet access and is a user of various social media platforms, thus demonstrating high digital connectivity. The study's objective of ensuring that the respondents from the six universities in the Federal Capital Territory are users of various social media platforms and have access to the internet was achieved to ensure that the study findings are robust and represent respondents' experience and exposure.

Social Media Platforms Accessed: From the results, 107 (28.5%) of the respondents are users of Facebook social media platform, 108 (28.8%) WhatsApp, 60 (16.0%) Twitter, 21 (5.6%), Instagram 58 (15.5%) and TikTok 21 (5.6%). Most respondents access multiple social media platforms, with Facebook and WhatsApp being the most commonly used for posting pictures, watching videos and messaging. Twitter is known for its real-time updates and short-form content. Telegram is a messaging app known for its security features. Instagram is popular for sharing photos and videos. TikTok is known for short video content. These results suggest that Facebook and WhatsApp are the most popular social media platforms among the surveyed individuals. In summary, the data shows a clear preference for accessing social media on smartphones, with Facebook and WhatsApp being the top platforms. The mean value of 2.674 suggests that, on average, respondents have access to approximately 2.67 (≈ 3) different social media platforms.

Prolonged Social Media Usage: The results indicated that 219 (58.4%) of the respondents access the various social media platforms daily, 151 (40.3%) weekly, 3 (0.8%) monthly and 2 (0.5%) rarely access the various social media platforms. The mean value of 1.436 suggests that, on average, a substantial portion of respondents (58.4%) use social media platforms daily.

Exposure to Sexual Content: The results indicated that 370 (98.7%) of the respondents reported exposure to sexual content on social media, while a small percentage, 5 (1.3%), reported no exposure. The mean value of 1.013 suggests that, on average, a majority (98.7%) of respondents say exposure to sexual content on social media daily.



Source: Author (2023)

Figure 10: Reasons for Accessing the Various Social Media Platforms

Hours on Social Media Platforms: From the results, it can be inferred that 4 (1.1%) of the respondents spent at least 1-2 hours on the various social media platforms, 70 (18.7) 2-4 hours, 201(53.6%) 4-6hours, 100 (26.7%) 6 hours and above. The mean value of 3.058 suggests that, on average, respondents spend around 3 hours on social media platforms daily.

Facebook: Easy, cheap, and free to share: (30) respondents use Facebook because it is easy, inexpensive, and free to share content. This suggests that Facebook's user-friendly interface and cost-free sharing feature appeal to many users. Videos and photographs share knowledge/information: (13) respondents use Facebook to share videos and photographs and knowledge/information. This indicates that Facebook is a multimedia-sharing platform for disseminating information. When doing assignments: (10) respondents use Facebook when working on assignments. This suggests that Facebook might provide a distraction or a way to take breaks during academic tasks. Class notes and entertainment by sharing: (9) Respondents use Facebook to share class notes and entertainment

content. This indicates that Facebook is used for both educational and recreational purposes. Socialisation and meeting new people: (31) respondents use Facebook for socialising and meeting new people. This suggests that Facebook plays a significant role in connecting individuals and facilitating social interactions.

WhatsApp: Easy, cheap, and free to share: (40) respondents use WhatsApp because it is easy, inexpensive, and free for sharing. WhatsApp's convenience and cost-effective nature make it a popular choice. Videos and photographs, share knowledge/information: (15) respondents use WhatsApp to share videos and photographs and to disseminate knowledge/information. This indicates that WhatsApp is a messaging app platform for content sharing and information exchange. When doing assignments: (13) respondents use WhatsApp, suggesting it might be a tool for collaboration and communication during academic work. Class notes, entertainment by sharing: (10) respondents use WhatsApp to share class notes and for entertainment purposes through content sharing. It has a dual role in both education and leisure. Socialisation and meeting new people: (19) Respondents use WhatsApp for socialising and meeting new people, highlighting its role in personal communication and networking.

Twitter: Easy, cheap, and free to share: (22) respondents use Twitter because it is easy, inexpensive, and accessible. Twitter's simplicity and accessibility are attractive to users. Videos and photographs, share knowledge/information: (20) respondents use Twitter to share videos and photographs and to disseminate knowledge/information. Twitter's concise format is suitable for quick information sharing. When doing assignments: (10) respondents use Twitter when working on assignments, possibly for short breaks or to access relevant content. Class notes and entertainment by sharing: (9) Respondents use Twitter to share class notes and entertainment through content sharing. It serves both educational and leisure purposes. Socialisation and meeting new people: (9) Respondents use Twitter for socialising and meeting new people, indicating that Twitter also plays a role in connecting individuals.

Telegram: Easy, cheap, and free to share: (17) respondents use Telegram because it is easy, inexpensive, and accessible. Telegram's focus on privacy and security may appeal to some users. Videos and photographs, share knowledge/information: (19) respondents use Telegram to share videos and photographs and to disseminate knowledge/information. Telegram's emphasis on multimedia sharing and chat groups may contribute to this. When doing assignments: (4) respondents use Telegram, suggesting it might be used for academic discussions or collaboration. Class notes, Entertainment by sharing: (5) respondents use Telegram for sharing class notes and entertainment through content sharing. It has a role in education and entertainment. Socialisation and meeting new people: (15) Respondents use Telegram for socialising and meeting new people, reflecting its role in personal communication.

Instagram: Easy, cheap, and free to share: (14) respondents use Instagram because it is easy, inexpensive, and free. Instagram's visual focus makes it suitable for sharing photos and videos. Videos and photographs, share knowledge/information: (16) respondents use Instagram to share videos and photographs and to disseminate knowledge/information. It is primarily a visual content-sharing platform. When doing assignments: (4) respondents use Instagram, suggesting it might be used for short breaks or as a source of inspiration. Class notes, Entertainment by sharing: (5) respondents use Instagram for sharing class notes and entertainment through content sharing. It has a role in education and leisure. Socialisation and meeting new people: (13) respondents use Instagram for socialising and meeting new people, highlighting its role in personal networking and self-expression.

TikTok: Easy, cheap, and free to share: (8) respondents use TikTok because it is easy, inexpensive, and free for sharing. TikTok's focus on short video content is its primary attraction. Videos and photographs, share knowledge/information: (2) respondents use TikTok to share videos and photographs and to disseminate knowledge/information. While less common for informational purposes, it is used for multimedia sharing.

