UNIVERSITY FOR DEVELOPMENT STUDIES, TAMALE

KNOWLEDGE, ACCESS AND UTILISATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES AMONG SENIOR HIGH SCHOOL STUDENTS IN THE SUNYANI WEST MUNICIPALITY, GHANA

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THESIS SUBMITTED TO THE DEPARTMENT OF SOCIAL AND BEHAVIOURAL SCIENCES, SCHOOL OF PUBLIC HEALTH, UNIVERSITY FOR DEVELOPMENT STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF PHILOSOPHY DEGREE IN COMMUNITY HEALTH AND DEVELOPMENT.

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Finally, I wish to sincerely thank all the health workers, senior high school guidance and counseling coordinators and students for and willingly accepting to participate in the study voluntarily.

DECLARATION

I, Angelina Amoatemaa Korang hereby declare that this thesis is the result of my own original work towards the award of Master of Philosophy in Community Health and Development. All data were originally gathered and analyzed by me. Thus, it contains no material that has been published by another person or has been accepted for the award of any other degree of the University for Development Studies or elsewhere, except where due acknowledgement has been made in the text.

Candidate's Name

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Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University for Development Studies.

Name of Supervisor

Dr. Gifty Apiung Aninanya

Signature..... Date: 15th June, 2021

DEDICATION

I sincerely dedicate this work to God Almighty, my mother Mrs. Elizabeth Nyantakyiwaa, and my four kids; Kristen, Keren, Krista and Aseda.

ABSTRACT

Poor uptake of SRH services among adolescents affect the progress of reaching universal access to SRH services in Ghana. This study sought to assess adolescents' knowledge, access and use of SRH services in the Sunyani West Municipality. An analytical cross-sectional design was adopted with a mixed-method approach. Questionnaire was used to collect quantitative data through simple random sampling techniques by balloting. Both Focus Group Discussion and Key Informant Interview guides were used to collect qualitative data using purposive sampling techniques to select participants. Quantitative data were entered into Microsoft office Excel spreadsheet and analyzed using STATA version 12.1 and presented descriptively in tables and charts. Pearson Chi-square (X^2) test was done to establish association between key independent variables and access to and utilization of SRHS at a significant level of 5% ($p \leq 0.05$). Also, statistically associated factors were further subjected into multivariate logistic regression. Qualitative data was analyzed using thematic analysis procedure to help identify patterns of themes and sub-themes. The findings revealed that awareness level was high (83.7%). Knowledge level was averagely high (51.2%) and slightly over half (59%) had ever accessed SRHS. About 70.5% have ever used SRH service, and factors affecting access to and utilization of SRH service were restrictive school rules (42.7%), shyness (67.7%), and financial difficulty (57.5%). Significantly associated factors were relationship status, level of education, age, and frequency of visits by closed associates. Conclusively, awareness was almost universal, and knowledge level, access to and utilization were all above average. Ghana Health Service and Ghana Education Service should introduce sexual and reproductive

health education in the curriculum of schools to improve on adolescents' access to and use of SRHS.

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LIST OF ACRONYMS AND ABBREVIATIONS

ADHD	National Adolescents Health and Development Programme
AFRHS	Adolescents Friendly Reproductive Health Services
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
AOR	Adjusted Odd Ratio
ASRH	Adolescents Sexual and Reproductive Health
AYFRH	Adolescents Youth Friendly Reproductive Health
CHASS	Chiraa Senior High School
CHIPS	Community -based Health Planning Services
CSE	Comprehensive Sexuality Education
CSRH	Comprehensive Sexuality Reproductive Health
DHD	District Health Directorate
EC	Emergency Contraceptives
FGDs	Focus Group Discussions
FGM	Female Genital Mutilation
FHD	Family Health Division
FP	Family Planning
GDHS	Ghana Demographic Health Survey
GES	Ghana Education Service
GFR	General Fertility Rate
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HIV	Human Immune-deficiency Virus

HPV	Human Papilloma Virus
ICPD	International Conference for Population and Development
IPPF	International Planned Parenthood Federation
IUD	Intra-Uterine Devices
KII	Key Informant Interviews
LMIC	Lower- and Middle-Income Country
MOH	Ministry of Health
NGOs	Non-governmental Organizations
NODASS	Notre Dame Senior High School
NPC	National Population Council
ODASS	Odumanseman Senior High School
OR	Odd Ratio
PPAG	Planned Parenthood Association of Ghana
RH	Reproductive Health
SAHESS	Sacred Heart Senior High School
SD	Standard Deviation
SDGs	Sustainable Development Goals
SHSs	Senior High Schools
SRH	Sexual and Reproductive Health
SRHS	Sexual and Reproductive Health Services
SSA	Sub-Saharan Africa
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections

SWDHD	Sunyani West District Health Directorate
SWMD	Sunyani West Municipal Directorate
TFR	Total Fertility Rate
TV	Television
UN	United Nations
UNDESA	United Nations Department of Economic and Social Affairs
UNESCO	United Nations Educational Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children Education Fund
WHO	World Health Organization
WHS	World Health Survey

CHAPTER ONE

INTRODUCTION

This chapter outlines the detailed background of the study and the problem that necessitated the need of the study, the objectives of the study have also been highlighted, and the significance of the study, the conceptual framework and the organization of the study are well outlined in this chapter.

1.1: Background of the study

According to the World Health Organization (WHO), adolescents are normally considered a strong and healthy group of people among the general population that sometimes we overlook their health needs in society (McIntyre *et al*., 2012). These individual adolescents between 10 to 19 years are diverse groups of adolescents with varied and emergent needs, depending on the changes and life circumstances in the individual developmental stage (WHO, 2015; WHO, 2018).

Sexual and Reproductive Health (SRH) is one of the fundamental aspects of typical adolescent growth and development that consist of biological sex, masculine and feminine roles and identity, sexual abilities, sexual behaviours and reproduction maturities (WHO, 2015). Fortunately, some of these young people pass through the adolescent stage into adulthood successfully, while others also acquire life-threatening health problems that can be prevented or can persist throughout adulthood (Manu *et al*., 2015).

Globally, it is estimated that about 1.7 million young people lose their lives every year through preventable health problems. Evidence suggests that adolescents who begin

puberty experienced sexual and relationships difficulties. The United Nation Educational, Scientific and Cultural Organization (UNESCO) and the United Nation International Children's Emergency Fund (UNICEF) reported over 208 million of adolescents who are either in-union or married to have had unmet needs of family planning (Tlaye *et al*., 2018; UNICEF, 2018; UNESCO, 2018).

Adolescents' sexual and reproductive health problems have been noted by the United Nations Population Fund Agency (UNFPA) to involved early pregnancy, early marriage, sexually transmitted diseases, and infections, including Human Immuno-Deficiency Virus (HIV) and Acquired Immuno-Deficiency Diseases (AIDs), unsafe abortion, risk of morbidity and mortality linked with pregnancy and child birth. Additionally, some adolescents also missed their chances of getting access to and utilized SRHS due to poverty and mismanagement of sexual and reproductive health (Van Ouytsel *et al*., 2017; UNFPA, 2017; Abubakari *et al*., 2015).

Globally, 1.25 billion people are adolescents, and 513 million are within 15-19 years, with 85% living in lower and middle-income countries (LMIC) (Amankwaa *et al*., 2018; WHO, 2018).Worldwide, more than 280 million adolescents are considered mature and therefore were given to marriage before their 18th birthday among these adolescents, 246 million have been subjected to many forms of sexual harassment and sexual violence inside or outside their schools, and these have been an international concern worldwide (UNESCO, 2018; National Population Council (NPC), 2018).

In addition, many of these young people contract preventable Sexually Transmitted Infections (STIs) such as chlamydia, gonorrhoea, syphilis, and trichomoniasis every year. However, these excluded HIV, close to 5 million adolescents, and about 41,000 lives were

lost in 2015 due to HIV (Newton-levinson et al., 2016; UNICEF, 2016). Meanwhile only a few have the right to use suitable and inexpensive STIs facilities, and mostly, it is the female adolescents who usually bear the brunt or suffer the consequences (Cherie & Berhane, 2012; UNFPA, 2017; & UNESCO, 2018).

In countries like the Middle East and North Africa that are developing, early marriage, teenage pregnancy, child birth and unsafe abortion are seen as notable causes of death of adolescent girls (UNFPA, 2012; UNESCO, 2018; Akatukwasa *et al*., 2019). In Africa, about 226 million people are adolescents which formed 19% of the global population, and 23 million of these adolescents do not meet their family planning needs; unintended pregnancy, unsafe abortion also contributed to about 41% of all adolescent deaths (WHO, 2018; & World Health Survey (WHS), 2018). Also, in Sub Saharan Africa, STIs, HIV and AIDS awareness and access to specific Sexual and Reproductive Health (SRH) service utilization is now recognized as the primary reproductive health concern for teenagers, unprotected sex accounted for over 26% to 60% of new HIV infections that occurred among the youth in the Eastern and Southern African regions in 2017 (UNICEF, 2016; Ajike & Mbegbu, 2016; Kipmerewo, & Onyango, 2017; Amankwaa *et al.*, 2018; Ivanova *et al.*, 2018; Tlaye *et al*., 2018; Sychareun *et al*., 2018; Kühn, 2019; Maharjan *et al*., 2019).These suggest that many adolescents in Africa are exposed to many risks due to their early experience in sexual activities that make them vulnerable to a lot of SRH challenges (Othman *et al*., 2019).

In Ghana, nearly one-fifth of the Ghanaian populations of 24.7 million are between the ages of 10 and 24 years, 13% are within 15-19years (Abubakari *et al*., 2015; and Ghana Demographic and Health Survey (GDHS), 2010). According to the Ghana Demographic

and Health Survey (2010) and the National Population Council (NPC), 2018), for the past 15 years in Ghana, sexual activity before age 15 has risen to 61.6% in adolescents 15-19 years. These have put Ghana on the 61st position among the top countries leading in child marriage in the world. Also, in 2013, adolescent pregnancies were 12.3%, as against the 10% national target. Nine regions registered the highest teenage pregnancies in Ghana, including Bono Region, previously Brong Ahafo Region (Ghana Health Service (GHS), 2013; & Odoi-Agyarko, 2003).

New HIV infections prevalence among adolescents have reduced from 2.4% in 2016 to 2.1% in 2017, and skilled deliveries also improved in Ghana from 55% to 79% in 2017, which showed there had been a lot of progress made in improving contraceptive awareness and utilization among adolescents over the past years (GHS, 2016; NPC, 2018). Even though these achievements have helped to enhance SRH of adolescents in Ghana, SRH problems are still common among adolescents, and their uptake of SRH services remain poor in Ghana as well as the Sunyani West Municipality (Aninanya *et al*., 2015; Binu *et al*., 2018).

Additionally, sexual and reproductive health services are barely known and offered to unmarried adolescents 15-19 years in Ghana, and cannot access health services. A lot of these young people are defenseless and overwhelmed with the consequences of an unexpected pregnancy, unsafe abortion and sexually transmitted disease or infection (STD/I), including HIV and AIDS (Singh, 2010; Singh *et al.*, 2018; WHO, 2018; UNSECO, 2018). These SRH issues/challenges affecting adolescents require intensive and vigorous research in the Sunyani West Municipality, so appropriate intervention could be put in place to address the problems (GHS, 2016; GSS, 2014). Hence, the study sought to

evaluate adolescents' knowledge, access and utilization of Sexual and Reproductive Health Service (SRHS) in selected Senior High Schools in the Sunyani West Municipality.

1.2 Problem Statement

In Ghana, adolescent sexual and reproductive health is a national health issue mostly a public health concern. Adolescents encounter many SRH challenges such as teenage pregnancies, child marriage, less practice of family planning and contraceptives use, gender base violence, multiple sexual contacts, restricted access and use of quality services (GSS, 2014; Morris & Rushwan, 2015). An estimated 23% of all pregnancies among adolescents in Ghana in 2017 ended in abortion. Abortion rate among adolescents is estimated at 61 abortions per 1,000 adolescents aged 15–25. This is equivalent to over 327,600 abortions annually in Ghana among women aged 15-49years (Ministry of Health (MoH), 2017; Guttmacher Institute, 2019). Likewise, the then Brong Ahafo Region was among the five regions in Ghana that recorded over 14% adolescent pregnancies between 2012 and 2014 (GSS, 2014; GHS-Family Health Division (FHD), 2016; Asare *et al*., 2019). In Bono Region, SRH challenges exist among adolescents, and SRH services are common among adolescents, but access and utilization have been lacking. Teenage pregnancy rate is 17.8%, HIV prevalence is 19%, and STIs among adolescents is 12.5% (GSS, 2014). Furthermore, in 2015, 12,487 teenage pregnancies among adolescents 10-19 years were registered with antenatal clinics in the then Brong Ahafo Region. Out of 12,487 expected pregnancies among teenage mothers, only 8,632 teenage mothers delivered in all the health facilities. A whopping 1,161 abortion cases were recorded, and 6 maternal deaths were also registered in the Bono Region (GHS, Regional Report, 2016).

Also, in the Sunyani West Municipality, 1,360 pregnant adolescents and 30 unsafe abortions cases were recorded in health facilities between 2015 and 2017, while 241 adolescent pregnancies and 106 deliveries occurred in 2018 and 2019 (Sunyani West Municipal Health Directorate (SWMD), 2019). Worse of it, SRH services for adolescents are woefully inadequate, and so only 21% of students utilized SRH services (Awusabo-Asare *et al*., 2015; Kyilleh *et al*., 2018). SRH problems result from result from the adolescent hasty sexual exploit, insufficient knowledge on contraceptives, little contact with providers, and utilization of health services (Awusabo-Asare *et al*., 2015). This inadequate knowledge and utilization of SRH services in adolescents have contributed to about 15% of childbirths in the municipality.

Many good initiatives like the Adolescent Health Service Policy and Strategy (2016-2020), including various efforts by some non-governmental Organizations (NGOs), has been made to address the reproductive health problems of adolescents in Ghana (Igras *et al.,* 2014, GHS, 2016). Although some policy actions have been implemented to address the SRH challenges of adolescents in Ghana, poor SRH outcomes and abysmal uptake of SRH services still exist among adolescents (Bana *et al.,* 2014: Aninanya *et al*., 2015). Most of these SRH problems could be addressed through complete dissemination of quality information and services to adolescents on sexual and reproductive health (Alehegn *et al.,* 2018). However, inadequate access and contact with SRH services and providers persist. In 2016, the then Bono Ahafo Region had only 54 youth corners in the 27 districts; Sunyani West Municipality had 4 of the youth-friendly health corners that provided SRH services to 19,568 adolescents (GSS, 2010; GHS, 2016).

Additionally, although some studies have been done among adolescents, limited evidence exists on their knowledge, access and utilization of sexual and reproductive health services. A previous study done on secondary school pupils in the Central Region indicated that 95% of students experienced sexual intercourse while about 21% utilized SRH services (Binu *et al*., 2018; & Amankwaa *et al.,* 2018). Also, another research conducted on knowledge, attitude and behaviour among secondary school pupils in the Upper East Region of Ghana showed a low understanding of the students on contraceptive methods and knowledge on the spread of HIV and AIDS (Kyilleh *et al*., 2018; Masonbrink *et al*., 2019). Moreover, several studies have identified some barriers impeding adolescents use of SRH as including insufficiency of knowledge on where to take contraceptives and STIs cure, costs, schedule for SRH service, lack of privacy, religious affiliation, cultural background, myths and misconceptions about sex, stigma, inadequate parental control and undesirable provider approaches to adolescents (Averiyire, 2015; Binu *et al*., 2018; Singh *et al*., 2018; Ntulume, 2018).

Furthermore, the knowledge of adolescents on Sexual and Reproductive Health Services (SRHS), access and utilization remain largely unexamined among secondary school pupils in the Sunyani West Municipality (Boamah *et al*., 2018). Nonetheless, lack of tutoring on sex in schools and lack of adolescents' access to reproductive health services affect adolescents' uptake of SRH services (Boamah *et al*., 2018). This implies that if adolescents' patronage of SRH services is enhanced, most of the SRH challenges such as teenage pregnancies, unsafe abortions and STIs among them in Ghana and the Sunyani West Municipality will be reduced or eliminated. Therefore, it is indispensable to evaluate adolescents' knowledge, access, and use of SRHS in the Sunyani West Municipality.

1.3 Significance of the Study

Difficulties in the attainment of adolescents' access and use of Sexual and Reproductive Health services can affect the progress of the Sustainable Development Goals (SDGs) in every country (Amankwaa *et al*., 2018). Adolescents Sexual and Reproductive Health (ASRH) issues have gained global recognition in the SDGs with the focus on reaching global access to sexual and reproductive healthcare services most especially women getting quality sexual and reproductive health care information which will improve health and the well- being of women and their children, family, community and the nation (International Planned Parenthood Federation, (IPPF), 2016).

Evidence suggests that weakness in our health sector and lack of attention to some basic essential health services such as ASRH services contributed to the adaptation of the SDGs (World Health Statistic (WHS), 2018). Therefore, there is the need to focus on making sexual and reproductive health services more accessible, which would enable adolescents to make an informed choice on when to have sex and to have children. Such services include family planning (FP) which is central to the achievement of FP2020 and SDGS 2030 (Dockalova *et al*., 2016). This study assessed Senior High Schools students level of knowledge, access and utilization of sexual and reproductive health services in the Sunyani West Municipality that would contribute to the fulfillment of Sustainable Development Goal 3; targets 3.1 and 3.7 on declining maternal mortality and widely-reaching women access to sexual and reproductive health care services by 2030 in Ghana (Dockalova, *et al*., 2016; & Woog & Kågesten, 2017).

Secondly, the outcome of this study may publish and a copy issued to stakeholders such as the Ghana Health Service, Ministry of Gender and Children Affair (MoGCA) and Ghana

education service (GES) to adequately plan sustainable interventions that would target adolescent SRH needs. Particularly to the Ghana Adolescent Reproductive Health Programmes in schools, the findings would provide a means of validating or evaluating the efforts in addressing SRH, especially school health programmes in the Municipality.

To the adolescents, the outcome would provide a source of reference for their successful transition into adulthood that may help the adolescents to plan for their personal life. There was the need to critically pay attention to young people's knowledge, access, and utilization on the current sexual and reproductive health services, as the greatest most incredible opportunity to improve adolescents' health problems in Ghana. Also, the study would equally serve as a benchmark in guiding researchers in future studies on ASRH.

1.4: Theoretical Framework

The study adopted a conceptual standard propounded by Andersen and Newman (1995) on health care utilization and antenatal care (Chojenta, & Smith, 2018). The original model was developed to determine circumstances that enabled or impeded public health services (Babitsch *et al*., 2012).

The model assumed that a series of interacting elements, including predisposing, enabling, and need factors, control an individual's use of healthcare services. This adopted model would highlight the interrelations between adolescents' knowledge, access and utilization of SRHS and identify factors that affect adolescents' knowledge, access and utilization of SRHS (Anderson, 2010).

According to Anderson (2010), predisposing factors comprise demographics characteristics, social structure and health belief which are series of factors that can influence an individual's use of health care services. Demographic features of an individual

are the leading natural factor that shows that a person will need health care. The inability to recognize the needs of such individual can affect his/her use of health services. In this study, predisposing elements are the demographic features which comprise of age, gender, socio-economic status, socio-cultural factors, religion, education and ethnicity.

The second factor is the enabling factors that facilitate individuals to use health services. It consists of community and personal means of getting access to health care, and these resources must be available, free and close to the reach of the individual before adequate utilization of health service can occur. The enabling resources can describe, predict and understand individual use of health care services. This includes the presence of health personnel, availability of health facilities, the knowledge he/she has about the benefits and how he/she will use the service.

Again, the enabling resources also include a consistent and reliable source of care and personal understanding of the health care Organizational structure, thus, the categories of health care providers, different types of health facilities available and the services they provide in the community. In the study, enabling factors will mean getting access to the SRHS, sources of care, information, education and counselling.

The last factor that influences an individual's use of health service is the need factors that motivate service use and include perceived needs and evaluated needs. These supposed needs of the individual support the understanding of health care seeking behaviors of an individual and commitment to service use. It also explains how people understand, experience and interprets their ailment, concerns and wellbeing as well as their willingness in seeking for professional assistance. Alternatively, specific evaluated needs are services and treatment given to patients in the health facilities that are based on the health care

providers' decision and expertise (training, competency, skills and experience) in performing the duty. In this study, the adolescents will need knowledge on SRH services, experience and willingness to appreciate the importance of SRH services before he/she utilize the services. Evidence suggested that predisposing and enabling factors influenced adolescents to practice reproductive healthcare services, specifically age, emotive emotional ailment, capabilities, and the kind of reproductive healthcare facility (Azfredrick, 2016). Another research also found gender (female) as a predisposing factor for high utilization of health care in adolescents, whiles enabling factors reduce the quality of public health services (Abaerei *et al*, 2017).

Azfredrick (2016) ascertained that enabling factors prejudiced the usage of services, particularly members with community insurance. Predisposing, enabling and need elements have been proved to increase efficiency, effectiveness, and equity in reproductive health services. Enabling factors can also be the availability of health personnel's, health facilities/Adolescent/Youth Friendly Reproductive Health (A/YFRH) corners and how services are delivered. The need factors would explain adolescents' knowledge of SRH, their experience, and their willingness to access SRHS. Lastly, the individual students, teachers and health workers' opinion, beliefs and perception on ASRHS will influence their support and assistance of adolescents to access SRHS.

About the study, the conceptual framework explains that certain factors are in the school environment and the health facilities in the community that are unknown and the predisposing factor (demographics, socio-cultural and socio-economic factors) create individual and social barriers for adolescents to access SRHS. These barriers prevent adolescents from getting the required knowledge on SRH, access and utilization of SRH

services in the Municipality. These same factors can enable the adolescents to have knowledge, access and use the services and at the same time prevent the adolescents from getting the knowledge, access and utilize the services in the municipality, as shown in figure 1.1. Again, adolescents need those factors indicated in figure 1.1 to understand SRH services, experience the benefits of the services and willingly appreciate the importance of SRH services and use such services.

Therefore, careful removal of all identifiable barriers by stakeholders (Ghana Health Services) will enable adolescents to get access to the source of the services (facility, providers and types of services available) which lead to the acquisition of knowledge through provision of information, education and counseling on SRH services of adolescents. Again, it enables adolescents to use SRH services. Through that, they get enough knowledge and understanding of SRHS, which benefited the adolescents in decision making and form positive attitudes through their satisfaction and experience. Based on these, the adolescent would understand the importance of SRHS, which he/she appreciates and willingly utilize the available services. This helps improved adolescents' utilization of SRH services in the Municipality.

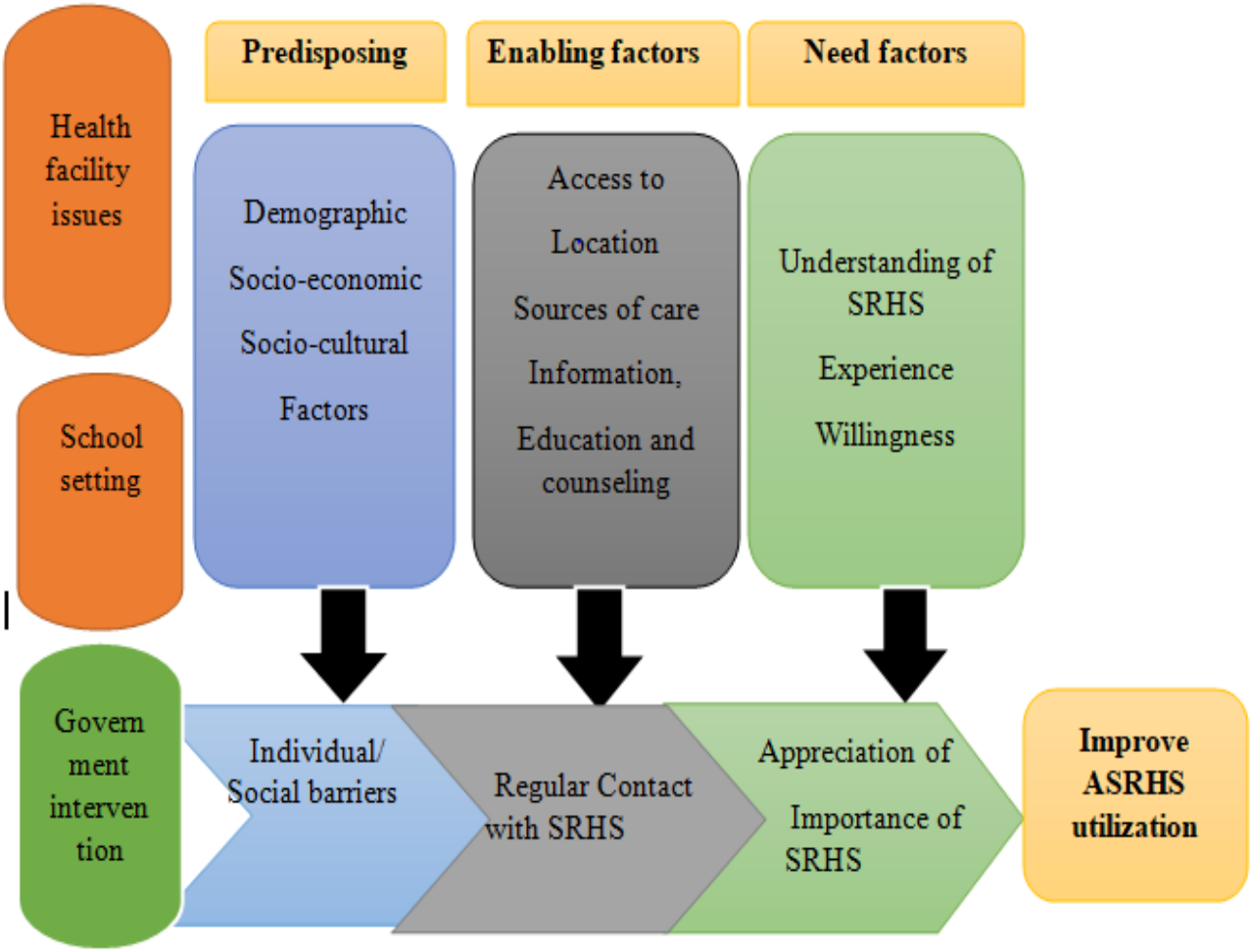


Figure 1.1: Conceptual framework on the interrelations of factors that affect adolescents' knowledge, access and utilization of SRHS.

Source*:* Modified and Adapted from Andersen and Newman, (1995)

1.5 Research Questions

1. What is the knowledge level of students in Senior High Schools on Sexual and Reproductive Health Services in the Sunyani West Municipality?
2. How do Senior High Schools students get access to sexual and reproductive health services in the Sunyani West Municipality?

3. What is the utilization level of sexual and reproductive health services among students in the Senior High Schools in the Sunyani West Municipality?
4. What factors affect adolescents' access to and utilization of SRHS in Senior High Schools in the Sunyani West Municipality?

1. 6 Research Objectives

1.6.1 Main Objective

The study's main objective was to determine knowledge, access, and utilization of Sexual and Reproductive Health Services (SRHS) among Senior High School students in the Sunyani West Municipality.

1.6.2Specific Objectives

1. To assess Senior High Schools students' knowledge of sexual and reproductive health services in the Sunyani West Municipality.
2. To assess Senior High Schools students' access to the sexual and reproductive health services in the Sunyani West Municipality.
3. To examine Senior High Schools students' utilization of the sexual and reproductive health services in the Sunyani West Municipality.
4. To identify the factors affecting Senior High School students access to and utilization of SRH services in the Sunyani West Municipality.

1.7: Definition of Key Terms and Concepts

Adolescents: adolescents are defined by the World Health Organization as individuals who fall within the age range of 10 and 19 years (WHO, 2015).

Adolescence: is defined as a stage characterized by rapid changes in growth and development of the physical, psychological, social and sexual features of an individual (WHO, 2018).

Sexual and Reproductive Health (SRH): refer to a well-defined as the skills couples have to carry out sexual acts safely, whether expecting pregnancy or not, and, if the couples want the pregnancy, the females should be prepared to bear the pregnancy to full term without harm, bring out infant in good health, and the mother should be willing to raise the child (UNESCO, 2018).

Sexual and Reproductive Health Service (SRHS) means health care providers undertake the responsibility to promote family planning services to adolescents, promote safe abortion care, prevent, treat and manage sexually transmitted diseases as well as HIV and AIDS among adolescents and encouraging adolescent to patronize in youth/adolescent-friendly health care services (WHO, 2015). It is also a way of reaching adolescents with reproductive health information, education, and counselling to promote the use of SRHS and create a link between the health facility, schools, and the community (UNFPA, 2017).

Knowledge of SRHS: means recognizance, understanding, grasp and have the capacity to solve SRHS problems (Manu *et al*., 2015).

Access to SRHS: is being able to obtain or offered a choice of the available healthcare services at any point in time (UNICEF, 2016).

Utilization: is the ability of an individual to apply the knowledge acquired in an event/a situation to solve problems (Singh *et al*., 2018).

1.8 Organization of the Thesis

This work has been arranged into six chapters. Chapter one introduces the study, which covers the background to the study, statement of the problem, study questions, objectives, significance, conceptual framework and the organization of the study. Chapter Two includes a review of related literature on adolescents' knowledge, access and use of sexual and reproductive health services. Chapter three presents discussions on the methodological approaches such as the choice of the research design, sources of data, sampling techniques, sample size, data collection techniques, and data analysis methods. Chapter four dilates on the presentation of results. Chapter five gives a detailed discussion of the results. Finally, chapter six encapsulated the conclusions and recommendations of the study.

1.9 Conclusion

This chapter has given an account of the general introduction, problem statement, research questions, and objectives, significance of the study, conceptual framework and organization of the study. The subsequent chapter will review related literature on key concepts of knowledge, access and utilization of Sexual and Reproductive Health Services and factors that affect adolescents' access to and utilization of SRHS.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Chapter two reveals numerous previous findings on the chosen topic of the study. This includes definitions and meanings of adolescents, adolescence, sexuality, sexual and reproductive health, Ghana national adolescent sexual and reproductive policy, sexual and reproductive health services in schools, the importance of SRHS to adolescents, factors affecting ASRHS, theoretical review, empirical study, research gaps and summary.

2.1: Adolescents

According to WHO (2018), an adolescent is an individual within the age range of 10 and 19 years, and usually, the term adolescent is used to group boys and girls whose age ranges between 10 to 19 years and use a young person to represent those between 10 and 24 years. Globally, about 1.25 billion people are adolescents, and 513 million are within 15-19 years, with 85% living in lower and middle-income countries (Amankwaa *et al.*, 2018). More than 226 million adolescents live in Africa, contributing to about 19% of the global adolescents' population, as reported by United Nations Department of Economic and Social Affairs (UNDESA), 2015 study. This percentage of the adolescent population in Africa was expected to rise from 19% in 2012 to 28% by 2040 (World Health Statistics, 2018). Also, it is estimated that about 80% of these adolescents are young women and are believed to be living in rural areas (Luvai, 2017). Quality of life and knowledge on sexual and

reproductive health were very low among adolescents. In sub-Saharan Africa (SSA), according to the World Bank Group report, 2015 showed a third of SSA population are young people, and these young persons aged between 10-24 years, and constituted about 33% (973.4 million) of the population in SSA (World Bank, 2015; Kabiru *et al.,* 2013). Another study report by Kabiru, *et al.,* (2013) equally showed the population of adolescents and young adults in SSA is expected to continue to increase over the next 35 years. This was affirmed according to the United Nations (2019) report which showed there are about 1.2 billion (representing 16% of global population) youth people aged 15 to 24 years in the world, and around 2065, the world's youth population is projected to reach its peak at about 1.4 billion persons (13%). The share of youth people in the total global population was peaked at 19.3% in 1985. In 2019, Central and Southern Asia alone was reported to have had the most significant number of youth (361 million), followed by Eastern and South-Eastern Asia (307 million) and sub-Saharan Africa (211 million) of youth or young people (United Nations, 2019).

In Ghana, nearly one-fifth of the Ghanaian population of 24.7 million are between the ages of 10 and 24 years, 13% are within 15-19 years,14% are sexually active, and 14% have begun childbearing, 11% have had a live birth and 3% being pregnant whiles 46% are living in rural areas (Ghana Statistical Service, 2014: Abubakari *et al.*, 2015). Formerly, Bono Ahafo Region had over 2.3 million people, with about 2,310,983 being adolescent between 15-19 years, and 50.8% were females and 49.2% were males' adolescents and 48% women were sexually active (GSS, 2014). This is due to adolescents having

difficulties in accessing and utilizing SRH services in schools and having less knowledge about the changes that occurred to their body in puberty (UNESCO, 2018).

According to United Nations Educational, Scientific and Cultural Organization (2018), adolescents become more defenseless in matters of sexuality, relationships and other sexual problems when they are on vacations because most of their time is spent in school. Adding to these, minors form a larger part of the general public and adolescents continue to involve in different sexting behaviors, (watching and sending sensitive sexy messages through what's app, e-mail, text message, picture, video shown breasts and private parts) (Van Ouytsel *et al.*, 2017), early child birth will continue to increase or rise if adolescents knowledge, access and use of SRH become stuck or decline and nothing is done immediately (National Population Council, 2018). This will require more adolescent health care providers and health services that will ensure improvements in adolescent knowledge, access and utilization of SRH care services in many regions in the country (GHS, 2016).

Notwithstanding, the country has short falls in these areas, and inadequate provision of these services will continue to give rise to many adolescent health challenges in the country such as sexual abuse, early marriage, teenage pregnancy, low use of contraceptive, infertility, cancers of reproductive systems, unprotected sex; a consequence of STIs, HIV and AIDs, unplanned pregnancy with a risk of unsafe abortion, mortality and or school dropout (Ajike & Mbegbu, 2016). Most of these adolescents, 15-19 years, are sexually active; however, they are not biologically matured to give birth at their younger ages (Kamble et al., 2018). Even though, Ministry of Health and GHS have several strategies tailored to the health needs of adolescent to improve some of these challenges, adolescents'

knowledge, access and utilization of SRHS is seeing less improvement due to lack of proper sexuality education, counselors, materials and expertise in sexual and reproductive health services (GHS, 2016).

These young population needs Reproductive health services that are friendly and tailored to adolescent health services of which reproductive healthcare, contraceptive methods, facts on Human Immune Virus and AIDS, the practice of safe sex, prevention of unexpected pregnancy, hasty marriage, early pregnancy and prevention, management and treatment of sexually transmitted diseases (STDs), cancers of the reproductive system (cervical and breasts), safe abortion care, infertility and safe motherhood care are included (Kamble *et al*., 2018) and when these adolescents are equipped with the needed information and knowledge, it can benefit adolescent who feels reluctant to access information and utilize the sexual and reproductive health services (Ajike & Mbegbu, 2016). Though, there are enormous factors that determine the quality and quantity of adolescent health services in Ghana which have not been covered (Abajobir & Seme, 2014) however, knowledge, access and utilization of these sexual and reproductive health services of adolescent varied in terms of the services availability, the efficiency and skills of the provider and the process of rendering services to the adolescents in the health facility (Dapaah *et al*., 2016).

