UNIVERSITY FOR DEVELOPMENT STUDIES

THE USE OF SOCIAL MEDIA BY ADOLESCENTS TO ACCESS REPRODUCTIVE HEALTH INFORMATION AND SERVICES IN THE TAMALE METROPOLIS

BY

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2022

DECLARATION

Student

I hereby declare that this dissertation/thesis is the result of my original work and that no part of it has been presented for any other degree in this university or elsewhere.

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Supervisor

I hereby declare that the preparation and presentation of the dissertation/thesis was supervised following the guidelines on supervision of dissertation/thesis laid down by the University for Development Studies.

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ABSTRACT

Approximately half of the global population possesses a mobile phone, and 42% access the internet. Social media is one of the variables affecting sexual behavior among teenagers in today's society. This study was conducted to assess the contribution of social media usage to adolescent reproductive health services in the Tamale metropolis of the Northern Region of Ghana. The study design was a mixed method approach thus, qualitative and quantitative study design (cross-sectional study design and focus group discussion). The study included adolescents in Senior High Schools within the Tamale metropolis of the Northern Region of Ghana. A semi-structured questionnaire was used and a focus group discussion was used to gather information on the barriers to social media usage. The qualitative data collected was analyzed using content analysis whiles the quantitative data were analyzed using STATA 16.0, chi-square test of association, and binary logistic regression at a 5% significance level. The study findings were, out of the 342 students studied, 45.4% - 95% indicated they have ever accessed reproductive health information through social media. Out of the total students studied, 98.3% were between 15 – 19 years of age. About two-thirds, 68.7% of students were females. The odds of accessing reproductive health services via social media were 62% times higher among male students. Students who resided in urban areas had 55% higher odds of accessing reproductive health services via social media. Challenges faced when using social media to access reproductive health information included; wrong information, lack of internet bundle, and network failure. In conclusion, despite the high utilization of social media and awareness of reproductive health services, there is still a low utilization of social media by adolescents to access adolescent reproductive health services in the Tamale metropolis.

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DEDICATION

Dedicated to my lovely and supportive family.

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LIST OF ABBREVIATIONS

ADHD	Adolescent Health and Development
ASRH	Adolescent Sexual and Reproductive Health
AYFHS	Adolescent and Youth Friendly Health Services
CSE	Comprehensive Sexuality Education
GHS	Ghana Health Service
ICPD	International Conference on Population and Development
NYA	National Youth Authority
RH	Reproductive Health
SDG	Sustainable Development Goals
STI	Sexually Transmitted Diseases
UDS	University for Development studies
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This portion of the project starts out with a general perspective on the subject and then focuses in on a few key areas of concern. As a result, it begins by describing the study's purpose, goals, and importance before going on to discuss contemporary topics of significance to the field. This chapter is separated into subsections that contain the study's background, problem statement, defining the specific objectives and main objective, justification of the study, research questions, definition of keywords, work organization and conceptual framework of the study.

1.1 Background of the study

Computer-mediated systems which allow individuals and communities to connect, interact, link and share content are known as "social media" (Kietzmann et al., 2011). These technologies are effective tools for letting clinicians and clinics disseminate information to a broader audience that informs, exposes, promotes, and delivers information. Texting, blogging, streaming platforms, communities, wikis, social networking sites, and other forms of online are all included in the term "social media." The internet is currently a digital domain with constant and increasing engagement among the population's younger generations. Facebook, WhatsApp, Instagram, Twitter, and Snap Chat are some of the social media platforms. Young people utilize and accept social media in large numbers. They represent new ground with the prospect of youth-targeted health education initiatives. The manner in which young people obtain information and interact with one another has changed immensely as a result of new digital media (Pfeiffer et al., 2014). For most individuals, particularly young ones, using social media is now a lifestyle and various factors influence the utilization of social media. Billboards and pictures are used by health organizations to visually

encourage healthy habits, and infographics are used to communicate summary information to a wider populace. Social media initiatives can instantly reach bigger followings via recognizable venues, using social networks' credibility and impact (Hightow-weidman et al., 2016). Platforms for social media are always changing (Fung et al., 2020). Young people are increasingly communicating online instead of in person, and smartphones can obstruct face-to-face conversations and adolescent females are avid users of social media as compared boys, are more vulnerable to cyberbullying, and are more likely to suffer from mental health issues (Elia Abi-Jaoud MSc MD, 2020).

Approximately half of the global population possesses a mobile phone, and 42% access the Internet (Kenechi Okeleke, 2019). By peer pressure and unpleasant behaviors, such as cyberbullying, social media can have an impact on adolescents' self-perception as well as interpersonal connections (Elia Abi-Jaoud MSc MD, 2020). In the United States in 2014, 81% of 12-17 years used social media. Internet connectivity and social media use by young people in low- and middle-income nations are growing, although not to the exact extent as in high-income ones (Hightow-weidman et al., 2016).

Facebook which is one of the social media platforms is the most extensively accessed social media platform, and is used by authorities of Public Health for awareness-raising activities aimed at health education and behavior modification (Kite et al., 2016). According to latest report, over a billion people have used Facebook, Instagram, and WhatsApp in the past decade (Karikari et al., 2017).

The Social media platform is one of the variables affecting sexual behavior among teenagers in today's society. Using these platforms has both positive and harmful effects on adolescents, particularly when it comes to sexual content. They learn through watching individual interactions

displayed on these platforms and then assimilating them, particularly when the personalities on these platforms are recognized or seem to be spared from the consequences of their actions (Olumide & Ojengbede, 2016). According to a study, 27% of youngsters who use mobile phones now also use them for social networking. (Gwenn S. O'Keeffe; Kathleen Clarke-Pearson, 2017). Social media, training, parental responsibility and affiliation, demographics, and economic factor affects reproductive and sexual behavior of adolescents.

MTN, Vodafone, Airtel, Tigo, and Glo control the majority of mobile data subscribers in Ghana - was at 22,865,821 as of September 2017, with a subscriber base of 79.94%, according to the National Communications Authority (NCA, 2018). According to Jumia's Annual Mobile Report 2018, Ghana is one of the top mobile markets in Africa, with 34.57 million users and a subscriber base of 119%. (www.ghanaweb.com). According to a study by international digital organizations We Are Social and Hootsuite, Ghana has 5.6 million active social media users, 19.53 million phone users, and 9.28 million active wireless internet clients, making up 32% of the country's population. (www.businessworldghana.com).

Most teenagers prefer to be alone at this age rather to share time with their parents and family. Most parents find it challenging to hold conversations with their children as a result of this. As a result, they get much of their sexual information from colleagues, friends, and social media. Adolescent interaction is most productive when it occurs within the frame of a client - therapist relationship that is transparent and nonjudgmental, fosters trust and mental comfort, and provides a sense of involvement and liberty (Kim & White, 2018).

Additionally, many individuals use these networks to disclose their sexual encounters and concerns in order for their contemporaries to offer advice or engage in discussion. Naked photos and other sexualized images can readily be shared on social networking platforms and made accessible to

nearly anybody who visits them. Some adolescents catch up on topics that their contemporaries may address and rely on as the most appropriate kind of sexual practices.

Adolescents even have social media mentors in the form of artists, actors, broadcasters, and entertainers. Those influencers frequently share details about their private lives, fashion choices, and views on sexual topics on social networks. Adolescents can be greatly affected by culture and the surrounding environments. As a result, adolescents pick up information from their surroundings. Their sexual behaviors are influenced by their mimicking or emulation of sexual actions on social media. Adolescents acquire sexual practices including the frequency of sex depicted as appropriate on social media, several sex partners, casual sex partners, and contraception.

Users of social media may be susceptible to concerns such as inaccurate self-diagnosis, decreased personal interaction, dependency, probable privacy violations, insecurities, and anxiety (Akram & Kumar, 2017; Tripathi et al., 2018). Despite these obstacles, numerous studies have shown positive impacts linked with social media utilization, such as availability of information, support availability through online support groups, drive, and personal worth (Choo & Kang, 2014; Litman et al., 2015).

1.2 Problem Statement

An acknowledged global problem known as the growth crisis is adolescent sexual and reproductive health (ASRH) (Tabong et al., 2018). Even though Ghana's government, demographers, and planners are now concerned about teenage sexual and reproductive health, many other countries still do not fully comprehend or cater to young people's requirements. There are slow achievements in dealing with adolescent health in Ghana and some studies have attributed it to different factors.

In Ghana, several studies have been conducted on adolescent reproductive health information and service and its associated factors. An investigation was undertaken to evaluate the level of perception and to point out main factors of measuring the standard of care (Anaba, 2020). Study on adolescent reproductive health to assess the influencing factors, education and the usage of reproductive health facilities. Were 85% had the knowledge, sexually transmitted infections as prevailing issue with 78% and 50% adolescents had gone through reproductive health education (Adokiya et al., 2020).

Adolescents experience mental, physical, physiological and mental challenges that affects their developmental and productive potentials. Girls who are forced into undesirable relationships or marriage become victims of unsafe abortions, unintended pregnancies, high-risk childbirth, STDs, and even HIV.

Adolescents frequently lack knowledge about sexually transmitted infections (STIs), pregnancy, HIV/AIDS screening and treatment, and other reproductive health issues, all of which are serious health concerns in Ghana. As a result, the country's progress toward achieving Sustainable Development Goal 3 is hampered. A study conducted in Yong Dakpemyili show 37% of pregnant adolescents have abortion, 11% go through caesarean section during delivery, 8.9% stillborn and 7% had early neonatal mortality (Yussif et al., 2017).

By the District Health Information Management System of Ghana Health Service, from 2016-2020 there is 555,575 adolescent pregnancies in Ghana and thirteen adolescent pregnancies are recorded each hour and 110000 recorded in 2020.

However, there are few research on how adolescents utilize social media to seek resources for reproductive health, therefore this study will fill that knowledge gap.

1.3 Significance of the Study

The goal of the project is to determine how social media is used by adolescents in Tamale Metropolis to obtain services and information related to adolescent reproductive health.

The study will be helpful in modifying or making policies intended to improving adolescent reproductive health, services and information in the district and beyond by government, nongovernmental and philanthropic projects or interventions.

The research will also help advocates develop the required structure in cooperation with all stakeholders to provide adolescents with accurate and pertinent health information and skills.

The study will also contribution health workers and other stakeholder’s decisions to improving quality adolescent reproductive health services and information delivery.

The study contributes to the expanding body of knowledge on teenage sexual and reproductive health in Ghana and offers a starting point for designing potential future surveys. It will overall improve adolescent health; hence the study will play a role in achieving Sustainable Development Goal 3 and also raise economic productivity of the Ghana. Adolescents' access to and use of reproductive health services will be modified.

1.4 Research Questions

1. What is the proportion of adolescents who use social media to access adolescent sexual reproductive health information and services?
2. What is the relationship between sociodemographic characteristics (age, sex, religion and residence) and the use of social media to access sexual reproductive health services and information?
3. Why do adolescents' resort to using social media to access sexual and reproductive health information and services?
4. What are the barriers to the use of social media to access sexual and reproductive health information and services?

1.5 Objectives

1.5.1 Main Objective

To determine contribution of social media usage in adolescent reproductive health services and information in Tamale metropolis.

1.5.2 Specific objectives:

1. To estimate the percentage of adolescents who use of social media to access sexual and reproductive health information and services in Tamale Metropolis.
2. To assess the of effects sociodemographic factors on the use social media to access resources for sexual and reproductive health in Tamale metropolis.
3. To examine reasons why adolescents resort to using social media and the utilization of sexual and reproductive health information and services in Tamale Metropolis.

4. To ascertain the key barriers to the use of social media to access sexual and reproductive health information and services in Tamale Metropolis.

1.6 Operational Definition

Adolescents: Individuals aged between 10 and 19 years.

Social media use: The use of communication app, texting and websites.

Adolescent health: Not just the lack of illness or infirmity during the adolescent period, but also the physical, mental, and social well-being.

Adolescent reproductive health services: Adolescents are more likely to be interested in and remain motivated to use the services provided to them if services are made available to match their specific health requirements.

1.7 Organization of Work

The study's background, problem statement, research questions and objectives, operational definition, significance of the study, and thesis organization are all included in Chapter 1's introduction.

The second chapter focused on reading pertinent literature.

The third chapter of the study focused on the methodology, including the research design, ethical issues, sample methodologies, data sources, instruments, techniques of data collecting, and study limitations.

The topics of data presentation, analysis, and findings are likewise the focus of chapter four.

The discussion of the findings is included in chapter five.

The summary, conclusion, and recommendation for the direction and application of policy are the main topics of chapter six.

1.8 Conceptual Framework of the study

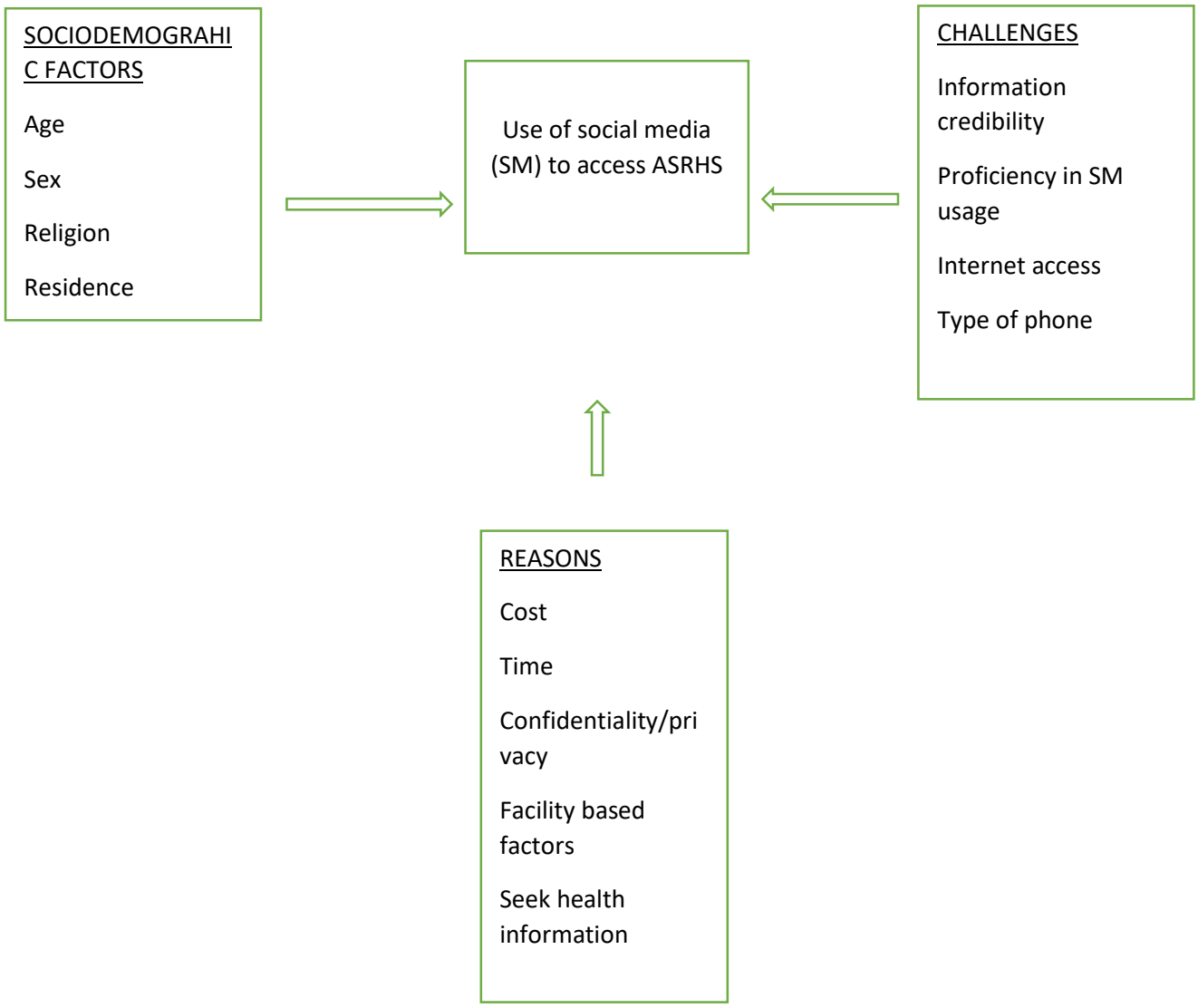

Figure 1: Conceptual Framework of factors associated with the use of social media to access reproductive health services.