When doing assignments: (4) respondents use TikTok, suggesting it might serve as a brief diversion during academic tasks. Class notes, Entertainment by sharing: (6) respondents use TikTok for sharing class notes and entertainment through content sharing. It is used for both educational and recreational purposes. Socialisation and meeting new people: (6) Respondents use TikTok for socialising and meeting new people, indicating that it fosters social connections through video content.

These results show that each social media platform has unique strengths and features that cater to different user needs and preferences. While some platforms are primarily used for socialisation and entertainment, others serve as tools for information sharing and educational purposes. The understanding of these usage patterns is significant in their influence on users.

4.4.1 Respondents’ Sexual Behaviours and social media usage

Table 4.4: Sexual Behaviours and social media usage

		Relationship Status		
		Frequency	Per cent	Cumulative Percent
Valid	Yes	360	96.0	96.0
	No	15	4.0	100.0
	Total	375	100.0	
	Mean	1.040	Median	1.00
	Std. Deviation	0.196	Minimum	1.00
	Maximum	2.00		
		Sexual Activity (Have sex before)		
		Frequency	Per cent	Cumulative Percent
Valid	Yes	344	91.7	91.7
	No	31	8.3	100.0
	Total	375	100.0	

	Mean	1.082	Median	1.00
	Std. Deviation	0.2757	Minimum	1.00
	Maximum	1.00		
Have Engaged in Risky Sexual Behaviours				
		Frequency	Per cent	Cumulative Percent
Valid	Yes	190	50.7	50.7
	No	178	47.5	98.1
	Not really	7	1.9	100.0
	Total	375	100.0	
	Mean	1.512	Median	1.00
	Std. Deviation	0.5366	Minimum	1.00
	Maximum	3.00		
Type of Risky Sexual Behaviours				
		Frequency	Per cent	Cumulative Percent
Valid	Multiple Sexual Partners	155	41.3	41.3
	Unprotected Sex	210	56.0	97.3
	Transaction Sex (sex for cash or other benefits) (Sugar daddy or mummy)	10	2.7	100.0
	Total	375	100.0	
	Mean	1.6133	Median	2.000
	Std. Deviation	0.5396	Minimum	1.00
	Maximum	3.00		
Sexual Partners				
		Frequency	Per cent	Cumulative Percent

Valid	One	103	27.5	27.5
	Two	121	32.3	59.7
	Three	79	21.1	80.8
	Four	35	9.3	90.1
	Five and above	37	9.9	100.0
	Total	375	100.0	
	Mean	2.418	Median	2.000
	Std. Deviation	1.255	Minimum	1.00
	Maximum	5.00		

Source: Author (2023)

The results reported in Table 4.5 showed relationship status, sexual activity, engagement in risky sexual behaviours, types of risky sexual behaviours, and the number of sexual partners among a sample population of 375 respondents newly admitted into the six sample universities in the Federal Capital Territory.

Relationship Status: From the results, 375 (96%) respondents are in a relationship, while 4 (15%) reported not being in a relationship. The mean value of 1.040 suggests that, on average, respondents are more likely to be in a relationship. This indicates that 96% of the sample population is in a relationship.

Sexual Activity (Have sex before): The results indicate that 344 (91.7%) of the respondents have engaged in sexual activity, while 31 (8.3%) reported not having engaged in sexual activity. The mean value of 1.082 suggests that, on average, respondents are more likely to have had sexual experiences. In summary, the result from relationship status and having engaged in sexual activity indicates that a significant portion of the sample population is in relationships and has engaged in sexual activity (have sex before) daily.

Engagement in Risky Sexual Behaviors: From the reported results, it can be inferred that 50.7% of respondents (190 out of 375) reported engaging in risky sexual behaviours, 47.5% (178 out of 375) reported not engaging in risky sexual behaviours, and 1.9% (7 out of 375) were unsure if their sexual activity infers risky sexual behaviours. The mean value of 1.512 indicates that, on average, respondents are somewhat inclined to engage in risky sexual behaviours.

Type of Risky Sexual Behaviours: The results obtained from 375 respondents newly admitted and selected from universities in the Federal Capital Territory showed that 155 (41.3%) have multiple sexual partners, 210 (56.0%) had unprotected sex, 10 (2.7%) engage transactional sex (sex for cash or other benefits). The mean value of 1.6133 suggests that, on average, respondents are more likely to engage in unprotected sex, which in turn will lead to unwanted pregnancy, sexually transmitted diseases (HIV, Aids) and others. In summary, respondents reporting engaging in risky sexual behaviours also engage in unprotected sex daily as the most common type of risky sexual behaviour.

Sexual Partners: The results obtained from 375 respondents newly admitted and selected from universities in the Federal Capital Territory showed that 103(27.5%) have one sexual partner, 121 (32.3%) have two sexual partners, 79 (21.1%) have three sexual partners, 35 (9.3%) have four sexual partners and 37 (9.9%) have five sexual partners and above. The mean value of 2.418 indicates that, on average, respondents have had more than (2) sexual partners. These findings suggest that peer pressure and social norms, access to sexual information, exposure to sexual content, communication and peer influence, online dating and hookup culture, body image and self-esteem, privacy and sexting, cyberbullying and harassment and other collective influences on sexual behaviour and relationships among newly admitted adolescents in the selected universities in the Federal Capital Territory.

4.5 Factors Influencing Sexual Behaviour And Relationships.

Table 4.5.1: Sexual Behaviours and social media usage

Factors related to sexual behaviour and relationships				
		Frequency	Per cent	Cumulative Percent
Valid	Peer Pressure and Social Norms	63	16.8	16.8
	Access to Sexual Information	60	16.0	32.8
	Exposure to Sexual Content	62	16.5	49.3
	Communication and Peer Influence	54	14.4	63.7
	Body Image and Self-Esteem	50	13.3	77.1
	Privacy and Sexting	50	13.3	90.4
	Cyberbullying and Harassment	36	9.6	100.0
	Total	375	100.0	
	Mean	3.698	Median	4.000
	Std. Deviation	1.940	Minimum	1.00
	Maximum	7.00		

Source: Author (2023)

The aim is to assess factors influencing sexual behaviour and relationships among adolescents newly admitted into the selected universities in the Federal Capital Territory. From the results reported in Table 4.5.1, factors associated with the potential influence of social media on adolescent sexual behaviours. The results indicate that:

Peer Pressure and Social Norms: 16.8% of respondents identified peer pressure and social norms as factors related to sexual behaviour and relationships influenced by social media. This suggests that

a significant portion of respondents acknowledge the role of social pressure and norms in shaping their sexual behaviours and relationships in the context of social media.