Again, due to the increased risk in adolescent pregnancy outcomes in developing countries like Ghana, measures to improve Adolescents Sexual and Reproductive healthcare activities are essential to the public health experts (Ganchimeg *et al*., 2014). WHO (2015) indicated that, for adolescents to obtain good reproductive health services that are relevant to their needs and promote their health, there must be alteration in the quality of health services and care for the adolescents. For these problems to continue to show up means

that there are some levels of unmet need for SRHS. However, research has shown that in bid to make sexual and reproductive health service of adolescents successful; it must be effectively attracting and retaining the young people in utilizing the services (Ajike & Mbegbu, 2016) and also health workers must have adequate knowledge in delivering the services (GHS, 2016). Other evidence also suggests that there are some marginalized adolescents within our communities who will not be able to seek reproductive health services because of stigma and cost of services; therefore, it is essential to be equitable in providing the needed services to all adolescents (WHO, 2015).

2.1.1: Adolescence

According to the United Nations Population Fund (2019), adolescence is defined as the period between 10 and 19 years of age. It is a continuum of physical, cognitive, behavioral, and psychosocial adaptation characterized by increasing individual autonomy levels, a growing sense of identity and self-esteem, and progressive independence from adults. Likewise, adolescence is a phase of initiating into maturity with characteristics of rapid changes in growth and the development of physical, psychological, social, and sexual features of an individual (Kliegman *et al.*, 2015).

Similarly, adolescence is characterized by changes in boys' and girls' biological, mental, emotional and social development as they transition from puberty to adulthood (WHO, 2015). The physical evolution of adolescence is noticed in bodily, voice, and sexual appearances and vigour, the psychological evolution is seen in the mental capacity of the individual whiles the social transition is noticed when the individual begins to consider his or her privileges and self-esteem in the society (WHO, 2015). Meanwhile, the WHO (2016)

report has categorized adolescence into three major phases, namely the early, mid and late adolescence.

Notwithstanding, the early adolescence phase of 10 to 13 years was noted to be characterized by sexual growth and maturity. The mid adolescence is also described by the growth of stronger sense of identity among persons aged between 14 to 15 years and late adolescence is the phase which is characterized by the development of persons between ages 16 to 19 years into adult form (Morris & Rushwan, 2015). Therefore, Khanal, (2016) study indicated that emphasis should be placed on adolescence categorization and said that adolescence is grouped into very young adolescents (10 to 14 years), which is considered as sexual maturation, middle adolescence (15 to 16 years) that is the stage of developing a stronger sense of self-identity whereas older adolescence (17 to 19 years is the stage where adolescents developed into adulthood. Socially, adolescence is the period between childhood and adulthood (WHO, 2018). Grouping the adolescence stage with their age will make it easier to gather specific information and analyze it based on their transitional period (UNICEF, 2018). During the progress and process of adolescents' transitional period, they learn from their peers, and what they experience can positively or negatively affect their lives.

This is also the period where the younger adolescents' physical feature starts to appear and they become more aware of their sexuality and are attempting to experience sexual intercourse. These adolescents should be made aware of adolescents' health services suitable for their age, knowledge and development (UNFPA, 2019). Evidence suggests that adolescents behave responsibly when they are well informed, especially on career

development, relationships and reproductive health (NPC, 2018). Adolescents are exposed to various health risks and regularly demonstrate and experiment risk-taking behavior. Counsellors and health care workers need to be familiar with adolescents and appreciate the stages of adolescence and be willing to deliver their services and support unconditionally for adolescents to attain an ideal state of general well-being and reproductive health (Senderowitz *et al.*, 2010).

Again, it is also necessary to indicate that health service workers should familiarize themselves with adolescents' rights in reproductive health as a fundamental right for service delivery (Senderowitz *et al*., 2010). Also, understanding and improving adolescents' health during this risky developmental stage of sexual maturity needs careful attention to initiate healthy adulthood (Hormenu *et al.,* 2018). Therefore, adolescents will need regular access to sexual and reproductive health providers, information, and supplies to improve their uptake of SRH services (UNESCO, 2018).

2.1.2 Sexuality

According to UNESCO (2018), sexuality is a lifecycle event that is difficult to explain and can be in many forms such as the genetic, political, societal, religious, mental, legal, moral and traditional aspect of life. Again, it is an essential feature of human being which can be understood from different perspectives such as the understanding of human being and its relation to the body, the sensitive aspects of the person such as love, individual's sexual role, gender disposition, sexual feeling, sexual relationship, sexual desire and feelings for reproduction (UNESCO, 2018).

Egan & Hawkes (2012) reported that, girls' sexuality is difficult to understand, its present is very dangerous and its absent too requires an external influence to kindle its existence to manifest later in life. This shows that girls are incompetent and incapable of making sense out of what they experience and therefore needs intervention from parents and the government (Egan & Hawkes, 2012). However, many attempts have been made to increase adolescents' knowledge, access and utilization of sexual and reproductive health services in many countries. One such intervention is the International Conference on Population and Development (ICPD) in Cairo in 1994.

Additionally, during the conference, Reproductive Health services were introduced to many heads of states and some essential sexual and reproductive health needs of adolescents were highlighted, and it was agreed that there was the need to invest in the sexual and reproductive health of adolescents (Woog & Kågesten, 2017). At the conference, it was agreed that reproductive health services must include organized and proper health care for women before conception, during pregnancy. It must continue throughout delivery, and after delivery, the care continues with contraceptive counseling and methods, averting and correct treatment for infertility, abortion prevention and care, management of reproductive tract infections, STIs and other conditions that affect the reproductive system, not forgetting proper education and counseling for reproductive health, human sexuality and responsible parenting (Woog & Kågesten, 2017).

To add, certain reproductive health services such as HIV and AIDS, breast and cervical cancer screening, testing and treatment and delivery care were highlighted as needs and should be extended to all adolescents. Also, active deterrence of female genital mutilation (FGM) was among the critical issues discussed at the International Conference

on Population and Development (ICPD). Most African leaders present at the conference focused their needs on adolescents 15-19 years (Woog & Kågesten, 2017). They promised to improve the SRH of adolescents by providing ASRH information, proper health care services that meet the desires of young people through the delivery of youth-friendly health services (Odoi-agyarko, 2003).

2.1.3: Sexual and Reproductive Health

The WHO (2018) defined Sexual and Reproductive Health as the ability of both men and women to undertake sexual activity safely, whether or not pregnancy is desired, and, if desired, for the women to carry the pregnancy to term safely, deliver a healthy infant, and be prepared to nurture it. SRH thus implies that people can have a responsible, satisfying and safe sex life and that they can reproduce and the freedom to decide if, when and how often to do so (WHO, 2016). According to the UNESCO (2018) report, the scope of SRH includes the physical, emotional, mental and social well-being of an individual concerning sexuality. SRH is an important aspect of adolescent growth and development that encompasses biological sex, gender roles and identity, sexual orientation, sexual behavior, and reproduction. This, therefore, involves providing the adolescents' healthcare to promote family planning services uptake, promote safe abortion care, prevention, treatment and management of Sexually Transmitted Infections, including HIV and AIDS in adolescents (WHO, 2015).

SRH is also a way of reaching adolescents with reproductive health information, education, and counselling to promote the use of adolescent-friendly health services and create a link

between the health facility, schools, and the community (WHO, 2012; Gebremichael & Chaka, 2015). To add, WHO (2016) report cited SRH programmes and policies to relate to and include contraception and family planning use, maternal and newborn health, prevention and treatment of HIV and other STIs, promotion of sexual health, prevention and management of gender-based violence, prevention of unsafe abortion and management of post-abortion care, provision of antenatal care services, intrapartum and postnatal care to adolescent mothers and their babies (WHO, 2016).

2.1.4 Ghana National Adolescent Sexual and Reproductive Health Policy

Issues on adolescent health are integrated into the National Reproductive Health Policy and Standards, the National Adolescent Sexual and Reproductive Health Policy and the National Youth Policy. These policies focus mainly on Sexual and Reproductive Health, emphasizing the prevention of HIV/AIDS and unintended adolescent pregnancies. Some initiatives have been undertaken in Ghana since 1980, culminating in the launching of the National Adolescent Health and Development Programme (ADHD) in 2001 (National Population Council, 2018).

According to the seven years (2009-2015) National ADHD Strategic Plan, which was subsequently developed in 2009, and sought to provide multi-sectorial support to every young person living in Ghana with education and information that will lead to the adoption of a healthy lifestyle physically, psychologically and socially. This strategy sought to achieve holistic adolescent health by providing age and sex appropriate information and counseling on SRH, comprehensive health services complemented by self-care, and livelihood and leadership skills or competencies (GHS, 2013).

To add, following the completion of the first strategy (2009-2015), the country developed a new National Adolescent Health and Development Programme (ADHD) in 2016 which thus reflects some of Ghana's new health commitments and the newly agreed Sustainable Development Goals (SDGs) to provide the enabling environment for quality health service delivery for the adolescents. It also considers the Global Strategy for Women's, Children's and Adolescents' Health (2015-2030) which is aligned to the SDGs (WHO 2015). The policy provides broad strategic directions to promote, prevent, and manage the health and development of Ghanaian adolescents.

2.1.5 Sexual and Reproductive Health Services in Ghana

A wide variety of services and interventions are provided for Adolescent Health and Development Programme (ADHD) in Ghana. These include FP, STI, comprehensive abortion care (including post-abortion care), information, education and counselling, counselling and capacity building, HIV and AIDS-related information and services, and referrals (GHS, 2016-2020). In view of these, WHO and other stakeholders have set a standard that needs to be completed to improve the quality of adolescent health services in all developed and developing countries where Adolescents' health services are highly needed and unevenly distributed (WHO, 2015).

In Ghana, some initiatives have been implemented in line with WHO standards, and one of such is the Adolescent-friendly reproductive health services (AFRHS) which were one of the strategies implemented in Ghana to meet the standard criteria for adolescents reproductive health services and have been recognized as an appropriate and effective

strategy to address SRH needs of adolescents (Hadian *et al.,* 2018).Evidence shows that there are many challenges associated with setting up some adolescent-friendly reproductive health services. Not all adolescents are covered in sexual and reproductive health services in many areas in the country (GHS, 2016-2020).

2.1.5.1 Adolescent Friendly Health Services

The term Adolescent Friendly Reproductive Health Service according to the World Health Organization (2012) is a service that focuses on the welfare of adolescents through guidance on how to maximize the use of health care services. AFRHS should therefore be accessible, acceptable and appropriate for the adolescents, and these services thus include counseling, family planning, voluntary counseling and testing and treatment of sexually transmitted infections (McIntyre *et al.,* 2012).

Adolescent friendly' health services should meet the needs of young people in their age range sensitively and effectively and are inclusive of all adolescents. Such services should be delivered on the rights of young people and represent an efficient use of precious health resources (Schalet *et al*., 2014). Accurate, evidence-based, appropriate sexual health information and counseling should be available to all young people and be free of discrimination, gender bias and stigma. Such education can be provided via schools, workplaces, health providers and community and religious leaders (Schalet *et al.,* 2014).

In Ghana, the ADHD secretariat has developed guidelines for establishing Adolescent Friendly Health Facilities. A draft register for adolescent corners has recently been developed to be rolled out in 2016. A total of 291 adolescents' health corners were established, 276 in public and 15 in private health facilities (GHS, 2016), but the

functionality of most of them is questionable. The partnership between Marie Stopes International and the regional health directorate in ADHD services in the Western region has led to the establishment of 22 ADHD friendly corners in the Ghana Health Service facilities.

In the Upper East Region, about thirteen districts have seven ADHD corners, with only four been functional (GHS-ASRHS, 2016). In 2016, through the financial support of the Department for International Development and under the Palladium managed Ghana Adolescent Reproductive Health Project, 54 youth corners were established within Ghana Health Service facilities in all 27 districts in the then Bono Ahafo Region, including the 4 corners in Sunyani West Municipal. The corners have been designed and refurbished to provide space and a welcoming environment to deliver adolescent-friendly RH counselling and services (GHS-ASRHS, 2016). Despite these interventions, the status quo appears not improved much; there is still a gap in getting adolescents with sexual and reproductive health information, access to adolescent health services, number of adolescent health care providers, comprehensive adolescent knowledge in HIV and AIDs and unmet need for contraceptive use (GHS, 2016-2020).

2.1.5.2: Family planning and safe abortion

Emphasizing International Conference on Population and Development (ICPD) agreement on adolescent's sexual and reproductive health that is to prevent early marriages and early pregnancies, increase access to contraception and reduce unsafe abortion, United Nations Population Fund and WHO have jointly circulated guidelines in 2011 which appealed and

recommended governments to take necessary action for strengthening family planning and safe abortion services (Paul *et al*., 2013). As a result of this global commitment different program related to family planning and safe abortion has been introduced in most of the countries. Therefore, adolescent pregnancies in the past decades have been reduced to a certain extent in many countries (Paul *et al*., 2013). Adolescents and especially girls, whether married or not, face significant difficulties in accessing contraception.

About 1 in 4 adolescent girls aged 15-19 have an unmet need for contraception (Darroch *et al*., 2016). Without access to evidence-based information and services about sexual and reproductive health, these adolescents are at higher risk of unwanted pregnancies and an increased risk of contracting sexually transmitted infections, including HIV and Human Papilloma Virus (HPV). Adolescents are the only age group in which died due to AIDS is increasing, with adolescent girls being disproportionality affected (Darroch *et al*., 2016).

2.1.6: Sexual and Reproductive Health Services in Schools

2.1.6.1: Sex education in schools

Sex education, also referred to as sexuality education is getting information and developing attitudes and belief about sexual identity, sex, relationships and intimacy (UNESCO, 2018). Sex education helps developed skills about informed choices and sexual behavior among young people and adolescents, which make them more capable of acting on these choices (Kirby, 2011). However, the challenges of adolescents in the world today are many to overcome their Sexual and Reproductive Health needs. Several of these challenges forbid the promotion of adolescents' good sexual and reproductive health in many countries (Tlaye *et al*., 2018).

Young people and adolescents can be exposed to various attitudes and beliefs concerning sex and sexuality (Akatukwasa *et al*., 2019). Lack of access and incorporation of Sexual and Reproductive Health education and services in school-based activities can worsen the knowledge in adolescent sexuality, which can cause a significant challenge to adolescents' sexual and reproductive health service utilization (Akatukwasa *et al*., 2019). Also, similar related research has equally identified that highly effective sex education and HIV prevention program affects multiple behaviors and can achieve positive health impacts on the sexual behavior of young people (Kirby, 2011).

2.1.6.2 Sexual and Reproductive Health Service Restrictions in School

In the political arena, ASRHS has been given less consideration with many laws that restrict unmarried and sexually active adolescents from accessing reproductive health services in schools and the community (Igras *et al.,* 2014). On the other hand, the ASRH programme is faced with many operational challenges. Adolescent sexuality has become a delicate matter for parents, communities, and governments. The majority argue that sex education in school is too premature or not appropriate to introduce ASRH topics in schools (Aransiola *et al*., 2013; UNESCO, 2016).

Again, several health promotion activities, especially ASRH programmes depend largely on donor support and sustainability of ASRH programmes become an impediment when donor funding ends (Igras *et al*., 2014). Furthermore, sexual initiation among adolescents is also attributed to various socio-cultural factors such as values on sexual behavior, cultural norms, values, religious beliefs and these prevents open discussion and approval of sexual matters (UNICEF, 2015). For instance in mostly Christian institutions (schools),

some rules and regulations restrict adolescents in boarding houses from accessing SRH services unless the approval of the school authority (Aransiola *et al*., 2013).

Meanwhile, most schools backed dismissing the pregnant female adolescents from school. At the same time, many teachers are not prepared to give individual counselling to students, even though some prefer to teach comprehensive sexuality education in schools (Aransiola *et al*., 2013). Likewise, inadequate female teachers in many senior high schools can affect adolescent girls accessing and utilizing SRH services in some schools (Shayan, 2015). The adolescent with challenges in dealing with sexual harassment from male friends or teachers may lack the confidence in approaching the issue and resort to school absenteeism and substances' abuse (Fuentes *et al*., 2018). According to UNESCO (2018), there is a considerable gap in adolescent knowledge on SRH, where to get the services (testing for pregnancy and HIV) and how to use condom and emergency contraceptive.

2.1.6.3 Sexual and Reproductive Health System in school

Besides, pregnant adolescent mothers have increased risk of getting eclampsia, puerperal endometritis, systemic infections, preterm delivery, having babies with low birth weight, and severe neonatal conditions (Ganchimeg *et al*., 2014). Subsequently, the adolescent with less knowledge about complications in pregnancy will find it challenging to decide on where to access and use health services due to some restricted rules and laws in our school system and country (UNESCO, 2018).

Additionally, Young people whose quality of life has being affected by early marriage, early pregnancy, unplanned pregnancy, STI, HIV and AIDS infection, sexual abuse and have suffered from unsafe abortion with an un met need for contraceptive (Dapaah *et al*.,

2015), often feels uncomfortable and reluctance in accessing primary health care services. Likewise, they perceive that there is lack of privacy, confidentiality, respect, discrimination, fear of being labeled as bad people in the society by friends, teachers, parents and health care providers (WHO, 2015). Such a perceived positively and negatively affected adolescents, including social, economic and physical access to health information and services.

On the other hand, our health care system also has many challenges such as insufficient adolescent health care providers, inadequate and unsatisfactory equipment and suppliers, difficulties in integrating adolescent health care services into other reproductive health services that meet the reproductive health needs of the adolescents (GHS, 2016). In such a situation, adolescents reproductive health services will be compromised, and some adolescents may never get access to reproductive health information, hence may lack knowledge in reproductive health services and service utilization (Bana *et al*., 2014). Therefore, it is appropriate to consider adolescents in schools and invest into adolescents reproductive health needs and services that can address most of adolescents health problems, improves productivity and enhance quality of life of adolescent than delaying and manage the effects and treating short and long term reproductive health problems of adolescent (Murigi *et al*., 2016).

Unfortunately, in Ghana, our health system is challenged with difficulties integrating adolescent health services into other reproductive health services, poor and unevenly distribution of health care services and providers (GHS, 2016). Our health service coverage has led to access and utilization of sexual and reproductive services a challenge in most rural areas in the country (GHS, 2016). Despite Ghana health service programs gears

toward reducing many problems confronting the majority of young people within 10-19 years in the country, adolescents continue to have various challenges batting with in the country such as SRH right, HIV, STIs prevention and management, adolescent's marriage, low use of family planning and contraceptive, adolescent childbearing, gender-based violence, unsafe multiple sexual contacts, unsafe abortion, restricted access to and utilization of quality health services, nutritional challenges, mental health issues, substance abuse, poverty, disability and other non-communicable diseases, (GSS, 2014) as well as political, economic, and socio-cultural issues (Morris & Rushwan, 2015).

In addition, adolescent/youth corners in our health facilities are also a significant challenge in providing adolescent-friendly reproductive health services in many parts of the country (GHS, 2016). Alternatively, Ghana health service can consider our school system to avert the problems of adolescent sexual and reproductive health service (Tlaye *et al*., 2018). Again, the school can also minimize the gap and play a significant role in a child's development and contribute to adolescents knowledge, access and use of sexual and reproductive health services by producing skillful teachers and producing credible sources of information and activities on SRH and services for adolescents (Tlaye *et al*., 2018).

Currently, Ghana's adolescent health service policy and strategy (2016-2020 is the integration of the comprehensive sexuality education programme in some schools and the adolescent and youth-friendly reproductive health services provided in most of the health facilities in the country. According to WHO (2018) school-based Comprehensive Sexuality Education (CSE) report showed that, most adolescents are having increased knowledge and positive attitudes towards SRH services, and have been cited to be one of the cost-effective progamme which could help in the prevention of HIV among sexually active adolescents.

Again, Comprehensive Sexuality Education has noted by WHO to contribute significantly to a delayed early sexual intercourse initiation among adolescents, thus reducing the number of sexual partners, sexual risk-taking of an adolescent, and increased contraception use such as condoms (WHO, 2018). According to UNESCO (2018), schools connect children to the health care services available within the communities and provide opportunities for adolescents to obtain comprehensive, accurate, and evidence-informed and age-appropriate information on sexuality.

Also, Comprehensive Sexuality Education is a school-based curriculum and has components that involved courses on adolescent sexual and reproductive health issues such as sexual and reproductive anatomy and physiology, puberty, menstruation, reproduction, modern contraception, pregnancy, childbirth, and STIs prevention which include HIV and AIDS, and among others (UNESCO, 2018). Also, Esantsi *et al.,* (2015) indicated that about three folds of adolescents and parents expressed the need for additional classes on SRH and Comprehensive Sexual and Reproductive Health (CSRH) Education in schools for adolescents in Ghana. For that reason, there is the need to invest in school-based adolescent reproductive health services and adolescent/youth-friendly reproductive health services to increase adolescent knowledge on sexual and reproductive health information's, and as well expand adolescent access to quality reproductive health services, and to encourage more adolescents to use reproductive health services (Igras *et al.,* 2014; GHS, 2016).

Also, to create an opportunity to intervene and improve adolescents' quality of life against reproductive health problems and help young people initiate healthy relationships and assume responsibility for their sexual relationships (GHS, 2016: Binu *et al.,* 2018).

According to Esantsi *et al.,* (2015), education influences adolescents' age at first sex intercourse and plays a significant role in adolescents' lives. Also, Tlaye *et al.,* (2018) study agreed on the way forward and reported that teachers, health care professionals, school counselors and nurses should be alert on changes and relation that occur concerning different types of sexing behaviors among adolescents and create awareness on adolescent narrow understanding of sexing in and out of affectionate relationship. The study further emphasized that they should incorporate SRH services that are adolescent friendly-services and established train health personnel at an appropriate place in the school that is suitable for the adolescent and provide a reliable, confidential and accessible system of SRH services to adolescents (Tlaye *et al*., 2018).

According to Esantsi *et al*., (2015), it is vital to provide adolescents with SRH education and skills to enable them to make an informed decision by targeting SRH programmes that can improve the SRH knowledge of adolescent and communication skills of the adolescents and their parents. A related study by Mbeba *et al.*, (2012) endorsed SRH programmes that reform adolescents' behaviors and incorporate more adolescent-friendly health services into the health facilities at the community level equip adolescents' knowledge, access and utilization of SRH services. The study further indicates that there should be more efforts focusing on interventions that positively and negatively impact adolescents' online sexual behavior.

2.2.: Importance of SRHS to Adolescents

2.2.1 Promoting Access to Contraceptives

According to Luvai *et al.,* (2017) study, unsafe abortions account for 6% of all maternal mortality Worldwide. In Latin America, abortion among the youth accounted for over 40% of maternal deaths. Also, Kamble, (2018) study cited over 85% of maternal death for having occurred in developing countries, including Ghana, and further reported that in developing countries, about 201 million adolescent girls lack behind on modern contraceptives use. Also, Ivanova (2018) study conducted among refugee, migrant and displaced girls and young women in Africa demonstrated that 42.2% of adolescents between the ages of 10 to 20 years have had unprotected sex, and only 40.1% of these adolescents protected themselves with a condom. Therefore, this study indicates the need to recognize the factors that create a barrier for individuals like adolescents, people living in rural areas and marginalized groups to have access to family planning services.

Again, Dockalova *et al.*, (2016) study said SRH services are meant to promote safe abortion among adolescents and to eliminate or reduce the alarming rate of unsafe abortions in Africa. To achieve this, Van Ouytsel *et al.*, (2017) study cited the need to promotes contraceptives utilizations among adolescents as findings indicate that enabling access to contraceptives among adolescents is one of the main methods of reducing unsafe abortion, STIs and maternal morbidity and mortality among adolescents. Findings further indicate that, making contraceptive services available to individuals like adolescents can reduce deaths among adolescents (Dockalova *et al*., 2016).

2.2.2: Promoting Family Planning Services

According to McIntyre et al. (2012) study, it is abundantly clear that unplanned pregnancies among young people results from reasons not readily identified by parents and other interested and concerned adults and could result from the lack of adequate birth control devices made accessible to adolescents (McIntyre et al., 2012). Findings indicate the need than the combined factors that teenagers lacked in preparation for sexual intimacy. Therefore, ensuring that a variety of contraceptive methods are available and accessible to a young population in all youth centers create an opportunity for increasing family planning accessibility for young couples (Dockalova *et al*., 2016).

2.2.3 Preventing, Treating and Managing STIs including HIV and AIDS

Globally, 1 in 20 young people contract preventable STI every year with 333million new infections rate increasing among 20-24 years and 15-19 years and 3 million new infections occurring annually with 70% among young people whiles few have access to suitable and affordable STI services (UNESCO,2018: Cherie & Berhane, 2012). Also, an estimation of 250,000 adolescents aged 15-19 years was newly infected with HIV, and about 41,000 were adolescents aged 10-19 years who had died from HIV/AIDS-related illnesses in 2015 as per UNICEF (2016) report. With these statistics, the most significant way to reduce sexual risk in adolescents is to identify adolescents' consistency with the use of condom, and the postponement of adolescents' early contact with sexual intercourse, thus promoting abstinence among adolescents (Ntulume, 2018).

In addition, further findings by Ntulume (2018) study showed many adolescents do not perceive themselves as at risk of contracting an STI. But contract findings showed about

340 million new cases of Sexually Transmitted Infections (STIs) each year, and 6000 young people were reported to have been infected with HIV every day (Kamble, 2018). Again, most adolescent boys and girls were disproportionately affected by the HIV, especially in Sub Saharan countries such as Ghana (WHO, 2016; UNFPA, 2014). According to UNICEF (2015) report, findings showed Sub- Saharan Africa had about 72% of HIV prevalence among teenage girls in some countries, which is five times higher than among teenage boys. From the report, the highest prevalence of STIs was among youth aged 20–24-year-olds, followed by adolescents aged 15–19-year-olds and these are often adolescent girls who bear the higher burden (UNICEF, 2015).

In Ghana, the Ghana Demographic Health Survey reports have shown that about 5.2% of female and 3.4% male adolescents in Ghana reported having experienced STIs, HIV and syphilis (GSS, 2014). These findings show that STIs, including HIV and AIDS, are a significant issue affecting adolescents in Africa; therefore, SRH programmes help reduce or alleviate this menace (GSS, 2014).

2.2.4: Preventing and Avoiding Teenage Pregnancy

Global concern is about adolescent pregnancy which contributes to over 14 million birth each year, 2 million births occurring among those under 15 years, whiles 91 percent of these births in adolescents occur in developing countries before age 18 (Abubakari *et al*., 2015: UNFPA, 2012) leading to 14% maternal deaths among 15-19 years adolescents (Ntulume, 2018). To add, infants born to Adolescent mothers account for 50% of all infant deaths worldwide. Every year, about 3 million unsafe abortion cases occur globally among

15-19 year, with 40% befalling among adolescents and youth due to legal restrictions on access to safe abortion in many part of the world (WHO, 2018; UNESCO, 2018).

In developing countries, 12 million girls aged 15 to 19 years, and 3-2.5 million girls under 16 years give birth each year. In addition, some 3.9 million girls aged 15 to 19 undergo unsafe abortions. Indeed, complications during pregnancy and childbirth are a leading cause of death for 15 to 19-year-old girls globally (WHO, 2018; UNESCO, 2018). In Africa, teenage pregnancy rates remain high, and maternal mortality was the leading causes of death for adolescent girls (United Nations Education Social and Culture Organization, 2013-14). Across Southern Africa, the birth rate amongst girls aged 15 to 19 years' ranges from 8.2% in Malawi to 16.7% in Mozambique (Binu *et al*., 2018).

In addition, pregnant adolescents engaged in unsafe abortion account for 41% of adolescent deaths in Africa (WHS, 2018) and 23 million adolescent 15-19 years have an unmet need for family planning. As such, unintended pregnancy accounts for half of all pregnancies (WHO, 2018). SRHS has a family planning component that is designed to help prevent and avoid teenage pregnancy among adolescents, especially among young girls.

According to Stover & Winfrey (2017), increased contraceptive use has been associated with a decrease in high parity births, births that occur close together in time, and births to young women because family planning programmes are to provide information, education and counseling to individuals and couples to enable them to decide freely and responsibly the number and spacing of their children and to offer affordable contraceptive services and make available a full range of safe and effective methods of contraceptives usage. By

reducing unintended pregnancies and abortions and facilitating family planning, effective contraception provides both health and social benefits to mothers and their children.

2.3: Factors affecting Adolescents' Sexual and Reproductive Health Services

2.3.1: Knowledge of SRHS

According to the 2014 Ghana Demographic and Health Survey, knowledge on contraceptives and HIV among young adolescents has been relatively high. Findings showed among married young women aged 15-19-year-olds, knowledge of any form of contraceptive has improved from 85.6% in 1993 to 96.5% (GSS, 2014). In the 2014 GDHS, nearly all the respondents had heard about HIV, and only 20% of females and 27% of males had comprehensive knowledge of HIV.

Additionally, Ajike & Mbegbu, (2016), through a study on the knowledge of youths on available adolescent/youth-friendly services (A/YFRHS) in Ikeja, Lagos State, Nigeria, found that most (82%) of the youths knew what adolescent/youth-friendly service area (where most of the respondents got their information from friends/peers) but a majority of them did not know where to get these services from because they were not aware of the available adolescent/youth friendly facilities.

Also, more than half (79.5%) of the respondents did not know of the adolescent/youth friendly SRHS, and findings further indicate young people lack of knowledge on SRHS was found to have a significant influence on adolescents' access and utilization of SRH services (Dapaah *et al*., 2016: Bedho, 2014). To add, Tegegn *et al.*, (2013) also discovered that the level of knowledge on the type of SRHS provided was one of the

significant factors influencing access and utilization of SRHS. Hence, the lack of knowledge on SRH can affect availability, leading to poor utilization of SRH services.

On the other hand, knowledge is essential in increasing the utilization of the available youth-friendly services, which could result in optimal utilization of the public services (Bedho, 2014). Supporting this statement, Bedho, (2014) opined that knowledge on SRHS is vital in increasing the access and utilization of the available youth-friendly services, and this could result in optimal utilization of the available services among young people. Thus knowledge was found to have influenced SRHS access and utilization.

Again, Bedho, (2014) study reported poor utilization of SRHS when adolescents were found to lack knowledge on the availability of SRH services. Also, Binu *et al.,* (2018) conducted a school-based cross-sectional study on sexual and reproductive health service utilization and the associated factors in Ethiopia and the result indicated that 45.1% of adolescents get their source of information from the media, 41.3% from the teachers, and 6.7% from health workers.

To add, Luvai *et al.,* (2017) cross-sectional study on utilization of youth-friendly reproductive health services among the youth in Kenya reported that about 60% of the youth have knowledge on youth friendly reproductive health services, and 56.1% knew of SRH services from their friends. Also, Abajobir & Seme, (2014) study on the level of reproductive health knowledge and services utilization of rural adolescents in Ethiopia found 67% of adolescents have had knowledge on SRH services and identified age, living and economic conditions as a contributing factor to adolescents' knowledge in SRHS.

Similarly, Tamang *et al.,* (2016) study conducted in Nepal, South Asia, found that whiles over 90% of the selected adolescents indicated that shame and shyness were the main obstacles to them accessing SRH services; virtually all of the adolescents (97.9%) reported that they have adequate information of STIs. In terms of the prevention of STIs, more than 30% indicated that they know the use of condoms and pills, but less than 50% of the respondents had knowledge about implants or intrauterine devices (Tamang *et al.,* 2016).

Additionally, a study conducted in the Eastern Region, and some part of Ghana, demonstrated that inadequate knowledge on SRH issues, robust cultural and social norms, myths and misconceptions about sex and stigma are problems adolescents face in utilizing SRH services (Koster et al., 2001; Abuosi & Anaba, 2019). Again, a related study by Singh *et al.*, (2018) found lack of enthusiasm on the part of their teachers, inadequate communication between adolescents and their parents (Ntulume, 2018), and health staff, delay their knowledge and utilization of health service especially when they have insufficient knowledge on the access of such services (Masonbrink *et al.*, 2019). Another study conducted among adolescents living in rural parts of Ethiopia on knowledge and utilization of reproductive health services shows that adolescents have low knowledge on reproductive health and services utilization (Abajobir & Seme, 2014). This means that sometimes adolescent may have knowledge on reproductive health services but never utilize the services.

Additionally, Averiyire, (2015) conducted a study on knowledge in reproductive health practice in two senior high schools in Ghana. The results indicated that age and the level of the adolescent at school affect their level of knowledge on contraceptives. This outcome

proves that the higher the level of education, the more knowledgeable the adolescent in sexual and reproductive health (Averiyire, 2015). Again, a study conducted in Manhyia Sub Metro indicates that 48.7% of adolescent girls had a boyfriend and 30.8% have had sex; only 19% used contraceptive even though 62.1% had knowledge in contraceptive methods (Champiti, 2015).

2.3.2 Adolescents Access to SRHS

The WHO (2018) describes access to SRHS as the ability to obtain or offer to people SRHS to choose the available SRHS at any point in time. Reproductive health services such as contraceptives, safe abortion services and reproductive health counseling services are not always available to the entire population. Also, Ghana Health Services report that, in some places where these services are available, young people are unable to access them because of factors such as provider bias, restriction by law, fear of being branded as a bad boy or girl, distance to services, unfavorable opening hours, or simply lack of knowledge about the availability of such services. Provider biases were noted to have had their roots in the social values, norms and culture of the society that turns to have a significant influence on the access and utilization of SRH services among young people (GHS, 2016).

Breaken & Rondinelli, (2012) noticed that when adolescents have access to better SRH education, they become a powerful force for economic development and positive change. This suggests that adolescents' access and utilization of SRHS is directly linked to their level of knowledge on SRHS. In Africa, the majority of the adolescent population are sexually active and increasingly engage in risky sexual behaviours, but most of them do not have access to, and utilization of SRHS is a significant challenge due to poverty as

well as mismanagement of SRH concerns which are the major effect on adolescents transitional stage (Akatukwasa *et al*., 2019).

Also, Asibi & Anaba, (2019) study conducted in Ghana using case study design has identified four levels barrier to adolescent access and use of sexual and reproductive health services in Ghana to include facility, provider, community and personal levels factors to impede adolescents' access and utilization of SRH services. A study conducted in Manhyia Sub Metro of Kumasi in Ghana was affirmed in other studies which indicated that about 31% of adolescents had sex and only 19% had accessed and used contraceptives even though about 62% knew contraceptive methods (Kühn, 2019). Furthermore, lack of sex education in schools and lack of access to Adolescents reproductive health services affect adolescents' uptake of SRH services (Abrafi *et al*., 2018).