Narrative of the Conceptual framework

Age affects how the body develops, and it also heralds the start of the emotional changes that occur during adolescence. Adolescents try to start sex as they mature and change. According to a 2014 Pew Research Center survey, age is a key factor in social media use. According to research, adolescents and young adults are the main social media users. Social media sources many young people today to learn about issues with their sexual and reproductive health.

Confidentiality and privacy

There should be as much appropriate privacy as possible. Adequate privacy should be set out for health counseling, examinations, and the dissemination of health-related materials, teaching, and interaction. adolescents should have the assurance that their private and personal problems will not be shared with others.

Cost

Adolescents must be able to use services at a reasonable cost because they may not be able to afford those services financially as they are too costly, preventing them from using the services.

Environment

The environment in which their services are given must be friendly in order for them to access.

Information seeking facilities should be at vantage points and made easy to their access.

Service providers should be approachable, non-judgmental and have a friendly but professional attitude towards people in need of their services.

Challenges for using social media

Adolescents using social media to access reproductive health services and information are likely to face some challenges. Some of these challenges may include, network or internet problems, cost of internet data to use, how good are they to using social media, parental guidance, type of phone usage and appropriate and accurate information.

CHAPTER TWO

2.0 LITERATURE REVIEW

The chapter consists of the scope of data that relates to the study and literature from sources like, articles, textbooks, journals and internet sources.

2.1 Reproductive Health

Reproductive health includes the physical, emotional, and social well-being of both male and female reproductive systems, in addition to being disease-free. In all things pertaining to the reproductive system and its activities and processes, reproductive health is described by the WHO as the "state of total physical, mental, and social welfare and not only the absence of sickness or infirmity" (WHO, 2018). Reproductive health is primarily seen as a human rights problem that has drawn attention from states and interest groups on a global scale (ICPD, 1994). Reproductive health reckon that, a person can have a safe and meaningful sexual relationship, as well as the capability to initiate and the ability to choose whether, when, and how frequently they do so (WHO, 2015b). Menarche (menstruation) in females and ejaculation in males, which both begin by 12 or 13 years, mark the start of adolescence. Menstruation typically begins two years after the development of breast buds, the earliest observable indication of puberty in females, though that can occur between 9 and 16 years. Early adolescents may get captivated and disturbed by their developing physique as their physiological growth progresses, and they frequently compare themselves to their contemporaries' growth. Between 10 and 13 years, the number of sexual fantasies and masturbation sessions grows.

Young ladies, like the older peers of fertile age, do have right to reproductive health that is good and secure. They have earned the right to defend themselves against sexual misconduct,

unwelcome sexual contact, unmet need, early motherhood, unsafe abortions, and sexually transmitted illnesses. Refusing to grant those rights may result in erroneous choices such as unsafe and uncontrolled sexual activity and dangerous abortions (*Third International Conference on Global Public Health*, 2015). The Ghana Health Service has set a strategic objective for reproductive health in its 2008-2011 strategy program to boost the overall health of women of reproductive age including their babies. This will be accomplished through the availability of great quality reproductive health care. Awareness of proper and suitable reproductive decisions will almost certainly convert into favorable attitudes in any country, particularly the youth. As a result, this could potentially serve to minimize incidents of Sexually Transmitted Infections, unintended pregnancies, unsafe abortions, elevated population growth rates and their resultant effects, like increase rates of maternal and infant mortality, unemployment, and economic hardship, and also come to terms with human rights abuses related to sexual and reproductive health (UNFPA, 2019a).

Most African settings rarely talk about sexual and reproductive health subject in their families. Different information programs from traditional to new-media give information on the detail, diverse ways and precision on sexual reproductive health information. Reproductive health is of public health interest and human rights matter is important in achieving Sustainable Development Goals (SDGs). Non availability of comprehensive care largely contributes to maternal death. Although men also have reproductive challenges, most times STIs, but the extent is greater in women due to circumstances.

The adolescent sexual and reproductive health facility was known by 82.3 percent of respondents in Arajiline and 97.2 percent of those in Hosakote, per a rural India study on the integration of adolescent-friendly health care into the public health system. The majority of adolescents in both

areas were familiar with the clinic's location (Mehra et al., 2013). 31.6 percent of respondents were aware of adolescent reproductive health services at health centers, according to a survey in Ethiopia. Around one-fifth of the respondents (18.1%) said they had never heard of any adolescent reproductive health service, and 50.3 per cent said they had heard of only one part of the services. 72.4 percent of those surveyed said they had heard of adolescent reproductive health services from radio advertisements and from teachers. Additionally, the majority of them said that young people needed access to information and services related to adolescent sexual and reproductive health (Motuma et al., 2016).

It has been discovered that sociodemographic characteristics like age have an impact on the use of services. Adolescents aged 19 and under were more likely than those aged 20 to 24 to use voluntary counselling and testing services, according to a study by Negash et al.,2016 in Ethiopia (Negash et al., 2016). In comparison to girls, a higher percentage of boys under the age of 15 (79%) sought sexually transmitted infection care (21 per cent). Meanwhile, in the older group, girls were more likely than boys to use sexually transmitted infection services in Uganda (Bukenya et al., 2017). Menarche (menstruation) in females and ejaculation in males, which both begin by 12 or 13 years, mark the start of adolescence.

2.2 Adolescent Reproductive Health

Adolescents' sexual and reproductive health is impacted by a variety of barriers. Several societal, cultural, and religious factors contribute to the low assessing of reproductive health services.(Morris & Rushwan, 2015). For talk of ASRH, many societies stigmatize and have judgmental behaviors towards sexual activities especially for the unmarried and sexually active girls and women. Societal coerce prevent the use of contraceptives may also exist. Conflict,

migration, urbanization, and a lack of education can all cause porous ASRH (Morris & Rushwan 2015).

The healthcare of adolescents is important and has been given attention for the pass years by governments, policymakers and service providers.

Reproductive health involves everyone to: get the right information and knowledge on adolescent reproductive health services to keep up reproductive health. Additionally, it entails menstruation in a clean, private, and self-assured manner, access to trustworthy, advantageous, affordable, and acceptable methods of contraception of their choice, care for pregnancy and childbirth, access to safe abortion services, including post-abortion care, and access to care for the prevention, management, and treatment of infertility (Starrs et al., 2018).

About 1.8 million of adolescents have HIV of which 80% are from sub-Saharan Africa and 41% of new cases are from adolescents each year. They either get it from their parents which is through the perinatal and postnatal period and some through their behaviour hence the rise in adolescents living with HIV.

Marriage has effects on the utilization of contraceptives and childbirth. From 1990 to 2019, nonmarried adolescents' contraceptive utilization multiplied from 3.8% to 7.4% and married from 15% to 31%. Either married or not married adolescents unmet needs are on the rise, there is also less patronage of contraceptives by married adolescents (Morris & Rushwan, 2015; United Nations, 2019).

Adolescents takes 23% disability-adjusted life years and 11% of international deliveries. Intrauterine death and early neonatal death, preterm delivery low birth weight and asphyxia increase fifty per cent with adolescent mothers (Moghaddam et al., 2016).

Although adolescents value reproductive health services, there are many socioeconomic and cultural differences that make it difficult for youth to access and use RH services (Zaw et al, 2012). In respect to the Sustainable Development Goal (three), the Global Strategy of Every Woman Every Child now includes adolescents and is now the Global Strategy of Every Women, Every Adolescent, and Every Child, in acknowledging the unique challenges adolescents face and in working towards achieving the Sustainable Development Goals (SDGs) (Finlay et al., 2020). Adolescent girls especially, go through physiological, physical and psychological challenges as they are prone sexual coercion, early marriage which can have sociocultural, socioeconomical and environmental effects (Morris & Rushwan, 2015).

14% of Ghanaian ladies between the ages of 15 and 19 had started having children. 11% of the 14% had a live birth, and 3% of the group were expecting at the time of the poll. In Ghana, two in ten men and four in ten women between the ages of 15 and 19 had had sex in the past year. Between the ages of 15-19, 12% women and 1% men have had a child before. In Ghana, adolescent mothers represent one in ten births(Survey, 2014).

Another national survey of 1037 adolescents found that the total prevalence of contraceptive use was 18.3%, with 14.6% of adolescents using contemporary techniques and 3.7% using traditional methods. Similar to this, another study revealed that hazardous abortion and sexual activities were widespread and accepted as normal (Tabong et al., 2018). According to a study by Owusu, Blankson, and Abane, among teenagers in Ghana's Central Region, their friends (30%), radio/television (26%) and parents (13%), were the main sources of information on SRH for them.

In 2019, there was a rise in contraceptive utilization prevalence by unmarried adolescents to 7.4% and married adolescents to 31% and early marriage reduces to 12% in sub-Saharan Africa.

Adolescent birth and contraceptive utilization is affected by child marriage and in spite of increase in the utilization of contraceptives by adolescents their needs are not still met (United Nations, 2019). A study conducted in Yong Dakpemyili shows 37% of pregnant adolescents have abortion, 11% go through caesarean section during delivery, 8.9% stillborn and 7% had early neonatal mortality (Yussif et al., 2017). Study on adolescent reproductive health to assess the influencing factors, education and the use of reproductive health services. Were 85% had the knowledge, sexually transmitted infections as prevailing issue with 78% and 50% adolescents had gone through reproductive health education (Adokiya et al., 2020). Condom usage upon first sexual intercourse for 15-19 year-olds in Ghana is 25.9 percent for females and 31.4 percent for males (Baatiema et al., 2019). Young people require a range of care that caters to their specific requirements. The cornerstone for developing both the right service plan and the optimum methodology for providing care is a detailed, context-specific knowledge of young people's requirements, choices, and experiences.

2.2.1 Means of accessing ASRH services

Young people in Nigeria were the subjects of cross-sectional research on how to obtain SRH information using mobile phones, and it was discovered that they were significantly more accepting of using mobile phones to do so. The majority of those surveyed stated that this was the most popular way to get SRH information and services (Ihesie & Chukwuogo, 2017). An analysis of 28 research on the use of mHealth to access ASHR information and services revealed that text messaging accounted for 82 percent of the majority of initiatives. The methodological reporting requirements were met in 82 percent of the cases. That is, the majority of initiatives employed text messaging in health promotion strategies, sexual disease testing and review, and treatment adherence, all of which could contribute to enhanced SRH (Ippoliti & Engle, 2017). Young people

in Enugu State, Nigeria, who participated in a mixed-methods study found that SRH care was accessible and readily available at health clinics. The young people claimed to have access to services for both safe parenthood and STI prevention through that primary source of care delivery (Odo et al., 2018). The main information and service sources used by young people in Ethiopia were found to be the nearby facility (49.5 percent), peers (54.6 percent), parents (27.1 percent), and the media (7.6 percent). Young people did not frequently use the digital application to obtain ASRH services and information (Zone et al., 2018). Just like Zone et al. having peers as the prime source of ASRH service and information, a survey conducted by (Saratu O. Ajike, 2016); peers were also identified to be a provider of ASRH service information.

2.3 Policies on Adolescent Reproductive Health

Adolescent reproductive health has always been a sector that needs attention; therefore, it has always had the attention of both public and private organizations. Some policies include: To coordinate all population-related projects in Ghana and to provide government with advice, the National Population Council (NPC) was established in 1992 by an Act of Parliament. The National Population Council is now trying to update the National Population Policy to take into account new concerns, particularly those that directly impact adolescents and young people. the establishment of an office for a program manager for adolescent health and development (ADHD) inside the Ghana Health Service (GHS). Health facilities across the country are promoting youth-friendly services.

A Multi-sectorial National Adolescent Health Strategic Plan (2009-2015) and Standards and Tools for Monitoring Adolescent and Youth friendly Health Services (AYFHS) have been developed to guide service delivery. The formation of the National Youth Authority (NYA) to engage with identified youth groups in addressing not just the special development requirements of the youth

in the country but most crucially to incorporate them into all parts of the socio-economic development debate in Ghana.

The Planned Parenthood Association of Ghana (PPAG) established "Young and Wise Centers," multipurpose youth centers that offer recreational activities in addition to sexual and reproductive health services. Peer educators are used to promote the centers' services and non-traditional condoms are distributed to local residents.

The National Reproductive Health Policy and Standards, the National Reproductive Health Strategic Plan, the National Youth Policy, and the HIV/AIDS and STI Policy are additional significant policies that are addressing issues related to youth. These policies have provided frameworks through which young people are protected and to promote their growth and development.

An appropriate platform for delivering important SRH information to adolescents is Comprehensive Sexuality Teaching (CSE), which is age-appropriate, culturally relevant, scientifically correct, realistic, and nonjudgmental education on sexuality and relationships. The rights of young people to sexual and reproductive health (SRH) information and services were supported by the International Conference on Population and Development (ICPD) in 1994 and the Fourth International Conference on Women in 1995. The main sources of information on sexual and reproductive health in developing nations have been identified as parents, teachers, the media, social media, and peers.

In 2015, the World Health Organization created and published worldwide criteria for providing services to young people, which nations can accept and modify to satisfy the expectation of young people in their own country. In view of this, the Ghana Adolescent Health Program amended its five benchmarks for providing services to younger generations to align with the World Health

Organization's eight international standards for providing services to young people. WHO's delivering services requirements:

Standard 1: Shows that all medical amenities should ensure that adolescents get access to appropriate care, have access to health-related knowledge and are informed as to where and when to pursue medical attention when they are in need.

Standard 2: Shows that in adolescent health programs, medical facilities encourage community cooperation and participation.

Standard 3: All health-care facilities be required to provide a comprehensive set of services that satisfies and meets the requirements of every adolescent. By ensuring that no young person is left out, services should provide comprehensive referral links and outreach.

Standard 4: Practitioners of healthcare and other support employees have and exhibit professional capabilities in ensuring efficient, high-quality care to young people that defend their rights.

Standard 5: Health institutions that accept adolescents and young people, have flexible operation hours as well as medications and technological tools to deliver needed treatments.

Standard 6: Regardless of their ability to afford, age, sex, marital status, educational qualification, ethnicity, sexual orientation, or other traits, the health centre delivers greater care to all young people.

Standard 7: To assist in enhancing quality, health facilities gather and use data on service consumption and quality of care, disaggregating records by age and sex.

Standard 8: Adolescents and young people participate in the designing, monitoring, and implementation of health services, as well as choices about their own care (WHO, 2015).

In respect to the Sustainable Development Goal (three), the Global Strategy of Every Woman Every Child now includes adolescents and is now the Global Strategy of Every Women, Every

Adolescent, and Every Child, in acknowledging the unique challenges adolescents face and in working towards achieving the Sustainable Development Goals (SDGs)(Finlay et al., 2020).

2.4 Information Technology in Adolescent Reproductive Health

Mobile communications have grown and more than just voice and text use, it has advance to using applications and internet. Over 7 billion of mobile cellular subscriptions globally and more coming from the developing countries. 3.2 billion people worldwide use internet and out of that, 2 billion are from the developing country ("Little Data B. Inf. Commun. Technol. 2017," 2017). Beginning in 2020, there will be more than 4.5 billion users of the internet, compared to more than 3.8 billion users of social media. Almost 60% of the world's population is presently online, and according to current trends, over 50% of people will be using social media by the middle of 2020. More than 5.19 billion individuals use mobile phones worldwide, up 124 million (2.4 percent) in the past year (KEMP, 2020).