Access to Sexual Information: 16.0% of respondents reported that access to sexual information is a factor influenced by social media. This indicates that sexual information, particularly about sexual health, contraception, and relationships online, can impact their sexual knowledge and decisions.

Exposure to Sexual Content: 16.5% of respondents noted exposure to sexual content as social media influence a factor related to sexual behaviour and relationships. This suggests that frequent exposure can affect their attitudes, desensitise them to sexual content, and influence their expectations about sex and relationships.

Communication and Peer Influence: 14.4% of respondents identified communication and peer influence as factors influenced by social media. This highlights the role of online communication and interactions with peers in shaping their attitudes and behaviours regarding sexual behaviour and relationships.

Body Image and Self-Esteem: 13.3% of respondents reported body image and self-esteem as factors influenced by social media. Social media often emphasises physical appearance and idealised body images. Adolescents experiencing body image-related pressures and self-esteem issues can have their self-perception and body image, potentially influencing their sexual behaviours and relationships.

Privacy and Sexting: 13.3% of respondents reported privacy and sexting as social media influence factors related to sexual behaviour and relationships. This suggests that sending explicit messages or images through social media and a lack of awareness about the potential consequences or peer pressure to participate can lead to risky behaviours.

Cyberbullying and Harassment: 9.6% of respondents identified cyberbullying and harassment as a factor influenced by social media. This indicates that some respondents recognise the negative impact of online harassment on their sexual behaviours and relationships.

In summary, the mean value of 3.698 indicates that, on average, respondents perceive several of these factors as being influenced by social media to affect their sexual behaviours and relationships moderately.

Table 4.5.2 Degree of social media impact on sexual behaviours and relationships

Social Media on Sexual Behaviours				
		Frequency	Per cent	Cumulative Percent
Valid	Strongly Disagree	69	18.4	18.4
	Disagree	7	1.9	20.3
	Agree	99	26.4	46.7
	Strongly Agree	200	53.3	100.0
	Total	375	100.0	
Mean		3.146	Median	4.000
Std. Deviation		1.1268	Minimum	1.00
Maximum		4.00		

Source: Author (2023)

From the results presented in Table 4.5.2, respondents revealed that social media influences sexual behaviours. 69 (18.4%) strongly disagree, 7 (1.9%) disagree, 99 (26.4%) agree, and 200 (53.3%) strongly agree that social media influences sexual behaviours. The mean value of 3.146 indicates respondents’ agreement regarding the influence of social media on sexual behaviours. This indicates that, as a group, they perceive social media as having a moderate impact on sexual behaviours, with a median value of 4.000. These findings indicate that, within the context of the selected universities and the sample population of newly admitted adolescents, there is recognition of the potential influence of social media on sexual behaviours and relationships. Thus, supporting the results reported in Table 4.5.2

4.6 Discussion of Findings

Research Question One: Which are the most commonly assessed social media platforms by 100-level adolescents in selected universities in the Federal Capital Territory, Nigeria?

The study investigated the effect of social media usage on the sexual behaviours of adolescents in tertiary institutions within the Federal Capital Territory, Abuja, Nigeria. The study determined that undergraduate adolescents (18-21 years) newly admitted into 100 level in the six universities in the Federal Capital Territory were already exposed to usage of social media platforms. Findings infer that all 375 respondents (100%) have internet access and at least one registered social media account. This indicates that the entire sample population has internet access and are users of various social media platforms, thus demonstrating high digital connectivity.

Study findings reveal that all questionnaire respondents do access multiple social media platforms. The platforms are Facebook, WhatsApp, Twitter, Telegram, Instagram and TikTok, with Facebook and WhatsApp being commonly used for posting pictures, watching videos and instant messaging. Twitter use is used for real-time updates and short-form content. Telegram messaging app exhibits security features, while Instagram is famous for sharing photos and videos. TikTok provides accessibility for sharing short video content. Findings showcase that Facebook and WhatsApp are the respondents' most popular social media platforms. A further finding indicates a clear preference for accessing social media on smartphones, with Facebook and WhatsApp being the top platforms.

Social media networks are today's most used communication methods (Kaya & Bicen, 2016). The introduction of social media networking has provided an outlet for adolescents to use and seek gratification through those sources. Based on the models developed by Katz, Blumler, and Gurevitch (1973), adolescent undergraduate respondents seek out social media in all outlets falling within the prescribed need categories. Findings from focus group discussion (FGD) in consonance indicate that the most effectively used social media platforms are Facebook and WhatsApp. One FGD participant

stated that they use social media to know the happenings from around the world and not only about personal-related issues.

The study findings demonstrate the importance of the Uses and Gratifications theory (Katz, 1987) to social media. The study applied the Uses and Gratifications Theory to understand better why newly admitted 100-level undergraduate adolescents (18-21 years) seek to use social media. In consonance with the study findings, Whiting and Williams (2013) identified ten uses and gratifications for using social media. The ten uses and gratifications are social interaction, information seeking, passing time, entertainment, relaxation, communication, convenience utility, expression of opinion, information sharing, and surveillance/knowledge about others. Research implications are that the uses and gratifications theory has specific relevance to social media and helps explain the many reasons why respondents use social media.

To that effect, the framework of the UGT theory implicates the study findings on how and why the audience uses social media. As alluded to by Haridakis and Hanson (2009) while expatiating on the mass communication theory by Mc Quail (2010), the main point of UGT theory stresses that there are distinct benefits adolescent undergraduate consumers of social media messages need or get or anticipate getting from a social media platform, network, or page. Otherwise, they may desert the social media platform and seek alternatives to satisfy their needs.

The UGT has been applied by Karimi, Génois, Wagner, Singer, and Strohmaier (2018) to compare the motivations for the use of social media by higher-education students from Iran, Malaysia, the United Kingdom, and South Africa. Unlike other theoretical perspectives, UGT holds that audiences are responsible for choosing media to meet their desires and needs to achieve gratification. The UGT theoretical implication is that social media competes against other information sources for adolescent users' gratification.

Several research studies have examined the use of social media networks in different fields (Hegde, Chandran & Pattnaik, 2022). Findings in this study are comparable in some and divergent in others. Firstly, the current study reveals that Facebook is the most prevalent social media platform used by

adolescent undergraduate students, while YouTube is the least due to the cost of data. This finding is different from that of Amoo, Adetoro and Olawale-Isaac (2013) on the effects of adolescents exposed to sexual content on social media in Nigeria, who found that YouTube is the most prevalent social media platform used among adolescents while LinkedIn was the lowest.