2.3.3 Level of Adolescents SRHS utilisation

According to the United Nations Population Fund (2019), adolescent sexual and reproductive health continues to be a pressing issue in sub-Saharan Africa, with HIV/AIDS, unsafe abortions, complications during pregnancy, childbirth and the puerperium contributing to some of the leading causes of mortality and morbidity for young people. Unplanned pregnancy, sexually transmitted infections, and lack of access to contraception continue to negatively impact their wellbeing (UNFPA, 2019).

Also, Abajobir *et al.,* (2014) cited adolescents' access and utilization of SRH services to stand at 30% among young people. Utilization thus involves the ability of an individual to apply the knowledge acquired on SRHS in any situation such as family planning services,

counselling, sex education, prevention of HIV and AIDS, treatment and management of STI in the prevention of the health conditions.

According to Geremew *et al.,* (2018), utilization involves using reproductive health services such as HIV-counselling and testing, STI screening and treatment, family planning counselling and contraceptive use, life skill education, condom use, among others. In many countries in sub-Saharan Africa, many sexually active adolescents do not use SRHS due to a lack of knowledge about places of getting methods or the infection treatment. Lack of awareness of the treatment of the infections among adolescents was attributed to perceived barriers to accessing health services (Geremew *et al.,* 2018).

According to the 2014 Demographic Health Survey, in Ghana, although knowledge of adolescents on contraceptives has been reported high among married young adolescents in Ghana; usage, however, remains low among this group of people. Only 16.7 percent of married females 15-19 years were reported current users of modern family planning methods in 2014 from a low percentage of 8.1 percent in 1993. However, use of contraceptive methods was found to have increased with education attainment from 19 percent of currently married young women with no education to 34 percent of married young women with a secondary or higher educational attainment (GSS, 2014).

In Ethiopia, Binu *et al.,* (2018), through a study, discovered that school youths who had encountered at least one of STIs symptom are more likely to utilize SRH services than those who did not encounter any problem. Also, studies conducted in Hadiya, Nepali, showed individuals who have ever had sexual contact were more likely to have utilized SRH services than abstainers. Similar studies previously conducted in Bahir Dar equally supported this study finding (Abebe & Awoke, 2014; Bam *et al.,* 2015). In Awusabo-Asare

et al., (2014) study conducted in Ghana found that 2 in 3 young women and 4 in 5 young men with STI symptoms did not seek treatment, while approximately half of the unmarried sexually active female adolescents and over one-third of sexually active male adolescents did not use contraceptives (Awusabo-Asare *et al.,* 2014). Again, findings in the same study showed the use of SRHS was crucial to the fight against STIs, HIV and AIDS among adolescents in Africa and has been a key part of the policy decisions of most nations.

To add, Binu *et al.,* (2018) study conducted in Ethiopia reported that school youths who had encountered at least one of STIs symptom were more likely to have utilized SRH services than those who did not face the problem of STIs. In another study conducted by Pinyopornpanish *et al.,* (2017) investigate sexual health, risky sexual behavior and condom use among vocational students in Thailand and found out that condom use amongst the students was low. The research further indicated that seven percent of the students had contracted STIs; one-third of the participants who had never used condoms claimed there was no risk of contracting an STI. Additionally, researchers argued that the students' attitude and behavior towards condom used depended on their knowledge of STIs and HIV (Pinyopornpanish *et al.,* 2017).

Again, in a study by Burnett *et al.,* (2011), findings showed that students who did use condoms during intercourse were less than half of those who used condoms to prevent themselves from contracting STIs and HIV. Findings concluded that adolescents used condoms was primarily for protection against pregnancy and not STIs, and their use of contraceptives become irregular when other hormonal contraceptives are being used

(Burnett *et al.,* 2011). However, according to Luvai *et al.,* (2017) study conducted in Kenya, findings showed about 61.5% of adolescents were reported to have utilized youth-friendly reproductive health services, and more than a third (38.5%) did not use the service in Kenya (Luvai *et al.,* 2017).

In Binu *et al.,* (2018) study conducted on sexual and reproductive health services utilization and associated factors among secondary school students showed that only 21.2% of students in town utilized SRH services, and 95% have experienced sexual intercourse in their life. The research further explains that some adolescent also see times schedule for SRH service, lack of privacy, religion, culture, and parental control as a barrier to SRH utilization.

In Ghana, some concerns have been raised concerning adolescent utilization of the existing health services available in the senior high schools, and research is done so far point to the fact that adolescents in Ghana hardly use health services in their schools. For instance, research on factors associated with poor sexual and reproductive health services utilization among secondary school students in the Central Region indicated that barriers related to adolescents' utilization of SRH services include; lack of privacy, religion, culture and lack of parental control (Binu *et al.,* 2018).

Also, in 2018, a study conducted among refugee, migrant and displaced girls and young women in Africa demonstrated that 42.2% of adolescents between the ages of 10 to 20 years have had unprotected sex. Still, only 40.1% of these adolescents protected themselves with a condom (Ivanova *et al.,* 2018). According to Abajobir & Seme (2014) study conducted in both India and Nigeria indicates that most adolescents do not use SRH services due to shyness, shame and humiliation from the community, and as well as high

cost of SRH service, negative attitudes of SRH providers and absence of privacy or confidentiality during SRH service provision.

In the same vien, Dapaah *et al.,* (2016) conducted a study in Kwadaso, another urban Centre in Kumasi and found that 45.2% of young people between the ages of 10 to 24 years are exposed to sexual experience, 42% are those in school, and 70% are those who have had sexual intercourse are out of school youth. Within six months, those who had sexual intercourse were 28.8%, only 40.1% protected themselves with a condom. The study further deduced that the least discussed topics among those in school, 29.3% are parental conversation on contraceptive methods and 28.0% are sexual and romantic relationships (Dapaah *et al.,* 2016).

2.4 Review of Theoretical Literature

Studies on ASRH have been grounded by several cognitive and psychological theories which scholars have developed over the years. The model that has been used to predict health-related human behavior is the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB), propounded by Fishbein and Ajzen in 1975 (Ajzen, 2015). However, the study used the theory of planned behavior, which is an extension of reasoned action theory to evaluate the study hypothesis, which state that, there is low knowledge, access and utilization of sexual and reproductive health services among senior high school students in the Sunyani west municipality, Ghana.

2.4.1 Theory of Reasoned Action

This theory explores the relationship between behavior and beliefs, attitudes, and intentions. The main objective of this theory is the individual intention to act a given behavior. Fischbein and Ajzen earlier in 1960s and 1970s assumed that, attitude determine behavior, and later found out that, it is not always that adolescents' attitude relate to their behavior and however suggested that, adolescent intention to carry out a particular behavior that determine their behavior, and not their attitude towards the behavior (Ajzen, 2015).

Adolescents' intentions are considered as the motivational factors that influence their behavior. They indicate how they are willing to try or how much effort they are planning to exert to perform the behavior. The model assumes that behavioral intention is the most important determinant of behavior (Ajzen, 2015). The Theory of Reasoned Action is best in determining a behavior under willful (volitional) control. To explain this concept, an updated version was done in 1991 to help discover the Theory of Planned Behavior (TPB) (Ajzen, 2015). These theories are not behavior change theory, but rather theories that foresee people's intention and best explain their behavior. The TPB assumes that all other factors (e.g., culture, the environment) operate through the models' constructs and do not independently explain the likelihood that a person will behave in a certain way (Ajzen, 2015).

The two theories believe that the fundamentals of people behavior are their intentions to start the behavior or the possibility that the person will be engaged in a particular behavior and their ability to decide whether to perform such behavior or not (volitional control). There are some situations a person cannot get full control over behavior, yet the intention is good (Ajzen, 2015). For instance, an adolescent may want to use SRHS, yet the services

may not be available or within the domains of the adolescent even though the intentions are perfect yet have few volitional controls. Planned behaviors are likely to be carried out than when it is not planned (Figure 2.0). People behaviors are determined by their intention to perform. In figure 2.0 below, a theory proposed three determinants of intention, which is identified by individual personnel attitude, subjective norm and Perceived Behavioral Control (PBC) (Ajzen, 2015).

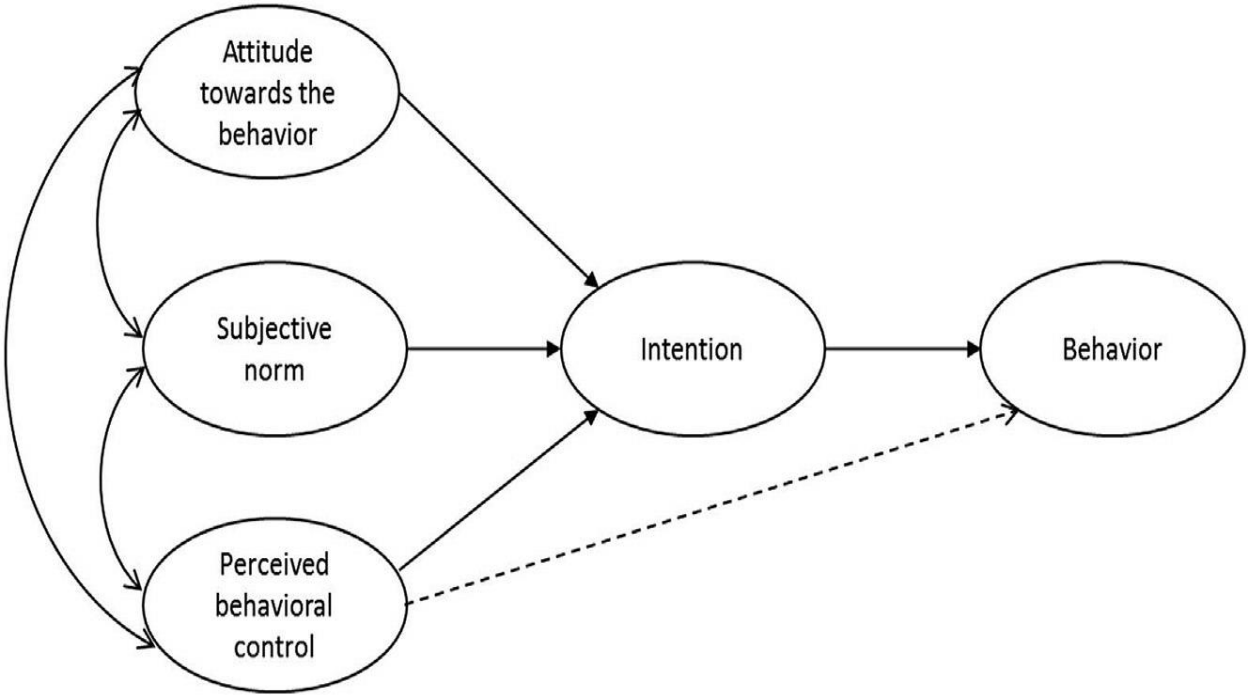


Figure 2.0: The theory of planned behaviour

Source: Ajzen, (2015).

Explanations to the theory of planned behavior:

Personal Attitudes: These are molded from series of beliefs that have been assessed to ensure that the relevance of the outcome is either positive or negative in the performance of a behavior (Lange *et al.*, 2012). Behavior is shaped, and attitude becomes positive if the benefit from the outcome is good. For example, if an adolescent belief accessing and utilizing SRHS will prevent SRH problem such as teenage pregnancy, abortion, HIV and

AIDS and STIs and that the benefit of using SRHS outweigh the consequences of not using SRHS, then the adolescent attitude toward utilization of SRHS will be positive (Cooke *et al.,* 2016). On the other hand, if an adolescent develops a negative attitude towards SRHS and sees SRHS as not good, then attitude will influence the use of SRHS negatively. Cooke *et al.,* (2016) have used the model to predict alcohol consumption in a systematic review and meta-analysis and found out that, intention has a close relationship with attitude and alcohol consumption.

Subjective norms: are individually identifiable opinions on whether to engage in specific approval or disapproval social behaviors, which can impact intention (Cooke *et al.,* 2016). Subjective norms are a function of a person's beliefs regarding what each referent thinks he or she should do and the motivation to comply with these referents (Ajzen, 2015). Subjective norms are controlled by normative belief and motivations, and these are behavior we think people like teachers, healthcare workers, religious leaders and other important people in the society who matter in our lives expect from us and the desire to obey and satisfy the perceive beliefs (Lange *et al.,* 2012). People can develop a positive attitude towards behavior but their perceived social pressure will not let them do it. Alternatively, individuals can get negative attitudes towards behavior and find cooperative subjective norms (Lange *et al.,* 2012). For instance, adolescents can develop an interest in SRHS and may want to use the services, but the behavior of some health workers and other close relations can prevent them from utilizing the service. Likewise, adolescents can have a bad opinion about SRHS, but the information and education they will receive from their teachers, health workers and opinion leaders can influence their use of SRHS. Cooke *et al.,* (2016) ascertained that people's intention in alcohol consumption is directly related to their

attitude and subjective norms. Asare, (2015) also identified subjective norm and normative belief as the main predictor of condom use among college students in the United States.

Perceived Behavioral Control: is the individual perception of behavioral control factors, and these are internal and external barriers that can impede or hinder a person's interest in performing a behavior (Lange *et al.,* 2012; Cooke *et al.,* 2016). It is a blend of perceived control and self-efficacy. Perceived control is people's perception of managing external obstacles to perform a behavior, and self-efficacy is the ability and confidence of people to perform a behavior (Lange *et al.,* 2012). It further explains that people can act on their intentions and overcome obstacles that impede their performance of a behavior when they have possession of information, abilities, skills, qualities their performance when they have possession of information, abilities, skills, and qualities. They perform when they have information, abilities, skills, qualities and support from the individuals. For example, adolescents who have no idea of SRHS and want to utilize the service have behavioral control over their intention to try the service. People with control over behavior are likely to perform such behavior (Lange *et al.,* 2012). According to Cooke *et al.,* (2016), people intend to use SRH services and their self-efficacy are associated with alcohol consumption, while perceived behavioral control was found to have less association with alcohol consumption.

However, many researchers have used the theory in predicting behavior and intention in service utilization and were proven to be effective. In another study by Newby, Brown, French and Wallace (2013) used the theory on schools and university students in England through a randomized controlled trial to measure young adults' intention to use condoms with casual sexual partners in a study of increasing young adults' condom use intentions

and behavior through changing chlamydia risk and coping appraisals and recommended that the research is effective in changing condom use intention and behavior.

Again, Gronhoj *et al.,* (2012) used the theory of planned behavior to predict healthy eating among Danish adolescents and found adolescents perceived behavior and attitudes to be the most influential factors in predicting adolescents' behavioral intention in healthy eating. Also, Mostafaei *et al.,* (2020) study used the model to investigate the cognitive, emotional and behavioral predictors of marijuana use among young Iranian adults in a cross-sectional study and found out that the young adults use of marijuana was strongly related to their attitude, subjective norms, environmental constraints, and behavioral intention in the use of marijuana.

2.5: Conclusions

The adolescent stage is a transitional journey with diverse challenges and requires various sexual and reproductive health services. Andersen and Newman health care utilization, theory of reason action, and planned behavior theory explain factors that influence adolescents' health care utilization. The theories suggest that health care providers must identify and address those internal and external barriers to ASRHS; doing so will improve adolescents' intention to use RH services. Some researchers have identified shortfalls in methodological approach to studies of this nature, and even in Binu *et al.,* (2018) study identified respondents' bias in the use of SRH services in a quantitative study design, and was noted as a limitation to some information that are needed in qualitative studies. The researcher could not generalize his findings to the entire Ethiopian adolescents' population because the study was done in schools that were located in one town and recommended

that further research look at factors within the community such as health care systems, parental control and approach to the adolescents. Alehegan *et al.,* (2018) also did not consider out of school adolescents in an institutional-based cross-sectional study among preparatory school students in Mecha district, northwest Ethiopia on the other hand, to increase utilization of Youth friendly reproductive health services, Luvai *et al.,* (2017) recommended training of more peer educators and increasing adolescents outreach programmes in Kenya. Aninanya *et al.,* (2015) study also observed thatloss to follow-up, recall bias and unmeasured confounding, as well as loss to follow-up, which was primarily attributed to migration and respondents, was not present when interviewers visited; however, the study indicated that there were no major differences between intervention and comparison communities, and so was unlikely to have changed study results significantly. Abajobir & Seme (2014) also recommended that other researchers focus and address changes in demographic, social and economic sectors that affect adolescent knowledge and services utilization. Therefore, this current study sought to assess knowledge, access and utilization of Sexual and Reproductive Health Services among Senior High School students in the Sunyani West Municipality using a mixed method to generate evidence and make recommendations to fill the gaps.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

Chapter three provides detailed information on how the study was conducted. It starts with a narrative profile of the study area, followed by the study design, study population and sampling techniques. It further discusses the sample size, data collection methods, validity and reliability of the findings and data analysis, and ethical considerations of the study.

3.1 Study Area

3.1.1 Location and Size

This study was done in Sunyani West Municipal, which is found on latitude 7º 19´N and 7º 35´N and longitudes 2º 08´ W and 2º 31´ W. It shares its North boundary with Tain District, North East border with Wenchi Municipality, Western border with Berekum and Dormaa East, South East with Sunyani Municipal, Tano North and Offinso North District are the Eastern boundaries of the District. The Municipality has two urban councils (Nsoatre and Chiraa), one town council (Fiapre) and four area council (Koduakron,

Awuah-Dumase, Odumase number 1 and Dumasua). Odumase is the administrative capital of the district. There are 84 communities in the district covering 1,658.7 square kilometers (Sunyani West District Assembly (SWDA), 2016).

3.1.2: Population of Sunyani West Municipal

According to the 2010 census, 85,272 people reside in Sunyani West Municipality, representing a 3.7 portion of the total population in the region. Out of this, males constitute 49.5 percent while females constitute 51.5 percent (Ghana Statistical Service, 2014). There are 10,715 households in the Municipality with a household population of 84,630, of which 71 percent reside in urban areas, with the rest in rural areas. The average household size was 4.3 children to have constituted the largest households and accounted for 41.4 percent. The youthful population in the Municipality accounts for 38.3 percent of the people depicting a wide base populace pyramid that matches with a small number of the people aged 60 years and older (GSS, 2014). About 37.2 percent of the people from 12 years are married, 31.4 percent of the married have no education. The Municipality is the fourth highest with a general fertility rate (GFR) of 95.8 births per 1000 and a total fertility rate (TFR) of 3.2 in the region (Ghana Statistical Service, 2014). The Municipality has a diverse ethnic population, with the “Akan” ethnic group being the dominant (73.5%), amongst whom the Bono (Bono East) constitutes more than two-thirds of that population. Traditional Government demonstrate vital role in the running of districts.

Traditional Authorities are the embodiment of the rich culture and customs of the people of the area. SWD has three paramount seats (Odomase No.1, Awua-Domase and Nsoatre), a divisional area of Dormaa Traditional Council (Chiraa) and a traditional area (Fiapre).

Despite the different ethnic and religious groups and foreigners, the inhabitants co-exist in peace and unity, which has supported the socio-economic development of the area (Sunyani West Municipal Assembly (SWMA), 2016).

3.1.3: Educational Facilities

The Municipality has all the educational facilities which are found in all the big cities in Ghana with both public and private providers at the basic level. The number of literates in the study area per the 2010 Population and Housing Census was reported low even though all the educational facilities could be found in the study area. The municipality has 65 Kindergartens, 68 Primary Schools, 43 Basic Schools, 2 Technical/Vocational schools, 5 Senior High Schools and 2 Universities which are Catholic University College (private tertiary institution) and University of Energy and Natural Resources public institution (Public Tertiary Institution) (Ghana Statistical Service, 2014).

Among the general population, approximately 49% of males and 55% of females were illiterate. However, these percentages were lower among the adolescents (12–18 years of age). The illiteracy rate was reported at 22% among males and 25% among females. There was a high school dropout rate of more than 17.3% (14.8% among males and 19.7% among females), with many adolescents abandoning school to support their parents in their daily activities such as farming and trading. About 63.8% of the population was crop farmers, labourers, or domestic workers (Sunyani West District Assembly, 2017).

3.1.4: Health Facilities

The Municipality has public and private health facilities that provide all kinds of health services to the people. The Municipality has 2 polyclinics, 2 private clinics, 21 functional Community-Based Health Planning and Services Compounds (CHIPS) and 9 maternity homes (Sunyani West District Health Directorate (SWDHD), 2017). The reproductive health services provided in the health facilities include family planning, STIs/HIV/AIDS prevention and management, and post-abortion care.

Adolescent Sexual and Reproductive Health Services strategies in the area include health talks targeting Senior High School students, apprentices, and religious groupings. Despite all these significant activities organized in the municipality, adolescents have consistently contributed to more than 15.0% of births that occur in the district per year for the past 5years (District Health Directorate (DHD), 2017).

In 2015, 431 (15%) adolescents registered at the antenatal clinic (ANC), 227 (14%) delivered, 458 (15.7%) registered at ANC in 2016, 236 (14.7%) delivered, out of 471(16.5%) ANC registrants in 2017, 241(15%) delivered. Between 2018 and 2019, adolescents' pregnancies at age 10-14years were 7 and 2 delivered while 234 pregnancies and 104 deliveries had occurred among 15-19 years' adolescents in the municipality 2019 annual health report of the Municipal Health Directorate.

This indicates that the prevalence of adolescent pregnancy was on the increase in the Municipality, as reported by District Health Directorate. However, most female adolescents were still not aware of SRH services and majority equally lacked knowledge on SRH services in the locality, which has led to the high number of female adolescents getting pregnant in the locality. According to Esantsi *et al.*, (2015), the high teenage

pregnancy and sexual activity among the adolescent in the SWDA resulted from adolescents not getting the required knowledge on the current SRH services and the resultant usage of the SRH services.

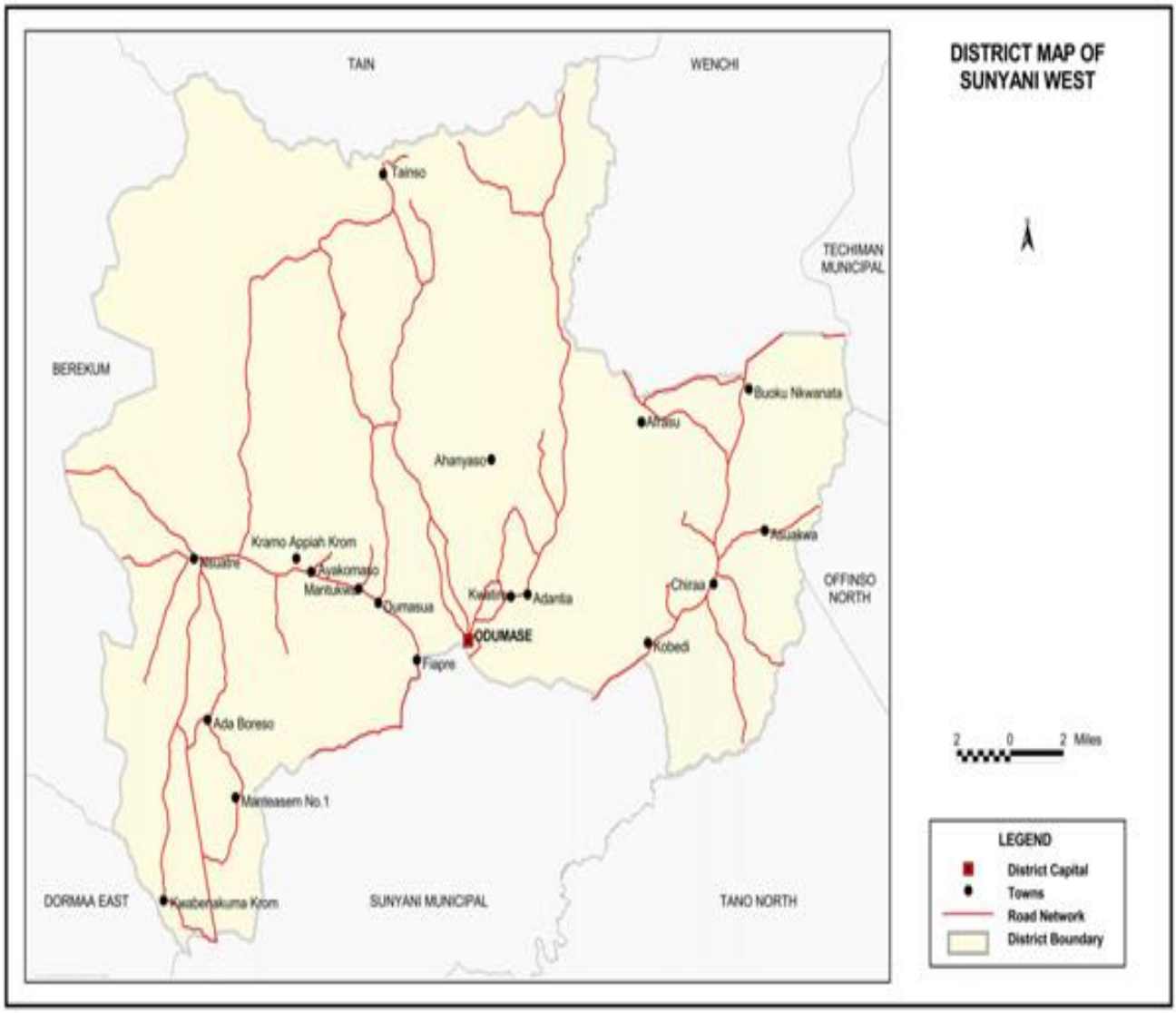


Figure 3.1: Map of Sunyani West Municipal

Source: Ghana Statistical Service, (2014)

3.2 Study Design

The study employed an analytical cross-sectional study design with quantitative and qualitative approachesto assess the relationship between adolescents exposure to SRH services and the outcome of knowledge, access and use of SRH services among adolescents in selected Senior High Schools in the Sunyani West Municipality (Joshi *et al.,* 2015; Kesmodel, 2018).

It was a cross-sectional study because information on adolescents' knowledge, access and use of SRH services was gathered at a point in time in the Sunyani west municipality (Mukherjee, 2017). The researcher also adopted a mixed-method approach due to the research objectives of the study. Mixed methods research has become an increasingly used and accepted approach to conducting social research (Bryman, 2012). Mixed method approaches answered a broader and more complete range of research questions because the researcher was not confined to a single method or approach. The mixed-method system equally enabled the researcher to collects quantitative and qualitative data concurrently, analyzed the two data sets separately, and merged the results and then interpret the combined results to draw conclusions. Moreover, mixed-method approach provided a more comprehensive analysis of the Knowledge, Access and Utilization of SRHS among in-school adolescents to provide better feedback to be provided to policymakers.

3.3 Study population

The quantitative study population consisted of male and female adolescents in the public sector senior high schools in the Municipality. According to Ghana Education Service Sunyani West Municipal Report (2019), there were four (4) Government Assisted Senior

High Schools in the Municipality. The schools were Odumaseman Senior High School (ODASS), Sacred Heart Senior High School (SAHESS), Chiraa Senior High School (CHASS) and Notredame Girls' Senior High School (NODASS). Three schools were with male and female students in the Municipality and were purposively selected, and the schools included; Odumaseman Senior High School, Sacred Heart Senior High School and Chiraa Senior High School. Additionally, these three Senior High Schools have a total population of 4,097 students between the ages of 14 -19 years, and these formed the target population for the study. The qualitative study population comprised of Guidance and counselling coordinators/teachers at the selected schools, healthcare providers involved in SRH activities in the Municipality and some selected number of students from each chosen school to form the target population for the qualitative data collection.

3.4 Inclusive and exclusive criteria

All adolescents, both male and females aged 14-19 years from the three selected Senior High Schools were included in the study. Again, only those found in the school premises at the time of the study and were willing to participate in the study were enrolled in the quantitative study process. For the qualitative research, only health workers in the health facilities near the selected schools were included in the study. Also, Guidance and counseling coordinators/teachers involved in teaching Sexuality Education in the selected schools were selected for the interview in the qualitative study. For the exclusive criteria, private Senior High Schools were excluded in the study as well as Notre Dame Girls' Senior High School because it was a girls' school.

Again, out of school adolescents and adolescents who were absent from school and adolescents who were between the ages of 10 to 13 years and those who were not ready to participate in the study, were excluded.

3.5 Study Variables

3.5.1 Dependent Variable

Dependent variables considered in this study were utilization of ASRH services (family planning counselling and services, adolescent-friendly health corners, HIV counselling and testing, abortion care, testing and treatment of STIs, school health activities).

3.5.2: Independent Variable

Independent variables included respondents socio-demographic characteristics (age, sex, level of education, place of residence, religion, ethnicity and parental occupation), knowledge of SRH information, awareness of available services and understanding of services (family planning, voluntary testing and counselling on HIV, abortion care, testing and treatment of STIs), Access to and provision of SRH information, care and services (transportation, affordable, proximity, mobile or static).

3.6 Sample Size Determination

The sample size was calculated from the target population by using Yamane's (Yamane, 1967) single population sample size determination formula with a margin of error of 0.05% at a confidence level of 95% (Figure 3.1). Yamane formula was chosen for the sample size calculation because it was convenient in determining sample size in a known population.

The formula is given by the relation: $n = \frac{N}{1+Ne^2}$

Where,

n= Estimated Sample Size of the study

N = the total population size of adolescents aged 14-19 years in the study area (N=4,097). According to the Ghana Education Service (2019), there are 4,097 male and female adolescents in the three selected senior high schools.

e = Margin of error of 5% at 95% confidence level ($p \leq 0.05$).

Therefore;

n = the sample size

N = 4,097

e = 0.05

$$n = \frac{4,097}{1+4,097\ (0.05)^2}$$

n = 364.420

n = approximately 364 sample size for the study.

Then, 10% non-respondent rate was added to the sample size, and this percentage was added to cater for respondents who may not give their consent as well as those who may not complete the questions.

$$= \frac{364 \times 10\%}{100}$$

= 36.4 approximately 36 non-response rate.

Therefore,364 + 36 = **400 respondents** were the overall sample size for the study.

Table 3.1 below presents the respondents' sampling frame and number administered with the questionnaires at the various secondary schools for the quantitative study. A total of 144 respondents were selected from Chiraa Secondary School (CHASS) from form 1-3. At Secret Heart Secondary School (SAHESS), a total of 108 respondents were selected. At Odumaseman Secondary School (ODASS), 148 respondents were selected to give a total of 400 respondents for the study, as depicted in the Table 3.1 below.

Table 3.1: Sampling Frame and sample size administered with the questionnaires for the Quantitative Study in the selected schools

SCHOOLS	POPULATION OF STUDENTS	SAMPLE SIZE
Chiraa Secondary School (CHASS)		
Form one	716	70
Form two	521	51
Form three	243	24
Total	**1,480**	**144**
Secret Heart Secondary School (SAHESS)		
Form one	421	42
Form two	434	42
Form three	249	24
Total	**1,104**	**108**
Odumaseman Secondary School (ODASS)		
Form one	570	56
Form two	557	54
Form three	386	38
Total	**1,513**	**148**
Grand total	**4,097**	**400**

Source: Author's construct, 2020

Table 3.2 below indicated the number of participants administered recruited for the qualitative study, and a total of 15 male prefects were selected for the Focus Group Discussions. Also, a total of 15 female prefects were chosen equally for the FGD in the various schools. Again, six (6) teachers who were school guidance and counselling coordinators as well as thirteen (13) health workers at the various school health facilities

were selected for key informant interviews (KIIs) on the study topic as indicated in Table 3.2 below.

Table 3.2: Number of participants recruited for the Qualitative Study

ALL SCHOOLS AND HEALTH FACILITIES	SAMPLE SIZE
Focus Group Discussion (FGD)of Male prefects	15
Focus Group Discussion of Female prefects	15
Key Informant Interview (KII) of Teachers	6
Key Informant Interview of health workers	13
Grand Total	**49**

Source: Author's construct, 2020

4.7 Sampling Techniques

Probability and non-probability sampling techniques were used in the selection of schools in the Sunyani Municipality. Under the probability sampling, a simple random sampling technique was used to select the required sample size of the target population from each of these academic levels (form one, form two and form three) in each of the three schools through balloting, whereby pieces' papers were numbered based on the required sample size and selected at random. Simple Random Sampling Technique also known as the lottery method; the process involved written of numbers from 1 to 50 in relation to the number of students in each class on pieces of papers included blank papers; the papers were put into three bows; each of the bow represented the levels in the 3 classes (Form 1, Form 2 and Form 3). The target population was then asked to pick the papers at random according to the proportionate number of the class. Those with numbers written on their papers were

picked to form the sample size for the study and participated in answering the questionnaire. Using this sampling technique was to help decrease the level of biasness in selecting items from the entire population (Quinlan, 2011).

For non-probability sampling techniques, the researcher adopted convenient and purposive sampling techniques to select participants to participate in the six (6) Focus Group Discussions (FGDs) to share their views on the awareness utilization of SRH services. In each school, 2 separate focus group discussions were conducted, one for males and one for females. Each focus group discussion involved 6 students at the time and place of convenience for their schools.

Usually, participants for FGD were between 12-15 participants with relevant information on the subject matter. However, because more than one FGD was carried out in a single study, it makes it easy for compilation. According to Boateng (2012), it was acceptable to engage adolescents between 3 to 8 people in a group interview for a study with more than one Focus Group Discussion. Again, in each school, 2 Guidance and Counseling teachers who counseled students on SRH issues and were involved in teaching the students on Sexuality Education were purposively selected to participate in the key informant interviews (KII) in the same school.

Also, the same purposive sampling was adopted to select 6 Health workers who provide SRH services to the adolescents in the community. In each community where the schools were located, one health facility was selected, and 2 health workers were enrolled on the key informant interview because of their experience and knowledge in SRH services and to gain their views on the subject matter. In all, both the quantitative and qualitative

sampling size was 454 respondents from the three Senior High Schools and the health facilities in the communities.

4.8 Data Collection Techniques and Tools

4.8.1 Quantitative Data Collection

A structured questionnaire was used to collect data for the quantitative study because the respondents were literate who could read and write. It was also an efficient way to collect statistically quantifiable data and large respondents were reached within a shorter period (Ugoji, 2014). The questionnaire contained both closed and open-ended questions. The closed questions required direct answers from the respondents, whilst the open-ended questions enabled respondents to express their views as they wished. Also, open-ended questions helped in sourcing relevant information that was no obtained by the closed questions. The questionnaire was distributed to 400 students (14-19 years) that were sampled from the 3 Senior High Schools (SHSs) after the school authorities granted permission in the Municipality. The questionnaires were made up of four sections. The section A included the demographic characteristics of respondents such as age, sex, education; section B and C had information's on the study variables such as knowledge, access and utilization of the SRH services such as types of contraception, STIs/HIV/AIDS prevention and management, counseling on SRH matters.

Section D provided information's on factors that affected adolescents access to and use of SRH services in the Municipality. The researcher administered the questionnaires together with two other research assistants after the questionnaires were explained to the respondents in the language they understood and instructions on how to answer the

questions. The research assistants were trained before they were engaged in administering the questionnaires. One day (3rd December, 2019) was used to administer the questionnaires in each school, and the responses were collected on the same day and cross-checked for completeness before leaving the school.