ICT has made a lot of impact and has a lot of benefits which include: creating new opportunities, increasing productivity, higher resources and more job opportunities. It has been associated with good health, health information, education and services. Mobile phones are an assuring technology to involve adolescents to getting information on sexual health issues. Owning a cell phone is simple in the US, especially for teenagers. In 2015, 91% of adolescents aged 13 to 17 who owned a mobile phone used it to access the internet. Adolescents can benefit from correct information about sexual health when it is delivered to them in a convenient and private manner through the use of mobile technology for health promotion. The emergence of mobile technology and how the adolescents familiarize themselves with it, gives chance to use mobile phone to access sexual and reproductive health services though it is novel. The advent of mHealth is as a result of the development of mobile communication. mHealth services has the chance to enhance interventions on health

promotion, protection and prevention easy to access and may also reduce time and distance (Aranda-Jan et al., 2014). With the fast development of mobile communication, there has been a rush in study into the health advantages of mobile phone use. With the advancement of digital and mobile technologies, vast interaction has now become increasingly easier for people than before; as a result, a new media era has emerged, having interaction at the core of new media activities (Association, 2021). Considering today's society, experts from several disciplines of study have been investigating major online networks such as WhatsApp, Twitter, and Facebook, including the concerns they present for society at large, interpersonal relationships, mental well-being, and politics. Web-based technology, whether on a desktop, laptop, or digital device that includes social media functionality as one of its components of mobile operators, are needed to enter this new media. A significant percentage of teenagers (22%) use social media sites more regularly than other adolescents (O'Keeffe et al., 2011). Teenagers hold smartphones in the majority of countries (75%) and use social media for texting and messaging (Tuncay Dilci, 2018).

Whether it's economics, education, social connections, or health, the social and technological developments that today's times lifestyles leave a lasting impact on all aspects of life in Ghana (Addy, 2015). The search for social learning and forming bonds has resulted in the emergence of both online and offline communities and organizations (Jane et al., 2018). Acceptance and the use of socially mediated technology, such as social media, keeps improving people's lives.

The widespread utilization of image-based platforms like Facebook and Instagram to tackle health-related challenges such as nutrition and physical activity has resulted in increasing usage of social media, it is noticeable in nations such as Australia, Hong Kong, the United States, among others, which are increasingly relying on image-based platforms for promoting health (Vaterlaus et al., 2022; Zhang et al., 2016). Social media sites such as Facebook and Instagram allow users to

exchange health-related ideas, concerns, guidance, and support (Mcgregor et al., 2014; Roundtree, 2017). Facebook is the leading social media site in Ghana, with 75.69 percent of users using it (statista.com). Instagram has 52,900 active members and is highly used by Ghana's youth (gs.statcounter.com).

Mohr et al (2013) survey highlighted several benefits of utilizing the internet and communication technologies for health services. For instance, the report claims that the internet eliminates the physical border which exists between the place of the health professional and the position of the person seeking health services. That is, information offered via the internet and ICT can be accessed by a huge number of people. Also, some more difficult-to-reach groups can be contacted with far greater ease via the internet than through any other approach. It also mentioned the internet was recommended as a means of promoting interactivity. Last but not least, the study discovered that using the internet for healthcare services is rather affordable (Mohr et al., 2014).

A study by, Goodyear, Armour and Wood (2018), stated in general, when looking for healthcare information, young people are turning to new technologies, notably social media. Furthermore, persons 18 to 29 years old were shown to be much more likely to use social media sites to seek remedies to health issues. According to their research, social media provides extraordinary and unusual opportunity for the young to be educated and know about health. Additionally, it has a great range of effects on behavioral changes in terms of health and lifestyle. Aside that, the survey discovered joining health groups on social media is simpler than joining traditional health or fitness groups (Victoria Goodyear, Kathleen Armour, 2018). Texting on cell phones is more frequent between Ghanaian young aged 18 to 34 compared to those aged 35 and beyond (Maeve Duggan, Nicole B. Ellison, Cliff Lampe, Amanda Lenhart, Mary Madden, Lee Rainie, 2015). Media has long been recognized as a useful instrument for enhancing health. The World Health

Organization (WHO) proposed transferring health-related information via engaging and audio-visual tools in 1986. Following this, digital technology, also referred as mobile health (mHealth), has emerged as a means for fostering and attaining health. The use of a mobile phone for improve healthy behaviors is known as mhealth (Friederici et al., 2012). As a result, mhealth is seen as a potential because it solves the difficulties of Sexual and reproductive health issues being controversial in most cultures and services that are out of range, if not totally unreachable, for the most marginalized communities (Rokicki, 2017). Current research proves that mobile health initiatives can improve overall health awareness and are embraced by young people (Rokicki, 2017). mHealth is gathering steam as a critical avenue for connecting to young people who face numerous obstacles and difficulty in gaining access to adolescent youth-friendly institutions, and has been effective tools for offering young people with information on adolescent reproductive health and services (Ippoliti & Engle, 2017). Health may be the solution to this nomad problem since it gives young people ongoing access to knowledge and information. In 2015, research conducted in Ghana, 31% of participants aged 14 to 18 and 71% of participants aged 19 to 25 owned a mobile phone, while 77% of those aged 14 to 18 and 91% of those aged 19 to 25 had used a cell phone in the previous four weeks (Hampshire et al., 2015).

Although the possibility for official m-health programs to enhance healthcare in limited resource areas has been extensively lauded, this opportunity is yet to be realized in large-scale policy implementation (Chib et al., 2014). According to a survey, men are more likely than women to use mobile phones, and young people from higher socioeconomic levels are also more likely to purchase and use mobile phones (Blumenstock et al., 2012). According to a study by Rokicki (2017), mHealth platforms for teenagers have the potential to engage and increase health awareness among teenage girls from all socioeconomic backgrounds, particularly those who are

more likely to experience poor sexual and reproductive health outcomes. The mobile phone penetration rate in Ghana is 90.34 percent by June 2019 (Statistics et al., 2019). This indicates that mobile phones are used by the most of Ghanaians. With the fast development of mobile communication, there has been a rush in study into the health advantages of mobile phone use. There some benefits to mHealth technologies (Ross, 2019);

• Makes it possible for patients to contact doctors and obtain treatment more promptly.

• There is improved medication adherence.

• Enables simple and practical remote patient monitoring.

• Improves patient outcomes by improving medication administration precision.

• Encourages provider cooperation and communication.

2.5 Factors impacting the use of the SRH mobile application

Research of the use of mobile applications in rural China found, among other factors, that individuals are more inclined to respond to text messages from persons they trust in their everyday lives. In addition, a quarter of the participants said they had used mobile apps for healthcare-related reasons in the three months leading up to the survey (Velthoven et al., 2015). The use of mobile applications in health care is also affected by the physical and social variables. Patients employed their phones to recall to take their prescriptions or to go to their scheduled appointment. (Ross, 2019). The use of a mobile application for SRH services can also be driven by security and privacy concerns. According to research conducted by Luxton et al., the protection of adolescent information is extremely important while utilizing online applications for medical purposes. It is due to the fact that young people are prone to losing their phones or leaving it with strangers and also there is substantial evidence that the Internet and social media can have an impact on suicidal behavior.(Luxton et al., 2012). They can retrieve their information by using the online application.

A cross-sectional survey on variables impacting mHealth usage intention discovered that time, user satisfaction, and dependability were the linked variables that had a significant impact on the adolescent's desire to utilize mobile applications. The mobile application demand is still in its initial phases, according to this study, and as a result, people are unaware of it (Odo et al., 2018). Young people use social media extensively for sexual health information, and it has the ability to expand understanding and favorably influence behavior (Nurmi, 2013). Young people appreciate clearly understood online tools on SRH information, according to a survey done among them to determine their perspective and choice for internet users to obtain ASRH services and the Internet has the ability to raise sexual health awareness and encourage healthy behavior (Rosen et al., 2017). Young people viewed the usage of mobile applications as a valuable platform for disseminating education, simple access to knowledge, learning objectives, information sharing, and a faster means to offer opinions in learning, according to a study done among college students (Iqbal et al., 2017). It was shown by a survey that the internet provides confidentiality and availability of endless information, most adolescents and young people use about 74 percent of their online time looking for health information and 44 percent check-up sexual health education such as pregnancy, contraception, HIV/AIDS, and other STIs (Wurtele, 2017).

A cross sectional survey conducted by Stevens et al. had shown that the frequency at which respondents used social media differed substantially, 8.8 percent say they don't use social media of any kind; 5.6 percent say they use it every few weeks; 10.9 percent say they use it weekly; 17.3 percent say they use it every day; and 57.0 percent say they use it numerous times every day. Facebook 64.4 percent, Instagram18.7 percent, and Twitter 5.5 percent were the most popular social media platform at the time of this survey and other platforms like snapchat and vine were 11 percent (Robin Stevens, Stacia Gilliard-Matthews, Jamie Danaev, Abigail Todhunter-Reid,

Bridgette Brawner, 2017). In a mixed method study, the frequency at which they use the internet was 25 percent of people accessed the internet each day, 52 percent more often than once a week, and 10 percent weekly. Facebook 73 percent, YouTube 38 percent, and Twitter 20 percent were the most popular platforms, while 20percent went to personal e-mail accounts and 5percent went to Wikipedia. In the same study but different cities the youth in Dar es Salaam residents accessed YouTube 46 percent and Wikipedia 16 percent more frequently and in Mtwara, those who accessed YouTube 30 percent and Wikipedia there was none but they had the same for Facebook (Pfeiffer et al., 2014). In this same study, 65 percent stated they enjoyed chatting and staying connected with peers, 22 percent liked to follow the news, 15 percent preferred to watch videos, 17 percent used it for assignments, and 10 percent played online games. Pornographic websites were common with boys in both cities, according to the findings.

Significant number of the participants 85.3% were never married and never married (64.5 %) utilize social media more than ever married (2.1%). WhatsApp 40.4%, Facebook 20.2%, and 2go 19% were the most popular social media platforms used by participants. Majority of participants spent a total of 2-3 hours (30.9%) or 6-7 hours (29.1%) every day on social media and 13.8% spent not up to an hour or an hour. Male participants 55.8% used social media more frequently than female participants 55.0%. Those who used contraception were more likely to use social media which was 73.9%, these are findings are from survey in Bayelsa state, Nigeria by (State & Ekpenyong, 2017). 75.7 % of respondents use the internet multiple times each day. Facebook was named as the most often used platform by 53.9% of the participants and just 37.5% utilized the internet for academic purposes while 49.3% stayed over an hour per day on the internet. The survey indicated that access to sexual material through social media does have a substantial impact on

respondents' risky sexual behaviors, with males being the most impacted (Olayinka A. Osanoga, Joel O. Aluko, Sweetie N. Adegbuyi, Olaniyi A. Filade, 2020).

According to a study on sexual behaviour and the use of youth-friendly health services among urban youth in Ghana, 50.4% of the participants were sexually active, and 77.3% of them started having sex after the age of 15 (Asare et al., 2020). 68.4% of teenagers use social media as a source of sexual information, according to a 2015 study by Gonzalez-Otega, Vicario-Molina, Martinez, and Orgaz on associations between sexual behaviour and the internet.

2.6 Factors Influencing Adolescent Reproductive Health Access

Adolescents' access to services for reproductive health is impacted by a number of circumstances. These factors can be related to the client, service staff and the service systems. Adolescent health services in poor nations are typically limited in terms of affordability caused by a lack of adequate financial compensation for caregivers to provide essential and acceptable treatments to young people. In Ghana, health insurance reimbursement is now a major impediment to the provision of healthcare services.

2.6.1 Sociodemographic Factors

Challenges from the community, environs, customs, financial constraints, and psycho-social factors. There are other hurdles adolescents face that hinder their access to reproductive health services which include the social systems of masculinity and sexual orientation (Robert et al., 2020). Young females' ability to guarantee that they have inclusive and fair access to the services they require may be harmed by sex roles. Because young adolescent girls are taught to be obedient, they lose authority and the power to make decisions on Sexual and reproductive health matters, which leads to a vulnerability that has been proven to limit the use of reproductive health information, services, and contraceptives (UNFPA, 2019). Because adolescents may not

earn during this time of their life's, they will not be able to spend money at the adolescent friendly corners, particularly if they do not have parental approval. As a result, the expensive of service may affect usage (Singh et al., 2012).

Child marriage has large association with not using contraceptives before first pregnancy (Godha et al., 2013; Lata et al., 2019). This may be because, before the first pregnancy, the lady may not have any education on reproductive health which will not help her know to use any family planning method.

In Nigeria, 79.5% in Lagos and 98.1% in Port Harcourt adolescents and youth had deficit knowledge about reproductive health service in the health care setups some had no idea these services were available, also a study in Hadiya zone, Egypt, shows majority (69.2%) of its participants do not have enough information or knowledge on these services and financial constraints. (Francis & Chizoba Gabriel, 2019; Helamo et al., 2017)

Individual perception, fear, shame and stigma influence the use of reproductive health services (Ninsiima et al., 2021). Social norms which could be religious influences, family norms, community norms also hinder adolescents access to reproductive health services. Adolescents regards family values and their parents' attitude towards the use of reproductive health services, hence, discussions about sex between adolescents and parents or guardians makes it difficult. Some adolescents shy from bringing up topics related to reproductive health to their parents. The community does not accept adolescents go to use reproductive health services and can identify them as unchaste. Fear of stigmatization from society for adolescents to use reproductive health services is also barrier to access reproductive health, others during interviews does not accept using these services. To some extent, religion also influences the use of reproductive health services. Adolescents feeling guilty of having early sex and using condom or other contraceptives which

their religion does not subscribe to. Adolescents also viewed talking to their parents on sex topics as a religious taboo. It will be awful and an embarrassment to recognize your adolescent child engaging in such an action in areas or communities where customs and traditions prohibit younger individuals from having premarital sex. Sexual issues are still not addressed with adolescents at home, much less even practiced. As a result, adolescents experiencing sexual difficulties such as genital infections or unexpected pregnancies are more inclined to try to fix these issues on their own, consult with trusted brothers or sisters, buy medications from pharmacies or drugstores, and visit clinics that are not near to their homes. In rare circumstances, healthcare professionals unlawfully give hidden abortion services to adolescents. Because of cultural and religious preservation, frank discourse about reproductive health issues with families as well as other significant persons is rare in cultural situations. Most of such conversations occur between adolescents and their families when significant reproductive health issues have occurred. Most parents are uneasy, hesitant, and unprepared to talk about reproductive health issues with their children. Adolescents lack the information and abilities to make educated decisions and access contraception or other reproductive health care as a result of this (Motuma et al., 2016). (Agampodi & Agampodi, 2008), indicated most adolescent females stated that negative stereotypes of parents, teachers, and community posed as a barrier to health services.

2.6.2 Facility Based Factors

Despite the provision of services from public set-ups, adolescents perceive their needs are not met. Cynical behaviors from health service givers are also an obstacle in public health set-ups. Abuse by health professionals has great repercussions on the access of reproductive health services thereby making them detain or desist from going to health facilities for care.(Maharjan et al., 2019; Schroll et al., 2013)

Lack of enough skills and maximum knowledge about adolescent health needs and inadequate staffing also crippled efficient service providing (Robert et al., 2020). Age and gender of care givers also affects their access to reproductive health services. Also, continual changes of staffs also hinder reproductive health access by adolescents because proper handing over is not observed. Distance and location of facilities from client's houses where far and that there is shortfall on commodities, supplies, staff and medicine for sexual and reproductive health services (Francis & Chizoba Gabriel, 2019). On the report of Department of Health Services, Nepal, 34% of important drugs and 14% of family planning commodities run out of stock health care centers across the country (Lata et al., 2019). Inconvenient operating times, much waiting time, and high cost of services, fear of breach of confidentiality, discrimination gives adolescents the chance to miss reproductive health services (Helamo et al., 2017).

In a study by Senderowitz, Hainsworth, and Solter (2003), it listed a few of the barriers as follows: inconvenient work time, lack of serviceable transportation, lofty cost of services, inadequate knowledge on their body changes and needs, Lack of privacy and secrecy, lack of privacy and confidentiality, lack of understanding of the services offered, lack of knowledge of procedures and contraceptive methods, and lack of knowledge of parents. Providers who are rude and judgmental. (2003) Ma et al.