Nevertheless, signifying a change in trends, the later findings of Broom and Allen (2017) on social media and sexual behaviour among adolescents in the United States confirm the position of this study as it reports Facebook to be the most prevalent social media platform used by adolescents. In consonance with the study findings, Hegde, Chandran and Pattnaik (2022) aptly capture the situation that Social media networks are one of the most used communication methods by adolescents and highlight that Facebook is used for communication, entertainment and sharing news, pictures, and songs.

The study's findings are consistent with the Centers for Disease Control (CDC)(n.d.) findings that adolescents use mobile phones and the Web to interact with known and unknown peers to establish and maintain social connections. Such communication platforms are free of locale and time. They are relatively easy to use, making these interactions a new way to foster the development of adolescents' identity, self-expression, intimate relationships, and social well-being (Champion et al., 2016).

Compared with adults older than 25, youth between 12 and 24 are the most extensive users of new technology. They are more likely to be connected to the virtual world regardless of socioeconomic status (SES), race, or ethnicity. Social media platforms such as short message services (SMS or texting) and social networking sites (SNS) allow self-expression, intimacy, and privacy for adolescents. Adolescent users can set their preferences to convey messages about their social identity in the same manner that face-to-face interactions allow, but on a global scale and in contexts that are not continuously monitored by adults (Gilliard-Matthews et al., 2015).

Krasnova et al. (2008) state that using social networks can satisfy esteem as users can present themselves to friends who think similarly and have common interests. Tobi, Ma'on, and Ghazali (2013) mentioned the popularity of online social networks and conducted a study assessing if their use impacted Malaysian students' social and psychological health. The authors suggest that it has a positive effect on the health of the students. Tobi et al. (2013) further mention that this positively impacts user confidence. In addition, Kimball, Rheingold (2003) and Krasnova et al. (2008) argue that using social networking sites increases user happiness and can reduce depression if Facebook envy is controlled (Tandoc et al., 2015). However, it is also argued that social network use can depress people (Błachnio et al., 2015).

Research Question Two: What are the types of explicit, age-inappropriate sexual content undergraduate 100 levels adolescents are exposed to on social media in selected universities in the Federal Capital Territory, Nigeria?

Undergraduate 100-level adolescents, defined as 18-21 years of age in the study, undergo rapid physical, emotional, and cognitive development (Brown et al. (2006). This period is marked by an increased importance on social relationships focused on developing a sense of self and personal identity. Given the importance of social relationships and the inability to fully control impulsive behaviours during adolescence, Champion, Young and Rew (2016) amplify some concerns about social media's role in adolescents' lives.

Study findings reveal that respondents often use social media platforms to share explicit sexual content like X-rated videos, sex-related photos, sexting, erotic WhatsApp messages and pornography. Undergraduate 100-level adolescents exposed to social media in universities in the Federal Capital Territory, Nigeria, engage in private conversations about sexual activity, which leads to the exchange of intimate messages and content that can arouse curiosity and influence risky sexual behaviour among adolescents.

The study findings are consistent with several studies. The findings of Arulogun et al. (2016) and others support the study's findings. De Graaf, H., Verbeek, M., Van den Borne, M., & Meijer, S. (2018); Chang (2017) reveal that the availability of smartphones and internet access influence the extent to which adolescents are exposed to and engage with sexual content on social media. According to Fevriasanty, Suyanto, Soedirham, Sugihartati, & Ahsan (2021), due to the rapid increase in the number of internet users, there is a possibility that adolescents might engage in online events that could increase the likelihood of them involving themselves in sexual relations with the opposite sex.

Eleuteri, Saladino and Verrastro (2017) are of the view that social media access allows adolescents to obtain information about their sexuality and that of the people around them. In addition, they open internet sites that offer pornography because their curiosity drives them to know certain things about the sexuality of the opposite sex or because of coincidental factors that may cause them to open these sites. Male adolescents have been known to open more pornography sites as compared to their female counterparts.

Furthermore, social media platforms containing sexual content attract their attention because the majority of the media offer videos and images that increase their interest and need to try out what they have seen in the real world. Moreover, adolescents also use social media communication to explore their sexual desires, where the habits of these individuals can hurt their sexual activities and health, such as unprotected sex with a casual partner. Hence, the role of parents becomes crucial when trying to limit adolescents' access to social media (Fevriasanty et al. (2021).

Research Question Three - Does social media exposure influence risky sexual behaviours of 100-level adolescents in universities in the Federal Capital Territory, Nigeria?

The study points toward social media platforms as an integral part of adolescents' lives and influencing their sexual attitudes and behaviours. Adolescent respondents habitually use these social media platforms and networks to explore, share, and receive information related to sexuality,

relationships, and body image. Further findings reveal that adolescents may encounter misinformation, harmful advice, and unrealistic expectations regarding their sexual health on these social media platforms and that affects their understanding of sexual behaviour.

The study findings show that social media exposure significantly influences the sexual behaviour of adolescents in universities in the Federal Capital Territory, Nigeria. An increase in adolescent's social media exposure increases the influence on their sexual risk behaviour. This is evidenced by the diversity of factors contributing to the influence. These factors include social dynamics, cultural diversity, religious teachings, the quality of sex education, economic disparities, privacy and security concerns, and gender and age differences. Adolescents are highly susceptible to peer pressure, and social media provides a platform for peer interactions which influence an individual's sexual behaviour.

The cultural diversity of Nigeria exposes adolescents to various cultural perspectives on sexual behaviour through social media. Findings reflect the influence of cultural background on individual responses. Nigeria is deeply religious, and religious values play a significant role in shaping attitudes towards sexuality. Social media exposes adolescents to differing interpretations of religious teachings, contributing to response variations. The findings of Moreno and Whitehill (2014) support the findings of the study, showing that religious values play a significant role in shaping attitudes towards sexuality.

According to the Pew Research Center (2018a,b), adolescents primarily post positive, non-deviant content on social media. Risk behaviour content posted by a minority of social media influencers and famous peers to have greater reach and desirability influences the social media context. Due to the publicity and widespread availability, quantifiable reinforcement influences risky sexual behaviours. Tarisai and Manhivi (2017) corroborate the study's findings, indicating that cheap or inexpensive cell phones have made it possible for people to access social media platforms. The findings of Anderson and Jiang (2018) and Allcott et al. (2019) support the study's findings in reporting that online safety and privacy impact how adolescents interact with social media regarding sexual activities.