4.8.2 Qualitative Data Collection

The qualitative data collection instruments included unstructured guides for the Focus Group Discussion (FGD) and the Key Informant Interview (KII). The focus group discussion enabled the researcher to interview more respondents at the same time and to gather more information on the subject matter. It was easy to focus and gives quality and valid results on the phenomenon (Boateng, 2012). It also enabled the researcher to interact more with the students to get additional information on adolescents' knowledge, access, and sexual and reproductive health services. Also, because of its convenience and focused, more information was provided by the respondents and gave the researcher chance to elicit direct responses from the questions to get a deeper understanding of the meanings of the study topic under investigation without differing. Thirty-six school prefects were purposively selected to participate in the FGD, and twelve students from each school (six males and six female). All interviews were conducted in English; a voice recorder was used to record the interview. Field notes were taken along with the recordings. The researcher conducted the interviews at the selected schools and health facilities and then transcribed the responses. The audio recordings were transcribed each day after the interview sections to check for inconsistencies in participants' responses. The FGD took place in each school at a place and time convenient for the students and the school authority. The interview settings were very comfortable to the participants, and there was a high sense of privacy.

Before the group discussion, participants were informed of the aims and objectives of the study and the major themes of the study.

The focus group discussions focused on the adolescents' perceptions, experiences, and challenges adolescents had relating to SRH services. Again, the FGD and the KII elicited information on the quantitative questions that failed to ask on knowledge, access and utilization of SRH services in the community. Additionally, both interviews provided a general view and complete understanding of the phenomenon under study than what might be captured if a single technique was used to generate reliable results (Nmadu, 2017). For the KII, 6 health workers who provided healthcare to adolescents and has experience in RH services were purposively selected from the various government health facilities in the three communities, two from each community health facility where the SHS was situated, and the interview was conducted in the place convenient for the health workers in their facility. Again, two guidance and counseling teachers were purposively selected from each school and interviewed at a place appropriate for the counselors' schedule. During the interview, each participant had the opportunity to share their knowledge, experiences, and views on the adolescents' knowledge, access and use of SRH services. Detailed field notes were written on the demeanor of respondents, facial expressions and gestures. In all, six FGD and six key informant interviews were conducted. Each interview took a maximum of 30 to 45 minutes on each interview guide. Six days from 3rd December 2019 to 9th December 2019 were used to conduct both FGD and KII in each school, and one public health facility in each community was engaged for two days to complete the interviews.

4.9 Data Processing and Analysis

4.9.1 Quantitative Data Analysis

Before analysis, all completed questionnaire was checked for completeness and consistency manually. During this cross-checking on the questionnaires, wrong entries and inconsistent data recordings on the face of the questionnaires were corrected, and those questionnaires that were inappropriately filled or not correctly filled were removed. In all, seven (7) questionnaires were detected not correctly filled and were excluded in the analysis. So, therefore, the analyses of the results were presented based on a sample of 393 from an overall sampled total of 400 respondents. After that, the pre-coded data were keyed into Microsoft excel spreadsheet 2019 version and then transported into STATA version 12.1 (StataCorp LP 4905 Lakeway Drive, College Station, Texas 77845 USA). Again, data was coded by attaching values and bringing similar and related values into few and precise headings and cross-checked before analysis. Quantitative data was analyzed using descriptive and inferential statistics.

Descriptive statistics were used to analyze respondents' socio-demographic characteristics, knowledge of sexual and reproductive health, access to SRH services, utilization of SRH services, perceptions of SRH, and factors that influenced access and utilization of SRH services. All frequencies and percentages generated were presented into frequency tables, pie charts and bar graphs. Adolescent's knowledge of SRH services was measured by evaluating their responses to twelve (12) questions on SRH services among adolescents, including awareness, sources of SRH information, age to start sex, preventive methods of STIs, FP methods and side effects of contraceptive method use, and benefits of SRH information. Each correct response was coded to attract a score of "+1" while each

"incorrect" or "undecided" ("don't know") response was assigned a score of "0". The scores for each adolescent were summed and graded as follows; scores 0-3 = poor, 4-7 = average and 8-12 = good.

Inferential statistics was done using Pearson Chi-square (X^2) correlation test to establish the association between respondents' socio-demographic characteristics and knowledge level, attitudes/perceptions, access and utilization of sexual and reproductive health services. The statistically significant level was set at 5% ($p \leq 0.05$) points for the analysis. The statistically associated factors were then subjected to further analysis using multivariate logistic regression to help determine predictive factors influencing respondents' knowledge, attitudes, access and utilization of sexual and reproductive health services as well as the odd ratios of significant factors at 95% confidence level and 5% significant level.

4.9.2 Qualitative Data Analysis

For the qualitative analysis, manual thematic analysis was done. The objective of adopting the manual thematic analysis was to identify the patterns or similar subjects from the interview process (Maguire & Delahunt, 2017). This was done by transcribing the written notes of the responses and the audio recordings of the interview with the students, teachers and the health workers. The transcribed results were then organized into various themes (major and sub-themes). This process involved the researcher reading through the transcriptions and jointly generating a list of recurring codes. Afterwards, coding was done by assigning a code, number or symbol to the data. The transcribed data was analyzed by using a six-phase approach to thematic analysis as proposed by Maguire & Delahunt

(2017). The six-phase approaches of the thematic analysis procedure include: (1) familiarizing yourself with the data, (2) generating initial codes (3) searching for themes (4) reviewing themes (5) defining and naming themes, and (6) producing the report.

The first phase involves the researcher reading through the raw data of the interview recorded on tape and the field notes from the participants. The researcher read through the material several times to understand and become familiar with the critical concepts found in the data collected. Then the participants' ideas were then outlined verbatim as they expressed it and took notes of them by highlighting the main point that can be traced back and putting them in direct quotations for a careful transcription. In the second phase, a data-led approach was used. This was where the generation of codes guided analysis of the data. The researcher then scrutinized the data to identify codes that described the contents of a line or even a paragraph. The researcher then coded the chunks of data by using highlighters and inserted comments in the text to identify sections of the data. The researcher then codes all the transcripts and matches the data extracted to demonstrate a particular code and added new codes where necessary. The third phase of the thematic analysis involves searching for themes from the previously determined codes from the data. The researcher then organized the various codes into possible themes. This was done by looking for patterns in the coding and categorized them into undefined themes. The fourth phase involved the researcher reviewing the undefined themes, and then re-read the entire data set to certify whether all the themes were really themes or not and whether other themes needed further break down into different themes. The researcher also reviewed the themes and examined the themes concerning the data to see whether they appeared in a consistent pattern. Some themes were abandoned during this process; some were modified while others were

subdivided for more themes to be generated. The fifth stage now involved defining and labeling themes and organizing them into consistent descriptions. At this point, the researcher had identified some subthemes that she defined and labeled in each theme which were then tailored into the broader research objectives. The final stage of thematic analysis involved report writing. Here, the researcher made available all the descriptions and explanations of the themes in the form of a report. Extracts from the data was used to illuminate the findings. The researcher adopted convergent parallel design to merge the results of both quantitative and qualitative set data quantitative and qualitative results. The convergent parallel design involves strategies that combine the two sets of data (quantitative and qualitative). This design involved making a side-by-side comparison (in results or discussion section) of both the quantitative and the qualitative results. By this strategy, the research now tried to identify content areas found in both the quantitative and the qualitative results analyzed.

This procedure involves similar grouping themes from the qualitative data into counts and then quantifies them like the quantitative data. This was done by creating a new variable based on the presence of a theme and based on the number of times the themes appear in the qualitative data.

4.10 Quality Control

4.10.1 Pretesting

To ensure validity and reliability of the data collection tools, a pretest was conducted on adolescents in Seventh-Day Adventists Senior High School because of their comparable characteristics that were likely to contribute significantly to adolescent knowledge, access

and utilization of SRHS. Forty (40) adolescents were randomly selected for the quantitative interviews; ten (10) from each academic level, six (6) male prefects and six (6) female prefects were selected for the FGD. Again, two health workers from the municipal hospital and two guidance and counseling teachers in the school were purposively selected for the pretest. The pretested questionnaires enabled the researcher to identify issues with the data collection tools and corrected most of the mistakes before the actual data collection. The researcher, through the pretesting, also familiarized herself with the research instrument (Maguire & Delahunt, 2017).

The pretest interviews were tape-recorded to ensure the correct use of the tape recorder. The researcher also gave a brief orientation and training of two community health nurses for one day who work at the Seventh-day Adventist Hospital to assist in the data collection process. The orientation focused on approaching respondents and the skills needed to communicate with the adolescents on the field to get reliable and correct data for the study. These also help in improving the nurses' ability to record, collect and manage data. The researcher coordinated direct and supervises all the data collection activities on a daily basis to ensure completeness and clarity in the data collected.

4.11 Ethical Consideration

Ethical approval was obtained from the Kintampo Health Research Ethics Committee (Appendix 7). Also, permission to conduct the research in the study area was obtained from the Municipal Director of Health Service of the Ghana Health Service and the Municipal Director of Education of the Ghana Education Service in the Sunyani Municipality of the Bono Region. An introductory letter was obtained from the Department

of Behavioral and Social Change, School of Public Health of the University for Development Studies, Tamale and was sent to all the selected health facilities cited for this study in Odumase, Chiraa, and Nsuatre to request for necessary assistance and assurance of the benefit of the study to their facilities. Parental consent and assent from the minors (14-17 years) were sought before the commencement of the research. For students who were between 18 and 19 years, and health workers and teachers, a consent form was issued to them to sign to obtain their consent.

Once permission was granted, an arrangement was made with the school management committees to determine ways to get the students' consent. The consenting process of students involved explaining the purpose of the study, confidentiality procedures, risks and benefits, and the freedom to opt-out of the study at any time was equally made known to respondents. A signature or thumbprint indicated approval on the consent form. The research benefits to society and adolescents were explained to them by specifically highlighting how the study's findings may strengthen the use of sexual and reproductive health services (SRHS) among adolescents and as well educate them on sexual health issues and their rights in service demanded from the SRHS facilities. The research also ensured respondents and participants' confidentiality and anonymity by stripping off respondents and participants' details during the data collection and analysis.

The researcher, therefore, declared that no compensation was given to participants whose data was used in work. Data gathered from all the interviews were transcribed and typed out, and was stored in files created on a personal computer. Transcriptions of the data collected were kept for three (3) to five (5) years, after which they were destroyed. Access to the transcribed data was available to only the researcher and supervisors for purposes of

ensuring confidentiality. Apart from the study's academic and public health importance, the researcher, at this moment, declares that there was no other personal interest in the study.

4.12 Chapter Summary

This chapter gave an account of the methodological approaches such as the choice of the research design, sources of data, sampling techniques, sample size, data collection techniques and data analysis methods, quality control and ethical consideration. The subsequent chapters presented the results of the study.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the results based on the specific objectives of the study that include; knowledge, access to, and utilization of sexual and reproductive health services and factors affecting access to and utilization of SRH services in the Sunyani West Municipality. A questionnaire was administered among 400 senior high school adolescents in the Sunyani West Municipality, and 393 questionnaires were retrieved, given a response rate of 98.3%.

4.1 Quantitative Background Information of Respondents

4.1.1 Socio-demographic Characteristics of Respondents

Table 4.1 below presents the socio-demographic characteristics of respondents. Average age was 17.13 years, and 83.7% were 16-19 years, 11.7% were between 13-15 years, and 4.6% of them were 20 years and above. About 50.1% were males, and 49.9% were females. About 87.3% were Christians, 11.2% were Muslims, and 1.0% belonged to the African Traditional religion. With the ethnic group, about 81.4% were Akan, 3.3% Ewe, 3.8% Mole-Dagbani and 8.4% belonged to other ethnic groups such as Frafra, Dagaabas, Kassenas, Kokombas and Sissalas.

With relationship status, about 77.1% were single, 1.0% was married, 14.5% had boyfriends/lovers and 7.4% had girlfriends. About 29.8% were living with single parents alone (either mother or father), 60.3% were living with both parents, 1.8% was living with non-relations, 3.6% were living with grandparents and 2.0% were living with either boy or girlfriends.

About 93.9% had their biological parents alive, and 6.1% lose their biological parents. Regarding how comfortable adolescents felt living with the caregiver/guardian shows 73.8% were very comfortable, 19.8% were comfortable, 3.6% were uncomfortable, and about 2.8% were very uncomfortable.

Table 4.1: Socio-demographic characteristics of respondents

Variable	Frequency (N = 393)	Percentage (%)
Age category (X = 17.13; SD = 1.44)		
13-15 years	46	11.7
16-19 years	329	83.7
20 years and above	18	4.6
Total	**393**	**100.0**
Sex of respondents		
Male	197	50.1
Female	196	49.9

Religion		
Christian	343	87.3
Muslim	44	11.2
Traditional	4	1.0
No religion	2	0.5
Ethnic group		
Akan	320	81.4
Ewe	13	3.3
Ga-Adangme	12	3.1
Mole-Dagbani	15	3.8
Others	33	8.4
Total	**393**	**100.0**
Relationship status		
Single	303	77.1
Married	4	1.0
Boyfriend lover	57	14.5
Girlfriend lover	29	7.4
Person living/stay with		
Single parent alone	117	29.8
Both parents	237	60.3
Non-relation	7	1.8
Grandparents	14	3.6
Boy/girlfriend	8	2.0
Others	10	2.5
Biological parents alive		
Yes	369	93.9
No	24	6.1
Comfortable staying with a person		
Very comfortable	290	73.8
Comfortable	78	19.8
Uncomfortable	14	3.6
Very uncomfortable	11	2.8
Total	**393**	**100.0**

4.1.2 Socio-Economic Characteristics of Respondents

Table 4.2 presents the socio-economic characteristics of respondents. Almost the same proportions (37.2% and 35.9%) were in SHS one and two, and 26.9% were in SHS three. About 27.7% worked for pay, 48.6% were engaged in trading, and 11.0% engaged in teaching, and 0.9% was Secretaries.

With caregivers' occupation, about 39.4% were farmers, 38.2% traders, 8.1% teachers, 4.3% were unemployed, and 2.5% of the caregivers were bankers. Regarding individuals

who visited adolescents while in school shows 27% said only their mother paid a visit to them in school. Both parents' paying visit was 24.2%, only father was 11.9%, family members 11.5% and either boyfriend or girlfriend paying visit was 5.3%.

Regarding the frequency of visit by closed family, relations show more than half (52.4%) of the adolescents said their closed family relations paid a visit to them once every term, 15.3% said every weekend and 3.8% said every day closed family relations paid a visit to them in school.

Table 4.2: Socio-Economic Characteristics of Respondents

Variable	Frequency (N = 393)	Percentage (%)
Level of education		
SHS one	146	37.2
SHS two	141	35.9
SHS three	106	26.9
Total	**393**	**100.0**
Worked for pay		
Yes	109	27.7
No	284	72.3

Total	**393**	**100.0**
Type of work done for pay		
Mobile money	30	27.5
Trading	53	48.6
Secretary	1	0.9
Teaching	12	11.0
Others	13	11.9
Total	**109**	**100.0**
Occupation of caretaker		
Unemployed	17	4.3
Teacher	32	8.1
Health worker	14	3.6
Banker	10	2.5
Farmer	155	39.4
Trader	150	38.2
Others	15	3.8
Total	**393**	**100.0**
Person who paid visit in school		
Parents	95	24.2
Father	47	11.9
Mother	106	27.0
Family member	45	11.5
Boy/girlfriend	21	5.3
Others	79	20.1
Total	**393**	**100.0**
Frequency of visit by close associates		
Everyday	15	3.8
Every weekend	60	15.3
Once every term	206	52.4
No visitor	62	15.8
Others	50	12.7
Total	**393**	**100.0**

Source: Field Survey, 2022

4.2 Qualitative Background Information of the Participants

4.2.1 Distribution of Socio-demographic variables of Adolescents in qualitative interview

Table 4.3 indicates the distribution of demographic variables of adolescents. Six (6) Focus Group Discussions (FGDs) were conducted; three (3) each for boys and girls aged 16-19 years. About 43.3% aged 18 years and about 20% aged 16 years and 19 years, and 16.7%

aged 17 years. Also, two-third (66.7%) was females and 33.3% were males, and a half (50%) was single, 26.7% had girlfriend lovers, and 23.3% had boyfriend lovers. About 43.3% were at CHASS, 33.3% ODASS and 23.3% SAHESS. Also, about 46.7% were in SHS 3, 33.3% SHS 2 and 20% were SHS 1 students.

Table 4.3: Distribution of Socio-demographic variable of Adolescents in qualitative study

Variables	Frequency (N = 30)	Percentage (%)
Age of participants		
16 years	6	20.0
17 years	5	16.7
18 years	13	43.3
19 years	6	20.0
Total	**30**	**100.0**
Sex of participants		
Male	10	33.3
Female	20	66.7
Current status of intimate relationship		
Single	15	50.0
Boyfriend lover	7	23.3
Girlfriend lover	8	26.7
Senior High Schools		
CHASS	13	43.3
ODASS	10	33.3
SAHESS	7	23.3
Educational level/Form		
Form one	6	20.0
Form two	10	33.3
Form three	14	46.7
Total	**30**	**100.0**

Source: Field Survey, 2020

4.2.2 Distribution of Socio-Demographic characteristics of School Guidance and Counsellors in qualitative interview

Table 4.4 below shows the distribution of demographic variables of school guidance and counsellors. Key informant interviews were conducted among Senior High School

Guidance and Counselling Coordinators in three (3) selected senior high schools, namely; Chiraa Secondary School, Odumaseman Secondary School and Secret Heart Secondary School. Half (50%) of the participants aged 36-40 years, 33.3% aged 45 years and above, and 16.7% aged 41-45 years.

An equal proportion of half (50%) constituted both males and females, and all (100%) of them were married. An equal proportion of 33.3% was selected from each school, and all (100%) participants had tertiary education. The school coordinators' years of working experience showed half (50%) had 3-7 years' experience, 33.3% had 8-10 years and 16.7% had above 10 years working experience.

Table 4.4 Distribution of Socio-demographic variables of School Guidance and Counsellors in qualitative interview

Variables	Frequency (6)	Percentage (%)
Age of participants		
36-40 years	3	50.0
41-45 years	1	16.7
45 years and above	2	33.3
Sex of participants		
Male	3	50.0
Female	3	50.0
Marital status		
Married	6	100.0
Senior High Schools		
CHASS	2	33.3
ODASS	2	33.3
SAHESS	2	33.3
Educational level		
Tertiary	6	100.0
Years of experience		
3-7 years	3	50.0
8-10 years	2	33.3
Above 10 years	1	16.7

Source: Field Survey, 2020

4.2.3 Distribution of Health Workers Socio-demographic variables in qualitative interview

Table 4.5 below indicates the distribution of demographic variables of health workers. Key informant interviews were equally conducted among 13 health workers at four (4) health facilities. About 46.1% aged 22.29 years, 38.5% aged 30-39 years and 15.4% aged 40 years and above. Also, about 61.5%) were females and 38.5% were males, and more than two-third (69.2%) was married, and 30.8% were single. About 38.5% were Nurses, and 61.5% were Community health officers, and all (100%) had tertiary education. A little above half (53.8%) had 1-5 years working experience, 30.8% had 6-10 years, and 15.4% had above 10 years.

Table 4.5: Distribution of Health Workers Socio-demographic variables

Variable	Frequency (N = 13)	Percentage (%)
Age of participants		
22-29 years	6	46.1
30-39 years	5	38.5
40 years and above	2	15.4
Sex of participants		
Male	5	38.5
Female	8	61.5
Marital status		
Single	4	30.8
Married	9	69.2
Cadre of profession		
Nurses	5	38.5
Community health nurses	8	61.5
Educational level		
Tertiary	13	100.0
Health facility visited		
Nsoatre Health Centre	3	23.1
Kwatire RCH	3	23.1
Odumase RCH	5	38.5
Chiraa Health centre	2	15.3
Travelled time to facility		
15-30mins	5	38.5
1hour and above	8	61.5
Years of working experience		
1-5 years	7	53.8
6-10 years	4	30.8
Above 10 years	2	15.4

Source: Field Survey, 2020

4.3 Results of Quantitative Study

4.3.1 Knowledge of SRH services

Table 4.6 indicates respondents' knowledge of SRH services. The majority (83.7%) was aware of SRH services, and almost all of them (93.9%) disclosed that adolescents should be provided with SRH services.

Over three-quarters (85.5%) had ever been given SRH education, and 71.0% have had someone to discuss SRH problems with. More than three-quarters (84.7%) were provided with SRH counseling at school. SRH counseling services ever received at school shows about 55.6% had received counseling on personal hygiene, 17.1% had been counseled on STIs prevention, and 11.4% carrier progression, 9.6% pregnancy preventions, and 6.3% had received counseling on nutrition and good dietary practices.

Also, 82.7% said SRH counseling received at school was beneficial. Regarding how helpful was SRH information obtained shows 67.9% said SRH information was very good, 18.3% said good, 8.1% not good, and only 5.6% said information provided during counseling was bad. Overall knowledge score on SRH services shows that 50.4% had average knowledge of ASRH services, 26% had poor knowledge, and only 23.6% had good knowledge of ASRH services.

Table 4.6: Respondents' knowledge of sexual and reproductive health services

Variable	Frequency (N = 393)	Percentage (%)
Aware of SRH services in community		
Yes	329	83.7
No	64	16.3
Total	**393**	**100.0**
Adolescents be provided SRH information		
Yes	369	93.9
No	24	6.1
Total	**393**	**100.0**
Ever been given SRH education		
Yes	336	85.5
No	57	14.5
Total	**393**	**100.0**
Have somebody to discuss SRH problem with		
Yes	279	71.0
No	114	29.0
Total	**393**	**100.0**
School gives counseling on SRH services		
Yes	333	84.7
No	60	15.3
Total	**393**	**100.0**
Type of Counseling provided by school		
Personal hygiene	185	55.6
Carrier progression services	38	11.4
Nutritional counseling	21	6.3
STIs counseling	57	17.1
Pregnancy prevention counseling	32	9.6
Total	**333**	**100.0**
SRH information provided beneficial		
Yes	325	82.7
No	68	17.3
SRH information helpful to your education		
Very good	267	67.9
Good	72	18.3
Not good	32	8.1
Bad	22	5.6
Total	**393**	**100.0**
Knowledge scores		

Poor (0-3 scores)	102	26.0
Average (4-7 scores)	198	50.4
Good (8-12 scores)	93	23.6
Total	**393**	**100.0**

Note: difference in totals are due to the non-applicable questions

4.3.2 Sources of awareness of SRH services

Figure 4.1 indicates sources of respondents' awareness of SRH services. About 27% became aware of SRH services through healthcare providers, and 22% through the school programme. Also, about 17% were aware of the SRH services through social media platforms such as Facebook, WhatsApp, TV and Radio, 14% from school teachers,8% from parents, and 4% at church, friends and all the sources constituted.

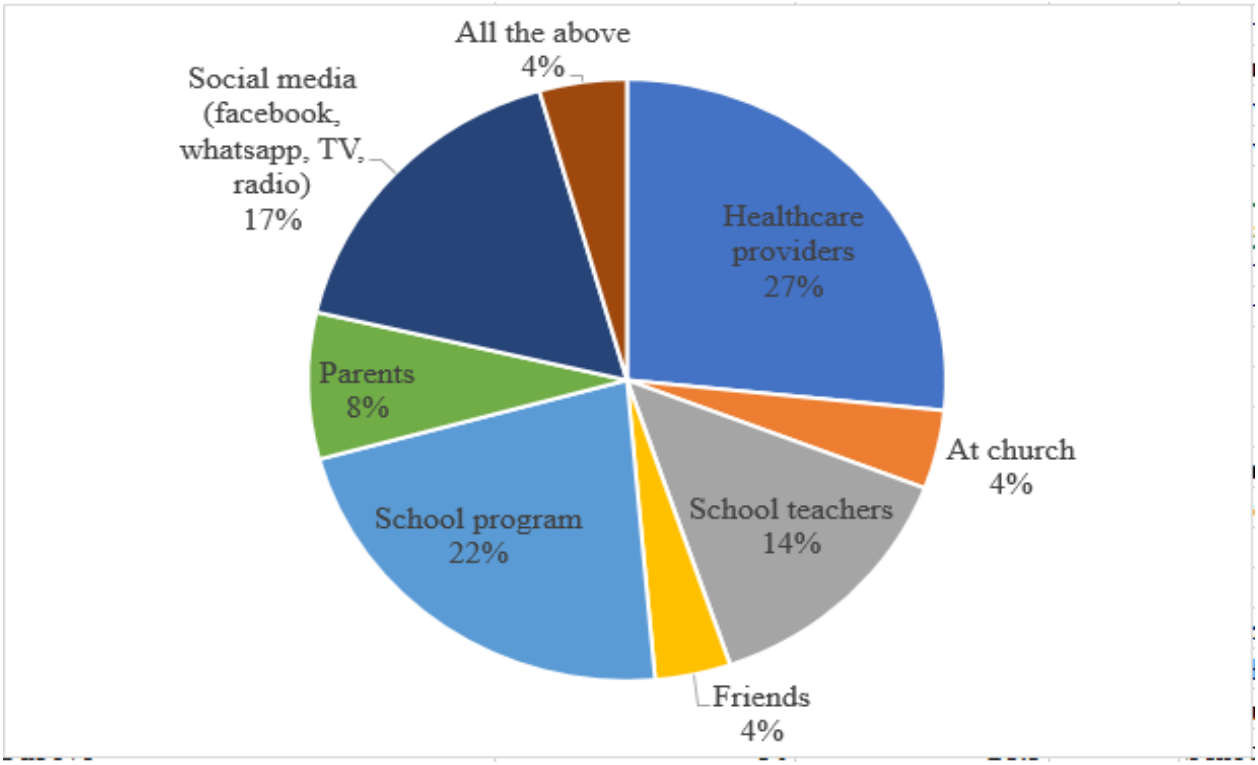


Figure 4.1: Sources of awareness of SRH services
Source: Field Survey, 2020

4.3.3 SRH areas adolescents ever received health education on

Figure 4.2 presents the SRH areas adolescents ever received health education on SRH services. About 17% have ever received education on personal and menstrual hygiene, 16% had information on STDs, and 14% have had education on contraceptive methods.

Also, about 14% had education on boys'/girls sexual relationship, and 12% had education on SRH information and counselling, and similarly, 12% had education on HIV/AIDS counselling. About 6% had education on preventing teenage pregnancy, 5% had received information on abortion care services, and 4% had received education and information on breast and cervical cancer screening.

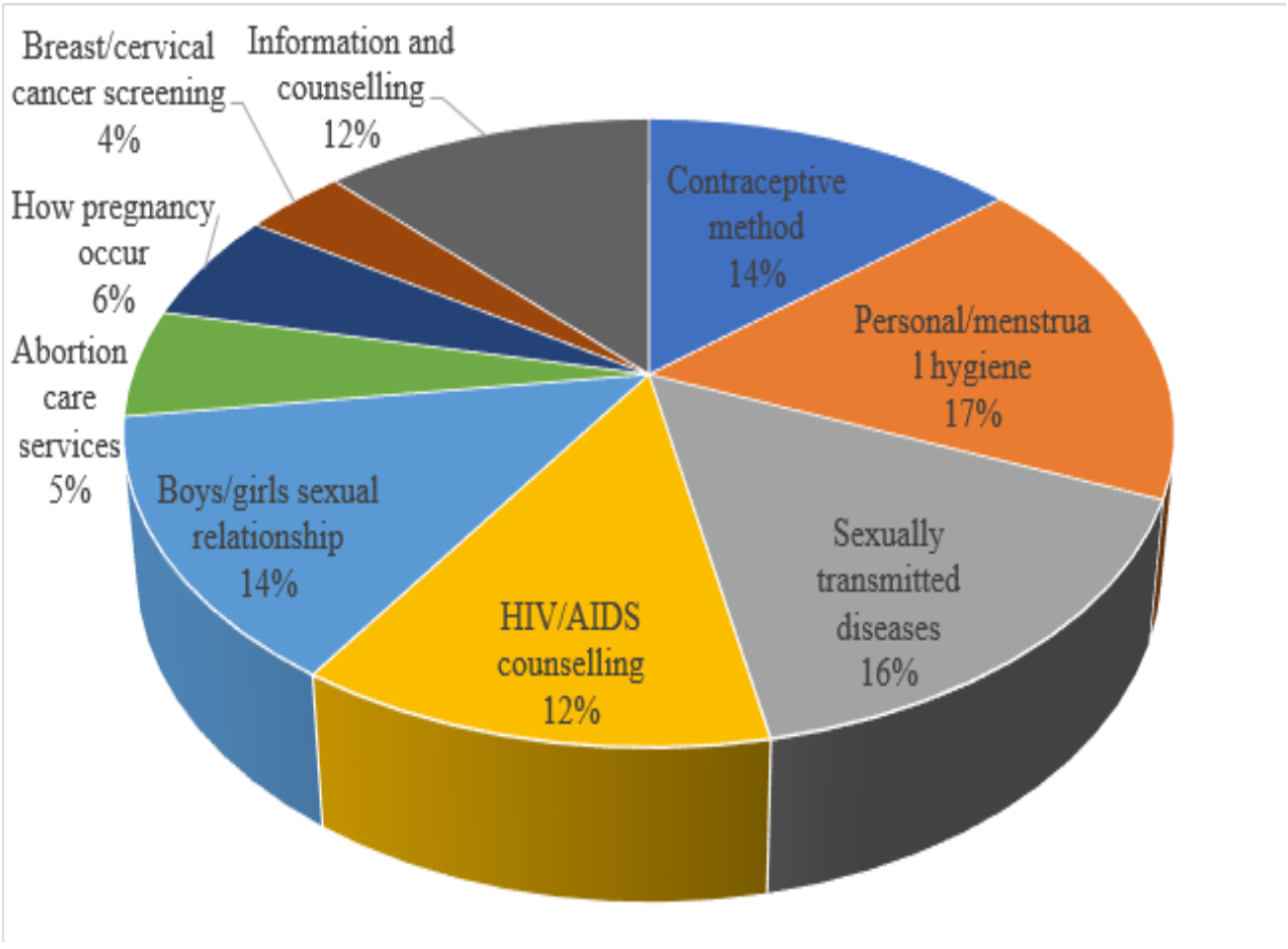


Figure 4.2: SRH areas adolescents ever received health education

Source: Field Survey, 2021

4.3.4 Sexual practices and knowledge of sexual Information

Table 4.7 below shows adolescents' sexual practices and knowledge of sexual information. About 35.9% were in a sexual relationship, and the average age of having a first sexual partner was 15.99 years.

Almost two-thirds (62.3%) had their first sexual partner between the ages of 15-17 years, 21.3% had their first sexual partner at the age of 18 years and above, and 16.3% had their first sexual partner below 15 years. About 48.2% had their school mates as their first sexual partner, 36.2% had neighbours, and 7.1% teachers, 3.5% for a family member and sugar daddy, and 1.4% had sugar mummies as first sexual partners.

The average perfect age for girls to start sex was 18.51 years, and 69.2% aged between 16-19 years, 22.1% aged above 20 years and above, and 8.7% aged below 16 years. The average preferred aged for boys to start sex was 18.68 years, 66.2% aged between 16-19 years, 25.2% aged 20 years and above, and 8.7% aged below 16 years.

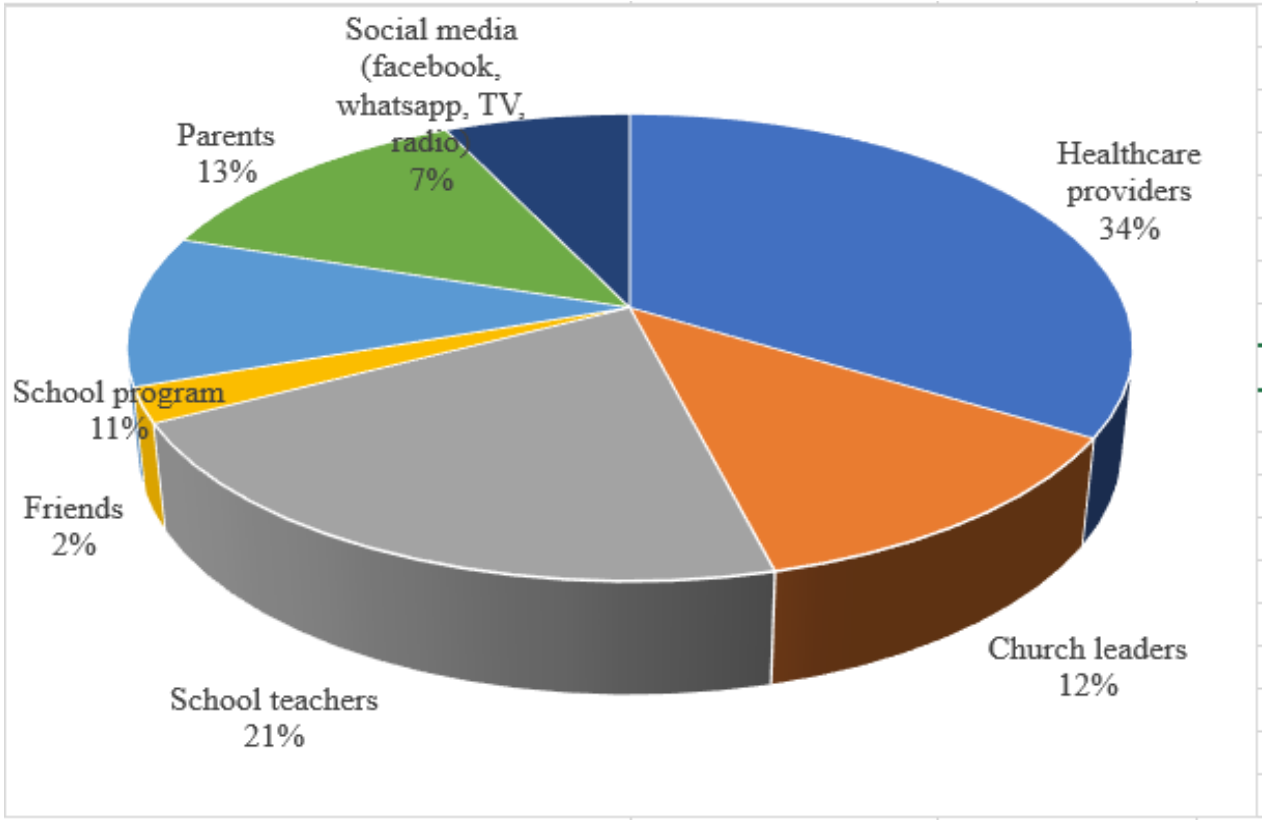
Table 4.7: Sexual practices and knowledge of sexual Information

Variable	Frequency (N = 393)	Percentage (%)
In sexual relationship		
Yes	141	35.9
No	252	64.1
Total	**393**	**100.0**
Age of first sexual partner		
<15 years	23	16.3
15-17 years	88	62.4
18 years and above	30	21.3
Total	**141**	**100.0**
Relation of first sexual encounter		
Family member	5	3.5
Teacher	10	7.1
School mate	68	48.2
Neighbor	51	36.2
Sugar daddy	5	3.5
Sugar mummy	2	1.4
Total	**141**	**100.0**
Perfect age for girl to start sex		
<16 years	34	8.7
16-19 years	272	69.2
20 years and above	87	22.1
Total	**393**	**100.0**
Best age for boys to start sex		
<16 years	34	8.7
16-19 years	260	66.2
20 years and above	99	25.2
Total	**393**	**100.0**
Note: the difference in the totals were attributed to the non-applicable		

Source: Field Survey, 2020

4.3.5 Source category of information on SRH services

Figure 4.3 shows the source categories that provided SRH education and health talks to respondents on the access and utilisation of SRH services. About 34% had received SRH education and health talks through healthcare providers, 21% had their education from the school teachers, and 13% from their parents. Also, about 12% had their SRH education from church leaders, 11% had education on SRH through organised school programmes, 7% had education on SRH through social media such as Facebook, WhatsApp, TV and Radio, and 2% had education on SRH from friends and peer groups.