Report from WHO in 2002 showed adolescents' lack of awareness, legal or cultural constraints, a shortage of medical resources, and gender obstacles are all factors. Fear, humiliation, lack of secrecy, unavailability, and expense are among the reasons given by teenagers aged 12 to 19 in Ghana, Malawi, and Uganda for not attending adolescent friendly facilities and also adolescents in Ghana, Malawi, and Uganda between the ages of 12 and 19 are unaware of any avenues for accessing services (Biddlecom et al., 2008).

The lack of confidentiality at adolescent health clinics' delivery stations discourages young people from utilizing the services (Binu et al., 2018). Facilities have to make arrangement to give privacy for patients or clients during their sessions, whether via physical boundaries between counselling and professional areas or through other appropriate arrangements. A study in Uganda found out most of service centers lacked structures to provide privacy for young girls and boys. Just one higher-order hospital was known to have a clearly defined location where youth programs may be delivered. With this, no healthcare facility had a separate reception area for young people to provide service without interruption from other staff (Bukenya et al., 2017).

Since the majority of adolescents will not be married at the time of family planning, many of them feel it would be humiliating to have their marital status questioned. Additionally, one person said family planning was not for adolescents but for grownups (Motuma et al., 2016). In this same survey, A service giver stated his hesitation about delivering a contraception to a 13-year-old girl.

CHAPTER THREE

METHODS

3.0 Introduction

The procedures that will be followed to carry out the study are described in this chapter. Study design, study population, sample size, sampling methodology, data collection method and instruments, data processing and analysis, and ethical considerations are all involved.

3.1 Study design

The study was conducted among adolescents between the ages of 10 and 19 in Senior High Schools in the Tamale metropolis in the Northern Region using a mix of qualitative and quantitative study designs (cross-sectional study design and focus group discussion). The cross-sectional study design was employed to gather data on the current state of the subject under investigation, and that is the use social media by adolescents to access sexual and reproductive health services and information in some senior high schools within Tamale Metropolis and focus group discussion was done with the students to gather insight and probing issues to the topic of discussion. A semi-structured questionnaire was used to collect data from sampled study participants on social media usage and its contribution to adolescent sexual reproductive health services and focus group discussion was used during the discussion.

3.2 Study setting

The Tamale metropolis will be the site of the investigation. The Metropolis, one of the 16 districts that make up Ghana's Northern region, acts as the region's capital. It shares borders with the Sagnarigu District to the west and north, Mion District to the east, East Gonja to the south, and Central Gonja to the south-west. It is situated in the region's center. The Metropolis' entire estimated land area is 646.90180 square kilometers. With an estimated 233,252 residents, Tamale metropolis is one of the West African cities that is expanding the fastest. The Metropolis has a young population (nearly 36.4% of the population is under the age of 15). In Tamale city, there

are 740 basic schools, 94 kindergartens, 304 primary schools, 112 junior high schools, and 2 institutions of education, according to the education administration. The Ghana statistical agency reports that 53.7% of people aged 12 and over in the country own mobile phones. Male ownership of mobile phones (55.5%) is higher than that of female ownership (44.4%). In the Metropolis, just 7.4% of people over the age of 12 utilize the internet, and only 9.4% of all households use desktop or laptop computers. There are 39 medical facilities in the Metropolis that offer services for young people's reproductive health. (**Figure 2**)

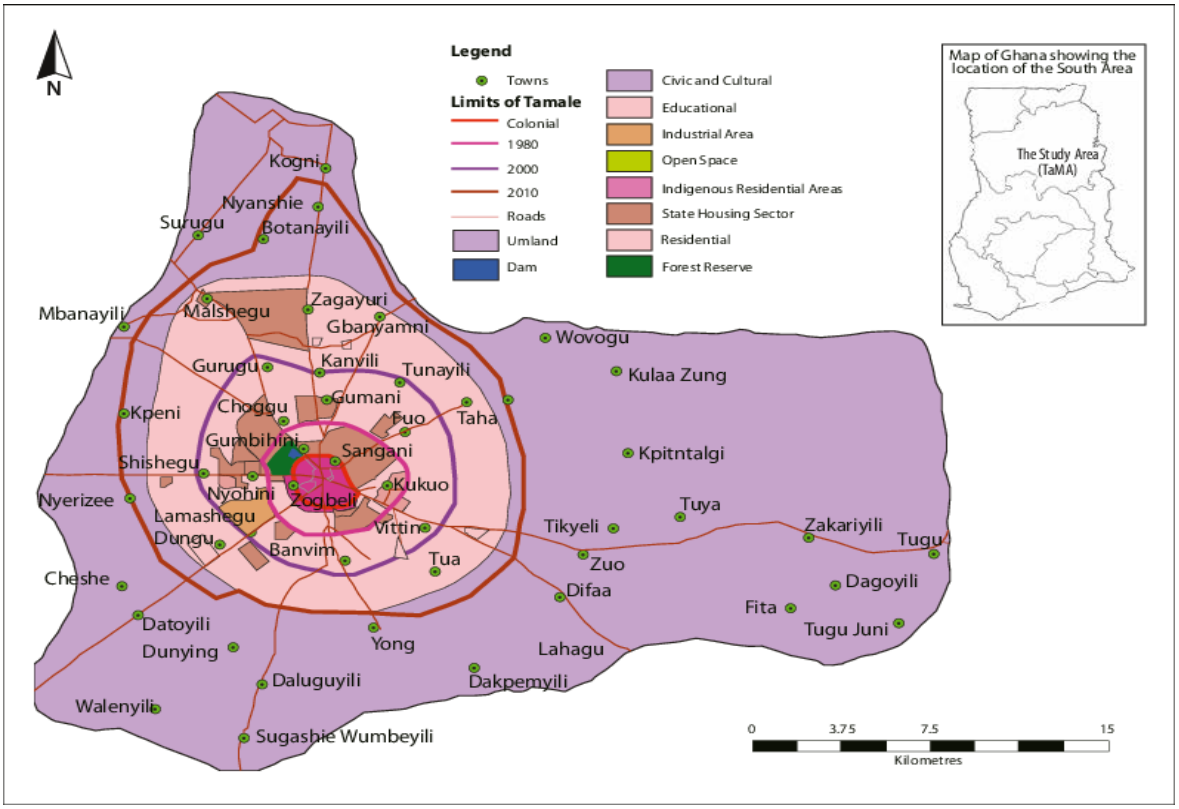

Figure 2: Map of the Tamale metropolis, Northern region, 2022

3.3 Study population

Adolescents (10-19) enrolled in senior high schools in Tamale Metropolis will make up the study population. By Ghanaian education, a greater number of adolescents are in this level of education and are assumed to have started sexual activity.

3.4 Study variables

3.4.1 Dependent variable

The dependent variable in the study is the use of social media to access adolescent reproductive health services that is adolescents who use's Facebook, YouTube, Instagram, Twitter or any other application.

3.4.2 Independent variable

Age, Sex, Religion, Residence, Education on ASRHS, Mobile phone usage, Type of media, Frequency, Devices used and Health information seeking.

3.5 Inclusion and Exclusion Criteria

3.5.1 Inclusion criteria

All person's age from 10-19 years in the selected Senior High Schools who consent to the study.

3.5.2 Exclusion criteria

Persons in the school with ages below 10 and above 19 years and those who are not available at the time of the study.

3.6 Sample size determination

The formula for a point estimate sample developed by Snedecor and Cochran (1989) was used to determine the sample size. In a survey by Marie et al. 2020, around 66.7% of adolescents said they

used social media to look up health-related information. Hence the proportion of social media usage for ASRHS will be 66.7%

$N = Z^2 \{P\} \{1-P\} / m^2$

Z (Standard value for 95% confidence level) = 1.96

P (Proportion of social media usage for ASRHS) = 66.7% (0.667)

m (margin of error) = 5% (0.05)

$N = 1.96^2 \{0.667\} \{1-0.667\} / 0.05^2$

$N = 3.8416 \{0.667\} \{0.333\} / 0.0025$

N = 341.3

The minimum sample size to be selected is 342 adolescents

Table 1: Proportion of students sampled from selected senior high schools

Name of school	Student Population	Boys	Girls	Number of students selected
Ghana senior high school	1885	976	909	140
St. Charles seminary	309	309	0	23
Vitting senior high	1118	792	326	83
Tamale girls' senior high school	1300	0	1300	96
Total	4612	2077	2535	342

3.7 Sampling process

In the Tamale Metropolis, there are eight public senior high schools, including a vocational school. Using a multistage selection strategy, the adolescents for this study were selected for the sample. The first stage involved the simple random selection 'the lotto technique' of the Senior High Schools in Tamale metropolis who will take part in the study this sampling gave all the schools an equal chance of participating in the survey. The second stage will involve the sampling of 342 adolescents from the selected schools. A proportionate to size sampling approach was used to determine the number of adolescents to sample from each of the schools. A simple random sampling approach was then used to recruit students eligible to respond to the semi structured questionnaire on each day of data collection and eight students from each school were selected for the discussion but were already students who had participated in answering the questionnaire. It was done to corroborate the response in the questionnaire.

3.8 Quality Control

Research assistants were recruited from the Tamale Nursing and Midwifery Training College and trained for data collection. Research assistants were trained on how to administer questionnaires, conduct interviews and observations. The questionnaire for the collection of data was pretested a week prior to actual data collection, among 20 adolescents sampled from schools in the Sagnarigu district. This was to allow for the modification of the data collection instrument prior to the actual data collection for the study if needed. The pretested questionnaire was analyzed to inform the content and formatting of the final questionnaire that will be used for the data collection.

3.9 Data Collection

Self-administered questionnaires and focus group discussion guide was used for data collection in this study. The questionnaire was the leading tool to gather the data and it was made of three

sections including sociodemographic characteristics of respondents, knowledge and utilization and the factors influencing adolescent sexual and reproductive health services and was administered to 342 students in various schools. Focus group discussion guide was used in collecting the qualitative data, the guide was written according to the objectives of the study. There were four group discussions, one from each school.

3.10 Data Management and Statistical Analysis

Data collected were entered into Microsoft Excel 2017, cleaned and imported into STATA version 16.0 for analysis. Returned forms with missing outcome variables were be excluded from the analysis.

Categorical variables such as sex, marital status, religion, utilization of services, type of media and the platform used were analyzed and summarized using frequencies and proportions at a 95% Confidence Interval (CI). Quantitative continuous variables such as age were summarized into mean and standard deviation.

In order to evaluate the relationship between the result variable and the different variables, a chi square test of association was employed. The chi-square analysis's level of significance was set at 5%. At a significance threshold of 5%, a crude and adjusted binary logistic regression was employed to assess the strength of the correlation between the outcome variable and the numerous variables.

Thematic analysis was used to analyze the qualitative data. The recordings were transcribed verbatim. The transcriptions were printed out and examined over and over again to look for comparable wordings, phrases, concepts, and meanings. The theme's heading was made, then snippets were selected and cited.

3.11 Ethical Consideration

The Department of Population Reproductive Health at the University for Development Studies was asked for an introduction letter. The Northern Region's Ghana Health Service Ethical Review Committee granted the study's ethical approval. The Tamale Metropolitan Education Office granted permission for the study. The Heads of each school were informed and permission was sought before data collection. The study's benefits, the risk associated, and confidentiality issues were explained to study participants in simple and straightforward language before they participate in the study. Study participants were made to sign an informed consent before responding to the questionnaire. Data collected from study participants was devoid of personal identifiers. Data was accessible to only the principal investigator and the supervisor.

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

This section of the research work presents the findings on the research topic after collecting data from the research area. The findings from analyzing the quantitative and qualitative data collected is summarized into frequencies and proportions. The results are presented according to the objectives of the study. Tables and graphs are employed to better illustrate the data.

4.2 Sociodemographic Characteristics of the participants, Tamale Metropolis, 2022

Out of the 342 students studied, 98.3% (336/342) were between 15 – 19 years of age. About two-thirds, 68.7% (235/342) of students were females. More than half 57.0% (195/342) of them stated urban as their residence. The majority 95.3% (322/342) were single in terms of marital status. On the occupation of their parents or guardians, traders were the majority making up 41.9% (140/342). Regarding their classes, the majority 85.7% (293/342) of the students were from the second year See table 2 for the details.

Table 2: Sociodemographic Characteristics of the participants

Characteristics	**Frequency (N)**	**Percentage (%)**
Age group (years)		
10 – 14	6	1.75
15 - 19	336	98.25
Sex		
Female	235	68.71

Male	107	31.29
Religion		
Christianity	95	27.78
Islam	247	72.22
Marital status		
Single	322	95.27
Married	5	1.48
Cohabiting	11	3.25
Residence		
Rural	147	42.98
Urban	195	57.02
Education		
SHS Form 1	1	0.29
SHS Form 2	293	85.67
SHS Form 3	48	14.04
Occupation of guardian		
Farmer	108	32.34
Government employee	74	22.16
Trader	140	41.92
Others	12	3.59

4.3 Participants Reproductive Health Characteristics, Tamale Metropolis, 2022

Regarding the students' reproductive qualities, out of the 342 studied, more than one-third 40.6% (139/342) of them were in a romantic relationship. Most 86.8% mentioned they were not sexually active at the time of the study. On their awareness of reproductive health services, almost all 93.9% (321/342) mentioned they were aware of the services. Regarding their source of information, the majority 85.7% (275/342) stated school as their source of information See table 3 for the details.

Table 3: Participants Reproductive Health Characteristics

Characteristics	**Frequency (N)**	**Percentage (%)**
Romantic relationship		
No	203	59.36
Yes	139	40.64
Sexually active		
No	296	86.80
Yes	45	13.20
Awareness of RH		
No	21	6.14
Yes	321	93.86
Information source		
Family members	13	4.05
School	275	85.67
Friends	6	1.87

Media	9	2.80
Religious gathering	5	1.56
Health provider	13	4.05

4.4 Participants Social Media Utilization, Tamale Metropolis, 2022

On their access to social media, when asked about the ownership of mobile phones, more than two-thirds 76.9% (263/342) answered affirmatively. Social media was accessed by half 51.5% (176/342) of the students. Regarding the social media, they frequently visited, most of the respondents, 71.2% (111/342) mentioned Facebook. On how often they visited social media, the majority 74.3% said sometimes. On their preference for accessing reproductive health services, the majority 69.6% mentioned they prefer social media to visit reproductive health centers. Most of them stated that the problem for which they access social media reproductive services was solved after accessing it. See table 4 for the details.

Table 4: Participants Social Media Utilization, Tamale Metropolis, 2022

Characteristics	**Frequency (N)**	**Percentage (%)**
Phone ownership		
No	79	23.10
Yes	263	76.90
Social media use		
No	166	48.54
Yes	176	51.46
Media frequently used		

Facebook	111	71.15
Instagram	12	7.69
Twitter	4	2.56
YouTube	29	18.59
Frequency of use		
Always	23	15.13
Rarely	16	10.53
sometimes	113	74.34
Preference for Accessing RH		
Physical	92	30.36
Social media	211	69.64
Means of access		
Communication App	39	14.89
Text (SMS)	86	32.82
Video call	12	4.58
Voice call	18	6.87
Websites	107	40.84
Problem solved		
No	53	21.54
Yes	193	78.46

4.5 Accessing Reproductive Health Information through Social Media, Tamale Metropolis, 2022

Out of the 342 students studied, 45.4% 95%CI (40.0 – 51.0) indicated they have ever accessed reproductive health information through social media. The details are depicted on figure 3.