Policymakers, educators, and parents must be aware of these influences to develop effective strategies for guiding adolescents in their interactions with social media. Promoting media literacy, sex education, and open dialogue about the impact of social media on sexual behaviour is crucial. Additionally, efforts to provide accurate and comprehensive sexual health information to adolescents through trusted sources will assist in mitigating potential negative influences.

The findings from the FDGs support the findings of a survey in that social media exposure significantly influences sexual risk behaviour among adolescents in universities in the Federal Capital Territory, Nigeria. Interview with key informants from the selected universities reveals that social media exposure influencing risky sexual behaviour of adolescents is a complex and multifaceted issue. K4, a key informant, reveals that adolescents' sexual behaviours are influenced by a multitude of factors, and social media is becoming increasingly prominent in shaping these behaviours. As such, adolescents' easy access to explicit content on social media platforms may lead to risky sexual behaviour. I will schedule some time for us to connect.

Study findings indicate that social media exposes adolescents to peer influences where they may feel pressured to engage in sexual activities to fit in or conform to perceived norms. Platforms like Instagram, Snapchat, Facebook Messenger and WhatsApp facilitate sexting and online relationships, which can impact adolescents' understanding of intimacy and consent. These platforms emphasise images and videos, which influence body image perception and may lead to self-esteem issues and risky behaviour. Dating apps (e.g., Tinder and Badoo) can lead to casual encounters and hook-up culture among adolescents. Adolescents might encounter misleading or harmful information regarding sexual health on these platforms, impacting their understanding of sexual behaviour.

Traditional values in Nigerian culture often emphasise abstinence and chastity before marriage. However, social media has recently challenged these norms by promoting more permissive behaviours (Baseline study, 2022). Nigeria is a religiously diverse country, and religious teachings can influence attitudes towards sexuality and relationships. Social media in recent times has introduced contrasting perspectives. Urban areas within the Federal Capital Territory may experience different influences due to higher internet access and urbanisation of rural regions.

According to the K6 key informant, social media influence on the sexual behaviour of adolescents is diverse with its consequences. Positive impacts include increased access to sexual education and the ability to discuss sexual health openly. Negative impacts include the promotion of risky behaviours, the perpetuation of stereotypes, and exposure to explicit content.

The findings promote digital literacy, sexual education, and mental health support among adolescents to navigate social media's influence effectively. Parental involvement and guidance are crucial in helping adolescents understand and manage their online experiences. Collaboration between educational institutions, healthcare providers, parents, and government agencies is essential to address these complex issues. A nuanced approach requires the consideration of cultural, regional, and individual differences while managing both the positive and negative aspects of social media exposure.

Nonetheless, according to K2, a key informant interview respondent, diverse platforms have varying effects on adolescents' sexual behaviours. He explains that visual platforms (e.g., Instagram, TikTok, Facebook, Telegram) promote idealised body images and can lead to issues and unrealistic standards, potentially impacting self-esteem and self-worth. Messaging apps (e.g., WhatsApp, Snapchat) facilitate sexting and the sharing of explicit content, which can lead to premature sexual exploration and privacy concerns. Dating apps (e.g., Tinder, Badoo) encourage casual sexual encounters and hookup culture among adolescents, potentially promoting risky sexual behaviour.

Several studies on sexual content in the media have often used a risk or deficit perspective, focusing on the effects of sexual content in the media on the age of sexual initiation, risky sexual behaviours, and sexual victimisation (Ybarra et al., 2014). Findings from the study contribute to empirical literature having been implicated through the application of the Integrative Model of Behavior Change (IMBC), which combines theoretical constructs from social cognitive theory and the theories of Reasoned Action and Planned Behavior (Fishbein & Yzer, 2003) to understand better the relationship between social media use and sexual risk behaviours among 100 levels undergraduate adolescents (Stevens et al., 2017).

Triangulated results from the application of the Integrative Model of Behavior Change (IMBC) framework show that social media content and platforms have a significant impact on the risky sexual behaviour of 100-level adolescent undergraduates in universities in the Federal Capital Territory, Nigeria. Findings indicate that content shared on social media, such as sexual pictures, videos, messages, and educational material, significantly contributes to shaping the attitudes and behaviours of adolescents. Social, cultural, and religious factors and privacy and security considerations contribute to the overall influence factor.

The study also deployed the postulations of the Uses and Gratification theory (UGT) (Katz, 1987) in ascertaining the influence of accessed social media platforms on the risky sexual behaviours of respondents. UGT, as an audience-centred approach, diverges from other media effect theories that question ‘what do media do to people’ and focuses on ‘what do people do with media’. UGT has implications with findings from the study based on the assumption that users and the audience choose media that will satisfy their given needs and allow one to enhance knowledge, relaxation, social interactions, companionship, diversion, or escape.

The application of the influence of social media on risky sexual behaviour to the Uses and Gratifications Theory has been positive in the study. Landry, Turner, Vyas, and Wood (2017) highlight the necessity of UGT in understanding the proliferation and success of social networking platforms mediated communication forms, seeking gratification through those sources, and choosing to seek out media content in one platform, all falling within the proscribed categories of need.

The findings from the FDGs support the findings from survey respondents that social media content and platforms have a significant impact on the risky sexual behaviour of 100-level undergraduate adolescents in the Federal Capital Territory, Nigeria. This is consistent with findings from key informants, which reveal that social media content and platforms influence adolescents’ risky sexual behaviour and is a crucial and multifaceted issue that needs careful consideration.

The study findings are supported by Ainin, Naqshbandi, Moghavvemi and Jaafar (2015), who emphasise that perception and interactions with peers and situations impact people's comprehension

and conduct. This is an integral part of the social learning process. According to the Social Learning Theory (Bandura (1977), models serve as an essential source for observational learning.

Social learning theory provides insights into the actuality that learning behaviour can be influenced by what adolescents observe on social media platforms such as Twitter, Facebook, Instagram, WhatsApp, and LinkedIn. Henceforth, they may wind up mimicking activities performed or communicated in social media, both great and terrible, with their feelings, practices, and states of mind towards learning. The SLT trusts that social networking ought to give positive examples as behavioural resultant effects may influence social performance positively or adversely (Myers, 2010).