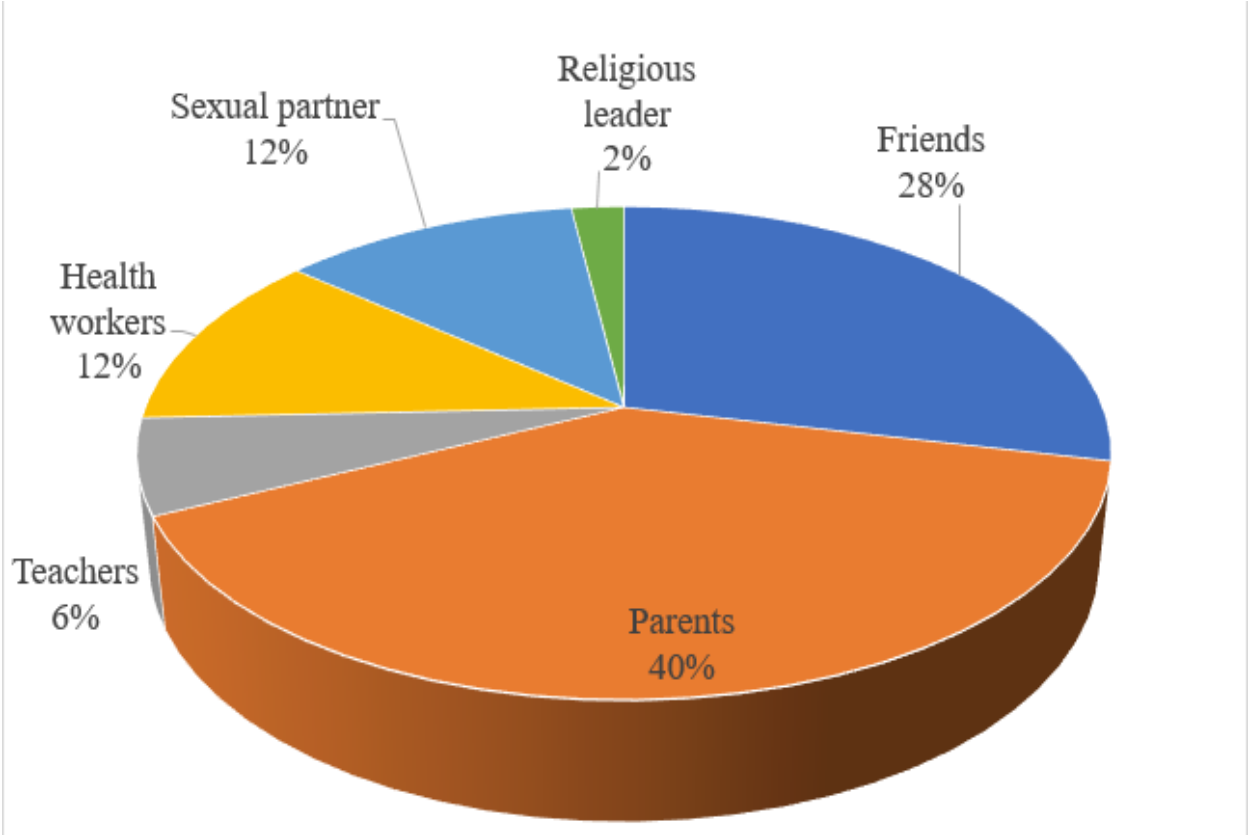
Source: Field Survey, 2020

Figure 4.3: Information sources of adolescents of SRH services

4.3.6 Preferred Individuals respondents feel comfortable discussing SRH problems

Figure 4.4 below presents the preferred individuals' respondents feel comfortable discussing the SRH problem with. About 40% felt comfortable discussing SRH problems with their parents, and 28% felt comfortable discussing SRH problems with their friends and peer groups.

Also, about 12% felt comfortable discussing SRH problems with their sexual partner, and the same percentage (12%) equally felt comfortable discussing SRH issues with health workers. Also, 6% felt comfortable discussing SRH issues with teachers, and 2% equally felt comfortable discussing SRH issues with their religious leaders.



Source: Field Survey, 2020

Figure 4.4: Individual respondents feel comfortable discussing SRH problem with

4.4 Results of Qualitative Study

This section presents the key findings of the qualitative study involving FGDs and in-depth interviews among adolescents, school counsellors and health workers.

4.4.1 Adolescents' knowledge of sexual and reproductive health Services

Findings from the focus group discussion show adolescents' knowledge of sexual and reproductive health was marginally low as 16 out of 30 adolescents have ever heard of adolescent sexual and reproductive health but could not explain in clear terms its meaning.

"*For me, adolescent sexual and reproductive health is a process by which we the adolescents are educated on how to relate with the other opposite sex, and also about educating us on how to have knowledge about having sex, and a healthy one" (Form 3 boy, 18 years old, Secret Heart Secondary School)*.

Awareness of SRH services such as emergency contraceptives (EC) was high among most of them as 18 out 30 adolescents had reported having ever heard of EC. It was also worth noticing that some have known about the uptake of emergency contraceptive.

"For me, SRH relates to the health of the adolescent reproductive system, hygiene practices and the use of emergency contraceptives to prevent teenage pregnancy" (Form 2 girl, 17 years, Odumaseman Secondary School)

Almost all of them (20 out 30) relate SRH to the physical, mental, emotional and physiological changes of an adolescent, and as well as all matters relating to the changes of the reproductive system such as enlargement of penis and breast, and changes associated with the females' menstrual cycles. Some also said SRH relate to the prevention of STIs and personal and menstrual hygiene practices among both males and females' adolescents.

"For me, SRH relate to the physical, mental, emotional, and the physiological changes of adolescents and all matters relating to the reproductive system of the adolescents" (Form 3 boy, 18 years old, Odumaseman Secondary School).

"For me, SRH education is about the reproductive system and changes on the reproductive system such as the secondary sex characteristics of an adolescent like enlargement of the penis, and the female menstrual cycle" (Form 3 boy, 18 years old, Odumaseman Secondary School).

On comprehensive abortion care services, almost all the adolescents (23 out of 30) were unaware of the services' availability and were virtually ignorant about the services. However, some equally perceived abortion care services to be against their religious faith and therefore abhor education relating to abortion care services.

"*Yes, some of us are ignorant about it, because when the people in society see them gone to the health facility, they think you either going to do abortion or family planning to prevent pregnancy. For me, I will prefer to give birth because, abortion you can die and is also a big sin against God" (Form 2 girl, 17 years old, Chiraa Secondary School)*.

To add, some (10 out of 30) knew SRH to mean using family planning and contraceptives such as condoms, Intra-Uterine Devices (IUD) and emergency contraceptives like postinor-2 to the prevention of teenage pregnancy and sexually transmitted infections like AIDS/HIV, gonorrhoea, syphilis and candidiasis (white).

"Yeah, I know SRH to mean the use of condoms, and some drugs, and tablets that you can drink to prevent pregnancy but I don't really know their names but I know some like postinor-2, Lydia contraceptives, and Levon-2" (Form 2 girl, 16 years, Odumaseman Secondary School)

Most (21 out of 30) adolescents' information source on SRH were through social media such as through TV, radio, and via internets. Some (11 out of 30) also got to know of SRH through peer groups such as friends like boys' friends, girlfriends and through family members such as parents and siblings. Most (18 out of 30) also had information on SRH through school and reading of books, and other sources of information on SRH were cited to include; hospital, guidance and counselling centre and parents as well as through health workers and from churches.

For me, I usually had information on SRH through the social media, internets, reading of textbooks, and through my friends (Form 3 girls, 18 years, Secret Heart Secondary School).

Yes, me I usually had information on SRH through the hospital workers, and from the school guidance and counselling centre, parents, and internets (Form 2 boy, 17 years old, Odumaseman Secondary School)

4.4.2 School guidance and counselling coordinators knowledge of ASRH SERVICES

Adolescents' sexual and reproductive health was explained by almost all (5 out 6) school guidance and counselling coordinators to mean the sexual makeup of adolescents and how to prevent teenage pregnancy among adolescents and HIV/AIDS, personal and menstrual hygiene and peer-relations between boys and girls. Some (3 out 6) also understood ASRH to mean the sexuality of adolescents and how adolescents can protect themselves from STDs and pregnancy through contraceptives and family planning.

"I think SRH is about adolescents' sexuality, teaching them on things about their reproductive system, and the various changes at adolescent age to avoid confusion regarding their physical and sexual development" (Male Guidance and Counselling Coordinator, 42 years old, Odumaseman Secondary School).

Sources of school guidance and counselling coordinators SRH information to adolescents were cited to include; classroom teachings, school worship time and chaplaincy. However, it was realised that the information channel through these mediums was rather not SRH information but carrier development and moral upbringing messages through the preaching

of the word of God. Adolescents' sexual and reproductive health issues reported were; teenage pregnancy, unsafe abortion practices, STDs and other unhealthy relationship and sexual practices. Also, most of the coordinators indicated adolescents SRH information sources were through peers, hospital, social media and parents. Social media such as Facebook and YouTube were cited as unguided sources of SRH information. The Ghana Education Services was indicated to have provided a manual on adolescents' sexual and reproductive health, which was being used as a guide by school guidance and counselling coordinators to offer education on SRH to adolescents.

"Normally, adolescents get SRH information from their colleagues (peers), from social media, through the school counselling unit, because the school has a vibrant counselling where the school regularly sent the coordinators to the regional educational centre to receive update and training on adolescents SRH, and so we equally come back to educate and counsel the students on SRH" (Female Guidance and Counselling Coordinator, 39 years, Secret Heart Secondary School).

4.4.3 Level of adolescents' knowledge of SRH through the health workers

The level of adolescents' knowledge of SRH services reported by health workers was previously high as most adolescents were educated at the adolescents' reproductive health corners. However, during the interviews, most health workers said adolescents' knowledge of SRH services had gone down because the supporting NGOs such as Palladium and Marrie Stopes International have folded up and no longer provide funds to support service delivery. Hence, almost all the adolescents' health corners have become non-functional due to lack of funds. Dominant adolescents' health corners no longer provide ASRH education

and counselling to adolescents, contributing to the low awareness level and knowledge of SRH services in the respective communities.

"ASRH corner at our facility started around 2015 by Marrie Stopes International, and they supported the facility with funds to provide school health and community education on ASRH and family planning to adolescents at free cost but now the funds no longer come, and this has affected the education we give to them" (Female Nurse, 25 years old, Chiraa Health Centre).

Also, most health workers said, when SRH services such as education, family planning and counselling were provided free for adolescents, most adolescents were regularly visiting the health facilities and corners to access SRH services, and some adolescents were reported to have had improved knowledge regarding the services, but now, since the SRH services are provided at a cost most adolescents do not come to the facility because most adolescents can't afford to pay for the cost of the services which equally have affected their knowledge.

"For our facility the patronage of adolescents to SRH services have gone down when compare data because most can't afford. We were having funds to run the programme but since the fund stopped everything has gone down. The adolescents have also stopped coming because they don't get the services free again, and they will have to pay for the services which have also affected their knowledge level" (Female Community Health Nurse, 32 years old, Nsoatre Health Centre).

"At first, the commodities such as condoms and some educational materials on SRH we were given to them for free and so they could read and get motivate to come but now, we don't get the support from the NGOs anymore and the one we have is for the Ghana Health Services and we go to buy, and so we also sell it to them and because of that they don't come" (Female Nurse, 29 years old, Odumase health centre, Reproductive and Child Health Unit).

Adolescents' sources of information on SRH services from health workers' perspective were reported to include family members, TV, Radio, classmates, and friends at home. Findings also indicated that most adolescents' sources of SRH information involved health workers and through social media platforms such as WhatsApp, Facebook, and peer group discussions.

"*Yes, some of the adolescents search for SRH information on the internet, through the social media like WhatsApp and Facebook, and some too their friends and parents as well*" *(Female Nurse, 42 years old, Odumase health centre, Reproductive and Child Health Unit).*

4.5 Quantitative Results on Adolescents Access to SRH services

4.5.1 Adolescents Access to sexual and reproductive health services

Table 4.8 below presents quantitative findings on respondents' access to sexual and reproductive health services. Slightly over half (59%) ever accessed SRH services, but only 41% of them did not. About 55.6% accessed the services through a visit of health workers to the school, 30.2% accessed the SRH services at health facility through closed relations

such as parents and friends, and 14.2% on their evolution visited the health facility to access the SRH services. Respondents' last visit to the ASRH center showed over three-quarters (81.9%) had visited the SRH center the last 1-9 months and 18.1% had visited the center over the last one (1) year. Over two-thirds (66.8%) spent more time getting to the SRH center from school, and 33.2% spent less time before getting to the SRH services center. More than three-quarters (83.6%) spent less than 30 minutes to 1 hour at the service center, and 16.4% had spent 2-4 hours at the SRH services center. About 62.5% did not encounter any difficulties accessing the SRH services, and 37.5% said to have experienced problems accessing SRH services. A little over three-quarters (77.2%) said their choice of SRH services was available, while 22.8% said their SRH services were not available. Also, about 76.7% said they have not made payment for the SRH services provided to them at the health facility, while about 23.3% had made payment for the SRH services provided to the health facility. Majority (86%) disclosed they would like to access the SRH service again, while very few (13.8%) disclosed that they would not like to access the SRH service again.

Table 4.8: Access to sexual and reproductive health services

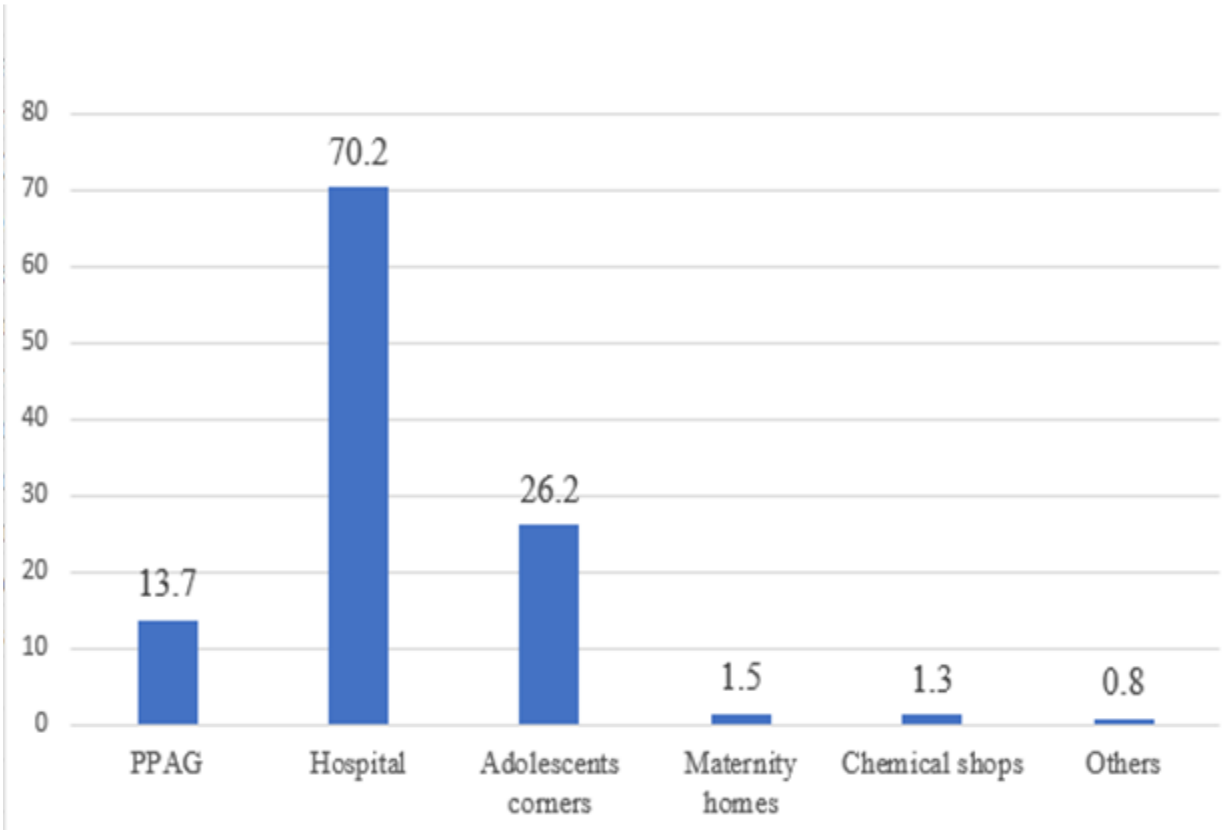
Variable	Frequency (N = 393)	Percentage (%)
Ever accessed SRH services		
Yes	232	59.0
No	161	41.0
Total	**393**	**100.0**
Ways contacted healthcare providers		
Health team came to school	129	55.6
Was sent by closed relations	70	30.2
Went there willingly/self	33	14.2
Total	**232**	**100.0**
Last visit to ASRH center		
1-9 months	190	81.9
Over a year	42	18.1
Total	**232**	**100.0**
Spend more time at a service center		
Yes	155	66.8

No	77	33.2
Total	**232**	**100.0**
Time spent to get to SRH center from school/home		
<30 minutes -1 hour	194	83.6
2-4hours	38	16.4
Total	**232**	**100.0**
Encountered difficulty accessing SRH services		
No	145	62.5
Yes	87	37.5
Total	**232**	**100.0**
Choice of service available		
Yes	179	77.2
No	53	22.8
Total	**232**	**100.0**
Made payment for the service		
Yes	54	23.3
No	178	76.7
Total	**232**	**100.0**
Wish to access the SRH service again		
Yes	200	86.2
No	32	13.8
Total	**232**	**100.0**
Note: the difference in the totals were due to the non-applicable questions		

Source: Field Survey, 2020

4.5.2 Respondents preferred sources for accessing SRH services

Figure 4.5 below showed the respondents preferred sources of accessing SRH services. Most (70.2%) preferred accessing SRH services at the hospital, 26.2% chose accessing the services at the adolescents' health corners, 13.7% preferred the Planned Parenthood Association of Ghana (PPAG). Also, 1.5% preferred maternity homes, and 1.3% preferred buying the services from chemical shops.



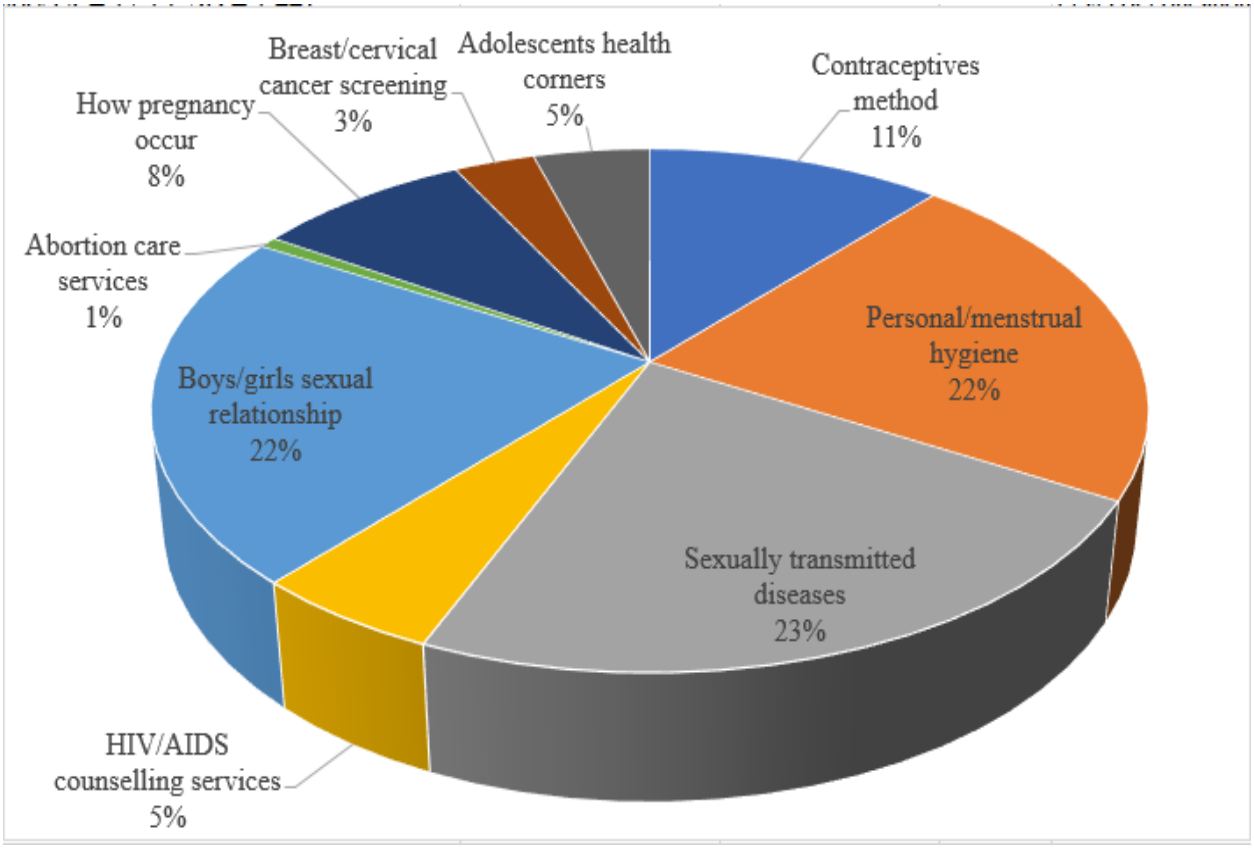
Source: Field Survey, 2020

Figure 4.5: Preferred sources for accessing SRH services

4.5.3 Type of SRH service ever accessed by respondents

Figure 4.6 below indicates the SRH services ever accessed by respondents. About 23% have ever accessed service on the treatment of sexually transmitted diseases such as gonorrhoea, candidiasis (white), syphilis and others, 22% have accessed service on menstrual and personal hygiene practices, and the same proportion (22%) have accessed counselling on boys-girls' sexual relationships. Also, 11% have accessed service on contraceptive methods use, 8% on how teenage pregnancy occurs, 5% on adolescent health

corners and HIV/AIDS counselling services, 3% on breast and cervical cancer screening and 1% on abortion care services.



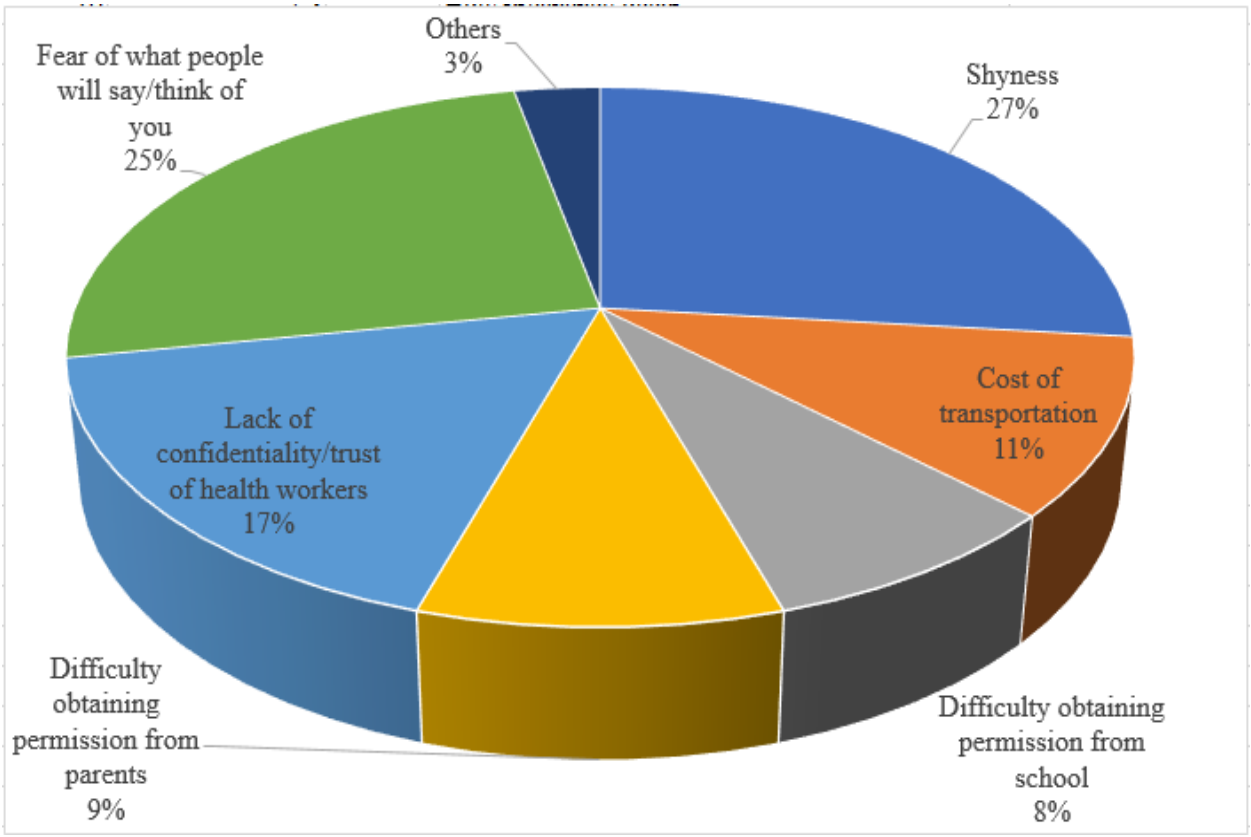
Source: Field Survey, 2020

Figure 4.6: Type of SRH service ever accessed

4.5.4 Reasons respondents do not access SRH services

Figure 4.7 below indicates the reasons respondents do not access SRH services. A quarter (25%) of the respondents do not access SRH services for fear of what people will say or think about them, 17% said lack of confidentiality and trust of health workers not to disclose their identity and 11% attributed to the cost of transportation to the service centre. Also, 27% said they feel shy visiting the service centre to request for SRH services, 9% attributed to the difficulty of obtaining permission from parents to access the SRH services,

and 8% of the respondents equally attributed to the difficulty of obtaining permission from school authority to access SRH services at the health facility.



Source: Field Survey, 2020

Figure 4.7: Reasons respondents do not access SRH services

4.6 Qualitative findings on Adolescents Access to SRH services

This section presents on the qualitative findings of adolescents' access level to SRH services in the study area.

4.6.1 Adolescents Access to SRH services

Access to SRH services was among few of the participants as most (26 out of 30) seem unaware of adolescents' sexual and reproductive health. However, some knew that

adolescents sexual and reproductive health services could be accessed at the hospital. Some also indicated that they could access sexual and reproductive health services such as condoms and emergency contraceptive pills through family members. Most were, however, ignorant about the existence of adolescents' health corners.

"Yes, we could access SRH services through the hospital workers, it is provided at the hospital, but they should create a separate place/corner with directions for adolescents alone because we usually feel shy discussing SRH issues in the presence of adults" (Form 3 boy, 18 years old, Odumaseman Secondary School).

4.6. 2 School Guidance and Counselors Views on Adolescents Access to SRH services

Access to SRH services among adolescents at the health facility was confirmed by most (5 out 6) school guidance and counselling coordinators as poor because most adolescents were unaware of the services. But some coordinators knew the existence of such services been provided by institutions such as Planned Parenthood Association of Ghana (PPAG) and Ghana Health Services and adolescent reproductive health corners, but consider adolescents access to SRH services to be wrong because they are still young.

Poor access to SRH services such as condoms was attributed to low awareness creation and restrictive schools' rules which have made it impossible for adolescents (students) to access condoms and other SRH services. Also, almost all coordinators said adolescents lacked the boldness to approach school authorities on SRH issues for fear of victimization. Also, it worth was mentioning that some schools do invite health personnel of the Ghana Health Service (Chiara health centre) to educate students on HIV, abstinence and teenage pregnancy prevention. Causes of teenage pregnancy were attributed to poor parental

guidance and during the school entertainment, where students engage in sex without condoms.

"I think, the students are practising those things (having sex) which we are not aware of, but the school boards and chaplaincy will not allow them have access to condoms. I know some of them too have dubious ways of getting the condoms because during entertainment we (teachers) normally find used condoms, and some too have been doing the abortions. Even with the abortions some parents influence their adolescents to do it or even go into sexual acts" (Female Guidance and Counselling Coordinator, 39 years, Chiraa Secondary School).

4.6.3 Health workers' views on adolescents Access to SRH services

About 9 out of 13 of the health workers interviewed said adolescents' awareness and access to ASRH services have gone down. Most said, in-school adolescents were virtually unaware of the services because health workers are not allowed most of the time to visit them to provide SRH education. Some health workers also said, out of school adolescents had increased awareness level of ASRH services but lack monies to access the service. ASRH services primarily accessed by adolescents were reported to include; post-abortion care complications, STIs, counselling and short- and long-term FP methods. The most accessed FP methods were injectable for 1 months, and 3 months, followed by emergency pills like secure, Lydia, M-tablet, and Postnor-2; Jadel for 5 years, Depo for 3 months, Norigynon and Sayana for 3 years. However, most adolescents were reported to have

preferred Norigynon and Jadel for 3 years and 5 years, respectively. The age ranges of adolescents who accessed SRH services were; 15, 17, 18, 20 and 21years.

"Yeah, they (adolescents) want the methods that can take them throughout the term in school, and so they prefer the long-term methods like Norigynon injection and Jadel for 3 years and 5 years" (Female Community Health Nurse, Nsoatre Health Centre).

Also, across all health facilities, most health workers said the female adolescents were patronizing the ASRH services such as FP and STIs management and treatment more than the male adolescents. Access to abortion care services as indicated at all health facilities to be poor. Most adolescents only come to the health facility for abortion care after they have attempted aborting at home and could not succeed.

"Yes, they (adolescents) do come with post-abortion complications for care, and that is after they have done their own thing at home, and feel they have a problem then they come for care at the health facility" (Male Community Health Nurse, 26 years old, Nsoatre Health Centre).

Adolescents' access to SRH services at the adolescent health corners was equally reported at all health workers to be poor as most health workers have lost contact with adolescents at the adolescent health corners, but only a few female adolescents could be tracked at the family planning unit.

"We lost contact with them at the corner, but at the family planning, they come and we register them and only females who come to access the FP services. For this our adolescent corner we have lost track of it, and so we are concentrating on them at the family planning unit, and this is where we get them" (Female Community Health Nurse, 30 years old, Nsoatre Health Centre).

"Yeah, conditions they report include STIs and also skin rashes. When you drag the conversation to their sexual relationship, they will tell you their problems, but just that their partners are not always around, they are either also in different schools or in home, and so we provide them the treatment/medications to be given to their partners too for treatment and care" (Female Nurse, 31 years old, Chiraa Health Centre).

4.7 Quantitative Results on Adolescents Utilization of SRH services

4.7.1 Utilization level of sexual and reproductive health services

Table 4.9 below shows quantitative findings of respondents' utilization of sexual and reproductive health services. Nearly three-quarters (70.5%) have ever used SRH services, while about 29.5% have never used the SRH services. Among those who have never used SRH services, more than a third (44%) attributed their reasons for non-use to lack of knowledge and SRH services perceived not to be good for the health of adolescents. About 31% of them attributed their non-usage to fear of side effects associated with some of the SRH services such as contraceptives, and 15.5% of them said their parents do not allow them, while 9.5% said their school teachers do not allow them to use the SRH services. In term of whether adolescents should be allowed to use SRH services, over three-quarters (85.2%) thought that adolescents should be allowed to use SRH services, while 14.8% do

not agree to the use of SRH services among adolescents. Regarding ways adolescents can avoid pregnancy and STIs, nearly three-quarters (72.5%) said adolescents should abstain from having sex, 17.3% said they use of male condom, 6.1% use contraceptive pills, and 4.1% said they use of female condoms during sex. In term of ways SRH services utilization can be promoted among adolescents, about 69.2% said schools should provide them with health talk and education on SRH services to promote utilization, and 18.3% of them said adolescents' reproductive health corners should be set in schools to promote utilization while 12% cited the need for services providers to engage adolescents more at the SRH service delivery center.

Table 4.9: Utilization of sexual and reproductive health services

Variable	Frequency (N = 393)	Percentage (%)
Ever used SRH services		
Yes	277	70.5
No	116	29.5
Perceived reasons for not using SRH services		
Lack knowledge/not good for health	51	44.0
Fear/afraid of side effects	36	31.0
Parents do not allow me to use	18	15.5
School teachers do not allow me to use	11	9.5
Total	**116**	**100.0**
Should adolescents be allowed to use SRH service		
Yes	335	85.2
No	58	14.8
Ways to avoid pregnancy and STIs		
Abstain from sex	285	72.5
Use of male condom	68	17.3
Use of female condom	16	4.1
Use of contraceptive pills	24	6.1
Promoters for adolescents usage of SRH service		
School health talk/education	272	69.2
Set up adolescent friendly corners in SHS	72	18.3
Engage adolescents in SRH services	47	12.0
All the above	2	0.5
Note: the difference in the totals were due to the non-applicable questions		

Source: Field Survey, 2020

4.7.2 SRH services adolescent used most

Figure 4.8 below shows the SRH services adolescents used most. About 23% mostly seek counselling on menstrual and personal hygiene practices, 20% utilised emergency contraceptives and 14% utilised services on STDs prevention. Also, 11% had utilised service on boys-girls' sexual relationship counselling, and a similar proportion of 8% utilised HIV/AIDS counselling services and how to prevent teenage pregnancy. Only 7% has utilised adolescent health corners services, 5% utilised abortion care services and 4% breast and cervical cancer screening.