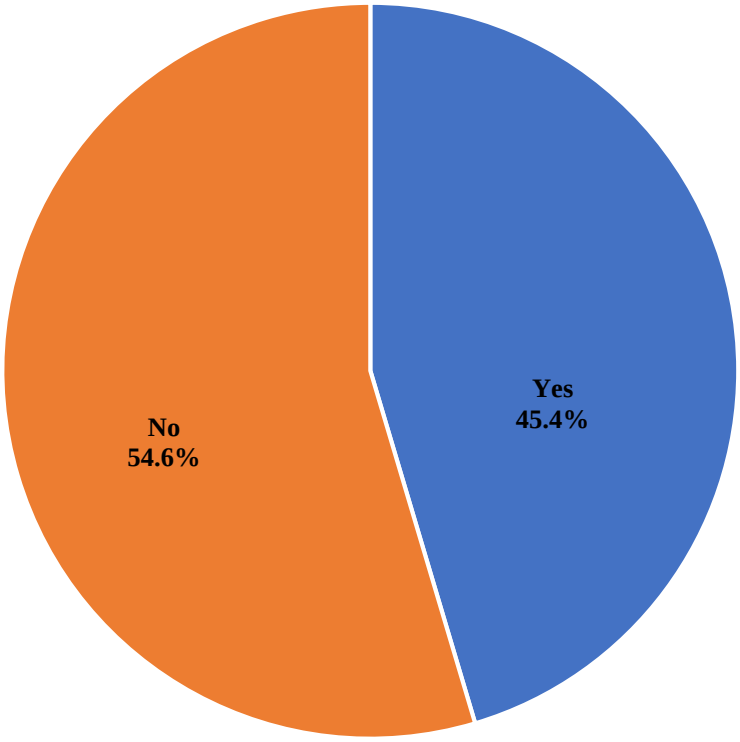

Figure 3: Accessing Reproductive Health Information through social media, Tamale Metropolis

The findings from the focus group discussion were not entirely different from the quantitative analysis. All students mentioned they have ever used social media to access reproductive health services.

"Yes, that was 3 to 4 years ago, there was one program about HIV, after the program I thought it wise to go and look for the causes, solutions and how to manage it on social media"

(FGD participant 2 Boy)

According to the students, the social media they frequented were WhatsApp, Tik Tok, Twitter and Instagram. Regarding the social media, they use to access reproductive health information. The mentioned applications were Instagram and tik tok.

"Sometimes you follow someone on Tic Tok and they do some video"

(FGD participated 3 Boy)

"On Instagram, there is a group that you join where there will be posting reproductive health ideas for your information"

(FDG participant 5 Girl)

On the reasons why students prefer accessing reproductive health services via social media and not visiting health facilities. The students mentioned shyness, the attitude of health workers, the absence of health centers and the lack of practical examples at the health facilities when they go visiting.

"Madam, some people are shy to go to the health person to ask questions about reproductive health, some will just go to the social media and they will go and get answers"

(FGD participant 15 Girl)

"Madam, when you go to the health personal, they will just say it without giving you practical examples, but through social media, they will show you some video"

(FGD participant 5 Girl)

"The health workers are too quick to judge you saying things like the last time she came here to ask this and that"

(FGD participant 7 Boy)

"Madam, like those living in the rural areas, there is no health facility, they don't have a counselor to talk to and teach them more about those things and if they have phones they can sometimes search"

(FGD participant 10, Boy)

Regarding some of the reproductive health services, they access via social media. The students mentioned family planning, abortion and treatment of syphilis and gonorrhea.

"We go on google, for instance, if you want to know something more about family planning and abortion."

(FGD participant 8 Girl)

4.6 Chi-square test of Association between accessing RH using social media and sociodemographic characteristics of the participants, Tamale Metropolis, 2022

The Chi-square analysis showed that respondents' place of residence ($p<0.040$) and occupation of guardian ($p<0.040$) were significantly associated with the accessing reproductive health information via social media

However, age, sex, marital status, religion and educational level were not significantly associated with accessing reproductive health services via social media ($p>0.05$) See table 5 for the details.

Table 5: Association between accessing RH using social media and sociodemographic characteristics of the participants

	Social Media to access RH			
Characteristics	**No**	**Yes**	**$\chi 2$**	**P-value**
Age group (years)			1.321	0.250
10 – 14	4 (80.0%)	1 (20.0%)		
15 - 19	180 (54.22)	152 (45.78%)		
Sex			3.444	0.063
Female	134 (58.01%)	97 (41.99%)		
Male	50 (47.17%)	56 (52.83%)		
Religion			1.557	0.212

Christianity	57 (60.00%)	38 (40.00%)		
Islam	127 (52.48%)	115 (47.52)		
Marital status			2.211	0.331
Cohabiting	7 (70.00%)	3 (30.00%)		
Married	4 (80.00%)	1 (20.00%)		
Single	184 (55.26%)	149 (44.74%)		
Residence			4.203	0.040**
Rural	89 (60.96%)	57 (39.04%)		
Urban	95 (49.74%)	96 (50.26%)		
Education			1.256	0.534
SHS Form 1	0	1 (100.00%)		
SHS Form 2	157 (54.51%)	131 (45.49%)		
SHS Form 3	27 (56.25%)	21 (43.75%)		
Occupation of guardian			8.289	0.040**
Farmer	69 (65.09%)	37 (34.91%)		
Government employee	31 (43.66%)	40 (56.34%)		
Trader	75 (53.57%)	65 (46.43%)		
Others	6 (50.00%)	6 (50.00%)		

P value= 0.05

4.7 Chi-square test of Association between accessing RH using social media and Participants Reproductive Health Characteristics, Tamale Metropolis, 2022

The Chi-square analysis showed that being in a romantic relationship ($p<0.001$), sexually active ($p<0.053$) and awareness of reproductive health ($p<0.040$) were significantly associated with accessing reproductive health services via social media. The details are depicted on table 6.

Table 6: Association Between Accessing RH using social media and Participants' Reproductive Health Characteristics

	Social Media to access RH			
Characteristics	**No**	**Yes**	**$\chi 2$**	**P-value**
Romantic relationship			16.664	0.001**
No	127 (63.82%)	72 (36.18%)		
Yes	57 (41.30%)	81 (58.70%)		
Sexually active			3.751	0.053**
No	165 (56.51%)	127 (43.49%)		
Yes	18 (40.91%)	26 (59.09%)		
Awareness of RH			4.212	0.040**
No	16 (76.19%)	5 (23.81%)		
Yes	168 (53.16%)	148 (46.84%)		

P value =0.05

4.8 Chi-square test of Association between accessing RH using Social Media and Social Media Utilization Among Study Participants, Tamale Metropolis, 2022

The Chi-square analysis showed that respondents' mobile phone ownership (p<0. .004), social media use (p<0.001), means of accessing RH using a mobile phone (p<0.02) and whether their problem was solved (p<0.001) were significantly associated with accessing reproductive health services via social media among the study participants

However, the social media application frequently used and the frequency of use were not significantly associated with accessing reproductive health services via social media (p>0. 05)

Table 7: Association Between Accessing RH via social media and Social Media Utilization Among Study Participants

	Social Media to access RH			
Characteristics	**No**	**Yes**	**$\chi 2$**	**P-value**
Phone ownership			8.155	0.004**
No	53 (68.83%)	24 (31.17%)		
Yes	131 (50.38%)	129 (49.62%)		
Social media use			53.974	0.001**
No	122 (75.31%)	40 (24.69%)		
Yes	62 (35.43%)	113 (64.57%)		
Media frequently used			2.374	0.498
Facebook	35 (31.82%)	75 (68.18%)		
Instagram	6 (50.00%)	6 (50.00%)		

Twitter	1 (25.00%)	3 (75.00%)		
YouTube	12 (41.38%)	17 (58.62%)		
Preference for Accessing RH			2.147	0.143
Physical	50 (56.18%)	39 (43.82%)		
Social media	99 (46.92%)	112 (53.08%)		
Means of access			12.791	0.012**
Communication App	19 (48.72%)	20 (51.28%)		
Text (SMS)	40 (46.51%)	46 (53.49%)		
Video call	7 (58.33%)	5 (41.67%)		
Voice call	11 (64.71%)	6 (35.29%)		
Websites	32 (29.91%)	75 (70.09%)		
Problem solved			14.058	0.001**
No	32 (60.38%)	21 (39.62%)		
Yes	62 (32.12%)	131 (67.88%)		

P value =0.05

4.9 Factors Associated with Using Social Media to Access Reproductive Health Services, Tamale Metropolis, 2022

In a multivariate logistic regression analysis, sex, residence, romantic relationship, mobile phone ownership, accessing reproductive health services via social media was substantially correlated with social media use and whether their issues were resolved. Male students were more likely than female students to use social media to get reproductive health services, with a difference of 62%. (aOR = 1.62, 95% CI 1.01 - 2.59), $p < 0.045$). Students who resided in urban areas had 55% higher

odds of accessing reproductive health services via social media than their rural dwelling colleagues (aOR = 1.55, 95% CI 1.00 - 2.41, p < 0.054). On their relationship status, students who were in a romantic relationship had 2.3 times increased odds of accessing reproductive health services via social media compared to their colleagues who were not in any romantic relationship (aOR = 2.25, 95% CI 1.39 - 3.64, p < 0.001). Among students who use social media, there were 6.37 times increased odds of accessing reproductive health services via social media compared to their colleagues who do not use social media (aOR = 6.37, 95% CI 3.68 - 11.05, p < 0.001), the details are shown on table 8.

Table 8: Multivariate Analysis of Factors Associated with using social media to Access Reproductive Health Services

Characteristics	**COR 95%CI**	**P-value**	**AOR 95%CI**	**P-value**
Age group (years)				
10 – 14				
15 – 19	3.38 (0.37-30.54)	0.279	3.36 (0.37 - 30.87)	0.284
Sex				
Female				
Male	1.55 (0.97 - 2.46)	0.064	1.62 (1.01 2.59)	0.045
Religion				
Christianity				
Islam	1.36 (0.84 - 2.20)	0.213	1.47 (0.90 2.40)	0.126
Marital status				
Married				

Single	2.30 (0.72 - 7.39)	0.160	2.03 (0.63 6.61)	0.238
Residence				
Rural				
Urban	1.58 (1.02 - 2.44)	0.041	1.55 (1.00 2.41)	0.054**
Education				
SHS Form 2				
SHS Form 3	0.93 (0.50 - 1.71)	0.804	0.93 (0.50 1.73)	0.814
Romantic relationship				
No				
Yes	2.51 (1.61 - 3.91)	0.001	2.25 (1.39 3.64)	0.001**
Sexually active				
No				
Yes	1.88 (0.99 -3.57)	0.055	1.20 (0.60 2.42)	0.601
Awareness of RH				
No				
Yes	2.82 (1.01 - 7.88)	0.048	2.14 (0.75 6.10)	0.153
Phone ownership				
No				
Yes	2.17 (1.27 - 3.73)	0.005	2.01 (1.17 3.49)	0.013**
Social media use				
No				
Yes	5.56 (3.46 - 8.92)	0.001	6.37 (3.68 11.05)	0.001**

Media frequently used				
Messaging apps				
YouTube	0.71 (0.31-1.62)	0.414	1.20 (0.32 4.42)	0.787
Problem resolved				
No				
Yes	3.22 (1.72-6.03)	0.001	3.403 (1.63 7.09)	0.001**
COR(CI95%) AOR(CI95%) P value=0.05				

4.10 Challenges faced by Adolescents and Measures to Address them, Tamale Metropolis, 2022

Regarding the difficulties, they have while attempting to get information on reproductive health via social media, the students mentioned wrong information, lack of internet bundle, network failure and website challenges

"Madam, sometimes there are some applications that consume a lot of bundles, you can get like gh10 bundle on the phone when you use it to search it will be uploading until the bundle finish."

(FGD participant 17, Boy)

"Some types of phones when you use them you don't see the images, they are not fast in downloading, sometimes they will say error but if you use original phones, it is fast."

(FGD participant 1, Girl)

On measures to help address the challenges they face when accessing reproductive health information via social media, students mentioned the development of reproductive health applications, providing computer rooms in senior high schools and providing WIFI internet connectivity.

> *"Madam, the government should create a particular application where we can access reproductive health."*
>
> *(FGD participant 1, Boy)*

CHAPTER FIVE

5.1 Discussion

Teenagers can use mobile phones to seek information about concerns related to their sexual health. Adolescents can benefit from correct information about sexual health when it is delivered to them in a convenient and private manner through the use of mobile technology for health promotion. Although it is innovative, the introduction of mobile technology and how teenagers become familiar with it give adolescents the opportunity to use mobile phones to access sexual and reproductive health services. The advent of mHealth is as a result of the development of mobile communication. mHealth services has the chance to enhance interventions on health promotion, protection and prevention easy to access and may also reduce time and distance (Aranda-Jan et al., 2014). With the fast development of mobile communication, there has been a rush in study into the health advantages of mobile phone use. With the development of digital and mobile technology, people are now more able than ever to engage in extensive engagement; as a result, a new media era has emerged, having interaction at the core of new media activities (Association, 2021). Experts from a variety of academic fields have been researching popular social media platforms like WhatsApp, Twitter, and Facebook in light of today's culture, including the issues they raise for politics, interpersonal relationships, the general welfare of society, and mental health. To participate in this new media, one needs web-based technology, whether on a desktop, laptop, or digital gadget that has social media capabilities as one of its mobile operator components.

mHealth is an effective tool for reaching young people, addressing issues with the healthcare system, and expanding access to high-quality medical care. According to certain studies, young people in low- and middle-income countries are willing to use social media to receive SRH information (Onukwugha et al., 2022).

Proportion of adolescents who use social media to access adolescent sexual reproductive health information and services

In this study, Tamale Metropolis's teenage reproductive health services and information were accessed via social media. Less than half of the teens in the survey had ever used social media to acquire information or services related to reproductive health, according to the report. This shows that even though teens in the Tamale metropolitan use social media frequently, less than 50% of them use it to find resources for their reproductive health.

This is in line with research from the Internet & American Life Project at the Pew Research Center, which found that an estimated 30% of youth use social media to learn about health-related topics. This, however, conflicts with the results of a study done in Nigeria with 1,800 girls randomly chosen from 18 public senior secondary schools in Lagos State, where social media was the least reliable source of information or services on reproductive health (Nwalo & Anasi, 2010). Additionally, although 94.6% of kids use social media, only 3.5% said they used it to look for health-related information, according to a survey done in Philadelphia (Plaisime et al., 2020). Furthermore, the majority of participants in a cross-sectional survey carried out in Nigeria stated that social media was the most often used channel for receiving SRH information and services (Ihesie & Chukwuogo, 2017). Additionally, a study conducted in 2015 by González-Ortega, Vicario-Molina, Martnez, and Orgaz shows that 68.4% of teenagers utilize social media for sexual education.

The use of social media will affect how often teenagers use it to receive services related to adolescent reproductive health. Compared to teenagers who don't use social media, those who do are more likely to discover and use reproductive services. This study found that social media is used by half of teenagers. However, a much higher proportion was reported in a study conducted

in Philadelphia, where 94.6% of teens use social media, (Plaisime et al., 2020). The inconsistency in findings could be attributed to the disparity in the settings of the studies.

Regarding the social media, they frequently visited, most mentioned Facebook. This is however inconsistent with the results of a study that was done by Plaisime which reported Instagram as the social media frequency by study participants (Plaisime et al., 2020).

Policymakers and organizations participating in adolescent reproductive health services will make better decisions if they are aware of and comprehend the choices adolescents make when deciding how to receive reproductive health information and services. This study found that most teenagers would rather use social media to acquire reproductive health information and services than go to reproductive health facilities. When asked why they would not want to attend a health center for their reproductive health concerns, students in a focus group discussion cited the attitude of the staff members and how others saw the institution. This conclusion is supported by research by Gray, Jones, Couzens, Sagar, & Jones (2019), which found that the internet and GPs/family doctors were teenagers' primary sources of knowledge on reproductive health (49.1% and 38.9%, respectively). However, this is inconsistent with the findings of a study conducted by Lim, Vella, Sacks-Davis, & Hellard, (2014) where fewer participants reported being comfortable getting information from social media. The disparity in findings could be attributed to the difference in the characteristics of the study participants. The study by Lim, Vella, Sacks-Davis, & Hellard, (2014) studied young people aged 16 – 29 years, unlike this study that interviewed adolescents aged 10 – 19 years.