Social media usage in the last decade has had comprehensive and far-reaching impacts on adolescent sexual behaviours (Temple-Smith et al., 2015). Substantiating this finding, Pavlik and MacIntoch (2015) note that there is an increase in the occurrence of sex discussions and demonstrations of sexual acts through social media. The associated risks with the abuse of social media for sex, having multiple sexual partners and sexting are identified by Hayes (2010) as one of the causes of depression and sexually transmitted diseases like HIV/AIDS and other sexually transmitted diseases. According to the National Agency for the Control of AIDS (NACA) (2018), 260,000 adolescents aged 10-19 are living with HIV, which represents 7.5% of Nigeria's HIV-positive population.

Social networking through social media has increasingly influenced the sexual behaviour of emerging adults in Nigeria over the years (Nwagwu, 2017). These risky behaviours are on the rise among Nigerian youth, particularly among undergraduates in urban areas (Yakubu & Salisu, 2018). In Ethiopia, Habesha, Aderaw, and Lakew (2015) observe that preparatory school adolescents watch sex films/movies and are exposed to sexually explicit texts. In Kenya, Kimemia and Mugambi (2016) find a positive nexus between access to social media and the high prevalence of teenage pregnancy among adolescent girls.

Adolescent exposure to sexual content in the media has been linked to early sexual initiation and risky sexual behaviour (Bleakley et al., 2008; Bleakley et al., 2009; O'Hara, Gibbons, Gerrard, Li, & Sargent, 2012), and sexual victimisation, including intimidation and rape (Ybarra et al., 2014). Although sexual media exposure predicts the broadening of sexual engagement among youth,

baseline sexual activity also predicts sexual media exposure, illustrating a recursive relationship (Bleakley et al., 2008). Merely focusing on how exposure affects behaviour ignores the complex dynamic that requires scholars to treat exposure tendencies as behaviours themselves (Bleakley et al., 2008). This may be particularly true in the case of sexual health information exposure on the Internet, considering the information is more likely to be intentionally sought.

Social media and online networking platforms provide a significant source of sexual behaviour modelling. Adolescents may suffer from internalising ideal standards from inappropriate body image depiction and overambitious sexual activity demonstration, thus resulting in poor self-esteem and socially unacceptable channels of sexual expression and needs. This can thus contribute to inappropriate social and sexual withdrawal in anticipation of perceived performed and unattainable ideals and standards, resulting in a vicious cycle (Kaya & Bicen, 2016)

Besides, some study findings showcase that some social media platforms provide sexual education and awareness content that is informative but that, nevertheless, the influence of such content on risky sexual behaviour varies by its quality and accuracy (El et al. (2016); Envuladu, de Kwaak, Zwanikken & Zoakah, (2017)). To address this issue, it is crucial to promote comprehensive and accurate sex education, encourage critical thinking skills, and provide a safe space for adolescents to discuss and navigate the impact of social media content on their sexual behaviour. Parents, educators, and policymakers must work together to develop strategies that empower adolescents to make informed and responsible decisions in the digital age.

The study findings indicate the need to incorporate digital literacy programs in schools to teach adolescents how to critically assess the credibility and reliability of online content, especially related to sexual health. Open communication must be encouraged through the creation of a safe space for adolescents to discuss their online experiences, including sexual content they encounter, and provide guidance on responsible online behaviour. Parental involvement in their children's online activities and educating them about the potential impact of social media on sexual behaviour must be encouraged. Monitoring and regulating social media content to minimise the exposure of explicit or

harmful content to adolescents is key. It is essential to provide guidance, education, and support to help them develop healthy attitudes and behaviours regarding sexuality in the age of social media.

Research Question Four: What is the role of social media peer interactions and online communities on the sexual behaviour of adolescents in universities in the Federal Capital Territory, Nigeria?

Study findings show that social media peer interactions and online communities significantly influence sexual behaviours among adolescents in selected universities in the Federal Capital Territory, Nigeria. The role of social media peer interactions and online communities in influencing the sexual behaviour of adolescents in the Federal Capital Territory, Nigeria, is a multifaceted issue. As a result, factors include peer dynamics, cultural norms, religious teachings, the quality of sex education, and online safety. Gender and age differences further complicate the picture.

Study findings indicate that adolescents are highly influenced by their peers, and this influence extends to the online realm. Online interactions shape the perceptions, attitudes, and behaviours of adolescents, especially when it comes to sexual matters. Online communities offer support and guidance related to sexual behaviour. Positive peer interactions within these communities have a constructive influence, while negative interactions have the opposite effect.

The findings from the FDGs support the findings of this study on the significant influence of social media content and platforms on the sexual behaviour of adolescents in the selected universities in the Federal Capital Territory, Nigeria. Key informants reveal that social media peer interactions and online communities significantly influence the sexual behaviour of adolescents in the selected universities in the Federal Capital Territory, Nigeria. Essien, L. U (2023), one of the key informants, reveals that:

“Facebook is a platform for various interactions, including support groups and discussions. Positive and negative influences can coexist. Instagram focuses on visual content that often emphasises idealised body images, potentially impacting body image perception and self-esteem. Twitter allows for open conversations and discussions but also has the potential for exposure to explicit

or harmful content. Online Forums and Chat Apps can be sources of misinformation, potentially leading to misunderstandings regarding sexual health and relationships. Dating Apps encourage romantic or sexual interactions and can influence dating and hookup behaviours. Another key informant revealed that social media peer interactions and online communities- (Key Informant Interview at Baze University, November 16, 2022).

Musa, M (20230, another key informant, emphasises that:

Peer interactions and online communities on social media can significantly impact adolescents' sexual behaviours. Adolescents often share and receive information related to sexual health, relationships, and intimacy within their peer networks and online communities. Adolescents may experience peer pressure to conform to perceived norms regarding sexual behaviour, relationships, or appearance. Positive interactions within online communities can provide support and empowerment, fostering healthy discussions and attitudes. (Key Informant Interview at Veritas University, April 16, 2023).

These findings encourage open and constructive discussions among peers regarding sexual health, relationships, and body image. Implement comprehensive sexual education programs that address the influence of peer interactions and online communities, consent, and healthy relationships. Encourage parents to engage with their children's online activities, discuss their experiences, and provide guidance. Foster collaboration between universities, healthcare providers, parents, and government agencies to address these issues holistically. It is essential to provide guidance, education, and support to help them develop healthy attitudes and behaviours regarding sexuality in the digital age. On the effect of sexual content on various social media platforms, Godwin, G (2023), a key informant, reveals that:

Instagram is a visual platform with idealised body images that may impact self-esteem and body image perception, potentially influencing sexual behaviour.