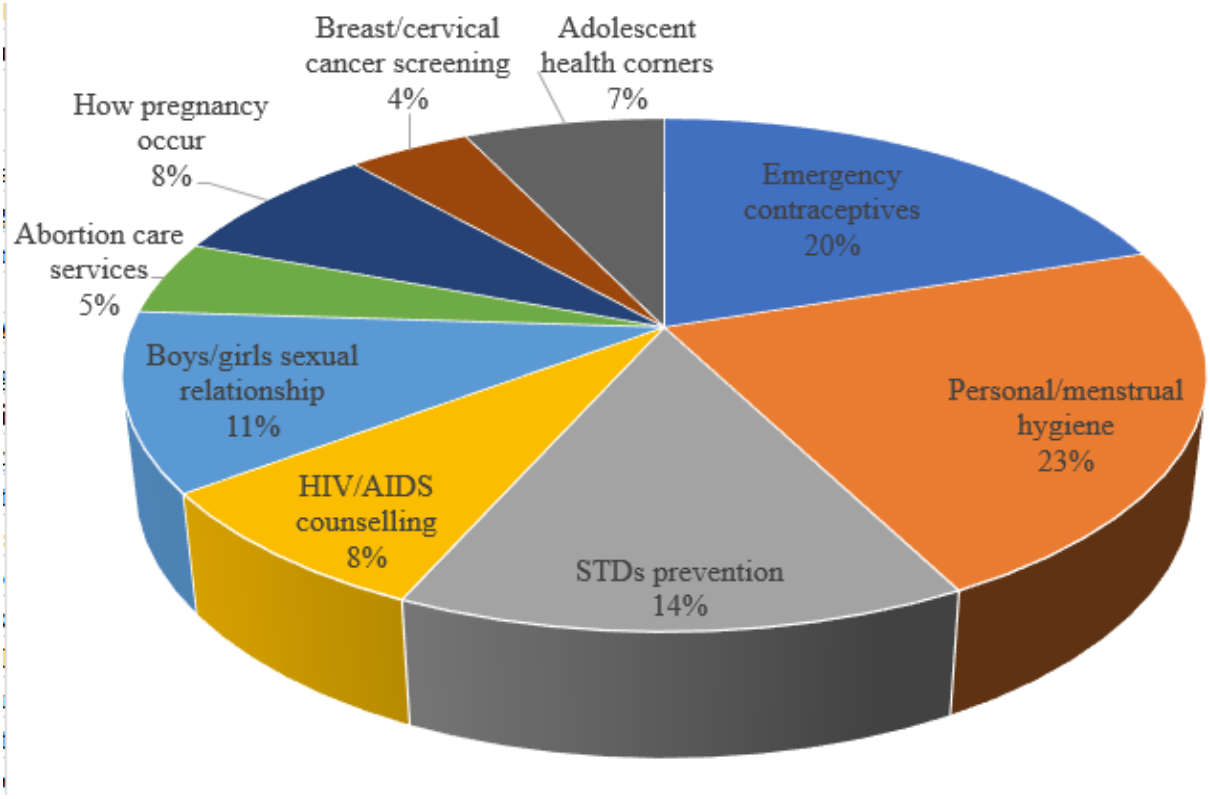


Figure 4.8: SRH services adolescent used most
Source: Field Survey, 2020

4.7.3 Occasions under which Adolescents need and utilised SRH service most

Figure 4.9 below shows the occasions under which adolescents are most likely to have utilised SRH services most. Findings showed about 41% of adolescents had utilised SRH

services most during weekends, 27% used the services most during weekdays, and 20% used the SRH services most during public holidays. Also, only 9% used the services most during vacations, and 3% indicated to have used the services in the evenings.

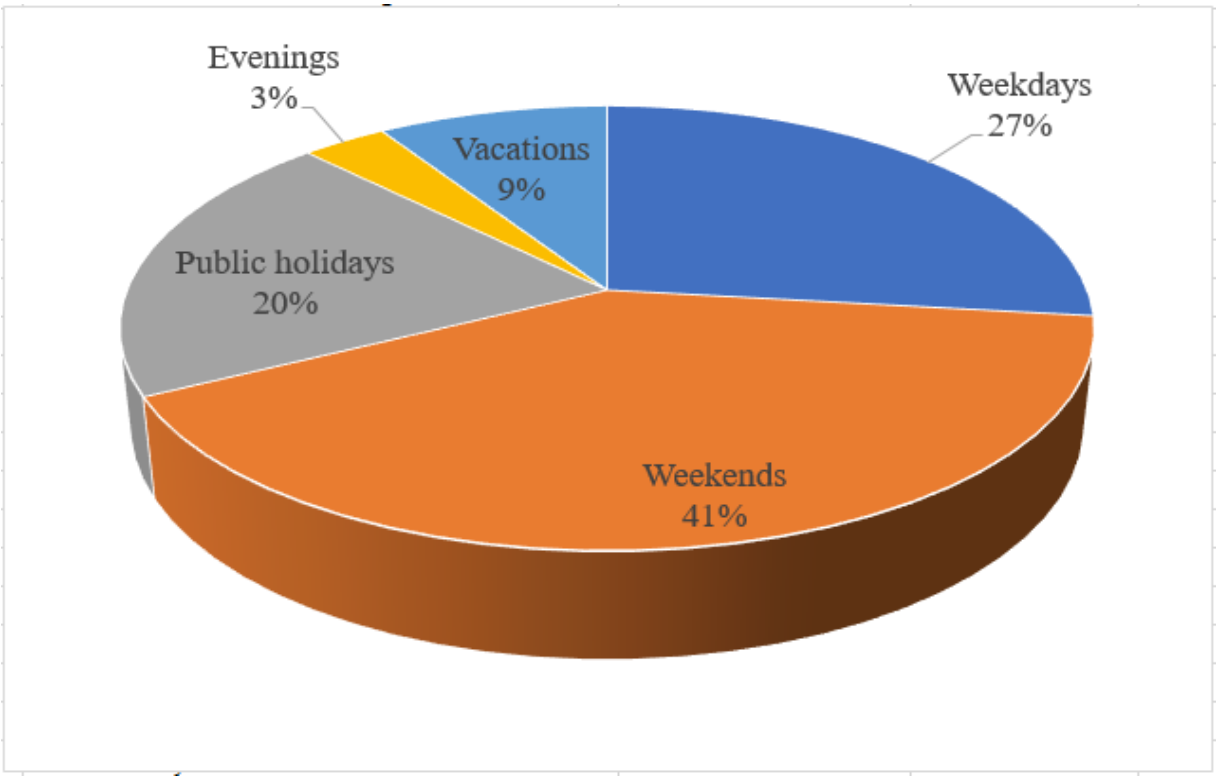


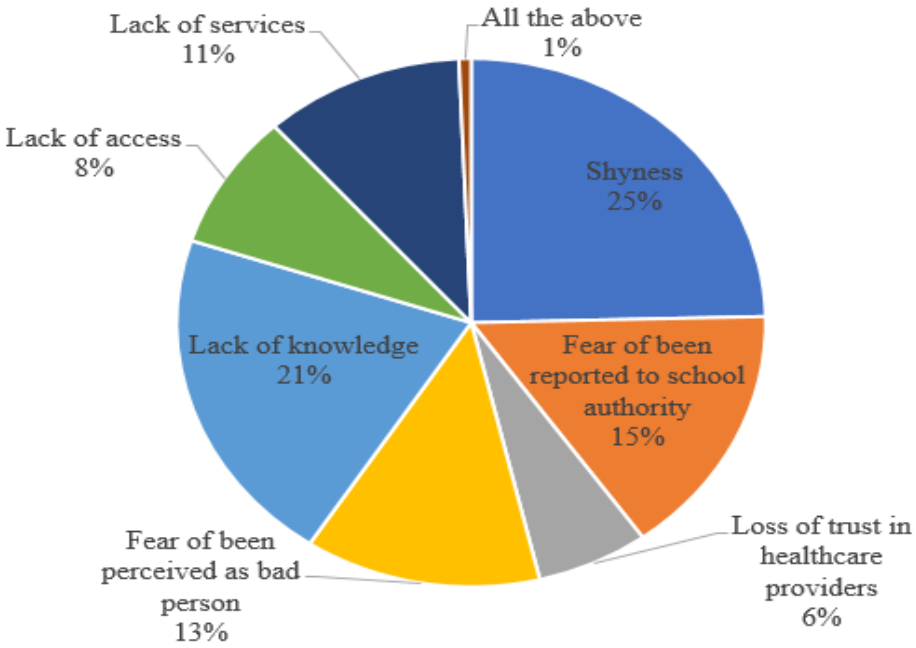
Figure 4.9: Occasions under which adolescents used SRH services most
Source: Field Survey, 2020

4.7.4 Reasons for non-utilisation of SRH services among adolescents

Figure 4.10 below indicates the reasons why most adolescents do not want to utilize SRH services. About a quarter (25%) of the respondents said they had not utilised the SRH services because they were feeling shy to visit the health facility, and 21% attributed their reasons for non-utilisation of SRH services to lack of knowledge of the various SRH services.

Also, about 15% did not utilised the services for fear of been reported to the school authority, 13% fear of been perceived as a bad person, 11% lack preferred services. 8%

lack availability and access to the desired services, and 6% attributed their non-utilisation of SRH services to their loss of trust in health workers and the bad attitude and behaviour of some health workers.



Source: Field Survey, 2020

Figure 4.10: Reasons for non-utilisation of SRH services among adolescents

4.8 Qualitative findings on Utilisation of SRH services

The below presents on the qualitative findings of study on utilization of SRH services among sexually active adolescents in the study area.

4.8.1 Utilisation of SRH services among adolescents

Utilisation of SRH services at health facilities was among few of the study participants, but most adolescents utilised SRH services such as family planning, contraceptives like condoms and abortion care services through informal means such as buying drugs from chemical shops and pharmacies and mixing of local concoctions to terminate pregnancies.

"For me, I didn't go to the hospital, I asked a friend to give me medicine to treat myself. Because, I perceived that if you go there you will have to pay money to be given the service, and I can't talk to my parents (mother) about my sexual life" (Form 2 girl, 17 years old, Secret Heart Secondary School).

"I also know that, there are some of the tablets that you drink to prevent pregnancy but I don't really know of the names, and I know some like postinor-2, Lydia contraceptives, levon-2 which are taken after having sex to prevent pregnancy. You can also prevent pregnancy by drinking paracetamol tablets, one tin of milk, and a lot of water" (Form 3 girl, 19 years, Secret Heart Secondary School)

Also, contraceptives and family planning methods most adolescents reported to have ever used include; condoms, postinor-2, Lydia, M-tablet, Levon-2, Bead method, and Coitus interruptus or Withdrawal method. However, most were found to have had improved knowledge of condoms and emergency pills as reported, and reasons for using contraceptives like condoms were to prevent STDs and pregnancies.

"Yeah, I have ever used a condom to have sex before. A condom is a suck like tube, and when your penis is erected, you remove the condom and fix it on your erected penis and then pull it to your testes, and then insert it into the lady vagina to have sex" (Form 3 Boy, 18 years old, Odumaseman Secondary School).

"For me, I ever had white/candidiasis, I went to the hospital and it was a male doctor, and I explained my problems to the doctor, and he gave me a tablet to insert for a week

and the sickness (white) went/healed" (Form 3 girls, 19 years old, Odumaseman Secondary School).

However, most adolescents were unaware of the comprehensive abortion care services at the health facilities and do not utilize the services. But the majority (19 out 30) reported resorting to mixing local concoctions and traditional herbs to abort pregnancies. Some also perceived the use of abortion care services at the hospital to be criminal and hence do not see the need to visit the health facility and request such services.

"Yes, we do abortion at home, some mixed concoctions and drinks, some of us also grinding of bottles and glasses and then mixed it with malt drinks, some of us also use cowbell coffee with a lot of sugar, sometimes too we drink herbal medicine with inscription "not recommended for pregnant women", and use of an ointment called "Nipa be gyie di" (Human being will believe) to apply on the stomach to abort pregnancy" (Form 2 girl, 16 years old, Secret Heart Secondary School).

Yeah, you can take kaesar apple drinks, drink coffee and plenty sugar, use of malt drinks and camphor chemicals to abort pregnancies. You can also chew plenty paracetamol tablets, buy medicines from drugstores like tramadol and take it, but I have not heard about the comprehensive abortion care (Form 1 girl, 16 years old, Chiraa Secondary School).

4.8.2 School Guidance and Counsellors views on adolescents' use of SRH services

The school coordinators noted utilisation of SRH services among adolescents as poor, and this was attributed to low awareness among students and lack of collaboration between the health personnel, school teachers and parents. This, they noted, contributed to the non-usage of the SRH services among adolescents even though most adolescents were engaging in unprotected sexual intercourse.

"I think, they (adolescents) don't know about the SRH service, and some too feel shy to visit the hospital, and is the responsibilities of parents to teach them on sexual issues, and as they grow to their adolescents' stage to enable them use" (*Female Guidance and Counselling Coordinator, 36 years old, Secret Heart Secondary School*).

4.8.3 Health Workers views on adolescents' use of SRH services

Utilisation of SRH services among adolescents was reported by all health workers to have been of low patronage as most adolescents were cited not to utilize the service. Most female adolescents were cited for having mostly utilised FP and other SRH services previously, and only a few males were equally cited for having utilised ASRH services.

"Yes, I think the injectable (hormonal) ones are better utilised than the barrier methods. The reasons why we (health workers) don't recommend the barrier methods or encourage them to take the barrier method is that; some complain it got burst, they don't feel comfortable wearing it and is a problem for some, and some were allergic to the latex condoms, most of the ladies were getting pregnant even after using condom, because the guys were puncturing the condom before using it to have sex with the girls, and the ladies

too don't know how to use the female condom"(Female Nurse, 31 years old, Chiraa Health Centre).

Also, most female adolescents were cited for having preferred using the hormonal (injectable) family planning method than condoms. It was also quite intriguing to indicate that health workers said most female adolescents prefer protecting themselves from pregnancy than contracting any STIs.

"The ladies were coming with pregnancy even after using condom. Most female adolescents prefer the injectable than condom. I must say most female adolescents prefer protecting themselves from pregnancy than contracting any of the STIs" (Female Nurse, 32 years, Chiraa Health Centre).

About 6 out of 13 health workers said that adolescent's preference for the hormonal family planning methods than the barriers were attributed to the health educational gap by health workers that have culminated to their preference for the hormonal methods than the barrier methods.

"Yes, because with the family planning aspect we (health worker) always made the FP education broad to include the long-term FP instead of concentrating only on the barrier method and their knowledge would have tailed toward barrier method. But because, we made it so broad, they feel there is a way out, instead of opting for the barrier method, they should go for the long-term contraceptive methods which only prevent pregnancy but do not prevent other STIs" (Female Community Health Nurse, 27 years old, Nsoatre Health Centre).

4.9 Quantitative results on factors/barriers affecting adolescents' access and utilization of SRH services

4.9.1 Factors/barriers that affect adolescents' access and utilization of SRH services

Table 4.11 below presents results on the factors affecting the access and utilization of SRH services among adolescents. Most respondents (57.3%)indicated that school rules did not affect their usage of SRH services, but very few (42.7%) said that the school rules had affected their use of health services. A little above two-thirds (68.7%) believed that an adolescent alone can visit the health facility to access health service, while 31.3% said that an adolescent alone could not visit the facility to access health services. Also, the majority (67.7%) of respondents said they feel shy to visiting the health facility to ask for SRH services, and 32.3% said that they do not feel shy visiting the health facility. Most respondents (63.9%) said that being younger in age was not a factor that prevents them from accessing SRH services, while 36.1% said being more youthful was a factor that prevents them from accessing SRH services. A little over two-thirds (64.6%) said school SRH information do not affect their knowledge. In comparison, 35.4% of the respondents said the school SRH information affects their knowledge in the access and utilization of SRH services. Also, more than half (54.7%) of respondents do not perceive their place of residence to affect their knowledge, access and utilization of SRH services, while 45.3% of respondents perceived their place of stay to have affected their knowledge in the access and utilization of SRH services. Over half (57.5%) of the respondents said financial difficulty/problem had affected their access and utilization of SRH services, and 42.5% do not see financial challenges as a barrier to their access and utilization of SRH services.

About 57.3% of respondents said seen close relations such as family members and friends at health facility affected their access and utilization of SRH services, while 46.3% of respondents do not see the presence of close relations as interference to their access and utilization of SRH service.

At most, half (50.1%) of respondents do not see school closing time and opening time of ASRH clinic to affect their utilization of SRH services, and about 49.9% said the school closing time and the time SRH center open have affected their usage of SRH services. More than half (53.7%) of the respondents said they do not feel ashamed accessing SRH services at the health facility, and 46.3% said that they felt ashamed been seen at the SRH center to access SRH services.

Also, a little above half (51.9%) of the respondents said they are not afraid of disclosing their health issues to the health workers, while about 48.1% said that they are always to disclosed to the health workers about their health secret on SRH issues. Also, about 52.7% said to have been afraid to ask their parents about SRH information and services, and 47.3% said that they are not scared to disclose or discuss their SRH issues with their parents.

Table 4.11: Factors that affect adolescents' access and utilization of SRH services

Variable	Frequency (N = 393)	Percentage (%)
School rules prevent adolescents usage of SRH services		
Yes	168	42.7
No	225	57.3
Adolescent alone can go to SRH center		
Yes	270	68.7
No	123	31.3
Adolescents feel shy talking about SRH		
Yes	266	67.7
No	127	32.3
Been younger in age prevent usage of SRH services		
Yes	142	36.1
No	251	63.9
School SRH information affects knowledge & use		
Yes	139	35.4

No	254	64.6
Place of stay affects knowledge, access & use of SRH		
Yes	178	45.3
No	215	54.7
Financial problem affects access & use of SRH services		
Yes	226	57.5
No	167	42.5
Close relations interference affects access & use of SRH		
Yes	211	53.7
No	182	46.3
School closing time& time open SRH center affect usage		
Yes	196	49.9
No	197	50.1
Feel ashamed seen accessing SRH services		
Yes	182	46.3
No	211	53.7
Afraid to tell health workers of personal secret on SRH		
Yes	189	48.1
No	204	51.9
Afraid to ask parents about SRH information		
Yes	207	52.7
No	186	47.3
Total	**393**	**100.0**

Source: Survey Data, 2020

4.10 Qualitative findings on factors/barriers affecting access and utilization of SRH services

4.10.1 Adolescents views on factors/barriers affecting access and utilization of SRH services

Adolescents reported barriers and factors that affect their access and utilisation of SRH services were; negative perceptions of community people, bad attitudes from health workers, religious factors, teachers been too hard, financial difficulties (poverty). Also, others reported factors were lack of trust of health workers to ensure privacy and confidentiality of information during services delivery.

"Yes, we face problems such as the perception of been a bad boy, prevented some of us from seeking SRH services. I remember one time, I was in class, and a teacher said "the thing will just come out like that" I didn't know but I couldn't ask the teacher because I was afraid he will perceive me as a bad boy" (Form 3 boy, 17 years old, Secret Heart Secondary School).

Other barriers reported include; personality issues such as feeling shy being afraid, unaware of the services' presence, and parents being too strict and harsh.

"Yes, some of us are ignorant, because when the people in the society see you going there (SRH centre), they either think you are going for abortion or family planning and so we feel shy. Also, some of us are always afraid because they might go and tell our parents, and they will want to punish us for being bad children" (Form 2 girl, 17 years, CHASS).

Regarding comprehensive abortion care services, most prefer buying drugs from pharmacies, drugstore and mixing local concoctions instead of going to the health facility because most said their parents have been too harsh, community members victimised, and school teachers been too strict.

"Yes, even when you have health insurance, the nurses still take money from you. For example, I last went to the Sunyani Regional Hospital, and the health workers at the service point were asking for money before providing us with the services even though my insurance card was active (Form 3 girl, 18 years old, Chiraa Secondary School).

Also, some adolescents cited religious barriers such as pastors preaching at church against family planning, contraceptives and abortion care services to have impeded their access and utilization of SRH services.

"For me, we do not always want to go to the health facility for SRH services such as family planning and abortions because our pastors preached against it and our teachers too are suspicious of us anytime, we visit the health facility" (Form 2 girl, 17 years old, Chiraa Secondary School)

To add, the presence of male healthcare providers and issues of privacy and confidentiality was cited by few female students as a barrier to the utilisation of SRH services because they perceived the male health workers to discuss their sexual health issues with their friends. Also, the use of harsh words and insults were cited by most adolescents to have dampened their confidence in the expression of their SRH issues/health problem.

"For me, I trust the ladies (health workers) than the guys (health workers) because the guys mostly discuss our sexual health issues with their friends. For example, I once had white (candidiasis), and I went to a health facility and it was a guy (male nurse) that was there, and I actually had difficulties telling him that if the health worker was a lady, I could have feel free to say it. Also, some of the male doctors/nurses when you (adolescent) tell them your SRH issues, and they (health workers) see you outside with their friends they (health workers) will be pointing fingers at you" (Form 3 girl, 19 years, Odumaseman Secondary School).

"Also, some of the nurses like using expressions such as "omu soma yen" meaning they (nurses) are not responsible for our problem or "waase ye o'dee" meaning your private

part (vagina) sweet you; which are not good expressions and make us feel bad because, the pregnancy sometimes happened by mistake, and cannot be our fault and so they (nurses) should stop those words they used on us, and be patient with us" (Form 3 girl, 19 years, Secret Heart Secondary School).

Again, most adolescents also cited contraceptives side effects and other family planning associated health effects were noted as barriers that prevented adolescents' access and use of SRH services.

"For me, I heard that contraceptives such as secure, postinor-2 can fail us with time, but herbal concoctions help in aborting babies, and do not prevent pregnancy, and some contraceptives like Jadel I heard is not good. For example, a friend of mine took the Jadel, and when she went back for the health workers to remove it, they could not find it on the arm and she was told the Jadel has melted in the body and mixed with the blood and so I am always afraid" (Form 2 girl, 18 years, Odumanseman Secondary School).

"For me, having abortion will affect you in the future, and so is not good but I know in my local language they used herbal leaves like "swatwaka" (bitter leaves) to cause abortion. The "swatwaka leaves" are grind and mixed with water which is given to the girl to drink at the beginning, and the pregnancy will be aborted" (From 3 Boy, 18 years old, Odumanseman Secondary School).

4.10.2 School Guidance and Counselling Coordinators views on factors/barriers that affect access and used of SRH services

Most guidance and counselling coordinators disclosed the factors affecting the access and utilisation of SRH services among adolescents to relate to ignorance on the part of

adolescents as well as unwillingness on the part of adolescents to access SRH service due to shyness and fear of victimization by parents and teachers for been either a bad boy or girl.

"*For me, I think is ignorance on the part of the adolescents; maybe they don't even know that such services exist that they can go for. Also, unwillingness of adolescents to go to health centre and request for the SRH service because of shyness to even visit the health centre, and fear of been term as a bad boy or girl"* (*Male Guidance and Counselling Coordinator, 56 years old, Odumaseman Secondary School)*.

Also, few participants said community cultural beliefs and perceptions were barriers to the access and utilisation of SRH services among adolescents. This is because most Ghanaian cultural values and norms do not permit adolescents to engage in an open sexual discussion with the elderly on issues relating to the sexual organs of both males and females.

"For SRH services it depends on the kind of services, because our school is a catholic school, and our doctrines don't allow us to talk about contraceptives to the students, and the students themselves are fully aware. We only preach abstinence, but most cases we have realized that some of them when they need condoms they sneak out to go and buy at the drugstore, but if they are caught by the school they will be punish" (Female Guidance and Counselling Coordinator, 40 years old, Secret Heart Secondary School).

4.10.3 Health Workers views on factors/barriers that affect access and utilisation of SRH services

Most factors cited by health workers to affect adolescents' access and utilisation of SRH services were attributed to socio-cultural and religious barriers such as societal perception about adolescents who used SRH services like condom of been either a bad boy or girl, and community religious beliefs and faith regarding the use of contraceptives and family planning among adolescents.

"Yes, societies have certain perceptions about FP, and it use among adolescents and so anytime an adolescent walk into the facility, they perceived such adolescent as coming to do FP meanwhile some come for SRH information and counselling. But society has tagged such adolescents to be bad girls/boys" (Male Community Health Nurse, 28 years old, Nsoatre Health Centre).

"For me, the challenge is that, some churches like Catholic Church and the GyidiKokoo church (Saviour church), and especially the Gyidikokoo are totally against the use of FP and so when they see you as member of the church and you are doing FP, they will punish you. So adolescents who belong to that church usually come to the hospital, and will sneak to the family planning unit to complain that, they want to do the FP but the church will not allow them, and so sometimes it is a challenge but we secretly do it for them (Community Health Nurses at both Nsoatre and Chiraa Health Centre).

Also, few health workers equally cited community health misinformation, misconceptions and FP myths as barriers to the access and utilisation of SRH services among adolescents. Some health workers were also worried about the community perception on FP use among adolescents as the cause of barrenness and infertility in women.

"For me, the herbalist and those who sell drugs at the information centres are our major problem as well as the pastors, because they preach that, FP is not good and it will make you barren and infertile" (Nsoatre and Chiraa Health Centre, Community Health Nurses).

Some health workers also cited privacy issues and lack of trust of health workers on the confidentiality of information on SRH issues to hinder some adolescents' from accessing and using SRH services.

"Yes, lack of confidentiality and privacy at health facility are issues, because, we (health workers) are many here and so if the adolescent knows any of us here might not want come because he/she think his/her information will be leak to others. Most of them therefore prefer going to the chemical shop to buy emergency contraceptives and condoms and is a big problem because we can't track them and see if they have problem with it or they use it well" (Female Nurse, 29 years old, Chiraa Health Centre).

4.11 Socio-demographic and economic variables influence on adolescents' knowledge, access and utilization of SRH services

4.11.1 Association between Socio-demographic variables and level of knowledge of SRH services

Table 4.12 below presents on the association between respondents' socio-demographic characteristics and knowledge of SRH services. From the analysis, almost all socio-demographic variables were found to show no statistically significant relationship with

respondents' level of knowledge on SRH services. All variables p-values were found greater than 0.05.

Table 4.12: Socio-demographic Characteristics and level of knowledge of SRH services

Variable	Level of knowledge of SRH services		Chi-value (χ^2)	P-value
	Poor n (%)	Good n (%)		
Age category (X = 17.13; SD = 1.44)				
13-15 years	22 (47.8)	52.2)	3.465	0.18
16-19 years	166 (50.5)	163 (49.5)		
20 years and above	13 (72.2)	5 (27.8)		
Sex of respondents				
Male	102 (51.8)	95 (48.2)	0.063	0.80
Female	99 (50.5)	97 (49.5)		
Relationship status				
Single	150 (49.5)	153 (50.5)	2.125	0.55
Married	3 (75.0)	1 (25.0)		
Boyfriend lover	31 (54.4)	26 (45.6)		
Girlfriend lover	17 (58.6)	12 (41.4)		
Biological parents alive				
Yes	185 (50.1)	184 (49.9)	2.465	0.12
No	16 (66.7)	8 (33.3)		
Comfortable staying with person				
Very comfortable	143 (49.3)	147 (50.7)	2.454	0.48
Comfortable	46 (59.0)	41.0)		
Uncomfortable	7 (50.0)	7 (0.0)		
Very uncomfortable	5 (45.5)	6 (54.5)		
Significant level of variables at 5% (p<0.005)				

Source: Field Survey, 2020

4.11.2 Association between Socio-economic variables and level of knowledge of SRH services

Table 4.13 below shows the association between socio-economic variables and level of knowledge of SRH services. However, no variable was found to show a significant association with the level of knowledge of SRH services. The respondents' level of education was found to show no statistically significant relationships with the knowledge

level of respondents (χ^2 = 0.629; p = 0.73). Also, respondents who worked for pay were equally found to show statistically significant association with the level of knowledge of respondents (χ^2 = 0.003; p = 0.96), and the type of work adolescents do for pay was also found to have no statistically significant association with knowledge of SRH services (χ^2 = 3.607; p = 0.46).

Also, occupation of caretakers of adolescents was equally found to show a statistically significant relationship with the knowledge of SRH services (χ^2 = 8.317; p = 0.22) as well as person who paid visit to adolescents in school has shown no statistically significant association (X^2 = 3.602; p = 0.61), and frequency of visit by close associates such as parents, family member and friends show no association with knowledge of SRH services (χ^2 = 0.138; p = 0.93).

Table 4.13: Association between Socio-economic variables and level of knowledge of SRH services

Variable	Level of knowledge of SRH services		Chi-value (χ^2)	P-value
	Poor n (%)	Good n (%)		
Level of education				

SHS one	71 (48.6)	75 (51.4)		
SHS two	75 (53.2)	66 (46.8)	0.629	0.73
SHS three	55 (51.9)	51 (48.1)		
Worked for pay				
Yes	56 (51.4)	53 (48.6)	0.003	0.96
No	145 (51.1)	139 (48.9)		
Type of work done for pay (N = 109)				
Mobile money	14 (46.7)	16 (53.3)		
Trading	31 (58.5)	22 (41.5)		
Secretary	1 (100.0)	0 (0.0)	3.607	0.46
Teaching	5 (41.7)	7 (58.3)		
Others	5 (38.5)	8 (61.5)		
Occupation of caretaker				
Unemployed	9 (52.9)	8 (47.1)		
Teacher	14 (43.8)	18 (56.2)		
Health worker	8 (57.1)	6 (42.9)		
Banker	2 (20.0)	8 (80.0)	8.317	0.22
Farmer	83 (53.6)	72 (46.4)		
Trader	74 (49.3)	76 (50.7)		
Others	11 (73.3)	4 (26.7)		
Person who paid a visit in school				
Parents	44 (46.3)	51 (53.7)		
Father	28 (59.6)	19 (40.4)		
Mother	52 (49.1)	54 (50.9)	3.602	0.61
Family member	22 (48.9)	23 (51.1)		
Boy/girlfriend	13 (61.9)	8 (38.1)		
Others	42 (53.2)	37 (46.8)		
Frequency of visit by close associates				
Weekends of every month	63 (50.4)	62 (49.6)		
Once every term	105 (51.0)	101 (49.0)	0.138	0.93
No visitor	33 (53.2)	29 (46.8)		

Source: Field Survey, 2020

4.11.3 Association between socio-demographic characteristics and adolescents access to SRH services

Table 4.14 below shows the association between respondents' socio-demographic characteristics and access to SRH services. The relationship status of respondents was found to have a significant association with access to SRH services as those who had either

boyfriends or girlfriends had a percentage increased chance of accessing SRH services (χ^2 = 9.631; p = 0.02). However, other socio-demographic variables had no significant relationship with access to SRH services among adolescents.

Table 4.14: Socio-demographic characteristics and access to SRH services

Variable	Ever Accessed SRH services		Chi-value (χ^2)	P-value
	No n (%)	Yes n (%)		
Age category (X = 17.13; SD = 1.44)				
13-15 years	22 (47.8)	24 (52.2)		
16-19 years	131 (39.8)	198 (60.2)	1.165	0.56
20 years and above	8 (44.4)	10 (55.6)		
Sex of respondents				
Male	79 (40.1)	118 (59.9)	0.122	0.73
Female	82 (41.8)	114 (58.2)		
Relationship status				
Single	135 (44.6)	168 (55.4)		
Married	2 (50.0)	2 (50.0)	9.631	0.02*
Boyfriend lover	13 (22.8)	44 (77.2)		
Girlfriend lover	11 (37.9)	18 (62.1)		
Biological parents alive				
Yes	147 (39.8)	222 (60.2)	3.187	0.07
No	14 (58.3)	10 (41.7)		
Comfortable staying with person				
Very comfortable	118 (40.7)	172 (59.3)		
Comfortable	34 (43.6)	44 (56.4)	3.064	0.38
Uncomfortable	7 (50.0)	7 (50.0)		
Very uncomfortable	2 (18.2)	9 (81.8)		
****** indicates the significant level of variables at 5% (p<0.005)***				

Source: Field Survey, 2020

4.11.4 Association between socio-economic characteristics and access to SRH services

Table 4.15 below presents on the association between respondents' socio-economic characteristics and access to SRH services. Level of education showed significant association with the access of SRH services as those in SHS form two and three were more likely to access SRH services (χ^2 = 7.453; p = 0.02). Also, a person who pays a visit to adolescents on the school campus was equally found to have had significant influence on

adolescents' access to SRH service as those who had their boyfriends/girlfriends as well as family members paying visit to them on campus were more likely to have access SRH services (χ^2 = 13.926; p = 0.02). All other variables were found to show no significant association with access to SRH services.

Table 4.15: Association between socio-economic characteristics and access to SRH services

Variable	Ever Accessed SRH services		Chi-value (χ^2)	P-value
	No n (%)	Yes n (%)		
Level of education				
SHS one	67 (45.9)	79 (54.1)		
SHS two	45 (31.9)	96 (68.1)	7.453	0.02*
SHS three	49 (46.2)	57 (53.8)		
Worked for pay				
Yes	38 (34.9)	71 (65.1)	2.324	0.13
No	123 (43.3)	161 (56.7)		
Person who pays a visit in school				
Parents	44 (46.3)	51 (53.7)		
Father	20 (42.6)	27 (57.4)		
Mother	41 (38.7)	65 (61.3)	13.926	0.02*
Family member	18 (40.0)	27 (60.0)		
Boy/girlfriend	1 (4.8)	20 (95.2)		
Others	37 (46.8)	42 (53.2)		
Frequency of visit by close associates				
Weekends of every month	36 (36.8)	79 (63.2)		
Once every term	84 (40.8)	122 (59.2)	2.992	0.22
No visitor	31 (50.0)	31 (50.0)		

****** indicates the significant level of variables at 5% (p<0.005)***

Source: Field Survey, 2020

4.11.5 Association between socio-demographic characteristics and adolescents' utilization level of SRH services

Table 4.16 below presents results on the association between socio-demographic characteristics and utilization of SRH services. The respondents' age had a significant

association with utilization of SRH services with those aged 20 years who were significantly more likely to have utilized SRH services ($\chi^2 = 7.214$; p = 0.03). Aside from age, all other variables were not associated with the utilization of SRH services.