A study by, Goodyear, Armour and Wood (2018), stated in general, when looking for healthcare information, young people are turning to new technologies, notably social media. Furthermore, persons 18 to 29 years old were shown to be much more likely to use social media sites to seek

remedies to health issues. According to their research, social media provides extraordinary and unusual opportunity for the young to be educated and know about health. Additionally, it has a great range of effects on behavioral changes in terms of health and lifestyle. Aside that, the survey discovered joining health groups on social media is simpler than joining traditional health or fitness groups (Victoria Goodyear, Kathleen Armour, 2018). Texting on cell phones is more frequent between Ghanaian young aged 18 to 34 compared to those aged 35 and beyond (Maeve Duggan, Nicole B. Ellison, Cliff Lampe, Amanda Lenhart, Mary Madden, Lee Rainie, 2015). Media has long been recognized as a useful instrument for enhancing health. The World Health Organization (WHO) proposed transferring health-related information via engaging and audio-visual tools in 1986. Following this, digital technology, also referred as mobile health (mHealth), has emerged as a means for fostering and attaining health. The use of a mobile phone for improve healthy behaviors is known as mhealth (Friederici et al., 2012). Consequently, mHealth is viewed as having potential since it addresses the challenges of services being out of reach, if not completely inaccessible, for the most vulnerable people and sexual and reproductive health topics being controversial in the majority of societies (Rokicki, 2017). According to recent studies, youth are supportive of mobile health programs that can raise general health awareness (Rokicki, 2017). mHealth is gathering steam as a critical avenue for connecting to young people who face numerous obstacles and difficulty in gaining access to adolescent youth-friendly institutions, and has been effective tools for offering young people with information on adolescent reproductive health and services (Ippoliti & Engle, 2017). Health may be the solution to this nomad problem since it gives young people ongoing access to knowledge and information. In 2015 research conducted in Ghana, 31% of participants aged 14 to 18 and 71% of participants aged 19 to 25 owned a mobile phone,

while 77% of those aged 14 to 18 and 91% of those aged 19 to 25 had used a cell phone in the previous four weeks (Hampshire et al., 2015).

Although the potential for government m-health initiatives to improve healthcare in locations with limited resources has received widespread praise, this opportunity has not yet been fulfilled in the execution of large-scale policy (Chib et al., 2014). According to a survey, men are more likely than women to use mobile phones, and young people from higher socioeconomic levels are also more likely to purchase and use mobile phones (Blumenstock et al., 2012). According to a study by Rokicki (2017), mHealth platforms for teenagers have the potential to engage and increase health awareness among teenage girls from all socioeconomic backgrounds, particularly those who are more likely to experience poor sexual and reproductive health outcomes.

Relationship between sociodemographic characteristics and the use of social media to access sexual reproductive health services and information

The sociodemographic or background characteristics of adolescents are factors that can influence their use of social media to access reproductive health services.

According to the study, there is a statistically significant link between having sex and using teen reproductive health services. Males in this study had higher odds of accessing adolescent reproductive health services via social media compared to their female counterparts. This may be explained by the fact that guys make up the bulk of the study's social media users. The results of a study by Marie, which showed a statistically significant sex difference in the frequency of usage of Facebook, Twitter, and Instagram for reproductive health information and services, are consistent with these findings (Plaisime et al., 2020).

The residency of students during school breaks was another factor found to significantly influence the use of social media to access adolescent reproductive health information and services. Students who resided in urban areas during school breaks were found to have higher odds of accessing health information via social media compared to their counterparts who dwelled in rural areas during school breaks. This could be explained by the availability of electricity and internet connectivity in urban settings compared to rural settings.

Another element that was discovered to be connected to teens using social media to seek information on adolescent reproductive health was their relationship status. Comparatively to those who weren't in a romantic relationship, adolescents who were more likely to receive information about reproductive health.

The type of reproductive health information and services that adolescents are interested in depends greatly on how sexually active they are. Adolescents who engage in sexual activities are more inclined to learn about reproductive health compared to adolescents who are naïve to sexual activity. More than two thirds of them were found to be inactive sexually, according to the study. It can be inferred from this that the majority of the teenagers had not engaged in any sexual activity. This contrasts with the results of a survey conducted by Asare, Aryee, and Kotoh in 2020, which indicated that 50.4% of young people were sexually active and that 77.3% of them initiated sex after the age of 15.

The awareness and knowledge individuals hold about a service influences their engagement or utilization of the services. Adolescents will only make use of social media to access reproductive health information and services if they are aware of these services and which social media to visit for this information. This study revealed that more than 90% of the study participants were aware of adolescent reproductive health services. This suggests that the majority of the adolescents who

participated in the study are aware of services for adolescent reproductive health. This is in line with the findings of a cross-sectional research of reproductive health knowledge and practices among female adolescents in a Mumbai urban slum, where 212 (88%) women were aware that ARHS services were offered (SUDHAKAR & R., 2011). The consistency in findings can be attributed to the urban nature of the settings of these studies. The findings of a study conducted in Oyo state, Nigeria, where just 13.1% of participants were aware of the adolescent reproductive health services, however, contradict this finding (Ilori et al., 2020).

Adolescents' awareness and use of these services will be influenced by the sources of information and services available to them on adolescent reproductive health. Regarding their source of information, the study revealed that the majority cited school as their source of reproductive health information. This could be explained by the fact that all the adolescents studied were second- and third-year students who received lectures on adolescent reproductive health in social studies. Knowing that the majority of adolescents obtain information on their reproductive health information from schools it will be important to introduce courses that will introduce students to the right information without shying them away. In a similar study, majority of the respondents 72.4 per cent learned about adolescent reproductive health services school staff. Also, majority of them believed that adolescent sexual and reproductive services and information were critical for young people (Motuma et al., 2016). This consistency in findings could be attributed to the fact that both studies were conducted among adolescents in secondary schools.

Reasons why adolescents resort to using social media to access sexual and reproductive health information and services

There are various reasons why adolescents will prefer accessing reproductive health services through social media rather than visiting health facilities in their communities. An engagement of

students through focus group discussion revealed that shyness, the attitude of health workers, the absence of health centers and the lack of practical examples at the health facilities were the major reasons why they prefer social media services.

The judgmental nature of health care providers at our health facilities is a key factor that shy adolescents from accessing reproductive health services. Adolescents will however rely on social media where there will be no individual to judge the kind of information they search or the kind of questions they ask. Also, the students stressed on the lack of practical examples in our facilities as one of the reasons why they will prefer getting reproductive health information via social media instead of the health facility. On social media, video evidence of questions is provided to further illustrate for students to understand. Considering the age of these students they would prefer visuals as a means of communication compared to just words or statements.

This is in line with the results of another study that looked at how teens utilize social media to get reproductive health care. This study identified a barrier to young people using the services provided by adolescent health clinics as the absence of confidentiality at the delivery stations (Binu et al., 2018). Facilities have to make arrangement to give privacy for patients or clients during their sessions, whether via physical boundaries between counselling and professional areas or through other appropriate arrangements. Another study in Uganda discovered that most service facilities lacked enclosures to give young girls and boys privacy. There was only one higher-order hospital that was known to have a site where youth programming might be offered. With this, no healthcare facility had a separate reception area for young people to provide service without interruption from other staff (Bukenya et al., 2017).

In addition, many teenagers think it would be humiliating to have their marital status questioned if they were to engage in family planning because the majority of them will not be married at the

time. Additionally, one person said family planning was not for adolescents but grownups (Motuma et al., 2016). In this same survey, A service giver stated his hesitation about delivering a contraception to a 13-year-old girl.

Barriers to the use of social media to access sexual and reproductive health information and services

In an attempt to increase the proportion of adolescents who access reproductive health information via social media, it is important to comprehend the obstacles teenagers confront when trying to get information. Adolescents mentioned the cost of internet bundle, network challenges and lack of adolescent reproductive health applications or sites on social media. If these issues are resolved, people will have greater access to reproductive health information and will have fewer problems with reproductive health, such as the nation's rising rate of STDs and unsafe abortion rates.

The results of this study are in line with those of other studies that indicate a variety of socioeconomic, cultural, and religious variables have a role in adolescents' poor evaluations of reproductive health care. For talk of ASRH, many societies stigmatize and have judgmental behaviors towards sexual activities especially for the unmarried and sexually active girls and women. It's possible that societal pressure keeps people from using contraception. Conflict, migration, urbanization, and a lack of education can all cause porous ASRH. (Morris & Rushwan, 2015).

Individual perception, fear, shame and stigma influence the use of reproductive health services (Ninsiima et al., 2021). Social norms which could be religious influences, family norms, community norms also hinder adolescents access to reproductive health services. Adolescents regards family values and their parents' attitude towards the use of reproductive health services, hence, discussions about sex between adolescents and parents or guardians makes it difficult. Some

adolescents shy from bringing up topics related to reproductive health to their parents. The community does not accept adolescents go to use reproductive health services and can identify them as unchaste. Fear of stigmatization from society for adolescents to use reproductive health services is also barrier to access reproductive health, others during interviews does not accept using these services. To some extent, religion also influences the use of reproductive health services. Adolescents feeling guilty of having early sex and using condom or other contraceptives which their religion does not subscribe to. Adolescents also viewed talking to their parents on sex topics as a religious taboo. It will be awful and an embarrassment to recognize your adolescent child engaging in such an action in areas or communities where customs and traditions prohibit younger individuals from having premarital sex. Sexual issues are still not addressed with adolescents at home, much less even practiced. As a result, adolescents experiencing sexual difficulties such as genital infections or unexpected pregnancies are more inclined to try to fix these issues on their own, consult with trusted brothers or sisters, buy medications from pharmacies or drugstores, and visit clinics that are not near to their homes. In rare circumstances, healthcare professionals unlawfully give hidden abortion services to adolescents. Because of cultural and religious preservation, frank discourse about reproductive health issues with families as well as other significant persons is rare in cultural situations. Most of such conversations occur between adolescents and their families when significant reproductive health issues have occurred. Most parents are uneasy, hesitant, and unprepared to talk about reproductive health issues with their children. Adolescents lack the information and abilities to make educated decisions and access contraception or other reproductive health care as a result of this (Motuma et al., 2016). According to (Agampodi & Agampodi, 2008), the majority of adolescent females claimed that

stigmatizing, beliefs of parents, teachers, and the community prevented them from accessing health services.

5.2 The limitation of the Study

The study did have certain restrictions. The findings are based on self-reported, individual data that may be skewed by respondents' social desirability as a result of participants filling out surveys in a school setting.

CHAPTER SIX

6.0 Introduction

This chapter includes a summary of the study's findings, along with any conclusions or recommendations that were drawn from it.

6.1 Summary of findings

Out of the 342 students studied, 45.4% 95%CI (0.40 – 0.51) indicated they have ever accessed reproductive health information through social media. Out of the total students studied, 98.3% (336/342) were between 15 – 19 years of age. About two-thirds, 68.7% (235/342) of students were females. Sex, residence, romantic relationship, Social media access for reproductive health care was highly correlated with social media usage and mobile phone ownership. Male students were 62% more likely than female students to use social media to get reproductive health services (aOR = 1.62, 95% CI 1.01 - 2.59), $p < 0.045$). Students who resided in urban areas had 55% higher odds of accessing reproductive health services via social media (aOR = 1.55, 95% CI 1.00 - 2.41, $p < 0.054$). Using social media to get information on reproductive health presented a number of difficulties, including wrong information, lack of internet bundle and network failure.

Proportion of adolescents who use social media to access adolescent sexual reproductive health information and services

Less than half of the teens in the survey had ever used social media to acquire information or services related to reproductive health, according to the report. This shows that even though teens in the Tamale metropolitan use social media frequently, less than 50% of them use it to find resources for their reproductive health. Compared to teenagers who don't use social media, those who do are more likely to discover and use reproductive services. This study found that social

media is used by half of teenagers. According to this study, the majority of teenagers favor using social media to get information and services about reproductive health over going to reproductive health clinics. When asked why they would not want to attend a health center for their reproductive health concerns, students in a focus group discussion cited the attitude of the staff members and how others saw the institution.

Relationship between sociodemographic characteristics and the use of social media to access sexual reproductive health services and information

According to the study, there is a statistically significant link between having sex and using teen reproductive health services. Males in this study had higher odds of accessing adolescent reproductive health services via social media compared to their female counterparts. The residency of students during school breaks was another factor found to significantly influence the use of social media to access adolescent reproductive health information and services. Students who resided in urban areas during school breaks were found to have higher odds of accessing health information via social media compared to their counterparts who dwelled in rural areas during school breaks. Another element that was discovered to be connected to teens using social media to seek information on adolescent reproductive health was their relationship status. Comparatively to those who weren't in a romantic relationship, adolescents who were more likely to receive information about reproductive health. More than two thirds of them were found to be inactive sexually, according to the study. It can be inferred from this that the majority of the teenagers had not engaged in any sexual activity. This study found that more than 90% of participants were aware of the resources available for adolescent reproductive health. This suggests that the majority of the adolescents who participated in the study are aware of services for adolescent reproductive health. Adolescents' awareness and use of these services will be influenced by the sources of information

and services available to them on adolescent reproductive health. According to the report, the majority of people who said they got their information about reproductive health from school.

Reasons why adolescents resort to using social media to access sexual and reproductive health information and services

There are various reasons why adolescents will prefer accessing reproductive health services through social media rather than visiting health facilities in their communities. An engagement of students through focus group discussion revealed that shyness, the attitude of health workers, the absence of health centers and the lack of practical examples at the health facilities were the major reasons why they prefer social media services. The judgmental nature of health care providers at our health facilities is a key factor that shy adolescents from accessing reproductive health services.

Barriers to the use of social media to access sexual and reproductive health information and services

Adolescents mentioned the cost of internet bundle, network challenges and lack of adolescent reproductive health applications or sites on social media. Social norms which could be religious influences, family norms, community norms also hinder adolescents access to reproductive health services. Adolescents regards family values and their parents' attitude towards the use of reproductive health services, hence, discussions about sex between adolescents and parents or guardians makes it difficult. Some adolescents shy from bringing up topics related to reproductive health to their parents. Adolescents also viewed talking to their parents on sex topics as a religious taboo.

6.2 Conclusion

Despite the high utilization of social media and awareness of reproductive health services, there is still a low utilization of social media by adolescents to access adolescent reproductive health services in the Tamale metropolis. Sex, usage of social media, urban or rural residence and adolescent romantic relationships were factors found to be significantly associated with their accessing of adolescent reproductive health information via social media.

6.3 Recommendations

1. The IT unit of Ghana Health Service should develop an application or integrate one into the existing social media platforms where adolescents can readily access correct reproductive health information.
2. Teachers, parents, and other care providers should be sensitized to help adolescents meet their reproductive health needs.
3. School management should provide free internet connectivity on their campuses to enable students to access reproductive health information via social media.
4. Teachers should educate students on the use of social media or the internet to access adolescent reproductive health information.

REFERENCES

Addy, N. A. (2015). ICT and Education : An analysis into Ghana ' s Universities. III(October), 23–28.

Adokiya, M. N., Cudjoe, F. K., & Yakong, V. N. (2020). Predictors of education and utilization of adolescent-friendly health services among youth in Kumbungu district , Ghana. https://doi.org/10.1108/JHR-04-2020-0120

Agampodi, S. B., & Agampodi, T. C. (2008). Adolescents perception of reproductive health care services in Sri. 8, 1–8. https://doi.org/10.1186/1472-6963-8-98

Akram, W., & Kumar, R. (2017). A Study on Positive and Negative Effects of Social Media on Society. 10.

Anaba, E. A. (2020). Determinants of adolescent sexual and reproductive health service quality in Ghana. 6(1), 1–8.

Aranda-Jan, C. B., Mohutsiwa-Dibe, N., & Loukanova, S. (2014). Systematic review on what works, what does not work and why of implementation of mobile health (mHealth) projects in Africa. BMC Public Health, 14(1). https://doi.org/10.1186/1471-2458-14-188

Asare, B. Y. A., Aryee, S. E., & Kotoh, A. M. (2020). Sexual behaviour and the utilization of youth friendly health Services: A cross-sectional study among urban youth in Ghana. International Journal of Africa Nursing Sciences, 13, 100250. https://doi.org/10.1016/j.ijans.2020.100250

Association, U. G. S. (2021). T6. Undergraduate Journal of Geography, 15.

Baatiema, L., Ameyaw, E. K., Moomin, A., Zankawah, M. M., & Koramah, D. (2019). Does

Antenatal Care Translate into Skilled Birth Attendance? Analysis of 2014 Ghana Demographic and Health Survey. Advances in Public Health, 2019, 1–7. https://doi.org/10.1155/2019/6716938

Biddlecom, A. E., Munthali, A., Singh, S., & Woog, V. (2008). NIH Public Access. 11(3), 99–100.

Binu, W., Marama, T., Gerbaba, M., & Sinaga, M. (2018). Sexual and reproductive health services utilization and associated factors among secondary school students in Nekemte. 1–11.

Blumenstock, J. E., Hall, M. G., & Eagle, N. (2012). Divided We Call : Disparities in Access and Use of Mobile Phones in Rwanda. 8(2), 1–16.

Bukenya, J. N., Mulogo, E., Kibira, S. P. S., Muhumuza, C., & Atuyambe, L. M. (2017). HHS Public Access. 2(3). https://doi.org/10.19080/GJORM.2017.02.555588.Health

Chib, A., Velthoven, M. Van, & Car, J. (2014). Journal of Health Communication : mHealth Adoption in Low-Resource Environments : A Review of the Use of Mobile Healthcare in Developing Countries. November. https://doi.org/10.1080/10810730.2013.864735

Choo, J., & Kang, H. (2014). Predictors of initial weight loss among women with abdominal obesity : a path model using self-efficacy and health-promoting behaviour. 1087–1097. https://doi.org/10.1111/jan.12604

Elia Abi-Jaoud MSc MD, K. T. N. M. M. A. P. (2020). Smartphones, social media use and youth mental health. 192(6), 136–141. https://doi.org/10.1503/cmaj.190434

Finlay, J. E., Assefa, N., Mwanyika-Sando, M., Dessie, Y., Harling, G., Njau, T., Chukwu, A.,

Oduola, A., Shah, I., Adanu, R., & Bukenya, J. (2020). Sexual and reproductive health knowledge among adolescents in eight sites across sub-Saharan Africa. Tropical Medicine and International Health, 25(1), 44–53. https://doi.org/10.1111/tmi.13332

Francis, E., & Chizoba Gabriel, V. (2019). Barriers Limiting Youth Access to Reproductive Health Services by Primary Health Care Facilities in Nigeria. Universal Journal of Public Health, 7(1), 36–43. https://doi.org/10.13189/ujph.2019.070105

Friederici, N., Hullin, C., & Yamamichi, M. (2012). Chapter 3. 45–60.

Fung, I. C., Blankenship, E. B., Ahweyevu, J. O., Cooper, L. K., Duke, C. H., Carswell, S. L., Jackson, A. M., & Iii, J. C. J. (2020). Public Health Implications of Image-Based Social Media : A Systematic Review of Instagram , Pinterest , Tumblr , and Flickr. 1–10.

Godha, D., Hotchkiss, D. R., & Gage, A. J. (2013). Association between child marriage and reproductive health outcomes and service utilization: A multi-country study from south asia. Journal of Adolescent Health, 52(5), 552–558. https://doi.org/10.1016/j.jadohealth.2013.01.021

González-Ortega, E., Vicario-Molina, I., Martínez, J. L., & Orgaz, B. (2015). The Internet as a Source of Sexual Information in a Sample of Spanish Adolescents: Associations with Sexual Behavior. Sexuality Research and Social Policy, 12(4), 290–300. https://doi.org/10.1007/S13178-015-0196-7

Gray, B. J., Jones, A. T., Couzens, Z., Sagar, T., & Jones, D. (2019). University students' behaviours towards accessing sexual health information and treatment. International Journal of STD and AIDS, 30(7), 671–679. https://doi.org/10.1177/0956462419828866

GSS. (2014). Tamale metropolis: 2010 Population and housing census.

Gwenn S. O'Keeffe; Kathleen Clarke-Pearson, C. C. and M. (2017). The Impact of Social Media on Children. 1–10. https://doi.org/10.4018/978-1-5225-5733-3.ch001

Hampshire, K., Porter, G., Asiedu, S., Mariwah, S., Abane, A., Robson, E., Munthali, A., Delannoy, A., Bango, A., Gunguluza, N., & Milner, J. (2015). Social Science & Medicine Informal m-health : How are young people using mobile phones to bridge healthcare gaps in Sub-Saharan Africa ? Social Science & Medicine, 142, 90–99. https://doi.org/10.1016/j.socscimed.2015.07.033

Helamo, D., Kusheta, S., Bancha, B., Habtu, Y., & Yohannes, S. (2017). Public Health & Safety Utilization and Factors Affecting Adolescents and Youth Friendly Reproductive Health Services among Secondary School Students in. International Journal of Public Health & Safety, 2(4), 1–7.

Hightow-weidman, L. B., Building, B., Hill, C., Muessig, K. E., Hill, C., Carolina, N., Bauermeister, J., Arbor, A., Zhang, C., Hill, C., Carolina, N., & Legrand, S. (2016). Youth, Technology and HIV: Recent Advances and Directions. 12(4), 500–515. https://doi.org/10.1007/s11904-015-0280-x.Youth

ICPD. (1994). No Title.

Ihesie, C. A., & Chukwuogo, O. (2017). Integrating mHealth into adolescent sexual and reproductive health promotion in Nigeria : prospects and barriers. 4(11), 3931–3941.

Ilori, O. R., Awodutire, P. O., & Ilori, O. S. (2020). Awareness and Utilization of Adolescent Reproductive Health Services among In-School Adolescents in Urban and Rural Communities in Oyo State. Nigerian Medical Journal : Journal of the Nigeria Medical

Association, 61(2), 67. https://doi.org/10.4103/NMJ.NMJ_38_19

Ippoliti, N. B., & Engle, K. L. (2017). Meet us on the phone : mobile phone programs for adolescent sexual and reproductive health in low-to-middle income countries. Reproductive Health, 1–8. https://doi.org/10.1186/s12978-016-0276-z

Iqbal, S., Khan, M. N., & Malik, I. R. (2017). Mobile Phone Usage and Students ' Perception towards M-Learning : A Case of Undergraduate Students in Pakistan. 32(1), 1–16.

Jane, M., Hagger, M., Foster, J., Ho, S., & Pal, S. (2018). Social media for health promotion and weight management : a critical debate. 1–7.

Karikari, S., Osei-Frimpong, K., & Owusu-Frimpong, N. (2017). Evaluating individual level antecedents and consequences of social media use in Ghana. Technological Forecasting and Social Change, 123(August), 68–79. https://doi.org/10.1016/j.techfore.2017.06.023

KEMP, S. (2020). DIGITAL2020: GLOBAL OVERVIEW.

Kenechi Okeleke, S. S. (2019). The Mobile Economy. 1–56.

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. Business Horizons, 54(3), 241–251. https://doi.org/10.1016/j.bushor.2011.01.005

Kim, B., & White, K. (2018). How can health professionals enhance interpersonal communication with adolescents and young adults to improve health care outcomes ?: systematic literature review. International Journal of Adolescence and Youth, 3843, 1–21. https://doi.org/10.1080/02673843.2017.1330696

Kite, J., Foley, B. C., Grunseit, A. C., & Freeman, B. (2016). Please Like Me : Facebook and

Public Health Communication. 1–16. https://doi.org/10.1371/journal.pone.0162765

Lata, P., Id, P., Seale, H., & Razee, H. (2019). Exploring the factors impacting on access and acceptance of sexual and reproductive health services provided by adolescent-friendly health services in Nepal. 1–19.

Lim, M. S., Vella, A., Sacks-Davis, R., & Hellard, M. E. (2014). Young people's comfort receiving sexual health information via social media and other sources. International Journal of STD and AIDS, 25(14), 1003–1008. https://doi.org/10.1177/0956462414527264

Litman, L., Weinberger-litman, S., Goldschein, A., & Robinson, J. (2015). Mobile Exercise Apps and Increased Leisure Time Exercise Activity : A Moderated Mediation Analysis of the Role of Self-Efficacy and Barriers. September. https://doi.org/10.2196/jmir.4142

Luxton, D. D., June, J. D., & Fairall, J. M. (2012). Social Media and Suicide : A Public Health Perspective. 102, 195–200. https://doi.org/10.2105/AJPH.2011.300608

Ma, J. S., Med, G. H., & Solter, C. (2003). A Rapid Assessment of Youth Friendly Reproductive Health Services. 4, 1–12.

Maeve Duggan, Nicole B. Ellison, Cliff Lampe, Amanda Lenhart, Mary Madden, Lee Rainie, A. S. (2015). Social Media Update 2014. January.

Maharjan, B., Rishal, P., & Svanemyr, J. (2019). Factors influencing the use of reproductive health care services among married adolescent girls in Dang District , Nepal : a qualitative study. 3, 1–9.

Mcgregor, F., Somner, J. E. A., Bourne, R. R., Munn-giddings, C., Shah, P., & Cross, V. (2014). Social media use by patients with glaucoma : what can we learn ? 34, 46–52.

https://doi.org/10.1111/opo.12093

Mehra, S., Sogarwal, R., & Chandra, M. (2013). Integrating adolescent-friendly health services into the public health system : an experience from rural India. 2(December), 165–173. https://doi.org/10.4103/2224-3151.115828

Moghaddam, H. T., Bahreini, A., & Abbasi, M. A. (2016). Adolescence Health : the Needs , Problems and Attention. 4(26), 1423–1438.

Mohr, D. C., Ph, D., Burns, M. N., Ph, D., Schueller, S. M., Ph, D., Clarke, G., Ph, D., & Klinkman, M. (2014). NIH Public Access. 35(4), 332–338. https://doi.org/10.1016/j.genhosppsych.2013.03.008.Behavioral

Morris, J. L., & Rushwan, H. (2015). International Journal of Gynecology and Obstetrics Adolescent sexual and reproductive health : The global challenges. International Journal of Gynecology and Obstetrics, 131, S40–S42. https://doi.org/10.1016/j.ijgo.2015.02.006

Motuma, A., Syre, T., Egata, G., & Kenay, A. (2016). Utilization of youth friendly services and associated factors among youth in Harar town , east Ethiopia : a mixed method study. BMC Health Services Research, 1–10. https://doi.org/10.1186/s12913-016-1513-4

NCA. (2018). Industry Information - Telecom subscriptions for March 2016. June, 1–9. http://www.nca.org.gh/downloads/Telecom_subscription_trends_for_March_2016.pdf

Negash, W., Dessalegn, M., Yitayew, B., Demsie, M., Wagnew, M., & Nyagero, J. (2016). Supplement article Reproductive health service utilization and associated factors : the case of north Shewa zone youth , Amhara region , Ethiopia. 25(Supp 2), 1–6. https://doi.org/10.11604/pamj.supp.2016.25.2.9712

Ninsiima, L. R., Chiumia, I. K., & Ndejjo, R. (2021). Factors influencing access to and utilisation of youth - friendly sexual and reproductive health services in sub - Saharan Africa : a systematic review. Reproductive Health, 1–17. https://doi.org/10.1186/s12978-021-01183-y

Nurmi, J. (2013). Sexual and Reproductive mHealth Better Access to Health Care through Mobile phones Geneva Foundation for Medical Education and Research.

Nwalo, K. I. N., & Anasi, S. N. I. (2010). Access to and use of reproductive health information among in-school adolescent girls in Lagos State, Nigeria: Http://Dx.Doi.Org/10.1177/0017896910386525, 71(1), 90–101. https://doi.org/10.1177/0017896910386525

O'Keeffe, G. S., Clarke-Pearson, K., Mulligan, D. A., Altmann, T. R., Brown, A., Christakis, D. A., Falik, H. L., Hill, D. L., Hogan, M. J., Levine, A. E., & Nelson, K. G. (2011). Clinical report - The impact of social media on children, adolescents, and families. Pediatrics, 127(4), 800–804. https://doi.org/10.1542/peds.2011-0054

Odo, A. N., Samuel, E. S., Nwagu, E. N., Nnamani, P. O., & Atama, C. S. (2018). Sexual and reproductive health services (SRHS) for adolescents in Enugu state , Nigeria : a mixed methods approach. 1–12. https://doi.org/10.1186/s12913-017-2779-x

Olayinka A. Osanoga, Joel O. Aluko, Sweetie N. Adegbuyi, Olaniyi A. Filade, and H. I. B. S. (2020). Influence of Social Media use on Sexual Behaviour of Undergradute Students. 3(2).

Olumide, A. O., & Ojengbede, O. A. (2016). The media as a critical determinant of the sexual and reproductive health of adolescents in Ibadan, Nigeria. Sexual and Reproductive Healthcare, 8, 63–74. https://doi.org/10.1016/j.srhc.2016.02.006

Onukwugha, F. I., Smith, L., Kaseje, D., Wafula, C., Kaseje, M., Orton, B., Hayter, M., & Magadi, M. (2022). The effectiveness and characteristics of mHealth interventions to increase adolescent's use of Sexual and Reproductive Health services in Sub-Saharan Africa: A systematic review. PLoS ONE, 17(1). https://doi.org/10.1371/JOURNAL.PONE.0261973

Pfeiffer, C., Kleeb, M., Mbelwa, A., & Ahorlu, C. (2014). The use of social media among adolescents in Dar es Salaam and Mtwara, Tanzania. Reproductive Health Matters, 22(43), 178–186. https://doi.org/10.1016/S0968-8080(14)43756-X

Plaisime, M., Robertson-James, C., Mejia, L., Núñez, A., Wolf, J., & Reels, S. (2020). Social Media and Teens: A Needs Assessment Exploring the Potential Role of Social Media in Promoting Health: Https://Doi.Org/10.1177/2056305119886025, 6(1). https://doi.org/10.1177/2056305119886025

Robert, K., Maryline, M., Jordan, K., Lina, D., Helgar, M., Annrita, I., Wanjiru, M., & Lilian, O. (2020). Factors influencing access of HIV and sexual and reproductive health services among adolescent key populations in Kenya. International Journal of Public Health, 65(4), 425–432. https://doi.org/10.1007/s00038-020-01373-8

Robin Stevens, Stacia Gilliard-Matthews, Jamie Danaev, Abigail Todhunter-Reid, Bridgette Brawner, J. S. (2017). Social Media Use and Sexual Risk Reduction Behaviour Among Minority Youth: Seeking Safe Sex Information. 66(5), 368–377. https://doi.org/10.1097/NNR.0000000000000237.Social

Rokicki, S. (2017). Assessing the reach and effectiveness of mHealth : evidence from a reproductive health program for adolescent girls in. 1–14. https://doi.org/10.1186/s12889-

017-4939-7

Rosen, A. J. Von, Rosen, F. T. Von, Tinnemann, P., & Rosen, A. J. Von. (2017). Sexual Health and the Internet : Cross-Sectional Study of Online Preferences Among Adolescents Corresponding Author : 19, 1–10. https://doi.org/10.2196/jmir.7068

Ross, S. M. (2019). What Are the Benefits of Mobile Health Technology?

Roundtree, A. K. (2017). Social Health Content and Activity on Facebook : A Survey Study. https://doi.org/10.1177/0047281616641925

Saratu O. Ajike, V. C. M. (2016). Aolescent/Youth Utilization of Reproductive Health Services:Knowledge Still a Barrier. 2(3), 17–22.