Snapshot is known for facilitating sexting and sharing explicit content, thereby raising concerns about privacy, consent, and risky sexual behaviours. TikTok offers a wide range of content, including sexual education and misinformation, affecting adolescents' understanding of sex and relationships. Twitter allows for open discussions, where adolescents may encounter explicit or harmful content, potentially affecting their attitudes towards sex and relationships. (K1, Key Informant Interview at African University of Science and Technology, University, September 26, 2022).

The findings of Galupo, Davis, Gryniewicz and Mitchell (2014), Hayes (2010), and Ashiekpe and Uganda (2017) reveal that religious values play a significant role in shaping attitudes towards sexuality. Online communities and peer interactions expose adolescents to varying perspectives on sexual behaviour, potentially challenging or supporting religious teachings. Brown and L'Engle (2009), Kujuni (2012), Amoo, Adetoto, and Olawale-Isaac (2013) also reveal that peer interactions and online communities on sexual behaviour differ by gender.

Adolescents go through distinct stages of development, and their responses to peer interactions and online communities can vary based on age and maturity level (Asrese & Mekonnen, 2018). The findings of Brown and L'Engle (2009), Kujuni (2012); Amoo, Adetoto and Olawale-Isaac (2013), Galupo, Davis, Gryniewicz and Mitchell (2014); Hayes (2010), Ashiekpe and Uganda, (2017) Brown and L'Engle, (2009); Kujuni, (2012) substantiate the findings of the study.

Factors such as content exposure, peer interactions, online communities, personal characteristics, educational programs, and social support all play crucial roles in shaping an adolescent's attitudes and behaviours related to sexual health and relationships. The findings of Anderson et al. (2018), Arulogun et al. (2016), Boislard et al. (2012), and Cale et al. (2016) revealed that the influence of social media on the sexual behaviour of adolescents is a complex interplay of various factors. As such content encountered on social media plays a crucial role in interactions with peers on social media platforms, individual factors, such as age, gender, cultural background, and personal beliefs,

also influence how an adolescent interprets and responds to the content and interactions on social media.

The findings of the study corroborate the findings of Anderson et al. (2018), Arulogun et al. (2016), Boislard et al. (2012), Cale et al. (2016), Chang (2017), De Graaf et al. (2018); Envuladu, et, al (2017) El Achhab, et, al (2016) among others. These findings underscore the need for comprehensive sexual health education and support systems to help adolescents navigate the influence of social media in a healthy and informed manner.

To address this issue, it is essential to promote comprehensive and accurate sex education, encourage responsible online behaviour, and provide support for adolescents navigating the online world. Parents, educators, and policymakers must work together to guide adolescents in using online communities and peer interactions for positive and informed decision-making regarding their sexual behaviour. On cultural and regional considerations, the impact of social media on sexual behaviour may vary based on cultural and regional factors within the Federal Capital Territory. Tailor educational programs and support resources to respect cultural norms and values while addressing the challenges posed by social media.

Research Question Five: What is the effect of social media prolonged time usage on the sexual behaviour of adolescents in selected universities in the Federal Capital Territory, Nigeria?

The study findings show that social media's prolonged time of usage significantly influences adolescents' sexual behaviour in universities in the Federal Capital Territory, Nigeria. The influence of social media's prolonged time of usage on the sexual behaviour of adolescents is a multifaceted issue. It is not solely determined by the time spent on social media. There is relatively little variability or disagreement among respondents regarding the impact of social media's prolonged time of usage on adolescents' sexual behaviour.

The findings from the FDGs support the findings of this study on the significant influence of social media's prolonged time of usage on adolescents' sexual behaviour in selected universities in the Federal Capital Territory, Nigeria. Interviews with key informants from the selected universities

reveal that prolonged social media usage exposes adolescents to a wide range of sexual content, including explicit imagery, discussions, and advertisements. This exposure shapes their perceptions and attitudes towards sex and relationships.

The constant presence of sexual content on social media can normalise certain behaviours, leading adolescents to believe that they are expected to engage in sexual activities at an earlier age. As such, adolescents may feel pressure to mimic the behaviour of their peers or celebrities they follow on social media, which can lead to premature sexual exploration. Engaging in sexual activities or sharing intimate content online can raise privacy concerns, as the permanence of digital content may result in unintended consequences. Suleman, M (2023), key informants reveal that:

On the effect on academic activities, prolonged social media usage can distract students from academic responsibilities, affecting students' academic performance. On the impact on time management: Time spent on social media may displace time devoted to academic activities, leading to procrastination and reduced productivity. (Key informant inter at University of Abuja, May 06, 2023).

In consonance, the UGT answers the study findings and holds that adolescent undergraduates are responsible for choosing a particular medium to meet their needs (Katz et al., 1974). This implies that the amount of time invested in social media could affect students' time allocated to studies and their learning outcomes. Application of Uses and Gratification theory implicates findings from the study and shows a positive correlation between active time spent on Twitter and the gratification of a need with other users. Furthermore, the frequency of tweets and the number of replies and public messages mediated the relationship between Twitter users. This helps increase media use and gratification by satisfying the need for connection. The study findings show four needs for using Facebook groups -socialising, entertainment, self-status seeking, and information- pushing adolescents to spend extended time on the platform (Kaya & Bicen, 2016).

The study findings indicate the need to incorporate digital literacy programs in schools to help adolescents critically evaluate time spent on accessing online content, including distractions from

distributed and unsolicited online sexual material. Encourage students to establish a balance between social media use and academic activities. Time management skills should be promoted. Promote supportive online communities and peer groups that focus on positive sexual health discussions and body image perception.

The influence of prolonged social media usage impact on the sexual behaviour of adolescents in universities in the Federal Capital Territory, Nigeria, is significant. Adolescents need guidance to navigate the digital landscape safely and to develop healthy attitudes and behaviours regarding sexuality in the context of social media. Findings relate to the fact that Parents should be actively engaged in their children's online activities, guiding safe and responsible online behaviour.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Study

This study assessed the influence of social media on the sexual behaviour of adolescents in selected universities in the federal capital territory, Nigeria. This is because the federal capital territory is a metropolitan city housing adolescents from diverse cultural, social, and religious backgrounds, with massive access to various social media platforms that have a significant influence on their sexual behaviours in different universities within the federal capital territory.