Table 4.16: Socio-demographic characteristics and utilization of SRH services

Variable	Ever Utilized SRH services No n (%)	Yes n (%)	Chi-value (χ^2)	P-value
Age category (X = 17.13; SD = 1.44)				
13-15 years	10 (21.7)	36 (78.3)		
16-19 years	105 (31.9)	224 (68.1)	7.214	0.03*
20 years and above	1 (5.6)	17 (94.4)		
Sex of respondents				
Male	61 (31.0)	136 (69.0)	0.398	0.53
Female	55 (28.1)	141 (71.9)		
Relationship status				
Single	90 (29.7)	213 (70.3)		
Married	1 (25.0)	3 (75.0)	0.098	0.99
Boyfriend lover	17 (29.8)	40 (70.2)		
Girlfriend lover	8 (27.6)	21 (72.4)		
Biological parents alive				
Yes	110 (29.8)	259 (70.2)	0.251	0.62
No	6 (25.0)	18 (75.0)		
Comfortable staying with person				
Very comfortable	86 (29.7)	204 (70.3)		
Comfortable	21 (26.9)	57 (73.1)	0.761	0.86
Uncomfortable	5 (35.7)	9 (64.3)		
Very uncomfortable	4 (36.4)	7 (63.6)		

****** indicates the significant level of variables at 5% (p<0.005)***

Source: Field Survey, 2020

4.11.6 Association between socio-economic characteristics and adolescents' utilization level of SRH services

Table 4.17 below presents on the association between respondents' socio-economic characteristics and utilization of SRH services. The educational level of respondents was found to have a borderline statistically significant association with the utilization of SRH services ($\chi^2 = 5.859$; p = 0.05). Frequency of visit by close relations to respondents on

campus such as family members, boyfriends and girlfriends were found to have had a statistically significant association with the utilization of SRH services ($\chi^2 = 10.619$; p = 0.005). All other variables were found to show no statistically significant relationship with the utilization of SRH services.

Table 4.17: Respondents socio-economic characteristics and utilization of SRH services

Variable	Ever Utilized SRH services		Chi-value(χ^2)	P-value
	No n (%)	Yes n (%)		
Level of education				
SHS one	38 (26.0)	108 (74.0)		
SHS two	37 (26.2)	104 (73.8)	5.859	0.05*
SHS three	41 (38.7)	65 (61.3)		
Worked for pay				
Yes	27 (24.8)	82 (75.2)	1.633	0.20
No	89 (31.3)	195 (68.7)		
Person who pay visit in school				
Parents	23 (24.2)	72 (75.8)		
Father	11 (23.4)	36 (76.6)		
Mother	32 (30.2)	74 (69.8)	10.255	0.06
Family member	10 (22.2)	35 (77.8)		
Boy/girlfriend	6 (28.6)	15 (71.4)		
Others	34 (43.0)	45 (57.0)		
Frequency of visit by close associates				
Weekends of every month	34 (27.2)	91 (72.8)		
Once every term	53 (25.7)	153 (74.3)	10.619	0.005
No visitor	29 (46.8)	33 (53.2)		
****** indicates the significant level of variables at 5% (p<0.005)***				

Source: Field Survey, 2020.

4.12 Logistic regression of associated socio-demographic and economic variables influencing knowledge, access and utilization of SRH services

4.12.1 Logistic regression of associated socio-demographic characteristics influencing adolescents' knowledge of SRH services

Table 4.18 presents the logistic regression of associated socio-demographic characteristics influencing adolescents' knowledge of SRH services. In the logistic regression, all socio-demographic characteristics were found to show no statistically influence on adolescents' knowledge of SRH services.

Table 4.18: Logistic regression of associated socio-demographic characteristics influencing adolescents' knowledge of SRH services

Variable	Knowledge of SRH services Good n (%)	Unadjusted OR (95%CI)	P-value
Age category			
13-15 years	52.2)	***1 (ref)***	
16-19 years	163 (49.5)	0.90 (0.48-1.67)	0.17
20 years and above	5 (27.8)	0.35 (0.11-1.15)	
Sex of respondents			
Male	95 (48.2)	***1 (ref)***	0.80
Female	97 (49.5)	1.05 (0.71-1.56)	
Biological parents alive			
Yes	184 (49.9)	***1 (ref)***	0.11
No	8 (33.3)	0.50 (0.21-1.20)	
Level of education			
SHS one	75 (51.4)	***1 (ref)***	
SHS two	66 (46.8)	0.83 (0.52-1.32)	0.73
SHS three	51 (48.1)	0.88 (0.53-1.45)	
Worked for pay			
Yes	53 (48.6)	***1 (ref)***	0.95
No	139 (48.9)	0.94 (0.65-1.38)	

Source: Field Survey, 2020.

4.12.2 Logistic regression of associated socio-demographic characteristics influencing adolescents' access to SRH services

Table 4.19 presents on the logistic regression of associated socio-demographic characteristics influencing adolescents accessed to SRH services. Level of education of adolescents was found to have significant influenced on the accessed to SRH services as those who were in either SHS two or three had increased chance of 1.80 times of accessing SRH services than their counterpart who were in SHS one (OR = 1.80; 95% CI 1.12-2.92; p = 0.02).

Also, adolescents' relationship status was equally found to have significant influenced on the adolescents accessed to SRH services as those who had either a boyfriend or girlfriend had an increased chance of 2.72 times of accessing SRH services than those were single (OR = 2.72; 95% CI 1.41- 5.25; p = 0.01).

Again, adolescents who were paid visit on campus by closed associates such as parents, boyfriends, girlfriends and other family members were found to have statistically significant association with adolescents accessed to SRH services as those who were paid visit by either their boyfriends or girlfriends were found to have had an increased chance of 17.25 times of accessing SRH services than those who were paid visit on campus by either parents (OR = 17.25; 95% CI 2.22-133.82; p = 0.003).

All other variables like age of adolescents, biological parent alive and among others in the logistic regression model were found to have had no statistically significant association with adolescents accessed to SRH services.

Table 4.19: Logistic regression of associated socio-demographic characteristics influencing accessed to SRH services among adolescents

Variable	Ever Accessed SRH service Yes n (%)	Unadjusted OR (95%CI)	P-value
Age category			
13-15 years	24 (52.2)	***1 (ref)***	
16-19 years	198 (60.2)	1.38 (0.74-2.57)	0.56
20 years and above	10 (55.6)	1.14 (0.38-3.42)	
Level of education			
SHS one	79 (54.1)	***1 (ref)***	
SHS two	96 (68.1)	1.80 (1.12-2.92)	0.02*
SHS three	57 (53.8)	0.98 (0.59-1.62)	
Relationship status			
Single	168 (55.4)	***1 (ref)***	
Married	2 (50.0)	0.80 (0.11-5.78)	0.01*
Boyfriend lover	44 (77.2)	2.72 (1.41-5.25)	
Girlfriend lover	18 (62.1)	1.31 (0.60-2.87)	
Person who pay visit in school			
Parents	51 (53.7)	***1 (ref)***	
Father	27 (57.4)	1.16 (0.57-2.35)	
Mother	65 (61.3)	1.37 (0.78-2.39)	0.003*
Family member	27 (60.0)	1.29 (0.63-2.39)	
Boy/girlfriend	20 (95.2)	17.25 (2.22-133.82)	
Others	42 (53.2)	0.97 (0.53-1.78)	
Biological parents alive			
Yes	222 (60.2)	***1 (ref)***	0.07
No	10 (41.7)	0.47 (0.20-1.09)	

Predictors on access to SRH services was statistically significant at 5% (p<0.05)

Source: Field Survey, 2020

4.12.3 Logistic regression of associated socio-demographic factors influencing the utilization of SRH services

Table 4.20 summarizes the final logistic regression model of predictive socio-demographic factors influencing the utilisation of SRH services among respondents. Age of respondents was found to have a statistically significant relationship with SRH services utilisation as those who aged above 20 years were 8.94 times more likely to have used SRH services as compared to those who aged between 13-15 years (AOR = 8.94; 95% CI 0.98-80.82; p = 0.04).

The respondents' level of education was again found to have a statistically significant relationship with the utilisation of SRH services (AOR = 1.04; 95% CI 0.59-1.83; p = 0.01). Respondents who had higher level of education were found to have had increased utilization level of SRH services as compared to those of their counterpart had a lower level of education.

Frequency of visits by closed associates was equally found to significantly influence the utilisation of SRH services (OR = 1.08; 95% CI 0.65-1.78; p = 0.005). Respondents who had their boyfriends or girlfriends as well as family members paying them a visit on campus once every month were 1.08 times more likely to have utilized SRH services than those who neither of their boyfriends, girlfriends and family members paying them a visit on campus.

Table 4.20: Predictors/socio-demographic factors influencing the utilization of SRH services

Variable	Ever Utilized SRH service Yes n (%)	Unadjusted OR (95%CI)	P-value	Adjusted OR (95%CI)	P-value
Age category					
13-15 years	36 (78.3)	***1 (ref)***		***1 (ref)***	
16-19 years	224 (68.1)	0.59 (0.28-1.24)	0.02	0.69 (0.31-1.52)	0.04
20 years and above	17 (94.4)	4.72 (0.52-42.32)		8.94 (0.98-80.82)	
Level of education					
SHS one	108 (74.0)	***1 (ref)***		***1 (ref)***	
SHS two	104 (73.8)	0.98 (0.58-1.67)	0.05	1.04 (0.59-1.83)	0.01
SHS three	65 (61.3)	0.55 (0.32-0.96)		0.47 (0.25-0.85)	
Relationship status					
Single	213 (70.3)	***1 (ref)***		***1 (ref)***	
Married	3 (75.0)	1.26 (0.12-12.39)	0.99	1.41 (0.12-15.55)	0.2
Boyfriend lover	40 (70.2)	0.99 (0.53-1.84)		1.12 (0.55-2.27)	
Girlfriend lover	21 (72.4)	1.11(0.47-2.60)		1.19 (0.49-2.88)	
Person who paid a visit					
Parents	72 (75.8)	***1 (ref)***		***1 (ref)***	
Father	36 (76.6)	1.04 (0.45-2.38)		1.15 (0.49-2.67)	
Mother	74 (69.8)	0.73 (0.39-1.38)	0.06	0.67 (0.35-1.28)	0.6
Family member	35 (77.8)	1.12 (0.47-2.61)		1.15 (0.48-2.74)	
Boy/girlfriend	15 (71.4)	0.79 (0.27-2.31)		0.83 (0.28-2.50)	
Others	45 (57.0)	0.42 (0.22-0.82)		0.61 (0.23-1.63)	
Frequency of visit					
Weekends of every month	91 (72.8)	***1 (ref)***		***1 (ref)***	
Once every term	153 (74.3)	1.08 (0.65-1.78)	0.005	1.23 (0.72-2.08)	0.3
No visitor	33 (53.2)	0.42 (0.22-0.81)		0.62 (0.22-1.69)	

Predictors of SRH services utilization was statistically significant at 5% (p<0.05)

Sources: Field Survey, 2020

4.15 Conclusion

Conclusively, this chapter presented the findings and the next chapter will discuss these findings.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Introduction

This chapter presents the discussions of the study based on the set objectives, which sought to assess knowledge, access and utilization of Sexual and Reproductive Health Services (SRHS) among Senior High School students in the Sunyani West Municipality. The discussions have been segmented to include; knowledge of SRHS, access to SRHS, utilization of SRHS and factors affecting access and utilization of SRH services.

5.1 Respondents Knowledge of ASRH Services

Respondents' knowledge of sexual and reproductive health services influences their access and utilization of the SRH services. From the current study, young people's awareness level of SRH services was high as over three-quarters were aware of SRH services in the quantitative study but contradict the qualitative findings as most school counselors reported that adolescents were unaware of the existence of SRHS. Also, almost the same proportion has disclosed that adolescents should be provided with SRH services, and the same proportion had ever been given SRH education on SRH services. However, few of the respondents were found to be unaware of the existence of SRH services. The high

awareness of SRH services among young people was equally reported in the GSS (2014) demographic and health survey and as well as studies by Igras *et al.,* (2014); Aransiola *et al.,* (2013); and Shayan (2015). But the current findings contradicted the findings of Champiti (2015), which indicated that adolescents were having low-level knowledge and awareness of SRH services and attributed this to the lack of information on SRH services to adolescents.

Also, most sources of SRH information of young people were found to include social media, health workers, parents, friends/peers, and others. Some of these sources have been cited for having a significant influence on the knowledge level of SRH services, and adolescents could be misinformed about SRH services through these sources (Dapaah *et al.,* 2016). Notwithstanding, the high awareness of SRH services among respondents could also be attributed to the proliferation of technological devices such as radio and TV, and the use of internet and social media platforms like Facebook as well as health education provided by health workers, school teachers and parents contributed to the awareness level of adolescents. These sources were also confirmed in the qualitative study as sources for SRH information. However, these sources could have both positive and negative influence on the knowledge level of adolescents and thus could influence their utilization of the service. These information sources shared similarities with studies conducted by Ghana Health Service (2016); Ajike & Mbegbu (2016); Kamble *et al.,* (2018); and WHO (2015), which also cited these sources for having an influence on adolescents knowledge regarding SRH services.

Aside been aware of SRH services through these sources, findings showed more than three-quarters of the respondents had adequate information on SRH counseling at school. More

than half had knowledge on personal and menstrual hygiene practices, and less than a third had knowledge on other SRH areas such as STIs prevention, carrier progression, pregnancy preventions and nutrition and good dietary practices. Good counseling services provided to adolescents and young people were noted to enrich their information sources on their sexual and reproductive health issues and guide them to make decisions regarding their sexual health. Similarly, the World Health Organization (2015) and Ganchimeg *et al.*, (2014) studies cited the need to improve on SRH counseling services to provide young people with proper information on SRH to help promote their health. However, the current study findings shared dissimilarities with Tamang *et al.,* (2016) study conducted in Nepal, South Asia, which reported over 90% of adolescents were found to have had adequate information of STIs, and more than 30% had knowledge on the use of condoms and pills, and less than 50% had knowledge about implants and intrauterine devices.

Additionally, findings again showed the majority of the respondents said the counseling provided to them was beneficial, and over two-third said the information received during counseling was helpful. However, the overall knowledge level of respondents showed less than half had a relatively good knowledge level, and a little above half lacked knowledge or had a poor knowledge level of SRH services. The fairly good knowledge level regarding the access and utilization of SRH services could be attributed to the health talk and education provided through healthcare providers and during the school programme. Notwithstanding, the 2014 Ghana Demographic and Health Survey equally showed that, young people had a relatively high level of knowledge of contraceptives and HIV as well as Ajike and Mbegbu (2016) study in Ikeja, Lagos State, Nigeria attributed young people relatively high knowledge level to the information received at adolescent and youth-

friendly health facilities and from friends/peers. In contrast to the current study's findings were study findings by Dapaah *et al.,* (2016); Tegegn *et al.,* (2013); and Bedho (2014), which showed more than three-quarters (79.5%) of the adolescents had no knowledge of the adolescent/youth friendly SRHS, and thus lacked knowledge of SRH services which has led to the poor utilization of SRH services.

Again, findings from the current study showed the average age of sexual debut of respondents was 16 years, and thus share similarities with the UN conventions and Ghana Health Services (2016) guidelines on early sexual practice/initiation among adolescents because Ghana's laws prohibited adolescents below 16 years to engage in pre-marital sex. Also, respondents' knowledge of pre-marital sexual relationship showed almost two-thirds had their first sexual partner between the ages of 15-17 years, and nearly a third had their first sexual partner at the age of 18 years and above. Knowledge of respondents of sexual initiation period contributed to a healthy sex life and the utilization of sexual and reproductive health services. These findings were also found to share similar relations with the results of UNESCO (2018); Egan & Hawkes (2012); Woog & Kågesten, (2017); and Odoi-agyarko, (2003) in Ghana on adolescents sexuality and age, and the access and utilisation of SRH services.

To add, adolescents' knowledge of the perfect age for boys and girls to initiate sex showed average age for both boys and girls was reported at 19 years, and more than two-third said boys preferred ages should be between the ages 16-19 years likewise girls. However, findings showed most adolescents have their colleagues or school mates as sexual partners and some have their school teachers, community neighbours, family members, sugar daddies and mummies as their sexual partners. The early sexual practice of adolescents

involving closed relations such as friends, family members and school teachers could be attributed to the trust adolescents have for these people of no possible harm. This was confirmed in the qualitative study as some participants cited sexual harassment from both teachers and closed family relations. This finding was relatively higher that Luvai *et al.*, (2017) in Kenya and reported about 60% of the youth have knowledge on youth friendly reproductive health services.

Additionally, respondents' knowledge of who to discuss SRH issues showed 40% felt comfortable discussing SRH problems with their parents. Less than a third felt comfortable discussing SRH problems with their friends and peer groups and sexual partner, health workers, teachers and religious leaders. This shows that most respondents have trust in these people and felt comfortable discussing their SRH issues with them. Hence, if such trust was maintained could promote the access and utilisation of SRH services and improve adolescents' knowledge. However, this current study finding shared dissimilarities with Abajobir and Seme (2014) in Ethiopia and Tamang *et al.,* (2016) study in Nepal, South Asia, which findings reported a much higher rate of about 67% and 90%.

5.3 Respondents access to the Sexual and Reproductive Health Services

Access to sexual and reproductive health services such as contraceptives, safe abortion services, counseling, cancer screening, and management and treatment of STIs is vital to promote healthy living of adolescents. From the current study, access to SRH services showed a little over half had ever accessed SRH services, and only less than half of the respondents did not access the services. Lack of access to SRH services could be attributed to respondents' poor insufficient knowledge level regarding the services. A WHO (2018)

report cited the need for improved knowledge of adolescents to access SRHS to obtain or offer to people SRHS with a choice of the available SRHS at any point in time. But GHS, (2016) study report indicated that lack of access of SRH services by adolescents was attributed to social values, norms, and society that contributed to young people non-access to SRH services.

Also, findings again showed little over half had accessed SRHS through the visit of health workers to the school. Less than a third had accessed the SRH services at health facility through the help of closed relations such as parents and friends. Only a few visited the health facility on their evolution to access the SRH services. Low access of SRHS was confirmed in the qualitative studies as findings showed most adolescents were not visiting the health facility, which was attributed to the fear of victimization by health workers and parents. This contradicted the findings of Breaken and Rondinelli (2012), which report shows that adolescents had better access to SRH services, and was due to their level of education and economic factors to have contributed to the positive change.

Additionally, current findings showed over three-quarters of adolescents had visited the SRH center for the last 1-9 months, and over two-third complained of spending more time at the health facility to access SRH services at SRH center. Long waiting time of adolescents at the SRH center serves as a disaffection to adolescents' access to SRH services, which could have contributed to the low knowledge and access of SRH services among adolescents. However, this finding was found to relate to Akatukwasa *et al.*, (2019) study, which equally reported that adolescents do spend a long time at service centers and thus do not access SRHS. Also, Asibi and Anaba (2019) study conducted in Ghana equally shared similar findings with the current research citing low access of SRH services among

adolescents and attributed this to barriers such as health facility provider attitudes and negative community perceptions about adolescents regarding SRH services access. But these findings contradicted the findings of Breaken and Rondinelli, (2012) study in Africa and reported that adolescents have better access to SRH services.

Adolescents access to SRH services in the current study showed about a third have ever accessed SRH services on the treatment of STDs such as gonorrhoea, HIV/AIDS, candidiasis (white), syphilis and others, less than a quarter have accessed counselling service on menstrual and personal hygiene practices, and on boys-girls' sexual relationships, and less than tenth had accessed service on contraceptive methods use breast and cervical cancer screening and abortion care services. These findings were lower in proportion compared to studies conducted by Tamang, *et al.,* (2016) in Nepal; and Abubakari *et al.,* (2015) in Ghana reported an increased number of adolescents had accessed SRH such as contraceptives and abortion care services.

Also, the current quantitativestudy showed almost three-quarters of adolescents preferred accessing SRH services at the hospital, and the least preferred access sources were adolescents' reproductive health corners, Planned Parenthood Association of Ghana, but this contradicts the qualitative findings as most health workers and school guidance and counselling coordinators said adolescents preferred accessing SRH services through informal sources like buying the services from chemical shops and drugstores. The preference of adolescents to access SRH services at chemical shops and drugstores could be attributed to the perceived community negative perceptions and fear of being punished by the parents or an older adult when seen at a health facility.

Also, this could be attributed to the perceived high cost of SRH services at the health facility and other barriers such as lack of confidentiality and trust of health workers, cost of transportation to the service centre, feel shy visiting the service centre, and difficulty of obtaining permission from school authority contributed to them not accessing SRH services at the health facility. These findings, however, shared similarities with Akatukwasa *et al.,* (2019); GHS, (2016); and Tamang *et al.,* (2016) studies which equally cited poverty, a culture of society, and the act of feeling shame and shyness were reported as the major obstacles to adolescents accessing SRH services at the health facility.

5.4 Respondents utilization of the Sexual and Reproductive Health Services

The use of SRH services among adolescents was vital to the prevention of sexually related health problems and the attainment of Sustainable Development Goal on STIs. This also promotes healthy living among adolescents, and thus, the current study findings showed adolescents who have ever utilized SRH services was nearly three-quarters, while almost a quarter have never used the SRH services. But this finding contradicts the qualitative findings as utilization of SRH services among adolescents was reported among health workers and school guidance and counseling coordinators to be very poor. The poor utilization of SRH services among young people was attributed to unawareness of services, financial challenges and adolescent being afraid of parents and school authorities punishing them for visiting the health facility. However, the findings were found to shared similarities with Geremew *et al.,* (2018), and United Nations Population Fund (2019), which equally reported that less than a third had used SRH services, but had shown dissimilarities with the findings of Abajobir *et al.,* (2014) study which reported an improved utilization of SRH

services among young people. Reasons for adolescents' non-utilization of SRH services shows more than a third indicated their non-use of SRH services was due to lack of knowledge of SRH services; about third said fear of side effects associated with contraceptives.

In terms of utilization of various SRH services, findings showed nearly three-quarters of adolescents said adolescents should abstain from having sex, and among those who ever used SRH services showed less than a quarter had used male condom, contraceptive pills and female condoms during sex. Utilization of SRH services was low, and the low utilization of SRH services could be due to poor knowledge regarding the services and lack of availability of the preferred methods of SRH services. The low utilization of SRH services shared similarities with the 2014 Demographic Health Survey which findings equally said SRH service use was low among young people but said utilization of contraceptive was high among married young women with a secondary or higher education.

Again, in the current study, SRH services utilization among adolescents show very few has sought for counselling on menstrual and personal hygiene practices, as well as emergency contraceptives use, and other services such as STDs prevention and HIV/AIDS counselling, abortion care services and breast and cervical cancer screening. These reported services mostly used by adolescents could be attributed to the perceived risk and side effects relating to these services and those who had ever encountered at least one of STIs symptom could have influenced their decision to use SRH services. Similar findings were reported by Binu *et al.*, (2018); Abebe & Awoke (2014); and Bam *et al.*, (2015) shows

school youths who had encountered at least one of STIs symptom were more likely to have utilized SRH services than those who did not encounter any problem.

The current study also showed that a little over third of adolescents used the services most during weekend and a quarter utilised the services most during weekdays and during public holidays and during vacations and evenings.

5.5 Factors affecting respondents' access to and utilization of SRH services

Various factors influenced adolescents' access and utilization of SRH services. Hence, findings showed few adolescents cited restrictive school rules to have affected their use of SRH services and been shy to visit the health facility to ask for SRH services. These reported barriers could be influenced by the Ghanaian socio-cultural environments that do not allow young people to engage in open discussions on sex and other matters relating to the male and female reproductive system with the elderly. Notwithstanding, these barriers were found to share similarities with Ivanova (2018) and Kamble (2018) studies, but findings were different from Dockalova *et al.,* (2016) study which findings showed that young people who were living in rural areas were marginalized groups to have access to family planning services.

Also, a little over two-third of adolescents cited lack of knowledge and access to SRH information had affected their knowledge in the access and utilization of SRH services. Adolescents' knowledge of SRH services is a key factor to the access and utilization of SRH services, and this was found to share similarities with Binu *et al.,* (2018) study in Ethiopia, and Luvai *et al.,* (2017) study in Kenya which equally found adolescents to lack knowledge of SRH services, and thus affected their access and utilization of SRH services.

Again, findings from the current study also indicated over half of the adolescents cited financial difficulties as a barrier and the presence of a close relation such as family member and friend at health facility affected their access and utilization of SRH services. To add, more than a third of adolescents said they felt ashamed been seen at the SRH center to access SRH services, and less than half said that they are always afraid to disclosed to the health workers about their personal health secret on SRH issues. Personality traits such as been ashamed and afraid of discussing SRH issues with health workers and parents could be attributed to the fear of victimization of been perceived as a bad person or been tagged with name calling of been deviant/bad boy or girl, and thus prevent most adolescents from accessing the services. These findings were found to shared similarities with McIntyre *et al.*, (2012); and Dockalova *et al.*, (2016), but different from the findings of UNESCO (2018): and Cherie & Berhane (2012), which cited among other barriers to include the affordability of STI services.

Also, frequency of visit by closed associates such as parents, family members and friends was also found to have a borderline statistically significant association with adolescents having good/positive attitude/perceptions toward SRH services as those who had closed associates (parents, friends) visiting them once every term were found to have had an increased chance of 1.86 times (2 folds) of having a good attitude toward SRH services as compared to their counterpart who parents/friends visit them weekends of every month. However, respondents who worked for pay were found to have had a statistically significant association in the univariate analysis as those who do not worked for pay had a probability increased chance of 1.69 times of having good attitudes toward SRH services as compared to those who worked for pay. The influence of socio-economic factors such

as educational attainment and frequency of visit were equally reported among others by Ntulume (2018) WHO, (2016), and UNFPA (2014) to have a significant influence on the attitude and perceptions of adolescents toward the access and utilization of SRH services.

Additionally, age of respondents in the current study was found to have a statistically significant relationship with SRH services utilisation as those who aged above 20 years were 8.94 times more likely to have used SRH services compared to those aged between 13-15 years. Age as a variable determined the utilisation of SRH services because age predicts the maturity of adolescents thus influencing SRH services access and utilisation. Level of education of respondents was again found to have statistically significant relationship with the utilisation of SRH services because educational attainment determined the knowledge level of adolescents and thus exposed them to a lot of information regarding SRH services which could influence their use of the service. The frequency of visits by closed associates was equally found to significantly influence the utilisation of SRH services. These significant variables were found to share similarities with UNICEF (2015) report, which cited a higher prevalence of utilization of STIs management services among youth 20-24 year-year-old than adolescents aged 15–19-year-olds. Also, similar findings were reported by Abubakari *et al.*, (2015); UNFPA, (2012); WHO (2018); and UNESCO (2018). These authors cited age as a significant factor that influences the utilization of SRH services.

Notwithstanding, the level of education of respondents was found to show significant association with the access of SRH services as those who were in SHS form two and three were more likely to access SRH services as well as the relationship status of respondents as those who had either boyfriends or girlfriends had an increased percentage chance of

accessing SRH services. Also, the type of person who pays visit to adolescents on school campus was equally found to have had significant influence on adolescents' access to SRH service as those who had their boyfriends and girlfriends as well as family members to have visited to them on campus were more likely to have access SRH services. However, these findings were found to have dissimilarities with Asibi and Anaba (2019) and Akatukwasa *et al.*, (2019) study, which cited mismanagement of SRH concerns of adolescents to influence their access to SRH services.

Conclusion

In this chapter, the findings were extensively discussed. The next chapter has provided a summary of these findings, conclusions and recommendations.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This chapter presents a summary of the findings to draw conclusions and make relevant recommendations to stakeholders and policy makers as well as health partners working on

Adolescent Sexual and Reproductive Health to improve adolescents and young people's knowledge, access and utilization of sexual and reproductive health services in the study area and the nation as a whole.

6.1 Summary of Findings

The average age of respondents was 17.13 years, and more than a third (35.9%) were in a sexual relationship, with an average age of sexual debut of 15.99 years. Six (6) Focus Group Discussions were also conducted among adolescents' boys and girls aged 16-19 years. Key informant interviews were conducted among School Guidance and Counselling Coordinators and 13 health workers at four (4) health facilities. Majority (83.7%) of the respondents had high awareness level of SRH services. Sources of awareness of SRH services indicated over a quarter (27%) became aware of SRH services through healthcare providers and 22% through the school programme. But in the qualitative study, most respondents became mindful of SRH services through social media like TV, radio, and via internets. About 17% have ever received education on personal and menstrual hygiene, 16% had information on STDs, and 14% have had education on contraceptive methods.50.4% of the adolescents had average knowledge of ASRH services, 26% had poor knowledge, and only 23.6% had good knowledge of ASRH services. Similarly, the qualitative knowledge of respondents was reported poor by health workers and school health coordinators. Slightly over half (59%) had ever accessed SRH services. About 55.6% accessed SRH services through the visit of health workers to the school, and 30.2% had accessed the SRH services at a health facility, and more than three-quarters (83.6%) had spent less than 30 minutes to 1 hour at the service center. SRH services ever accessed

shows about 23% had accessed service on the treatment of STDs such as gonorrhoea, candidiasis (white), and syphilis, 22% accessed menstrual and personal hygiene practices. In the qualitative findings, ASRH services mostly accessed were; post-abortion care complications, STIs, counselling and short-term and long-term FP methods Lydia, M-tablet, and Postnor-2; Jadel for 5 years, Depo for 3months, Norigynon and Sayana for 3years. On utilisation, nearly three-quarters (70.5%) have ever used SRH services, while about 29.5% have never used the SRH services. SRH services ever used shows 23% sought counselling on menstrual and personal hygiene practices, 20% utilised emergency contraceptives and 14% utilised services on STDs prevention. However, from the qualitative findings, most SRH services utilised condoms and abortion care services through informal means such as buying drugs from chemical shops and mixing local concoctions to terminate pregnancies. Contraceptives and family planning methods ever used include; postinor-2, Lydia, M-tablet, Levon-2, Bead method, and Coitus interruptus. Factors affecting the access and utilization of SRH services shows 42.7% attributed that to restrictive school rules, 67.7% said to feel shy visiting the health facility, and 57.5% said financial difficulty. Similarly, from the qualitative study reported barriers to include; negative perceptions of community people, bad attitudes from health workers, religious factors, teachers been too hard, and financial difficulties (poverty). Statistically significant factors that influenced respondents access to SRH services were; relationship status of respondents (X^2 = 9.631; p = 0.02), level of education (X^2= 7.453; p = 0.02), and individuals who paid visit to adolescents on school campus (X^2= 13.926; p = 0.02), and frequency of visits by closed associates (AOR = 1.86; 95%CI 1.08-3.21; p = 0.05), and worked for pay (OR = 1.69; 95% CI 1.03-2.77; p = 0.03), with utilization, factors were age

of respondents (AOR = 8.94; 95% CI 0.98-80.82; p = 0.04), level of education (AOR = 1.04; 95% CI 0.59-1.83; p = 0.01), and frequency of visits by closed associates (OR = 1.08; 95% CI 0.65-1.78; p = 0.005).

6.2 Limitations to the study

Limitations to the study include the following; the study do not include all schools in the municipality but only concentrated on the four (4) public schools leaving the private and vocational schools, and therefore findings might not give an overall view of all schools in the municipality. Again, the study uses a cross-sectional study design which was limited within a defined period of time, and hence there could be variation in the population after the study data collection. To add, the study also involved adolescents' sexual activities and family planning practice, and this has limited some of the responses they might provide due to fear of been mocked by peers and parents. The study was limited to Ghana and areas where the practice of family planning and contraceptive use was allowed. However, the researcher has adopted efficient measures such as pretesting of the study instruments, and rapport building to ensure that the respondents provided right and accurate information for the study.

6.3 Conclusions

Conclusively, the awareness level of SRH services among respondents was high (83.7%) and most became aware of SRH services through healthcare providers (27%). But in the qualitative study, most became mindful of SRH services through social media like TV, radio, and via internets. Knowledge of SRH services was averagely high (51.2%), and 48.8% had good knowledge of SRH services. Slightly over half (59%) had ever accessed SRH services, and more than three-quarters (83.6%) had spent less than 30 minutes to 1

hour at the service center. SRH services ever accessed shows 23% accessed STDs treatment such as gonorrhoea, candidiasis (white), and syphilis. In the qualitative findings, the SRH service ever accessed most were; post-abortion care complications and STIs. Nearly three-quarters (70.5%) have ever used SRH services, and 23% sought counselling on menstrual and personal hygiene practices. Similarly, from the qualitative findings, adolescents used informal means such as mixing of local concoctions as ways to terminate pregnancies. Overall, factors affecting the access and utilization of SRH services shows 42.7% attributed that too restrictive school rules, 67.7% said to feel shy visiting the health facility and 57.5% said financial difficulty. Statistically significant factors influencing access and utilisation of SRH services were; relationship status, level of education, ever worked for pay, age of respondents, and frequency of visits by closed associates.

6.4 Recommendations

Based on the findings, the following recommendations were suggested to policymakers and stakeholders;

6.4.1 Ministry of Health

1. The MOH in collaboration with the Ghana Health Service should partner with NGO for effective implementation of SRH services in Senior High Schools.

6.4.2 Ghana Health Services

1. Intensify health education that specifically targeting sexually active adolescents to improve their knowledge of SRH, access and utilization of SRH services.
2. GHS should be engage in publication sensitization to fight stigmatization of students who access the SRH services

3. The GHS should provide in-service training to reproductive health personnel and other health workers on ASRH service to improve their knowledge on SRH services and customer service relationship with the sexually active adolescents. This could improve their attitudes toward adolescents during health service delivery.
4. The GHS should pay attention to adolescents when they visit hospital by creating their own clinic and provide them with male and female medical doctors to see them, so that the females would feel free to talk to female doctors their problems, and the males equally can freely talk to male doctors of their problems. Just like as we have paediatric clinic and adult clinic but we don't have clinic that takes cares of those between 12-19 years.
5. Again, the GHS should make Adolescents Sexual and Reproductive Health Services part of the school sick bay where those in school can easy go there for information because they spend more time in school than in the house, and cannot seek information from the adolescent health corners attached to the main hospital in the community.

6.4.3 Ghana Education Service

1. The Ghana Education Service should have introduced SRH services in all curriculums for adolescents to be equipped with accurate information on SRH to be able to make informed decisions.
2. GES should as matter of urgency review its school rules regarding students' movement on campus to make it flexible that would allow students to visit the health facilities to access SRH services when the need arises as most students complained of restrictive school rules as a barrier to their visit to the health facility

to access SRH services. Also, they should collaborate with Ghana Health Service to make ASRH services available at school sick bay or create youth friendly corners in schools for students to easily access SRH services.

3. Also, level of education of adolescents was found as a significant factor that influenced adolescents' access and utilization of SRH service, and hence GES in collaboration with Ghana Health Service, should intensify SRH education in schools to enable students to have access to the correct information regarding SRH service and make informed choices concerning access to and utilization of SRH service. Sexuality education should be introduced in all curriculums for adolescents to be equipped with accurate information on SRH to be able to make informed decisions.

6.4.4 Parents and Civil society/Non-governmental Organization

1. Parents of adolescents as well as closed associates like aunties and uncles should be allowed to visit adolescents on campus as frequency of visits by closed associates could influence the access and utilization of SRH services.
2. The Ghana Health Service, Civil Society and Non-Governmental Organizations should support in community education of people on SRH services such as comprehensive abortion care, family planning, and contraceptives to help improve community members understanding of SRH services such as FP and contraceptives as most perceived the used of FP to be the cause of infertility among women.