Schroll, A. M., Kjærgaard, H., & Midtgaard, J. (2013). Encountering abuse in health care; lifetime experiences in postnatal women - a qualitative study. BMC Pregnancy and Childbirth, 13(April 2014). https://doi.org/10.1186/1471-2393-13-74

Singh, P. K., Rai, R. K., Alagarajan, M., & Singh, L. (2012). Determinants of Maternity Care Services Utilization among Married Adolescents in Rural India. 7(2). https://doi.org/10.1371/journal.pone.0031666

Starrs, A. M., Ezeh, A. C., Barker, G., Basu, A., Bertrand, J. T., Blum, R., Coll-seck, A. M., Grover, A., Laski, L., Roa, M., Summers, C., & Ashford, L. S. (2018). The Lancet Commissions Accelerate progress — sexual and reproductive health and rights for all : report of the Guttmacher – Lancet Commission. 391. https://doi.org/10.1016/S0140-6736(18)30293-9

State, B., & Ekpenyong, A. S. (2017). Social Media and Sexual Reproductive Health Behaviour

Among Adolescents In Bayelsa State , Nigeria. March.

Statistics, I. M., Data, M. M., & December, S. F. O. R. (2019). Mnos mobile data (2g & 3g) subscription trends 2019 airteltigo scancom (mtn) vodafone mobile glo mobile total mobile month over month growth month over month growth airteltigo scancom (mtn) vodafone mobile glo mobile population growth rate penetration mobile data market share for broadband data operators airteltigo scancom (mtn) vodafone mobile glo mobile. december, 67–68.

Sudhakar, B. P., & R., S. S. (2011). A cross sectional study of knowledge and practices about reproductive health among female adolescents in an urban slum of mumbai. In Journal of Family and Reproductive Health (Vol. 5, Issue 4, pp. 119–126).

Survey, H. (2014). Ghana.

Tabong, P. T. N., Maya, E. T., Adda-Balinia, T., Kusi-Appouh, D., Birungi, H., Tabsoba, P., & Adongo, P. B. (2018). Acceptability and stakeholders perspectives on feasibility of using trained psychologists and health workers to deliver school-based sexual and reproductive health services to adolescents in urban Accra, Ghana. Reproductive Health, 15(1), 1–16. https://doi.org/10.1186/s12978-018-0564-x

The Little Data Book on Information and Communication Technology 2017. (2017). In The Little Data Book on Information and Communication Technology 2017. https://doi.org/10.1596/978-1-4648-1028-2

Third International Conference on Global Public Health. (2015). Acadamic Resource Index.

Tripathi, M., Singh, S., & Ghimire, S. (2018). Effect of Social Media on Human Health Virology

& Immunology Journal Effect of Social Media on Human Health. February.

Tuncay Dilci, A. K. E. (2018). The Impact of Social Media on Children.

UNFPA. (2019a). No Title.

UNFPA. (2019b). Research on factors that determine women ' s ability to make decisions about sexual and reproductive health and rights. I(October), 53.

United Nations. (2019). World Population Prospect 2019: Ten Key Findings. Department of Economic and Social Affairs, Population Division, August, 2019–2020.

Vaterlaus, J. M., Patten, E. V, Roche, C., & Young, J. A. (2022). Computers in Human Behavior # Gettinghealthy : The perceived influence of social media on young adult health behaviors. 45(January 2014), 2014–2016.

Velthoven, M. H. Van, Li, Y., Wang, W., Chen, L., Du, X., & Wu, Q. (2015). Prevalence of Mobile Phones and Factors Influencing Usage by Caregivers of Young Children in Daily Life and for Health Care in Rural China : A Mixed Methods Study. 1–24. https://doi.org/10.1371/journal.pone.0116216

Victoria Goodyear, Kathleen Armour, H. W. (2018). The impact of social media on young people ' s health and wellbeing : and actions underpinning research supported by the. January.

WHO. (2015a). Global standards for quality health-care services for adolescents. 1.

WHO. (2015b). No Title.

WHO. (2018). WHO recommendations on adolescent sexual and reproductive health and rights.

Wurtele, S. K. (2017). Preventing cyber sexual solicitation of adolescents. January.

Yussif, A. S., Lassey, A., Ganyaglo, G. Y. K., Kantelhardt, E. J., & Kielstein, H. (2017). The long-term effects of adolescent pregnancies in a community in Northern Ghana on subsequent pregnancies and births of the young mothers. Reproductive Health, 14(1), 1–7. https://doi.org/10.1186/s12978-017-0443-x

Zhang, J., Brackbill, D., Ma, S. Y., Ma, J. B., Ma, N. H., & Centola, D. (2016). Support or competition ? How online social networks increase physical activity : A randomized controlled trial ☆. PMEDR, 4, 453–458. https://doi.org/10.1016/j.pmedr.2016.08.008

Zone, H., Nations, S., & Region, P. (2018). Utilization and Factors Affecting Adolescents and Youth Friendly Reproductive Health Services among Secondary School Students in Hadiya Public Health & Safety Utilization and Factors Affecting Adolescents and Youth Friendly Reproductive Health Services among Secondary School Students in. February.

APPENDICES

APPENDIX 1: Informed consent by Parent/Guardian (10-17 years)

Permission

Your child has been selected to be part of this study but your permission is required before proceeding. I am exploring 'the use of social media to access sexual and reproductive health services and information in the tamale metropolis.' He/she has the right not to answer questions to which he/she is embarrassed and the responses will be kept till the end of the study.

Right to Refuse or Withdraw

Your child has the right to refuse to participate in this study and can also withdraw along the line from the study if he/she wishes to do so.

Confidentiality

All information collected will be kept confidential.

Benefits

This study seeks to determine the use of social media to access sexual and reproductive health services, the knowledge level and factors associated with the use of the adolescent friendly health services in the Tamale metropolis. The outcome will help to address the adolescents' concerns regarding the adolescent health services and the impact of social media on adolescent health.

Certificate of Assent

I have read the following information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily for my child to be a participant in this study.

Name/Initials of Parent/Guardian

…….

…….

Relationship to child

……..

Signature/thumbprint of parent/guardian

……..

Date: …….

Name of researcher/research assistant

…….

Date:……

Signature/ thumbprint of participant

……..

Date:……..

For further information or clarifications, please contact the following:

Principal Researcher: 0540373315

APPENDIX 2: Consent form (18-19 years)

The use of social media to access sexual and reproductive health services by adolescents in the tamale metropolis

Good day, I am SALIFU RAHMA a masters' student of University for Development Studies, conducting a survey for my thesis on the use of social media to access sexual and reproductive health services and information in the Tamale metropolis.

Right to Refuse or Withdraw

You have the right to refuse to participate in this study and can also withdraw along the line from the study if he/she wishes to do so.

Confidentiality

All information collected will be kept confidential.

Benefits

This study seeks to determine the use of social media to access sexual and reproductive health services, the knowledge level and factors associated with the use of adolescent-friendly health services in the Tamale metropolis. The outcome will help to address the adolescents' concerns regarding adolescent health services and the impact of social media on adolescent health.

Certificate of Assent

I have read the following information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily for my child to be a participant in this study.

Name/Initials of Parent/Guardian

…….

…….

Name of researcher/research assistant

…….

Date:……

Signature/ thumbprint of participant

……..

Date:……..

For further information or clarifications, please contact the following:

Principal Researcher: 0540373315

APPENDIX 3: Questionnaire for data collection

Hello, my name is **Salifu Rahma**, a Maternal and Child Health student at the University for Development Studies. I am conducting a study on the use of social media by adolescents to access sexual and reproductive health services.

Findings from this study will be used by the Tamale Metropolitan Health Management Team and policymakers to establish reasonable steps in maximizing access to reproductive health services by adolescents.

Are you willing to participate in our study?

a. Yes [ ]
b. No [ ]

SECTION A: SOCIODEMOGRAPHIC CHARACTERISTICS

1. How old are you?
    a) 10-14 [ ]
    b) 15-19 [ ]

2. Sex
    a) Male [ ]
    b) Female [ ]

3. Which religion do you belong to?
    a) Islam [ ]
    b) Christianity [ ]
    c) Traditionalist [ ]

4. Place of residence
    a) Rural
    b) Urban

5. Level of Education
    a) form 1 [ ]
    b) form 2 [ ]
    c) form 3 [ ]

6. Marital status
    a) Married [ ]
    b) Single [ ]
    c) Divorce [ ]
    d) Cohabiting [ ]

7. Occupation of parents or guardians
    a) Farmer [ ]
    b) Trader [ ]
    c) The government employed [ ]
    d) Others specify …….

SECTION B: AWARENESS OF REPRODUCTIVE HEALTH

8. Do you have a boy/girlfriend?
    a) Yes [ ]
    b) No [ ]

9. Do you ever have sex?
    a) Yes [ ]
    b) No [ ]

10. Have you heard of or had any education on adolescent reproductive health services?
    a) Yes [ ]
    b) No [ ]

11. If yes, from where?
    a) School [ ]
    b) Religious place [ ]
    c) Friends [ ]
    d) Family members [ ]
    e) Media (radio, TV, internet) [ ]
    f) Health care providers [ ]
    g) Posters [ ]
    h) Others ……..

12. Do you know where these services are provided?
    …….
    …….
    …….

13. Who provides these services?

……
……
……

14. Do you know any adolescent reproductive health challenges?

a) Yes [ ]
b) No [ ]

15. If yes, give three of them

……
……
……

SECTION C: SOCIAL MEDIA USAGE

16. Do you own a mobile phone?

a) Yes [ ]
b) No [ ]

17. Are you on any social media platform?

a) Yes [ ]
b) No [ ]

18. Which of the following do you use frequently?

a) Facebook [ ]
b) Twitter [ ]
c) YouTube [ ]
d) Instagram [ ]
e) Other(s), specify ……

19. Have you used social media to access reproductive health services?

a) Yes [ ]
b) No [ ]

20. If yes, which of the services?

a) Family planning [ ]
b) Pregnancy screening [ ]
c) Postnatal services [ ]

d) Antenatal services [ ]
e) Abortion services [ ]
f) Nutritional services [ ]
g) Screening/ treatment of sexually transmitted diseases [ ]
h) Health information or counselling [ ]
i) Sexual violence management [ ]
j) Substance/drug abuse management [ ]
k) Other(s), specify ……

21. How often do you use it?
    a) Always [ ]
    b) Sometimes [ ]
    c) Rarely [ ]

22. Through which means of social media do you access reproductive health?
    a) Text (SMS) [ ]
    b) Websites [ ]
    c) Video call [ ]
    d) Communication App [ ]
    e) Voice call [ ]

23. Why do you resort to the use of social media to access reproductive health services?
    ……
    ……
    …….

24. Was your problem solved after accessing the service?
    a) Yes [ ]
    b) No [ ]

25. Will you prefer using social media to access reproductive health at a health facility?
    a) Yes [ ]
    b) No [ ]

26. What stops you from using social media to access reproductive health services?
    ……
    ……
    ……

Thank you for your participation

APPENDIX 4: Focus group discussion guide

1. How useful is social media (SM) to adolescents? Probe for details:
   i. Use for information about adolescent reproductive health issues,
   ii. Ask for more information

2. Have you ever used any social media platform to access RH information or service?
   i. How did you use it?
   ii. How often do you use it
   iii. What do you use it for?
   iv. Why do you use it?

3. What type of service or information did you access? **Probe for more details**:
4. What other types of information or services can you access through social media**? Probe for details**
5. Why did you choose to use social media instead of going to a facility? Probe for more details
6. How is it useful to you?
7. How does social media serve your sexual and representative needs? Probe for more details
8. Has it ever shaped/changed your opinion on SRH? **Probe for more details**
9. How could social media serve you better? **Probe for more details**
10. What challenges do you encounter when using social media to access information and services on RH? **Probe for more details**

11. What are the barriers you have encountered in using social media to access RH information and services? **Probe for more details**
12. Does social media help you navigate barriers, how does it help?
13. Does social media facilitate your access to SRH? **Probe for more details**
14. How does social media help you navigate the barriers?

GHANA EDUCATION SERVICE

In case of reply the date and reference number of this letter should be quoted

Our Ref: GES/NR/MEO/ T.T 12/VOL. 3
Your Ref: .....

Email: *tmetroedu@gmail.com*

Metropolitan Education Office
P. O. Box 6, E/R
Tamale, Northern Region
Tel: 037-2022090

Date: March 10, 2022

LETTER OF INTRODUCTION

SALIFU RAHMA

I reference letter dated 1st December, 2021 and wish to introduce to you Ms. Salifu Rahma, a Master of Public Health Student of School of Public Health of the University for Development Studies.

She is undertaking a study titled: **'The use of social media by adolescents to access Sexual and Reproductive Health services within Senior High Schools in the Tamale Metropolis.**

She is required to collect the necessary data from these schools in the Metropolis and we have given her our approval to enter your school to carry out her activity.

However, the consent is provided on the assurance that she comport herself and fully comply with requirements such as the protection of the rights and confidentiality of the pupils/students who will be selected for the study and ensure that agreed procedures are followed accordingly.

Please also find attached an introductory letter from the head of Department of the institution for your attention.

Counting on your usual cooperation.

(AMATUS D. TUG-UU)
METROPOLITAN DIRECTOR OF EDUCATION
TAMALE

ALL HEADS OF SECOND CYCLE SCHOOLS
TAMALE METRO.

Cc: Ms. Salifu Rahma
School of Public Health
UDS – Tamale

UNIVERSITY FOR DEVELOPMENT STUDIES
School of Public Health

Tel : 03720 - 94080
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Post Office Box TL 1883,

Tamale, Ghana. West Africa.

02/12/2021

Office of the Dean

The Chairperson
Institutional Review Committee
University for Development Studies
Tamale,
Northern Region

LETTER OF INTRODUCTION

I write to introduce to you Ms. Salifu Rahma, a second-year Master of Public Health student in the Department of Global and International Health, School of Public Health. As part of the requirement, Ms. Salifu is expected to write and submit a well-written thesis to the School as part of the requirements for graduation. As part of the process, Ms. Salifu is applying to your committee for ethical clearance on the topic ***THE USE OF SOCIAL MEDIA BY ADOLESCENTS TO ACCESS SEXUAL AND REPRODUCTIVE HEALTH SERVICES.***

I would be very grateful if you could assist her by way of ethical clearance to enable her execute his project to a successful end.

Thank you.

OFFICE OF THE DEAN
SCHOOL OF PUBLIC HEALTH
UNIVERSITY FOR DEV'T
STUDIES, TAMALE

.....
Prof. Adadow Yidana
(Dean, SPH)

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Tamale, Ghana, West Africa.

Office of the Dean 01/12/2021

The Metropolitan Director of Education
Tamale Metropolis
Tamale, N/R

LETTER OF INTRODUCTION

SALIFU RAHMA

This is to introduce to you. Ms. Salifu Rahma, a Master of Public Health student of School of Public Health of the University for Development Studies. Ms. Rahma is currently working on her thesis titled: ***THE USE OF SOCIAL MEDIA BY ADOLESCENTS TO ACCESS SEXUAL AND REPRODUCTIVE HEALTH SERVICES***. Ms. Rahma wants to have access to Senior High Schools within the metropolis to carry out this important academic exercise.

I would be grateful if you could provide her with this information and any other assistance she may need.

Thank you.

OFFICE OF THE DEAN
SCHOOL OF PUBLIC HEALTH
UNIVERSITY FOR DEV'T
STUDIES, TAMALE

.....
Prof. Yidana Adadow
(Dean, SPH)

UNIVERSITY FOR DEVELOPMENT STUDIES

INSTITUTE FOR INTERDISCIPLINARY RESEARCH (IIR)

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Website: www.uds.edu.gh
Email: iir@uds.edu.gh

P. O. Box 1350
Tamale, Ghana

Our Ref:.....

Your Ref:.....

OFFICE OF THE DIRECTOR

Date:....1st April 2022.

To whom it May Concern

I would be grateful if you could provide Ethical Approval to Madam Salifu Rahma to enable her collect data for her MPH Thesis. Madam Salifu is MPH candidate at the School of Public Health, University for Development Studies, Tamale. Her thesis title is "THE USE OF SOCIAL MEDIA BY ADOLESCENTS TO ACCESS REPRODUCTIVE HEALTH INFORMATION AND SERVICES IN TAMALE METROPOLIS"

I count on your kind consideration.

Thank you.

Yours faithfully,

Dr. Abdulai Abubakari
(Thesis Supervisor)