Chapter One presented the Background of the Study by conceptualising the research variables of social media, risky sexual behaviour, and adolescence. The chapter also expounded the Statement of Problem, Research Questions, Objectives of the Study, Significance of the Study, Scope of the Study, and Limitations. Chapter two presented a review of related literature and is subdivided into subsections of Conceptual Framework, Conceptual Review of Previous Studies, Empirical review, Theoretical Review, and theoretical framework.

Chapter three elucidated the research methodology- the subsections are Research Design, Study Population, Sample Size and Sampling Techniques, Methods of Data Collection, Technique for Data Analysis and Justification of Methods. Chapter four covers data presentation and analysis and discussion of findings.

5.2 Key Findings of the study

- i. Social media exposure has a significant impact on adolescents' sexual behaviour in tertiary institutions in Abuja, Nigeria, based on gender. Specifically, the various social media platforms accessed have a significant influence on adolescent sexual behaviour in selected universities in the Federal Capital Territory, Nigeria. Social media has a considerable influence on sexual behaviour through exposure to sexual content.
- ii. Social media content and platforms have a significant impact on adolescents' sexual behaviour in selected universities in the Federal Capital Territory, Nigeria. This implied that

the type of content encountered on social media and the various platforms significantly influenced respondents' attitudes and behaviours related to sexual activity.

- iii. Social media peer interactions and online communities have had a significant impact on sexual behaviour. Interactions with peers on social media, as well as participation in online communities discussing sexual topics, influence respondents' attitudes and behaviours toward sexual activity and relationships.
- iv. Social prolonged time of usage has a significant impact on the sexual behaviour of adolescents in selected universities in the Federal Capital Territory, Nigeria. This implies that time spent on social media is influenced by content shared and topics discussed in privacy.

5.3 Contribution to Knowledge

The main contribution of the study is to provide empirical evidence and insights into the nexus and influence of social media on the sexual behaviour of adolescents in selected universities in the federal capital territory of Nigeria. Some potential contributions include:

- i. Scope and Segmentation: The study's focus on specific age groups (early and late adolescents) and the consideration of gender differences provide a nuanced understanding of how social media impacts different segments of the adolescent population. This segmentation acknowledges that adolescents are not a homogenous group, and their experiences and vulnerabilities vary significantly. This approach allows for more tailored interventions and policies that address the unique needs of different groups.
- ii. Comprehensive Metrics: The study's inclusion of comprehensive metrics for measuring sexual behaviour, encompassing attitudes, knowledge, risk perception, and actual behaviours, is a valuable contribution. The study provides a holistic view of the issue by considering these various dimensions. This comprehensive measurement approach is crucial for gaining a deeper understanding of the complex interplay between social media and adolescent sexual behaviour.
- iii. Longitudinal Insight: The longitudinal aspect of the study, tracking changes in social media

use and sexual behaviour over time, is a significant contribution. This longitudinal approach allows for assessing and identifying trends and patterns. It helps researchers and policymakers understand how social media influences sexual behaviour over time and whether certain behaviours are short-term or enduring.

- iv. Policy and Intervention Guidance: One of the most important contributions is the potential for informing the development of policies, educational programs, and interventions more closely aligned with the realities of Nigerian adolescents. By providing empirical evidence on the impact of social media, the study offers actionable insights for addressing the challenges posed by digital media in the context of adolescent sexual behaviour. This research has the potential to lead to evidence-based interventions that are more effective in promoting safer and healthier sexual behaviours among adolescents.

5.4 Conclusion

Social media has been argued to be critical in increasing and sustaining the sexual behaviours of adolescents in the selected universities in the federal capital territory, Nigeria. Therefore, this study accessed the influence of the various social media platforms, exposure, content and platforms, peer interactions, online communities and prolonged usage on adolescents' sexual behaviours.

Through the analysis of data, several findings emerged. Findings indicate that social media, in various aspects such as exposure, content and platforms, peer interactions, and prolonged time of usage, significantly influences the sexual risk behaviour of 100-level adolescents in universities in the Federal Capital Territory, Nigeria. The data and responses put forward that social media plays a substantial role in shaping adolescents' attitudes and behaviours related to sexual activities and relationships in this context. These findings highlight the importance of addressing social media's impact on sexual health education and support systems for adolescents.

From the empirical results, the study revealed that social media has a significant influence on adolescents' sexual behaviour. It established that access to social media platforms is associated with an increase in risky sexual behaviours among adolescents in the selected universities in the federal capital territory, Nigeria. The study observed that as adolescents grow older, their social media usage

becomes more influential in shaping their sexual behaviours. This highlights the importance of age-appropriate sexual education and intervention programs. Social media was found to have a notable impact on adolescent sexual behaviours. This is a crucial consideration given the potential consequences of early pregnancy on their mental and emotional well-being.

5.5 Recommendations

The following tentative recommendations are made based on the study results and findings:

- i. The study recommends developing and implementing educational programs that specifically target adolescents based on their demographic characteristics, such as gender. To address the unique challenges and influences on genders in the context of social media and sexual behaviour. Also, the study emphasises digital literacy skills that will help adolescents critically evaluate and navigate social media content and differentiate between accurate sexual health information and potentially harmful or misleading content.
- ii. Sexual education programs should be tailored to fit the different age groups to address their specific needs and vulnerabilities. Adolescents of varying ages require different levels of guidance and information. The study recommends parental involvement in monitoring and guiding adolescents' social media usage and also educates us on the potential risks associated with social media.
- iii. The study recommends and encourages adolescents to manage their screen time effectively to reduce the potential negative impact of prolonged social media usage on their sexual behaviour. Educational campaigns and parental guidance will play a crucial role in this aspect. Offering mental health support services within educational institutions will help adolescents cope with the emotional and psychological challenges that may arise due to prolonged social media exposure.
- iv. Developed support programs that address the unique needs of adolescent mothers. These programs should focus on reproductive health, parenting, and emotional well-being and create peer support networks for adolescent mothers.

Overall, these recommendations emphasise the importance of a holistic approach to addressing the impact of social media on adolescents' sexual behaviour. It involves education, support, and intervention strategies considering adolescents' diverse needs and vulnerabilities in Nigeria's tertiary institutions. Collaboration between educational institutions, healthcare providers, parents, and government agencies is essential for implementing these recommendations effectively.

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