6.4.5 Areas of further research

Future researchers should undertake further studies to ascertain the contributory factors of community perceptions and attitudes toward SRH services and the funding mechanisms of SRH services towards making SRH services free for sexually active adolescents

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APPENDIX

Appendix 1: Respondents Questionnaire

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

Q1 What is your age? ……	Q2. Sex 1.male 2. female
Q3. What is your religion? 1. Christian 2. Muslim 3. Traditional 4. No religion 5. Other (specify)……..	Q4 Whichlevels of education do you have? 1. SHS one 2. SHS two 3. SHS three 4. Others specify ……
Q5. To which ethnic group do you belong to? 1. Akan 2. Ewe 3. Ga Dangme 4. Mole Dabgani 5. Others specify……	Q6. What is the status of your intimate relationship? 1. Single 2. Married 3. Boyfriend lover 4. Girlfriend lover 5. Others specify ……

Q7 Have you worked for pay before? 1. Yes 2. No	Q8. If yes, what type of work? 1. Mobile money 2.Trading 3.Secretary 4. teaching 5. Others specify ……
Q9. Who do you stay with? 1.Stay with one parent alone 2. Stay with both parents 3. Say with somebody not family member 4. Stay with grandparents 5. Stay with boyfriend/girlfriend 6.Others, specify	Q10. Are your biological parents alive? 1.Yes 2. No
Q11. What is the occupation of the person you are staying with? 1. Unemployed 2. Teacher 3. Health worker 4. Banker 5. Farmer 6. Trader 7. Others, specify…..	Q12. Are you comfortable with the person you are staying with? 1.Very comfortable 2 Comfortable 3.Uncomfortable 4 Very uncomfortable
Q13. Who visit you in school? **(You canchoose more than one)** 1.Parents 2.Father 3.Mother 4.Family member 5.Boy/girl friend 6.Sugar daddy 7. Others, specify ……	Q14. How often do you get visitors in school? 1.Everyday 2.Every weekend 3.Once every term 4.No visitor 5. Others, specify……..

SECTIONB: ADOLESCENTS SEXUAL AND REPRODUCTIVE HEALTH KNOWLEDGE

	Q15. .Are you in sexual relationship? 1. Yes 2. No
Q 16. At what age was your first sexual partner?.....	Q17. Who was that person to you at your first sexual encounter? 1. Family member 2. Teacher 3. Schoolmate 4. Neighbor 5. Sugar daddy 6. Others, specify…….
Q18. What is the perfect age for a girl to start having sex? ……	Q19.What is the best age for a boy to start having sex? .....

Q20. Are you aware of any sexual and reproductive health service in this community? 1. Yes 2. No	Q21. If yes, how did you get to know about sexual and reproductive health services**?(You can choose more than one)** 1. Health care provider 2. Churches 3. Teachers 4. Friends 5. School program 6. Parents 7. Social media (facebook, whatsapp, TV, radio) 8. Others specify ……..

Q22. Do you think adolescents should be provided with sexual and reproductive health information? Yes No	Q23. Have you ever been given education or health talk on any of the adolescent sexual and reproductive health services before? (**If yes, answer Q24 and Q25)** 1. Yes 2. No

Q24. If yes, circle the areas below that you received the education/health talk on. **If no move to Q26.** **(you canchoose more than one)** 1. Contraceptive method 2. Personal/menstrual hygiene 3. Sexually transmitted diseases 4. HIV/AIDS counselling and service 5. Boys and girls' sexual relationship 6. Abortion care services 7. How pregnancy occur 8. Breast and cervical cancer screening 9. Information and counseling	Q25. Which of these people gave you education/talk on sexual and reproductive health? **(You can choose more than one)** 1. Health care provider 2. Churches leaders 3. Teachers in school 4. Friends 5. School program 6. Parents 7. Social media 8. Others specify ……..
Q26. Do you have somebody to discuss your sexual and reproductive health problems with? **(If yes, answer Q27)** 1. Yes 2. No	Q27.if yes, who do you find comfortable discussing your problems with? 1. Friends 2. Parents 3. Teachers 4. Health workers 5. Sexual partner

	6. Religious leader Others specify …….
Q28. Does your school give you counselling on sexual and reproductive health services? **(If yes, answer Q29)** 1. Yes 2. No	Q29. If yes, which of the following counseling services can your school provide? 1. Personal hygiene 2. Carrier progression services 3. Nutritional counselling 4. Sexual transmitted infection counselling 5. Counselling on pregnancy prevention 6. Others ……
Q30. Have you been benefiting from sexual and reproductive health information available? 1. Yes 2. No	Q31. How is it helping you in your education? 1. Very good 2. Good 3. Not good 4. Bad

SECTION C: ADOLESCENTS ACCESS TO AND UTILIZATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES

Q32. . Where do you prefer seeking for adolescent sexual and reproductive health services? 1. Plan Parent Association of Ghana (PPAG) 2. Hospital 3. Adolescent friendly health Conner 4. Maternity homes	Q33. Have you ever accessed sexual and reproductive health services before? **If no, move to Q43** **If yes, answer (Q36,37,38,39,40,41,42)** 1. Yes 2. No

5. Chemical shop 6. Others …….	
Q34. If yes, which of these services have you had accessed to before? (You can circle more than one) 1. Contraceptive method 2. Personal/menstrual hygiene 3. Sexually transmitted infection treatment 4. HIV/AIDS counselling and services 5. Boys' and girls' sexual relationship counselling 6. Abortion care services 7. Information on how pregnancy occur 8. Breast and cervical cancer screening 9. Adolescent health corner 10. Others ……..	Q35. If no, what prevented you from accessing the service? 1. Shyness 2. Cost of transportation 3. Difficulty in obtaining permission from school 4. Difficulty in obtaining permission from parents 5. Lack of confidentiality/trust in health care providers 6. Fear of what people will say/think about me 7. Others …….
Q36. How were you able to contact the services providers? 1. I went there willingly 2. A friend took me there 3. Parents took me there 4. Health teams came to our school 5. Teacher sent me there 6. Others……..	Q37. When was your last visit to adolescent sexual and reproductive health service centre? 1. one to three months ago 2.four to six months ago 3. Seven to nine months ago 4 .Others, specify …….

Q 38. Did you spend more time at the service centre? 1. Yes 2. No	Q39. How long will it take you to get to the sexual and reproductive health service centre from your school/home? 1. 5minutes to 20 minutes 2. 25minutes to 1 hour 3. 2 hours to 4hour 4. Others specify …….
Q40. Did you encounter any problem or difficulties in accessing SRH Services? 1. Yes 2. No	Q41. Was your choice of service available to you? 1. Yes 2. No
Q42. Did you pay for the services? 1. Yes 2. No	Q43. Do you wish to access the service? 1. Yes 2. No

Q44.Do adolescents use sexual and reproductive health service in this municipality? Yes No	Q45. If yes, which of these services do adolescents use most? **(You can circle more than one)** 1. Emergency contraceptive 2. Personal/menstrual hygiene 3. Sexually transmitted diseases prevention and treatment 4. HIV/AIDS counselling and service 5. Boys' and girls' sexual relationship 6. Abortion care services 7. Information on How pregnancy occur 8. Breast and cervical cancer screening 9.Adolescent health corner 10.Others, specify ……

Q46. If no, Why?**(You can circle more than one**) 1. Not good for adolescent 2. I don't know how to use it 3.I am afraid 4.Parents will not allow me to use 5.School will not allow me to use 7. Others, specify ……	Q47. Should adolescents be allowed to utilize sexual and reproductive health services? 1. Yes 2. No
Q48. What should adolescents do to avoid pregnancy and sexually transmitted infections? 1. Abstain from sex 2. Use male condom 3.Female condom 4.Contraceptive 4. Others specify…….	Q49.Which of these occasions do adolescents need and use sexual and reproductive health service most **(You can choose more than one)** 1. Weekdays 2. Weekends 3. Public holidays 4. Evenings 5. Vacations 6. Others …….
Q50. What should be done to promote the usage of adolescent sexual and reproductive health services? 1. By given education 2. Organized school health talk 3. To set up adolescent friendly health Centre in SHS 4. Engage adolescents in sexual and reproductive health services 5. Others ……..	Q51. What would prevent adolescents from using sexual and reproductive health services? **(You can choose more than one)** 1. Shyness 2. Fear of being reported to the school authority/parents 3. Loss of trust in health care provider 4. Fear of being perceived as bad person 5. Lack of knowledge 6. Lack of access 7. Lack of services 8. Others ……..

Q52.Do you think that, high sexual activity in the adolescent is because adolescents are not aware of sexual and reproductive health services? 1. Yes 2. No	Q53.Do you think adolescent who do not use sexual and reproductive health service are at the risk of expose to sexual and reproductive health problems? 1. Yes 2. No
Q54.Do you think people will perceive you to be bad person when they see you going to the facility? 1. Yes 2. No	Q55.Do you think your school will not allow you to seek sexual and reproductive health service when you need it? 1. Yes 2. No
Q56. Do you think your parents will not allow you to use the services? 1. Yes 2. No	Q57. Do you think adolescent sexual and reproductive health is being neglected in this community? 1. Yes 2. No
Q58.Do you think health workers behave badly toward adolescent when accessing the service? 1. Yes 2. No	Q59.Do you think that the information you get from whatsup, TV, radio, internet is enough so you don't need Adolescent sexual and reproductive health services? 1. Yes 2. No
Q60.Do you think health care providers' behavior can prevent you from using the service? Yes No	Q61.Do you think is only spoil children who use adolescent sexual and reproductive health services? Yes

	No

SECTION D: FACTORS THAT AFFECT ADOLESCENTS ACCESS AND UTILIZATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES

Q62. Can your school rules prevent you from understanding, accessing and using sexual and reproductive health services? 1. Yes 2. No	Q63. Can you alone go to adolescent friendly health centre or a health facility to find out what they do for adolescent? 1. Yes 2. No
Q64. Do you think adolescents feels shy to talk aboutsexual and reproductive health? 1. Yes 2. No	Q65. Does your age prevent you from seeking information about sexual and reproductive health? 1. Yes 2. No
Q66. Does the information you receive you're your school teachers on sexual and reproductive health affect your knowledge, access and use of sexual and reproductive health service in your area? 1. Yes 2. No	Q67.Do you think where you stay can affect your knowledge, access to and use of sexual and reproductive health service? 1. Yes 2. No
Q68. Can financial problem prevent you from access and use of SRHS in your community? 1. Yes 2. No	Q69. Do what your friends, family members and the people in your community think and sometimes say about children who access and use adolescent sexual and reproductive health service affect your understanding of adolescent sexual and reproductive health? 1. Yes 2. No

Q70. Do you think the time you close from school and the time open for service Adolescent sexual and reproductive health services affect you ? 1. Yes 2. No	Q71. Will you feel ashamed when people see you asking information about sexual and reproductive health services in your area? 1. Yes 2. No
Q72. Are you afraid that if you tell the health care provider about your personal information and secret will be disclose to your parents when you visit sexual and reproductive health centers? 1. Yes 2. No	Q73. Are you afraid to ask your parent's information's about sexual and reproductive health services? 1. Yes 2. No

Q74. Does any of these affect your knowledge, access and use of adolescent sexual and reproductive health service in your community? **(You can choose more than one)**

1. Societal beliefs
2. Cultural beliefs
3. Religious beliefs
4. Financial problem
5. Parental control
6. Location
7. Transportation
8. Others ……

Appendix 2: Focus Group Discussions Guide of Adolescents

Can we begin the interview? Yes, No

Do you have any issue to be addressed before I start? Yes, No (if any, let discuss it)

Interview date: …… Respondent code: …….

Recording time for the interview

Starting time: hour……. Minutes ……Ending time: hour ……..minutes……

SOCIO-DEMOGRAPHIC CHARACTERISTICS

Q1 What is Your age?	Q2. Sex: 1 .Male 2. Female
Q3. What is your religion? 5. Christian 6. Muslim 7. Traditional 8. No religion 9. Other (specify)……..	Q4 Which level of education are you? 1. SHS one 2. SHS two 3. SHS three 4. Others, specify ……
Q5. To which ethnic group do you belong to? 1. Akan 2. Ewe 3. Ga Dangme 4. Mole Dabgani 5. Others specify……	Q6. What is the status of your intimate relationship? 1. Single 2. Married 3. Boyfriend lover 4. Girlfriend lover 5. Others, specify ……
Q7. Are you currently in boy/girlfriend relationship? 1.Yes 2. No	Q8. Have you ever been in boy/girlfriend relationship before? 1. Yes 2. No
Q9. Have you worked for pay before? 1.Yes 2. No	Q10. If yes, what type of work? 1.Mobile money 2.Trading 3.Secretary 4. Teaching 5. Others, specify ……
Q11. Who do you stay with? 1.Father 2. Mother 3.Relative 4.Friends 5.Others, specify	Q12. Are your biological parents alive? 1.Yes 2. No

Q13. What is the occupation of the person you are staying with? 1. Unemployed 2. Teacher 3. Health worker 4. Banker 5. Farmer 6. Trader 7. Others, specify…..	Q 14. Are you comfortable with the person you are staying with? 1.Very comfortable 2 Comfortable 3.Uncomfortable 4 Very uncomfortable (Probe for the nature of the relationship at home)
Q15. Who visit you in school? 1.Parents 2.Father 3. Mother 4. Family member 5. Boy/girl friend 6. Sugar daddy (probe for the one who visit her)	Q16. How often do you get visitor in school? 1.Everyday 2.Every weekend 3.Once every term 4. No visitor 5. Others, specify……..

Q17. What do you understand by sexual and reproductive health services? And why do you think adolescents be provided with sexual and reproductive health information?	Enquiry: Can you tell me some of the reproductive health services that you know about? And why you think what you know can help you? What kind of service provided for adolescents such as yourselves? Can you tell me reproductive health services available in your area
Q18.Is there any other service you want but cannot be offered?	Let the adolescent tell you what they want / expert

Q19. Can you tell me if you have ever accessed and used these services from any of the places that you mentioned?	If yes, would you share your experience with the services offered? What was your impression about the services offered? Enquiry: Can you tell me more about the whole process, what you went through and how you felt during your visit? What was good, what was bad? What did you think about the place and the attitude of the staff? Were you satisfied with the service? If not, why?
Q20. Can you tell me about where these reproductive health services are offered?	Enquiry: Where can adolescents obtain these reproductive health services in your community? Who do you want to offer the service to you ()
Q21. How would you like to see adolescent reproductive health services offered?	Enquiry: should it be part of the school curriculum in the District? If yes/no why?
Q22. Do you think adolescent sexual and reproductive health is being neglected in this community?	Enquiry about the support and interest from health care providers, community and NGO to the adolescents in the school or community

Q23.In your opinion, what encourages adolescents like you to make use of reproductive health services?	Enquiry: what can be done to make adolescents utilize sexual and reproductive services. What other things they expect to see or get or know about sexual and reproductive health services (confidentiality, attitudes of health workers, facility environment)

Q24. Will you use sexual and reproductive health services?	Probe further if those using will continue to use or recommend to a friend and those not using will start using

Q25. Do you think that it is necessary for adolescents like you to be provided with reproductive health services?	Enquiry: What are reasons for your thought?
Q26. Can you please share your views and experience on adolescent sexual relationships	Enquiry about pregnancy prevention before and after sex (emergency contraceptive usage), STI/HIV prevention, abortion care, counselling services

Q27. In your opinion, what discourages adolescents like you from making use of reproductive health services?	Enquiry: on social, cultural and physical barriers
Q28. What are some of the problems adolescent face when looking for information and understanding on sexual and reproductive health services?	Probe by asking barriers in school, home, health facility and or workers and the community

Appendix 3: Key Informant Interview Guide of Health Workers

Can we begin the interview? Yes/ No
Do you have any issue to be addressed before I start? Yes/No (if any let discuss it)
Interview date: …… Respondents code: ……
Recording time for the interview
Starting time: hour……. Minutes ……Ending time: hour ……..Minutes……

SOCIO-DEMOGRAPHIC CHARACTERISTICS

Q1. Name of the health facility: …	Q2. Place of the health facility: …
Q3. Occupation: ……	Q4. Rank: …….
Q5. Gender: …… .	Q 6. Department: ..……

Q7.How old are you?	Q8.What is your religion? .....
Q9.What is your ethnicity?	Q10.What is your marital status?
Q11.Where do you stay?	1.Single
1. Inside health facility compound	2.Married
2.Outside the health facility compound	Others, specify

Q12.Do you have adolescent friendly SRH corner in this facility and adolescent health specialist? Enquiry about the categories of staff in the facility who provide the ASRHS and the services they provide? Enquiry about if the place is conducive to deliver SRHS to adolescents	Q13.How will you react when adolescent approach you for any of the ASRHS? Enquiry about the health workers confidence in the work and if he/she likes or delivery SRHS to adolescent
Q14. How long have you ever been working in the health sector as adolescent care provider?	Q15. How many years have you been in this district working as a health professional in charge of adolescent health?
Q16. What do you know about sexual and reproductive health services?	Q16.Can you please mention some of the sexual and reproductive health services?
Q17.What reproductive health services do you offer to adolescents? Enquiry on type of services offered, those available, opening time and how often.	Q18. Which method does the adolescent prefer most? Enquiry: What do you think makes them prefer such methods? Are there any

How do they provide the service?(is it static or mobile services)	services that adolescents do not make use of?
Q19. What is your view on the services offered? Enquiry further, are they sufficient and accessible for the adolescents? Do the adolescents discuss any challenges they go through on accessing sexual and reproductive health services with you?	Q20.Do adolescents patronize in sexual and reproductive health service in your facility ?Enquire about their records keeping, number that has access and use the services
Q21.What are the reasons why adolescents seek health services in your facility and why they do not attend health care services?	Q22. What are some of the common conditions adolescents report to the facility? Enquire about how they approach health workers to seek care, how they behave and why?
Q23.What are your opinions on the use of the services by adolescents in the District? Enquire if it is i good or wrong? Are there any of the services that should not be provided to adolescents? If so, why? What is your perception on contraceptive promotion and provision for adolescents in the District?	Q24.What are some of the challenges do you face as adolescent health care provider in the course of delivering SRH services to adolescents? Enquire about socio-cultural, socio-economic, religious factors, parent-child communication, adolescent –health worker relationship, adolescent sexual relationship issues
Q25.Do you think adolescent sexual and reproductive health is being neglected in this community? Enquire about the support and interest from health care providers, community and	Q26.What are some of the experiences you have to share in promoting and providing sexual and reproductive health services?

NGO to the adolescents in the school or community	
Q27.What do you think might have gone wrong or right on the part of the schools that has impeded or smoothing the delivery of SRHS to adolescents in the district ?	

Appendix 4: Key Informant Interview Guide for School Counselors

Can we begin the interview? Yes no Do you have any issue to be addressed before I start? Yes/No (if any let us discuss it) Interview date: …… Respondents code: Starting time: hour……. Minutes…… ending time: hour ……..minutes

SOCIO-DEMOGRAPHIC CHARACTERISTICS

Q1. Name of school: ……	Q2. Location of the school: ……
Q3. Occupation: ……	Q4. Rank: …….
Q5. Gender: ……	Q6. Department: ..……

Q7.How old are you?	Q8. What is your religion? .....
Q9.What is your ethnicity?	Q10. What is your marital status?
Q11.Where do you stay?	1.Single
1. In side school compound	2.Married
2.Outside the school compound	Others, specify

Q12.How many guidance and counsellors do you have in this school?	Q 13.Are you a guidance counsellor for this school?
Q14.How long have you been working with Ghana Education Service?	Q15. How many years have you been in this district working as a professional guidance and counseling officer particularly in this school?

Q16.Where do you think adolescents get information on SRH issues from? Enquire about the medium in which they use to acquire SRH information.	Q17.Do you have adolescent school health services in this school? If yes, what do they involve? And who manage(s) the school health service? If no, why?
Q18.What do you know about adolescent sexual and reproductive health services?	Q19.What adolescent sexual and reproductive health services information do you offer to adolescents? Enquire on SRH souvenirs available for the adolescent in the school to access.
Q20.Do you discuss ASRH issues with the adolescent? Enquire if they do it on their own or part of the school curriculum? How many times in a term do they get such education?	Q21.In your view, which time in the school academic calendar do adolescents report more on SRH problems?
Q22.What are some of the SRH issue adolescent seek counselling on and how do they approach you on SRH matters?	Q23.Do you think adolescents have adequate knowledge on SRH? Why do adolescents engage themselves in sexual behaviors ?
Q24.What are some of the challenges do you face as a counsellor handling adolescents SRH issues? Enquire about socio-cultural, socio-economic, religious factors, parent-child communication, student-teacher relationship, students boy/girlfriend relationships	Q25.How can adolescents get access to SRHS when in school or outside school?
Q26. Do you think adolescent sexual and reproductive health is being neglected in this community?Enquire about the support and interest from health care providers, community and NGO to the adolescents in the school or community?	Q27.What do you think might have gone wrong or right in SRHS delivery to adolescents in the district on the part of the health sector?

Q29.What do you think can be done to improve on the services?

Appendix 5: A LETTER OF INTRODUCTION

UNIVERSITY FOR DEVELOPMENT STUDIES
(School of Allied Health Sciences)

P.O. Box 1883
Tamale, Ghana

Our Ref:
Your Ref:

October 29, 2019

Department of Public Health

To whom it may concern

Dear Sir/Madam,

INTRODUCTION: MPHIL COMMUNITY HEALTH AND DEVELOPMENT STUDENT

I write to introduce to you **Korung Amoatemaa Angeline** a MPhil Community Heath and Development student of the Department of Public Health, School of Allied Health Sciences.

As part of the requirements for graduation, the student is undertaking a study titled **"Knowledge, Access and Utilization of Sexual and Reproductive Health Service among Senior High School Adolescents in Sunyani West Districts."**
We would be grateful if you could grant her the necessary courses to facilitate their research process.
Thank you for the cooperation.

Yours Sincerely,

Dr. Abdulai Abubakari
(Head of Department)

DEP. OF PUBLIC HEA...
SCH. OF ALLIED HEALTH SCI...
UDS
P. O. BOX TL 1...

Appendix 6: Ethical Approval Certificate

Kintampo Health Research Centre (KHRC) Institutional Ethics Committee (IEC)

P.O Box 200
Kintampo, B/A
Ghana, West Africa

Tel: +233(35)2092037/+233504270501
E-mail: ethics@kintampo-hrc.org
fred.kanyoke@kintampo-hrc.org

FULL ETHICAL APPROVAL CERTIFICATE

Angelina Amoateman Korang
Seventh-Day Adventist Hospital
P.O. Box 1114
Sunyani, Brong Ahafo

Date: 11th September, 2020

Study ID: KHRCIEC/2020-12

Title of study: Knowledge, Access and Utilisation of Sexual and Reproductive Health Services among Senior High School Students in Sunyani West Municipality, Ghana

Principal Investigator: Angelina Amoateman Korang

Type of Review: Full Board Review

Approval Date: 11th September, 2020

Expiration Date: 11th September, 2021

1. The Kintampo Health Research Centre Institutional Ethics Committee (IEC) is constituted and operates in conformance with requirements of 45 CFR 46, 21 CFR 50, 21 CFR 56 and section 3 of the International Council on Harmonization Guidelines, as well as all applicable regulatory, legal, and other ethical requirements governing human subject research in Ghana. The OHRP Federal Wide Assurance number for the committee is 00011103; the IRB registration number is 0004854.

2. The above study in title was reviewed by the IEC and given Conditional approval.

3. The Committee acknowledge the response to the conditional approval letter and submission of revised protocol. The response and revised protocol has been reviewed and considered to be satisfactory. The Committee therefore grants you full ethical approval for implementation of the study.

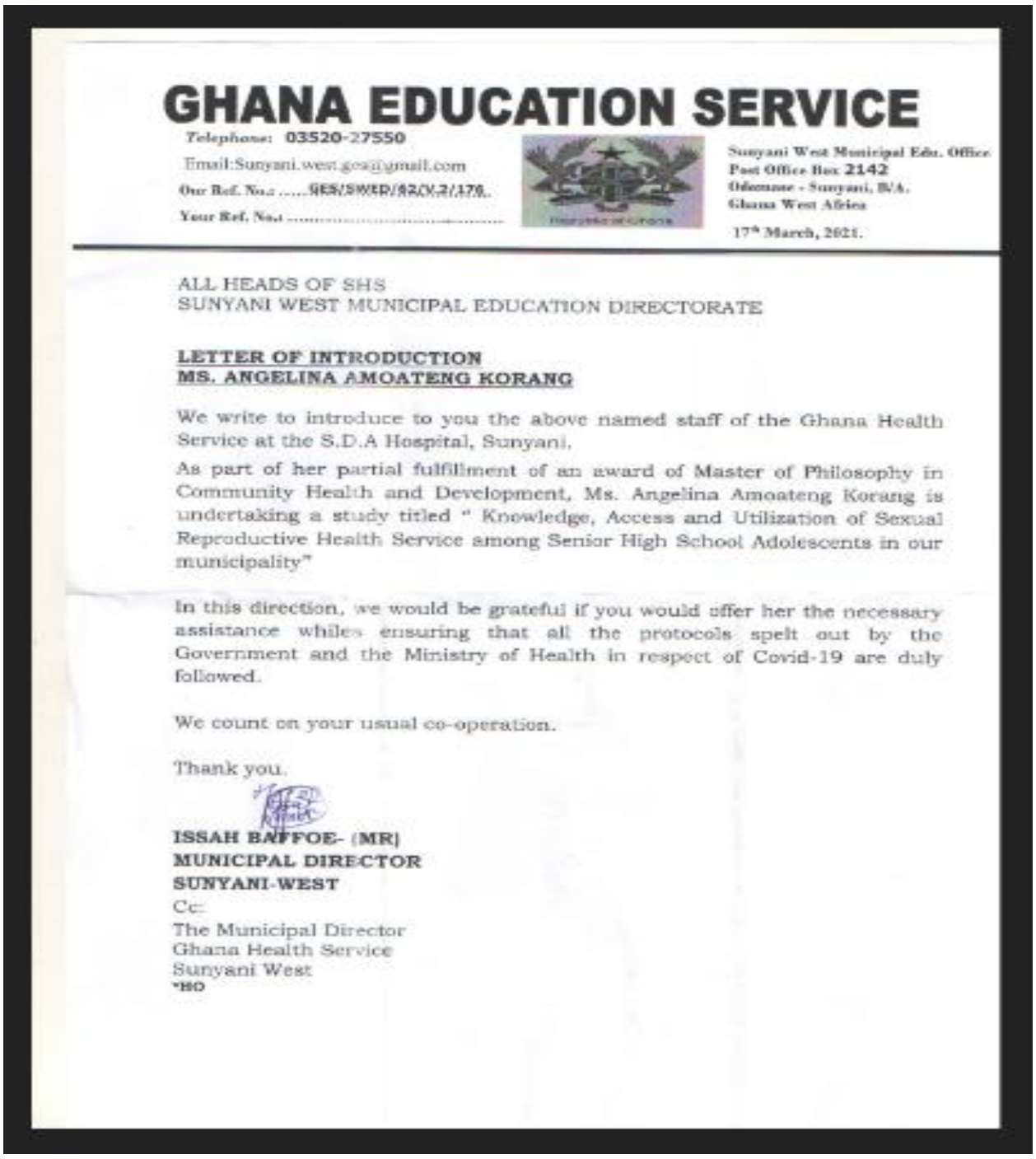
4. The following documents were reviewed and approved for use:
   - 4.1 Knowledge, Access and Utilisation of Sexual and Reproductive Health Services Among Senior High School Students in Sunyani West Municipality, Ghana Version 4.1 dated 20 August 2020
   - 4.2 Work plan and Study Timelines Version 4.1, dated 20 August 2020
   - 4.3 Consent form for Adolescents 18 years and above Version 4.1, dated 20 August 2020
   - 4.4 Assent form for Adolescent 14 to 17 years Version 4.1, dated 20 August 2020
   - 4.5 Questionnaire for Adolescence Version 4.1, dated 20 August 2020
   - 4.6 Adolescent Focus Group Discussion Guide Version 4.1, dated 20 August 2020
   - 4.7 Key Informant Interview Guide for Health Workers Version 4.1, dated 20 August 2020

Study File number: 2020-12

THE CHAIRMAN
KINTAMPO HEALTH RESEARCH CENTRE
INSTITUTIONAL ETHICS COMMITTEE

Page 1 of 2

Appendix 8: Letter of Introduction, Ghana Education Service



GHANA EDUCATION SERVICE

Telephone: 03520-27550
Email:Sunyani.west.ges@gmail.com
Our Ref. No.: .....GES/SWED/82/V.2/176.
Your Ref. No.: .....

Sunyani West Municipal Edu. Office
Post Office Box 2142
Odienase - Sunyani, B/A.
Ghana West Africa

17th March, 2021.

ALL HEADS OF SHS
SUNYANI WEST MUNICIPAL EDUCATION DIRECTORATE

LETTER OF INTRODUCTION
MS. ANGELINA AMOATENG KORANG

We write to introduce to you the above named staff of the Ghana Health Service at the S.D.A Hospital, Sunyani.

As part of her partial fulfillment of an award of Master of Philosophy in Community Health and Development, Ms. Angelina Amoateng Korang is undertaking a study titled " Knowledge, Access and Utilization of Sexual Reproductive Health Service among Senior High School Adolescents in our municipality"

In this direction, we would be grateful if you would offer her the necessary assistance whiles ensuring that all the protocols spelt out by the Government and the Ministry of Health in respect of Covid-19 are duly followed.

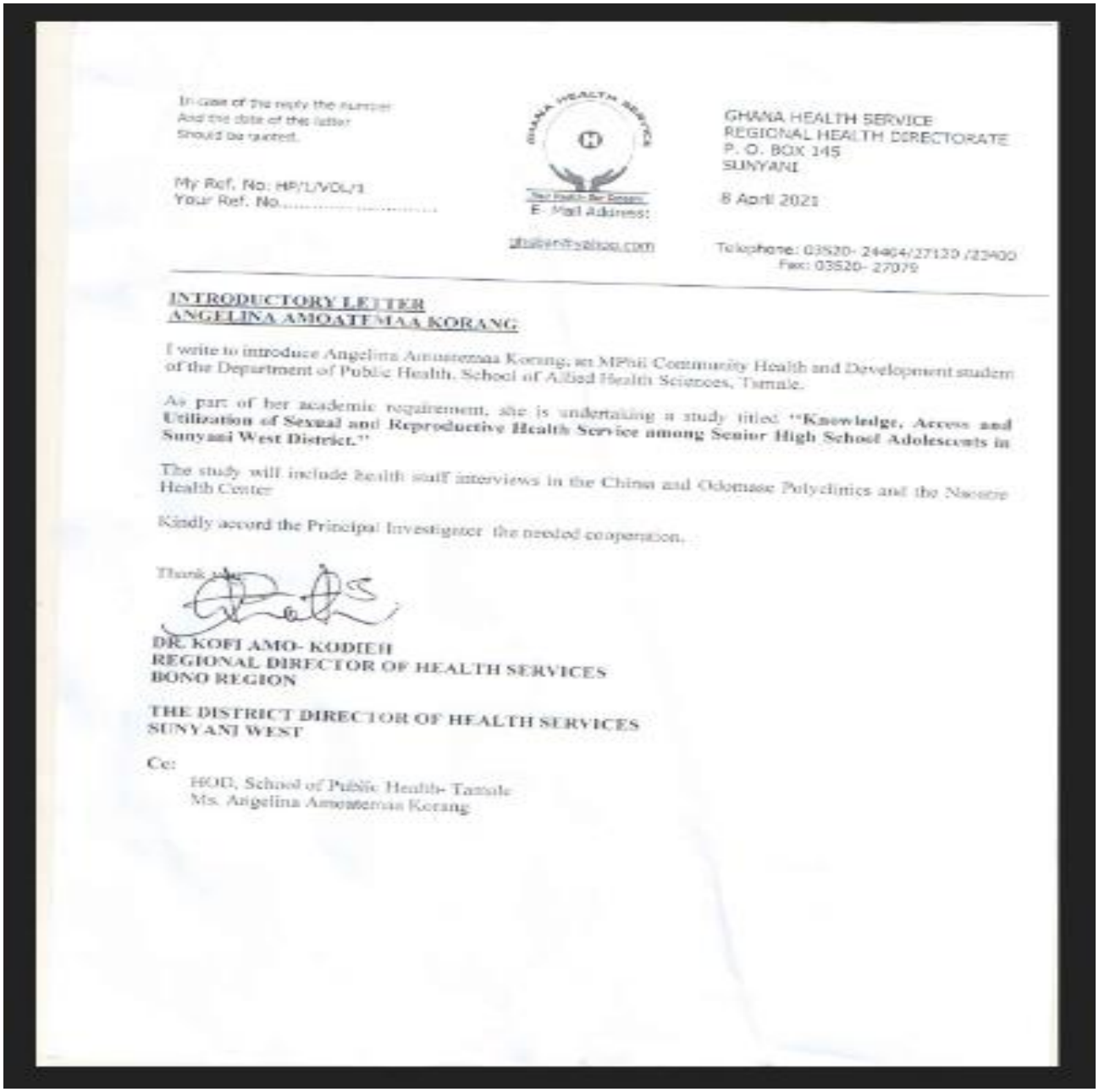
We count on your usual co-operation.

Thank you.

ISSAH BAFFOE- (MR)
MUNICIPAL DIRECTOR
SUNYANI-WEST

Cc:
The Municipal Director
Ghana Health Service
Sunyani West
*BO

Appendix 9: Introductory Letter, Ghana Health Service



In case of the reply the number
And the date of the letter
Should be quoted.

My Ref. No: HP/L/VOL/1
Your Ref. No.....

E- Mail Address:

GHANA HEALTH SERVICE
REGIONAL HEALTH DIRECTORATE
P. O. BOX 145
SUNYANI

8 April 2021

Telephone: 03520- 24404/27129 /23400
Fax: 03520- 27079

INTRODUCTORY LETTER
ANGELINA AMOATEMAA KORANG

I write to introduce Angelina Amoatemaa Korang, an MPhil Community Health and Development student of the Department of Public Health, School of Allied Health Sciences, Tamale.

As part of her academic requirement, she is undertaking a study titled **"Knowledge, Access and Utilization of Sexual and Reproductive Health Service among Senior High School Adolescents in Sunyani West District."**

The study will include health staff interviews in the China and Odomase Polyclinics and the Nacoora Health Center.

Kindly accord the Principal Investigator the needed cooperation.

Thank you.

DR. KOFI AMO- KODIEH
REGIONAL DIRECTOR OF HEALTH SERVICES
BONO REGION

THE DISTRICT DIRECTOR OF HEALTH SERVICES
SUNYANI WEST

Cc:
HOD, School of Public Health- Tamale
Ms. Angelina Amoatemaa Korang

Appendix 15: Original Plagiarism Report

KNOWLEDGE, ACCESS AND UTILISATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES AMONG SENIOR HIGH SCHOOL STUDENTS IN THE SUNYANI WEST MUNICIPALITY, GHANA

ORIGINALITY REPORT

18%	16%	5%	6%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS