UNIVERSITY OF CAPE COAST

ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH AWARENESS IN AJUMAKO-ENYAN-ESSIAM DISTRICT

VICTOR FANNAM NUNFAM

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BY

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THESIS SUBMITTED TO THE CENTRE FOR DEVELOPMENT STUDIES, FACULTY OF SOCIAL SCIENCES, UNIVERSITY OF CAPE COAST IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR AWARD OF MASTER OF PHILOSOPHY DEGREE IN DEVELOPMENT STUDIES

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DECLARATION

Candidate's Declaration

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

Candidate's Signature: …….. Date: ……

Name: ……..

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature: …… Date: ……..

Name: ……

Co-Supervisor's Signature: ……. Date: ……

Name: ……..

ABSTRACT

Sexual and reproductive health is fundamental to the development of human capital. However, early age at sexuality exposes adolescents to the health risk of early pregnancy and childbearing, sexually transmitted infections, unsafe abortions, lost of socio-economic benefits and thereby affecting the realization of their human capital potentials. Descriptive cross-sectional design, questionnaire and interview schedules were the methods employed in data collection. Probability and non-probability sampling techniques were employed to draw a sample size of 164 respondents due to time, money and logistics constraints.

The study showed that respondents have adequate stock of knowledge of sexuality and reproductive health hazards but are becoming sexually active at an early age with low or inconsistent use of contraceptives. The main reasons for early sexual activity were: sexual pleasure, peer influence and financial support.

Thus, the acquired knowledge and attitudes are direct manifestations of human capital development but the low/inconsistent use of contraceptives indirectly affects the development of respondents' human capital potentials. That is by restraining the acquisition of knowledge, skills, abilities and good health through education, training and health services as a result of the early pregnancy, childbearing/abortion and maternal/infant morbidity and mortality. Eventually these conditions affect the employability, productive skills, labour participation and future life-time earnings of respondents. Indeed, collaborative and sustained skill base education in schools and communities can improve on adolescents' sexual and reproductive health and human capital development in the district.

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DEDICATION

This thesis is dedicated to the Nunfams and to all my good friends.

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LIST OF ACRONYMS

AHD	Adolescent Health and Development
AIDS	Acquired Immune Deficiency Syndrome
CPO	Centre for Population Options
DHS	Demographic and Health Surveys
GPRS	Ghana Poverty Reduction Strategy
GSMF	Ghana Social Marketing Foundation
GSS	Ghana Statistical Service
GYRHS	Ghana Youth and Reproductive Health Survey
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
ICRW	International Center for Research on Women
ILO	International Labour Organization
IUCD	Intra-Uterine Contraceptive Device
JHS	Junior High School
MDGs	Millennium Development Goals
NGOs	Non-Governmental Organizations
OECD	Organization for Economic Cooperation and Development
ND	No date
NPP	National Population Policy
PAHO	Pan American Health Organization
PAI	Population Action International
PPAG	Planned Parenthood Association of Ghana
PRB	Population Reference Bureau
RCH	Reproductive and Child Health
SPSS	Statistical Product and Service Solutions
SHS	Senior High School
STIs	Sexually Transmitted Infections
TV	Television

UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VCT	Voluntary Counselling and Testing
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

Background to the study

Over the last two decades, the world's development process has been geared towards eradicating poverty and hunger, developing human capital, promoting gender equality and women empowerment. It also includes reducing maternal and child mortality, combating HIV/AIDS, malaria and other diseases as well as ensuring environmental sustainability, and developing global partnership for general development. These goals underpin the programme of action adopted at the 1994 International Conference on Population and Development (ICPD) and the Millennium Development Goals (MDGs) (UN, 1994; UNFPA, 2002).

It is well known that resources of different kinds (financial, physical, and human) are of paramount importance for any nation to realize its social and economic development goals. And of these, the human resource is understood to be the most fundamental. In this regard, Harbinson (1973) argues that human resources constitute the ultimate basis of the wealth of nations, while capital and physical resources are the passive factors of production. Capital is an all-inclusive concept that involves both man (skilled and unskilled human beings) and material resources in the form of machines, buildings, raw materials and natural resources,

which is utilized directly in further production (Schultz, 1963; Blaug, 1970). Thus, a wide array of human skills is essential in fueling the dynamics of development (Schultz, 1981).

Indeed, investment in formal education, human skill or on-the-job training, work experience, health care, physical fitness, social services, nutrition and general well-being as a way of building and improving upon human capital is most significant in achieving equitable and sustainable development (Blaug, 1970; Schultz, 1981). Human capital is a separate, "non-material" input akin to material capital, which determines how productive the other inputs of production will be in producing output. Certainly, sexual and reproductive health-care as an element of human capital formation can contribute to socio-economic growth and development: by reducing production losses caused by worker illness; by permitting the use of natural resources that have been totally or nearly inaccessible because of disease; by increasing the enrolment of children in school and enhancing their ability to learn; and by freeing up resources - both public and private - that hitherto would have to be spent on treating illness so that they may be invested in other kinds of human capital development activities (World Bank, 1993).

Therefore, "activities that influence future monetary and psychic income by increasing the resources in people" are investments in human capital. Over time, all these investments improve skills, knowledge, or health, and thereby raise money or psychic incomes (Becker, 1964). Thus, in the view of Seligman et al (1997), human capital is any quality specific to and undetachable from a person

that allows him/her to perform economic tasks more efficiently, vigorously or consistently, or allows him/her to lead a happier life. In the context of limited and dwindling financial and natural resources, a nation with a well equipped, educated, trained, healthy and developed manpower has the greater chance to socio-economic success (Seralgeldin, 1996).

However, the economic value of human capital is enhanced when its useful life is extended. Hence the life expectancy of a population is a factor in determining the incentives to invest in various forms of human capital and the value of the stock of such capital (Schultz, 1981). Adolescents are important category of the human resource of a nation whose human capital potentials need to be developed. Therefore, building and improving on their productive skills, health and technological knowledge is of utmost importance. The snag is that sexual and reproductive health status of adolescents all over the world is being threatened by the rising incidence of early but unprotected sexual activity. This leads to the inevitable consequence of unwanted pregnancies, and to early childbearing. It may also result in preventable unsafe abortions and sexually transmitted infections (STIs), including the deadly pandemic of human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) that is fast consuming the worlds' human resources, especially the youth and indeed adolescents (Awusabo-Asare et al, 2006; Kumi-Kyereme, et al, 2007).

Adolescents are those within the second decade of their lives, that is, the period between the ages of 10 and 19. They are individuals within the transitional period between childhood and adulthood (WHO, 1993). As a viable source of

human capital for most nations, investment in education, training, the sexual and reproductive health of adolescents has become the focus for policymakers, governmental and non-governmental organizations all over the world. Yet, a situational analysis of the world's adolescents' sexual and reproductive health indicates that adolescents become sexually active at an early age. Most adolescents in the Americas become sexually active at an early age. The average age of first sexual intercourse is about 15 to 16 years for girls and 14 to 15 years for boys in many Latin American and Caribbean countries (Berger, 1998).

Similarly, as adolescents grow and develop to physical, mental, and emotional maturity and achieve economic independence in Ghana, they become sexually active. The median age at menarche is 13.8 years with almost 40% of girls and 19% of boys aged 15-19 becoming sexually active, and by age 20, over 80% of adolescents have experienced their first sex. The median age at first sex is estimated to be 17.5 years, yet some adolescents in Kumasi and Accra as well as certain Caribbean countries start as early as 10 and 12 years (Nabila and Fayorsey, 1996; GSS, 1999; Behrman et al, 1999). The phenomenon of early sexual activity among adolescents in the world exposes them to the risk of unwanted pregnancies and STIs including HIV/AIDS. Hence the need for the appropriate sexuality education and contraceptive use is urgent. In Ghana, contraceptive awareness among adolescents is high but its use is relatively low. For instance, 76% of females and 88% of males aged 15-19 were aware of at least one modern family planning method. Though the condom and pill are the most frequently cited method, the use of condom by young people is low as they do not

feel confident in insisting on its use in a relationship (Tweedie and Witte, 2000; Awusabo-Asare et al, 2004). Consequently, low or inconsistent use of family planning method often increases the risk of unwanted pregnancies.

Currently, about 16% of adolescents on the average reported pregnant at the antenatal care between 2001 and 2003 (RCH Annual Report, 2003). The figure may be probably greater if we take into account those who might not have attended antenatal care for lack of access to such health facilities, or who preferred to seek the services of traditional birth attendance or because of poverty.

Another instance of concern to sexual and reproductive health of adolescents is the risk gap between the onset of sexual activity and marriage. The average time between first sexual activity and marriage is about two years for young women and more than five years for young men. Available evidence suggests that the median age at first marriage for females aged 20-24 is 19.3 years and 24.8 years for men aged 30-34 in 1998 (GSS, 1994; GSS, 1999). The relatively large gap between first sexual intercourse and marriage would obviously have serious inherent implications for the sexual and reproductive health of adolescents, and consequently the development of their human capital. Not only will they be at greater risk of being infected with STIs/HIV/AIDS but risk facing the social and economic consequences of lost education and lowered earnings.

As already indicated, one of the consequences of unprotected sexual activity among adolescents is unintended pregnancy, which most often results in abortion with little regard to its socio-economic and legal consequences. For

instance, 16% of women and 11% of men aged 12-24 who ever had sex reported being involved in terminating a pregnancy. However, not all abortions take place in a clinical setting. Thirty percent of women and 39% of men aged 12-24 indicated that the last abortion they were involved in took place at home or with the aid of a pharmacist. Some young females even used harmful but inexpensive methods to terminate pregnancies (Tweedie and Witte, 2000; Ahiadeke, 2001; Afenyadu and Goparaju, 2003). With regard to STIs, including HIV/AIDS, 27% of males and 22% of females knew one or more people who had ever had an STI. Among adolescents who had ever had an STI, three-quarters of young men and more than half of young women sought treatment, most often from a drug store, hospital or clinic (Awusabo-Asare and Anarfi, 1995; GSS, 1999; Tweedie and Witte, 2000).

It may be argued that, the situation of adolescent sexual and reproductive health and its implications for human capital development in the Ajumako-Enyan-Essiam District (AEED) may not significantly differ from the situation in Ghana as a whole. The district has a population of 91,965 people comprising 42,395 males and 49,570 females. Adolescents are about 21.55% of the entire population of the district and number up to 19,816 comprising 10,293 males and 9,523 females (GSS, 2002). Adolescents in the district may equally be sexually active. This is evident in the incidence of teenage pregnancies in the district. Available data on teenage pregnancy at the RCH Unit of the Ghana Health Services (GHS) in the district show teenage pregnancy rate of almost 16% on the average between 2002 and 2004 (RCH Annual Report, 2004). Reports from the Antenatal Care

Units of the hospital at Besease and the clinics at Ajumako and Nkwantanum-Essiam among others reveal that there have been cases of induced abortions. Indeed, the incidence of pregnancy and abortion is a manifestation of unprotected sexual activities of adolescents. Thus the risk and possibility of adolescents contracting STIs including HIV cannot be under-estimated in the district. Similarly, adolescents in the district have little or no access to contraceptives. Therefore the early age at which adolescents in the district indulge in unprotected sexual activity has implications for their sexual and reproductive health, which is inextricably linked to human capital development.

Recognizing that adolescents through out the country including the district are increasingly becoming sexually active and indulging in unprotected sex with its attendant problems, a number of measures have been put in place to stem the tide. For instance, the 1969 National Population Policy (NPP) was revised in 1994 to cater for the youth. One of the objectives is: “To educate the youth on population matters which directly affect them such as sexual relationships, fertility regulation, adolescent health, marriage and child-bearing, in order to guide them towards responsible parenthood and small family sizes” (Government of Ghana, 1994). More specifically, the 1998 draft Adolescent Reproductive Health Policy was ratified in 2002 to address the sexual and reproductive health concerns of adolescents. The policy is to provide the framework and the context within which information and services will be provided to adolescents and young adults on sexual and reproductive health.

In this regard, the GHS in collaboration with the Ghana Education Service (GES) and other stakeholders have undertaken various programmes to provide adolescents with adequate health information and knowledge in order to ensure behavioural change and increased utilization of reproductive health services in both public and private health delivery systems in Ghana (RCH Annual Report, 2004). The question however is, to what extent have these programmes succeeded in influencing attitudes to adolescent sexual and reproductive health issues or problems of the country and the district in particular.

Statement of the problem

The sexual and reproductive health of adolescents has become a global issue, essentially because it is fundamental to the development of one's full human capital potential, to the enjoyment of human rights and to an overall sense of well-being. Consequently, both the 1994 ICPD in Cairo and the 1995 4th Conference on Women in Beijing urged countries to promote the sexual and reproductive health of their population, especially that of adolescents.

It should be obvious that the adolescent sexual and reproductive health situation in the AEED could be similar to the situation in the country at large. The adolescents in the district can be said to be sexually active and this is clearly manifested in the teenage pregnancy rate of almost 16% (RCH Annual Report, 2004) and the incidence of unsafe abortions in the district. The obvious indication is that adolescents have little or no access to contraceptives and hence risk contracting STIs including HIV/AIDS.

The GHS, in collaboration with the GES, has undertaken some measures to address the sexual and reproductive health hazards of adolescents in the district as is being done in the entire country. This is evident in the establishment of the RCH Unit, the School Health Programme, and the Adolescent Health and Development Programme. However, these programmes are either earmarked for major health facilities or are non-existent in the district except the RCH Unit.

In recognition of the seemingly poor adolescent sexual and reproductive health hazards such as unwanted pregnancies and the risk of induced abortions as well as the higher risk of contracting STIs/HIV/AIDS, a programme dubbed "Time With Grandma" was launched at Ajumako Besease on April 19, 2005 by GHS to educate the adolescents on their sexual and reproductive health with the hope of preventing teenage pregnancy, induced abortion, STIs/HIV/AIDS and drug abuse, among other health problems in the district.

Essentially, the early onset of unprotected sexual activity of adolescents in the district has deleterious ramifications for their sexual and reproductive health and indeed on human capital development. Not only does it increase productive losses but decreases enrolments of adolescents in schools, affects their ability to concentrate and learn in school. Moreover, the little resources are spent in treating infected and affected adolescents instead of investing such resources in other kinds of human capital activities. Consequently, it would be worthwhile to investigate, establish and highlight that the sexual and reproductive health awareness of adolescents has implications for human capital development in the AEED.

Objectives of the study

The general objective of the study is to ascertain whether the sexual and reproductive health awareness of adolescents has implications for human capital development in the AEED.

The specific objectives of the study are to*:*

1. ascertain the effects of adolescents' knowledge of, attitude to and experiences of sex and sexuality on human capital development.
2. describe the factors influencing early sexual activity of adolescents.
3. determine how adolescents' knowledge of and attitude to the spread of STIs including HIV/AIDS influence human capital development.
4. assess the influence of adolescents' knowledge of, attitudes to and practice of contraceptive use on human capital development.
5. make recommendations to the district on ways to improving upon adolescent sexual and reproductive health, human capital development and to inform policy and programme formulation.

Research questions

Based on the above objectives, the following research questions were posed:

1. How does adolescent knowledge of, attitude to and experiences of sex and sexuality affect human capital development?
2. What factors influence early sexual activity of adolescents?

3. To what extent does adolescent knowledge of and attitude to the spread of STIs including HIV/AIDS influence human capital development?
4. Does adolescent knowledge of and attitude to contraceptive use influence its practice and human capital development?

Significance of the study

One of the major indicators of development and human capital is education and health. Adolescents are major source of human resource for any nation; hence their sexual and reproductive health should not be compromised. In this direction, there has been a reasonable amount of studies conducted on the subject matter of adolescent sexual and reproductive health in Ghana. However, studies of such kind are inadequate if non-existent in the AEED. It is therefore significant to undertake a study to ascertain whether the sexual and reproductive health awareness of adolescents has implications for human capital development in the AEED. The study thus intended to:

1. provide data on the sexual and reproductive health awareness of adolescents and its implications for human capital development.
2. serve as a reliable source of data for relevant government agencies, researchers, students, and organizations and institutions interested in adolescent sexual and reproductive health and human capital development.
3. contribute to knowledge and existing literature on adolescent sexual and reproductive health and human capital development.

4. serve as a source of policy and programme formulation that would promote and ensure the sexual and reproductive health of adolescents as well as their human capital development.

Organization of the thesis

The thesis is organized into six main chapters. Chapter one examines the background to the study, statement of the problem and objectives of the study. It also looked at research questions, significance of the study and organization of the thesis. Chapter two reviews related literature on the concepts and subject matter of the study. These include the concept of human capital, the human capital theory and investment in human capital development. The rest are the concept of adolescence, adolescent sexuality and reproductive health, sexual and reproductive health: implications for human capital development, sexual and reproductive health and human capital: a conceptual approach/framework.

The third chapter spells out the methodology of the study. It considers such methodological issues as the study design, study population, sample size and sampling procedure, sources of data, and instruments for data collection. Other methodological issues include the pre-test and main study as well as data collection and data processing and analysis. Chapter four and five is devoted to discussions, analysis and interpretation of the findings of the study. The areas of discussion and interpretation in chapter four relates to sexuality and human capital development while the chapter five is on reproductive health and human capital development. The sixth and last chapter focuses on the summary, conclusions and

implications, and recommendations of the study as well as areas for further research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter gives a detailed review of relevant literature relating to adolescent sexual and reproductive health and human capital development. The major thematic areas of review are human capital development, adolescent sexual and reproductive health, and sexual and reproductive health and human capital: a conceptual approach/framework.

Sexual and reproductive health and human capital development

This aspect of the study specifically reviews literature on the concept of human capital, human capital theory and investment in human capital development. It also reviews literature on the concept of adolescence, adolescent sexuality and reproductive health, and factors that influence early adolescent sexual and reproductive health and development as well as sexual and reproductive health: implications for human capital development.

The concept of human capital

The concept of capital often depicts assets available for use in the production of further assets. In other words, capital is referred to as stocks of

input that have the capacity to produce flows of economically desirable outputs. Capital can take different forms and these include: economic (financial, natural, produced), cultural, social and human (Becker, 1964; Bourdieu, 1986; Goodwin, 2003). Economic capital refers to stocks of inputs which is immediately and directly convertible into money and may be institutionalized in the form of property rights. Social capital consists of all actual or potential resources linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition (connections to certain individuals and groups). Cultural capital includes three states: embodied in the individual as long-lasting dispositions of the mind and body, objectified in cultural goods and institutionalized as academic credentials and diplomas (Bourdieu, 1986). Even though, the review of literature briefly touches on all forms of capital, the concept of interest to this thesis is human capital.

The genesis of human capital as a concept may be traced to attempts in the mid 18th century to understand the basis of economic growth. During this period, production function was used as the principal framework for understanding economic growth. Generally, the description of the function of production has been linked to the process by which inputs (machines, capital, labour, and natural resources) were combined with technology to produce output. Consequently, it became obvious that an increase in the amount of inputs especially capital and/or labour used in the production process was responsible for economic development. On the contrary, as the theory of development was tested over time by comparing the growth rate of inputs used in production to the rate of increase of output

produced given the level of technology, certain discrepancies became apparent. In fact, a large residual element of output growth remained after controlling for the growth in inputs and the level of technology, suggesting that some other factor was significantly contributing to the growth in output. One of the explanations advanced to account for this residual was human capital (Seligman et al, 1997).

Generally, the concept of human capital is considered as the stock of productive skills and technical knowledge embodied in labour which serves as means of production, into which additional investment yields additional output. In specific terms Seligman et al (1997:3) view human capital as "any quality specific to and undetachable from a person that allows her (or him) to perform economic tasks more efficiently, vigorously, or consistently-or allows her (him) to lead a happier life". According to the OECD (1998:9) human capital is "the knowledge, skills and competencies, and other attributes embodied in individuals that are relevant to economic activity". On the part of Ehrlich and Murphy (2007) human capital has been defined as

> "an intangible asset, best thought of as a stock of embodied and disembodied knowledge, comprising education, information, health, entrepreneurship, and productive and innovative skills, that is formed through investments in schooling, job training, and health, as well as through research and development projects and informal knowledge transfers"(p. 2).

Similarly, human capital is the stock of productive capacities of an individual, both inherited and acquired through education, training and health, which yields a flow of services (Becker, 1964). Unequivocally, these productive capabilities depend not only on one's knowledge, education, training and productive skills but include useful behavioural habits and level of energy, physical and mental health.

The human capital theory

Following the intellectual challenge posed by economic growth ever since the beginning of the systematic economic analysis, there have been various attempts by economists at addressing this challenge. For instance, it has been postulated that economic growth is associated with increasing division of labour (Smith, 1976) as cited from (Cannan, 1993). The idea relates fundamentally to specialization of the labour force. That is, breaking down of large jobs into many tiny components. Accordingly, each worker becomes an expert in one isolated area of production and thus increasing his efficiency (Becker et al, 1990). Furthermore, four types of fixed capital namely: useful machines and instruments of trade; profitable buildings; improvements of land and human capital. Accordingly whiles useful machines and instruments of trade facilitate and abridge labour; profitable buildings serve as means of procuring revenue. For example buildings such as shops, warehouses and farmhouses benefit both proprietor and the renter. Again, improvement in land quality by reducing it into a condition most proper for tillage and culture makes it more profitable. Like useful

machines, an improved farmland facilitates and abridges labour, affords much greater revenue to its employer and is equally advantageous and more durable than any of those machines. The acquired and useful abilities of all the inhabitants or members of the society have been referred to as human capital. For example the acquisition of such talents by the maintenance of the acquirer during his education, training or apprenticeship, is always expensive, yet is a fixed capital and realized in his person.

Consequently, Smith (1976) as cited from (Cannan, 1993) thought that human capital and the productive power of labour were both dependent on the division of labour. Hence, the greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity and judgment with which it is any where directed, or applied seem to have been the effects of the division of labour. Thus there is an existence of a complex relationship between the division of labour and human capital. In short, human capital referred to as skills, dexterity (physical, intellectual, psychological) and judgment. Furthermore, human capital can be acquired through formal schooling and on-the-job training. Even though growth was related to the division of labour, a clear linkage between them could not be established. Malthus (1798) as cited from Gilbert (1999), on the other hand, developed a formal model of a dynamic growth process, in which each country converged toward a stationary per capita income. In his opinion, when incomes exceed the equilibrium level, death rates fall and fertility rises, and the opposite occurs when incomes are below the equilibrium level. In other words, he perceived poverty and misery (decline of living conditions) as the natural

consequence of population growth resulting in unemployment and low incomes, the inability of resources (food supply) to keep up with rising human population and the irresponsibility of the lower classes to practice moral restraint. Accordingly, Malthus (1798) as cited from Gilbert (1999) suggested the regulation of family size of the poor. Hence, the well-educated, rational person would perceive in advance the pain of having hungry children or being in debt and would postpone marriage and sexual intercourse. Not withstanding the influence of the Malthusian model on economists' in the nineteenth century, fertility fell rather than rose as incomes grew during the past 15 years in the West and other parts of the world (Becker et al, 1990; Weeks, 1999).

Significantly, the neoclassical model of growth reacted to the failure of the Malthusian model by essentially ignoring any link between population and the economy. More importantly, adjustments in this model occur not in the population growth rate, but in the rate of investment in the stock of physical capital, which grows more slowly when per capita income exceeds its equilibrium level, and even grows more rapidly when per capita income is below equilibrium. Although, neither the Malthusian model nor the neoclassicists' approach to growth pays much attention to human capital development, evidence now indicates quite strongly, the close link between investments in human capital and growth. Since human capital is the stock of embodied knowledge and skills, and economic development depends on advances in technological and scientific knowledge, development presumably depends on the accumulation of human capital (Becker et al, 1990).

The basis of human capital lies in the theories of Schultz (1963), who argues that investing in education improves agricultural output. Furthermore, he explained the linkage between better education and improved productivity as a benefit for the economy as a whole. Consequently, Becker (1964), in building on Schultz's idea of human capital development, indicated that expenditure on education, training and health care are investments in human capital because people cannot be separated from their knowledge, skills, health or values in the way they can be separated from their financial and physical assets.

Crucially, the theory of human capital hinges on the assumption that rates of return on investments in human capital rise rather than decline as the stock of human capital increases, at least until the stock becomes large. The reason is that education and other sectors that produce human capital use educated and other skilled inputs more intensively than do sectors that produce consumption goods and physical capital. This leads to multiple steady states: an undeveloped steady state with little human capital and low rates of return on investments in human capital, and a developed steady state with much higher rates of return and a large and perhaps growing stock of human capital (Becker et al, 1990).

Another significant aspect of the theory is that the investment in education and health of a country could increase its human capital resource base and potential productivity. On the contrary, if sufficiently skilled labour was plentiful, such as in developing countries or service industries requiring minimum skills, most employers do not see the need to invest in their employees' education (Galor and Moav, 2001). However, as the essential skill set for many "knowledge

worker" jobs becomes more complex and the demand for highly-skilled employees rises, employers should see a direct productivity benefit by investing in their employees' capabilities through training programmes and the funding of post-secondary education (Galor and Moav, 2001). Despite the benefit employers can realize from supporting the education of their employees and potential hires, complete support for this concept has not been attained. In this regard the responsibility to increase one's human capital still rests largely with the individual. Therefore, it is extremely important to invest in the development of human capital at all levels as a significant step towards attaining economic development.

Investment in human capital development

Most often than not, while some activities fundamentally affect future well-being, other activities have their impact in the present. Similarly, as some affect money income, others affect psychic income, that is, consumption. For example, primarily, while on-the-job training affects money income, education at the college level could affect both money income and psychic income. The effect may operate through physical or human resources. Investment in human capital is therefore concerned with activities which involve education, training, health care, stamina and physical fitness that influence future monetary and psychic income by increasing resources in people (Becker, 1964; Schultz, 1981; Gaiha, 1993).

There are different forms of investment in human capital and these include: schooling or education, on-the-job training, medical care, migration, and

searching for information about prices and incomes. Even though their effects differ in relation to earnings and consumption, in the amounts typically invested, in the size of returns, and in the extent to which the connection between investment and return is perceived all such investments improve skills, knowledge, or health, and thereby raise money or psychic income (Becker, 1964).

It has become obvious from the literature that knowledge, skills and health as a result of education, training and medicare respectively are qualitative attributes of investment in human capital development. However, the concept of quality is not new in economics. For instance, the principle of Ricardian rent indicates that changes in the original properties of land lie at the root of changes in rent paid for land use. Therefore, a cropland becomes more valuable when its productivity improves by means of investment. Similarly, Schultz (1981) argues that the attributes of acquired population quality which can be augmented by appropriate investment can be treated as human capital. Furthermore, two classes of human capital can be distinguished by equating quality attributes and human abilities namely innate and acquired. Pragmatically, every person is born with a particular potential ability-determined by his/her genes. Even with the wide range of innate abilities, it might be convenient to presume that in large populations the distributions of these innate abilities tend to be the same from one country to another. On the basis of this assumption, it follows that the differences in population quality between such countries are a consequence of the differences in acquired abilities.

Again, any element of quality that a human being acquires from birth on, as indicated by Schultz (1981) entails a measure of cost. For that reason, whenever it is worthwhile to incur this cost, there is a motivation to invest in the quality component.

> "Child care by parents, primarily by mothers, is a variable source of quality. So are home and work experience, schooling, and health care. Experience derived by children from their part in family activities, and from work in later life, is a major source of useful skills" (Schultz, 1981:22).

Consequently, economic modernization has an appreciable positive effect in producing new opportunities and incentives to acquire additional human capital. It follows that modernization is a source of many new experiences that entail learning valuable new skills and acquiring information of value. To this end the opportunities and incentives to invest in each of these forms of human capital are interdependent. To understand the actual investment in acquired human capital, it is necessary to be ever mindful of the interactions among the various processes that contribute to population quality. Essentially, investments geared towards improving human capital through the acquisition of skills, knowledge or health can be attained through investment in education, training and medical care.

Investment in schooling/education

The concept of education, like freedom, bristles with difficulties as it is hard to define because its connotation depends upon a particular cultural setting.

Education is intimately bound to the culture of the community it serves, hence its meaning differ from one community to another. To educate means to educe or draw out of a person something potential and latent, that is, to develop a person morally and mentally so that he is sensitive to individual and social choices and able to act on them (Schultz, 1963). Accordingly, a school is an institution specializing in the production of training, as distinct from a firm that offers training in conjunction with the production of goods. Education is therefore a process of acquiring training from a formal institution like the school. Such training is quite distinct from firms like those for drivers/barbers; specialize in one skill, while others like universities, offer a large and diverse set of skills or training (Becker, 1964). Indeed investment in human capital through schooling/education offers specialized training to students in order to improve upon their productive capacities and future earnings. This can be used as a good ground to educate adolescents in or out of school to acquire those specialized skills geared towards improving upon their sexual and reproductive health and human capital.

Invariably, this mode of education improves on the knowledge and skills of adolescents resulting in their human capital development and in the long-run result in the alleviation of poverty. Accordingly, Gaiha (1993) argues that an effective anti-poverty interventions and investment in education can be designed to mitigate distress and hardships among the vulnerable sectors of the rural populations by making them more self-reliant over a period of time. Indeed, in all economies ranging from developed to the developing-people with more education

earn on average higher incomes than people with less education, at least if the people being compared are of the same age. In other words, Blaug (1970) observes that additional education and training pays off in the form of higher life-time incomes. But even if additional education did not raise life-time earnings, education might still be an investment from the social point of view. Furthermore, the demand for highly skilled and educated manpower in a growing economy might motivate students to stay longer in school in order to acquire the necessary knowledge and skill as a way of investing in the future productive capacity of the population. Indeed the formation and development of human capital involves education, work experience, physical fitness and stamina (Schultz, 1981; Gaiha, 1993).

However, according to Behrman (1990) the relationship between human capital and poverty is a complex one in as much as each influences the other. Lack of human capital among the poor and vulnerable takes a variety of forms: illiteracy, less or lack of income, morbidity resulting in lack of stamina (Gaiha, 1993). It must be noted that the production of human capital takes time. For example, the provision of basic education in rural areas may be impeded by lack of building and trained teachers. Even when the infrastructure and key inputs exist, basic education usually takes between five and sex years of classroom instruction. On the other hand, because of the scarcity of facilities for acquiring high-quality human capital in rural areas, acutely poor households are unable to invest in human capital. Once caught in this vicious circle poverty reinforces itself (Gaiha, 1993).

Nonetheless, education contributes to human well-beings in different ways: by improving people's ability to acquire and use information; by deepening their understanding of economic environment; by broadening their perspective and improving the choices they make as customers, producers, and citizen; by strengthening their ability to meet their wants and those of their family; by increasing their productivity and their potential to achieve a higher standard of living; by improving people's confidence and their ability to create and innovate; and by expanding their opportunity for personal and social achievement.

Investment in on-the-job training

On-the-job training is a form of investing in human capital which offers most workers with the opportunity to increase their productivity by learning new skills and perfecting old ones while on the job (Becker, 1964). There are two forms of on-the-job training: general training and specialized training.

One concept that is fundamental to the theory of human capital is the concept that the value of a person's human capital improves with the acquisition of more knowledge, skills and improved health. This increases the person's employability, income potential and productivity. For example, the human capital theory suggests that if an individual has acquired knowledge and skills in a number of different disciplines, and is in good health, he has the advantage of applying another skill set to get a job in another industry when one area of the economy suffers or company closes down. This flexibility can also benefit a company or society as employees with knowledge and skills of a number of

different jobs can be transferred between positions to respond to rising and falling demand in the marketplace for different products and services (McIntyre, n.d.).

However, this kind of inter-job flexibility mostly applies to positions requiring a lesser amount of training or education. The time an employee needs to invest in increasing their human capital needs to be supplemented by on-the-job experience and productivity. An employee cannot devote years of time to a great number of lengthy, advanced education degreed programmes and still get the work experience and compensatory productivity they need in each area of study (McIntyre, n.d.). Similarly, employers cannot afford to educate their staff in a great many disciplines requiring advanced knowledge and skills, without compromising corporate productivity (Bouchard, 1998).

McIntyre (n.d.) explains that this requires individuals or corporations to evaluate the benefits and disadvantages of general training and specialized training respectively, based on their individual requirements, working philosophies and goals. For example, a company must consider that when training an employee for general skills that are readily transferable, the employee can also apply these skills in another company. Conversely, the employee must consider that, although the skills may be highly transferable, it is likely that many other people have the same skills and competition for corresponding jobs could be intense. “Most on-the-job training presumably increases the future marginal productivity of workers in the firms providing it. General training, however, also increases their marginal product in many other firms as well” (Becker, 1964). Specific training enhances an employee’s skills in a manner that is primarily (or

uniquely) applicable to the needs of the employer: “Training that increases productivity more in firms providing it will be called specific training. Completely specific training can be defined as training that has no effect on the productivity of trainees that would be useful in other firms” (Becker, 1964).

Investment in health

Health has been popularly considered as the state of complete physical, mental and social well-being and not merely the absence of disease and infirmity in all matters relating to an individual’s system and to its functions and processes. Health has also been regarded as one of the analogous dimensions of human capital, and ranking high in importance is improvement in health care delivery (UN, 1994; Schultz, 1981).

Fundamentally, the human capital theory treats everyone’s state of health as stock, that is, health capital, and its contributions to health services. Notably, the quality of initial stock of health is partly inherited and partly acquired. The stock then depreciates over time at an increasing rate in later life. The theory also highlights that gross investment in human capital entails acquisition and maintenance costs, including child care, nutrition, clothing, housing, medical services, and care of oneself. The services that health capital renders consist of “healthy time” or “sickness-free time” which contributes to work, consumption, and leisure activities. Again, health capital tends to make a person more creative, more efficient in producing goods, services and new ideas. Hence the

improvements in health revealed by longer life-span of people have undoubtedly been the most important advance in population quality (Schultz, 1981).

In this regard, Schultz argues that the economic value of human capital, be it entrepreneurship, skills, or schooling, is enhanced when its useful life is extended. Consequently, according to Ram and Schultz (1979) as cited from Schultz (1981), the life expectancy of a population is an important factor both in determining the incentives to invest in various forms of human capital and the value of the stock of such capital. Thus there is also no other quality attributes that is as important and pervasive as improved health and its contributions to the welfare of people especially in low-income countries, regardless of the emphasis laid on the undesirable effects of health in causing population growth.

Significantly, the incentive to acquire more human capital by the incentive to acquire more education and on-the-job experience implies investments in future earnings. Similarly, gains in the state of health and longer lifespan also implies increases in the productivity of workers as a consequence of longer participation in the labour force, greater physical ability to do work, and less loss of working time because of ill health (Schultz, 1981; Gaiha, 1993).

The concept of adolescence

Adolescence comes from the Latin word *adolescere* meaning “to grow up” or “to grow to maturity” (Muss, 1996). Adolescents are young people within the second decade of life, that is, persons between 10 and 19 years of age (WHO, 1998). Adolescents are a large and growing segment of the world’s population.

They number more than one billion, comprising nearly one-fifth of the world population (UN, 1994). Generally, adolescence is considered as the transitional period between childhood and adulthood, during which young people experience changes following puberty, but do not immediately assume the roles, privileges and responsibilities of adulthood.

Adolescent sexuality and reproductive health

Sexuality encompasses the physical capacity for sexual arousal and pleasure as well as the personalized and shared social meanings attached to both sexual behaviour and the formation of sexual and gender identity (Ceres, 1981). Adolescent sexuality is therefore the state of the human sexual life at puberty which is characterized by fantasy, feeling and attitudes that have as their own one or any combination of physical characteristics and physiological drives (Ellis and Abarbanel, 1961). On the whole, the experience of an individual's sexuality as adolescents is mediated by biology, gender role, and power relation as well as by factors such as age and socio-economic conditions such as education, training, morals values, self-esteem and assertiveness (Dixon Mueller, 1993; Zeidenstein and Moore, 1996). However, the extent of adolescents' sexuality has implications for their reproductive health.

Hence, adolescent reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the adolescent's reproductive system and to its functions and processes (UN, 1994). The implication is that adolescents are able to have the

capacity to reproduce, and the freedom to decide if, when and how often to do so. The nature of adolescence differs tremendously according to age, sex, marital status, level of education, skills, region and cultural context. However, the general improvement in adolescent sexual and reproductive health and other forms of human capital tend to increase the productivity of adolescents as students in school or under training or workers.

Adolescent sexual activity

Increasingly, adolescents especially girls, are characterized by early onset of puberty (menarche) and late marriage making them vulnerable to early sexual relationship (Winter, 1982). In North America for instance, age at menarche decreased by three to four months each decade after 1950; in 1988 the median age at menarche was 12.5 years among girls in the U.S. (Winter, 1982). In developing countries age at menarche seems to be decreasing faster. The average age at menarche in Kenya fell from 14.4 years in the late 1970s to 12.9 years in the 1980s (Gyepi-Garbrah, et al, 1985). In the case of Ghana, age at menarche is 13.9 years (GSS, 1999). According to Moreland and Logan (2000) the impact of early age at menarche is that young women are capable of conceiving at younger ages than in the past.

Thus, the early age at which adolescents engage in sexual activity is gradually becoming a worldwide phenomenon. For instance, among women aged 20-24, the median age at first intercourse has decreased from 17.4 to 16.9 between 1993 and 1998; for males aged 20-24, the median age increased from 18.4 to 19.5

(GSS, 1999). Among 15-19-year-olds, 38% of females and 19% of males had ever had sexual intercourse (GSS, 1999). Hence, on the average, females begin sexual intercourse about two years earlier than males. This can affect their sexual and reproductive health outcomes and by extension their human capital development.

Given the evidence of early sexual activity among adolescents, would one be right in assuming that inadequate guidance and counselling and low contraceptive use, results in the risk of early but unintended pregnancies? Table 1 shows the trend of pregnancy rates among adolescents (15-19 years) in Ghana from 1997 to 2000. It suggests that the trend in adolescent pregnancies is falling in terms of proportions.

Table 1: Pregnancy rates among adolescents (15-19 years) in Ghana

Year	Absolute Number	Antenatal Care (ANC) Coverage	Proportions of Adolescents
1997	93,321	85.2%	15.2%
1998	96,187	87.5%	15.1%
1999	107,885	86.4%	15.1%
2000	86,527	94.2%	14.6%

Source: Reproductive and Child Health (RCH) Unit Annual Report (2000).

Overall, however, age at marriage appears to have risen more rapidly than age at first sexual experience, thereby significantly increasing the numbers of young people who have sex before marriage. The discussion above suggests a gap between the initiation of sexual activity and marriage resulting in adolescents

engaging in multiple sexual relationships. This situation has the tendency of stifling the human capital potentials of adolescents who are expected at this age to be in school to improve on their level of knowledge and skills.

Even though, few studies have examined sexual partnership of young people in Ghana with different time periods and samples, data on lifetime and current sexual partnerships give an indication of a fairly high level of multiple partnerships and a level of sexual networking (Awusabo-Asare et al, 2004). Clearly, adolescent engage in early sexual activity and with multiple sexual partners but with little regard to the repercussions it has on their reproductive health and human capital formation. But the question is: what factors influence early adolescent sexual activity and reproductive health and human capital development?

Factors that influence early adolescent sexual activity and reproductive health and development

The development of adolescent describes a transition where young adults experience a series of changes involving their biological, cognitive and psychosocial make up that affect how they later live as adults. Not only are these changes influenced by the gender and level of physical, psychological and cognitive maturity of the individual, but also they are influenced by the socioeconomic, cultural and political milieu in which the adolescent lives. Thus, the multiple factors at both individual and social/environmental level that

influence the sexual activity and reproductive health outcome of adolescents would be examined.

Factors that influence adolescent sexual activity and reproductive health and development at the individual level

During the second decade, young adults go through a series of biological, cognitive and psychosocial orientations that influence their sexual and reproductive health and development. These factors are inter-dependent, in that, biological processes stimulate cognitive growth which is linked to the psychosocial and emotional processes of human development, including sexual development (Schutt-Aine and Maddaleno, 2003).

Adolescent growth and development, which is often marked by the onset of puberty involves a series of biological, cognitive and psycho-emotional changes. The second decade of life is often characterized by the most rapid phase of human growth and development, following the prenatal and postnatal periods. During puberty, both sexes experience important changes, which include an increase in height and body mass, accompanied by the emergence of secondary sex characteristics. However, puberty differs among boys and girls.

As already observed, young people are reaching sexual maturity at younger ages, which has long-term implications for sexual behaviours, including intercourse. Data indicates that first intercourse for both girls and boys occur one to two years after girls' menarche and boys' first nocturnal emission (Haffner, 1995). Adjusting to the biological changes that occur during puberty is a major

task of early adolescence. Therefore, adolescents need to be adequately prepared through the process of counselling at home, in school and in the church or mosque (Schutt-Aine and Maddaleno, 2003). However, this process is influenced by the stages of cognitive development especially the formal operational stage.

The cognitive growth process is associated with the development of formal operational thought that includes increases in the capacity for abstract reasoning, hypothetical thinking and formal logic. This result in adolescents who are increasingly likely to reason abstractly, understand the social context of behaviours, think about alternatives and consequences when making decisions, assess the credibility of information, consider the future implications of actions and control impulses (Haffner, 1995; Juszczak and Sadler, 1999). Hence, cognitive changes that occur during puberty cause adolescents to move from concrete thinking to more abstract thoughts and behaviour. However, this healthy development depends on the extent of their psychosocial development.

Psychosocial development is explained by adolescents' perception of themselves in relation to their social and environmental surroundings. Adolescents' behaviour varies by level of educational, physical, psychological and social capacity of the individual. The major influences on psychosocial development include sexual identity, moral, ethical and spiritual development and independence/dependence struggles between peer and parental influences (Juszczak and Sadler, 1999). During early (10-13) and middle (14-17) adolescence, young people solidify their gender identification by observing gender roles of adults in their environment. They develop personal images and

ideals of masculinity and femininity based on social sex-role stereotypes (Kohlberg, 1987).

Additionally, during middle adolescence the youth tend to assert their independence by disconnecting and separating from their parents and other adults. They are also reluctant to accept parental advice and criticism and tend to be strongly attached to their peer groups. Social influences determine whether this behaviour becomes constructive or destructive to adolescent sexual and reproductive health and well-being in general.

Social and environmental factors that influence adolescent sexual activity and reproductive health and development

Adolescent sexual and reproductive health outcomes is also explained by social, political and environment characteristics, such as family and peer relationships, education, culture, socioeconomic situation, government policies and mass media. Probably the family is the most important factor contributing to adolescent sexual and reproductive health and development. Family relationships can nurture and guide young people, set limit and challenge certain assumptions and beliefs prevalent within a culture. Caring relationships with adults and friends, and positive school experiences are significant aspects of a supportive environment for adolescents. Research shows that parents who adopt an “authoritative-democratic” style characterized by warmth, firm control, limit setting and attention to the development of the child’s social and cognitive skills tend to foster self-confidence, self-control and effective coping skills in their

children. On the other hand, autocratic parents, especially severely critical, protective or anxious parents, tend to undermine their children's sense of self worth and self-efficacy, impairing psychological development (Gottlieb, 1998).

Furthermore, while young people balance between defining their autonomy and depending on their parents, they tend to identify closely with their peers. Peer acceptance plays an important role in adolescents defining their identity and self-esteem. Peer influences are multidimensional and adolescents are not uniform in their susceptibility to it (Feldman and Elliott, 1990). Generally, parents, teachers and adults can assist adolescents to deal with peer pressures through increased communication and participation in their lives and social network. They can also serve to enhance life skills, including negotiation skills, which help young people to assert and act upon their desires and potentially avert coercive situations (Schutt-Aine and Maddaleno, 2003). This can enhance adolescents' sexual and reproductive health, knowledge, skills, values and attitudes through education, training and health care.

Education is a key defining variable for the acquisition of knowledge, skills and values. It is also a major factor for almost all health outcomes, positive and negative. Increasingly, educational opportunities often lead to increased economic and employment opportunities, and young people's ability to secure their autonomy and economic future. Consequently, the price of an uneducated, unskilled young population is almost always greater than the cost of promotion and prevention programmes designed to help youth achieve these goals (PAHO,

1998). Therefore, when young people fail to receive adequate education, the cost to society is substantial (Schutt-Aine and Maddaleno, 2003).

In addition, educational opportunities are linked to increased positive sexual health outcomes, improve people's ability to acquire and use information, deepen their understanding of the economic environment, broaden their perspectives and strengthen their ability to meet their wants and those of their family by increasing their productivity (Schultz, 1981). It is well documented that increased educational opportunities lead to later initiation of sex, age of marriage, childbearing and fewer children over the course of their lives (Singh, 1998; GSS, 1998).

It is therefore important to ensure that youth are provided with the necessary competencies and life skills in order to secure a healthy future. These life skills that enhance the cognitive development of young people include decision-making and problem solving skills, creative and critical thinking, communication and interpersonal relations, self-awareness, self-efficacy and coping with emotions and stress (Schutt-Aine and Maddaleno, 2003). Thus, education and training obtained in school provides knowledge and skills leading to increased empowerment and control over lives. Eventually, this enables the youth to make decisions that lead to healthier outcomes and human capital development by increasing their employability, productivity and potential income.

There also seem to be a link between socioeconomic status, equity and health outcomes as well as knowledge and skill development. Poverty and social inequity are associated with many unhealthy outcomes for adolescents, including

their knowledge, sexual health status. These include poor nutrition, inadequate health care and poor school achievement. Consequently, adolescents from poorer families are more likely to initiate sexual intercourse at a younger age. Again, adolescents with less education and fewer opportunities for income generation become victims to a perpetual cycle of poverty (Tsui et al, 1997; Singh, 1998). More significantly, the level of poverty and the nature of policy and legislation may pose serious accessibility challenge for the youth and indeed adolescents who are psychologically matured and developed to seek sexual and reproductive health services such as contraceptive services, early treatment of STIs and post abortion care. These factors pose barriers to youth fulfilling their income potential, sexual health and education. If the stresses of poverty could be lightened through poverty interventions and appropriate health care and higher education achieved, the overall health of young people might have fewer negative consequences on their life-time earnings (Coupey and Klerman, 1992; Schultz, 1981).

In addition, rights and empowerment of adolescents are often influenced by the nature of policy environment. The policy environment including the existence or limitation of rights at the macro level is linked to adolescent sexual and reproductive health, the prevention of health problems and the provision of services including health, education and training. Restrictive laws, policies and regulations of countries have the tendency of impeding adolescents from exercising their rights and taking advantage of available opportunities for sexual and reproductive health information and services in general.

Consequently, the influence of the mass media in sexual and reproductive health education of adolescents is very fundamental. Over the last 30 years the radio, print and television have had a greater influence on adolescents (Santrock, 1998) and in recent times the internet. The media has a profound effect on information and communication of values and behaviour regarding sex and sexuality. On American television, a content analysis found that 75% of prime-time shows on the major networks contain sexual content, but only 10% of incidents include any mention of the risks or responsibilities of sexual activity or the need for contraception (Strasburger and Wilson, 2002). There are consistent messages that glamorize sex without discussing the options of abstinence, or the potential negative consequences of sexual behaviour, such as unwanted pregnancy and STIs.

On the contrary, television is responsible for teaching young people about STIs including HIV/AIDS. In Brazil, for instance, an AIDS prevention video entitled “Via de Rua” (Street Life) contributed to an 18% and 20% increase in condom use and youth knowledge levels respectively (UNICEF, 1997). Hence, the mass media should be used more vigorously to promote sexual and reproductive health among the youth.

Sexual and reproductive health: implications for human capital development among adolescents

It has become obvious in the preceding discussions that, the early indulgence of adolescents in sexual activity is motivated by inherent and acquired

factors. This phenomenon of early sexual activity put adolescents at special risk of STIs including HIV/AIDS, health risk of early pregnancy, unintended pregnancy and complications of unsafe abortion and socio-economic consequences of early childbearing. In the long run their human capital potentials are not wholly and comprehensively developed.

STIs/HIV/AIDS

STIs including HIV/AIDS infection among adolescents are not uncommon. Apart from HIV/AIDS, other STIs include gonorrhea, syphilis, chlamydia, genital herpes, chancriod, human papilloma virus and hepatitis among others. Generally, the incidence of STIs including HIV/AIDS among young people occurs in both developed and developing countries. Among all age groups in the US for example, girls age 15-19 have the highest incidence of gonorrhea among females, boys age 15-19 have the second highest incidence among males (United States, CDC, 1995). In many developing countries, data indicate that up to 60 percent of all new HIV infections are among 15 to 24-year-olds. Again, Sub-Saharan Africa, contains almost two-thirds of all young people living with HIV-approximately 6.2 million people, 75% of whom are females (UNAIDS and WHO, 2000; UNAIDS, 2003).

Contracting an STI particularly HIV can affect a young person's prospects for education, on-the-job training, health, employability and improving upon his productive capacities in the future. The implication is that in countries where HIV rates are very high the potential labour force would be decimated on account of

AIDS related deaths. Again, AIDS imposes both direct and indirect costs on national economies. The ILO notes that the cost of treating individuals infected with HIV/AIDS exceeds per capita GDP in a number of countries. Indirectly, resources allocated to combat AIDS may mean lower investments in education and health care, with consequences for the labour market and long-term economic growth (UN, 1994).

Health risks of early pregnancy

Another implication of early sexual activity is the health risk of early pregnancy of adolescents. Many adolescents are sexually active and more are likely to become pregnant and subsequently give birth. It is worth noting that when a woman is too young, pregnancy-wanted and unwanted-can be dangerous for both mother and infant. Complications of childbirth and unsafe abortion are among the major causes of death for women under age 20 (PRB and CPO, 1994). In addition, socioeconomic factors such as poverty, malnutrition, lack of education, and lack of access to prenatal care or emergency obstetrical care can increase a young woman's risk of pregnancy-related complications (Satin et al, 1994) and subsequently affect their human capital development or lead to death.

In situations where young girls and their babies survive, not only do they face enormous health risks but risk loosing the benefits of investing in human capital development. For instance, adolescent parents, especially girls, are often compelled to leave school, resulting in limited economic opportunities that may adversely affect their well-being and that of their children. As the world economy

changes, wage-paying jobs requiring formal education are displacing traditional occupations. Young parents whose education is interrupted have fewer opportunities to earn money for their families. Indeed, additional education and training pays off in the form of higher life-time incomes (Blaug, 1970; Gaiha, 1993).

Unwanted pregnancy and complications of unsafe abortion

One of the consequences of unprotected sexual activity among adolescents is unwanted pregnancy. In developing countries, approximately 60 percent of pregnancies and births to married and unmarried adolescents are unintended (ICRW, 1996). Increasingly, when young adults are confronted with unwanted pregnancy, they turn to abortion with little regard to its health, socioeconomic and legal consequences. Indeed, pregnant students in developing countries often seek abortion to avoid being expelled from school (Zabin and Kiragu, 1998).

In addition to the reduction of health risks, young women who delay childbearing until after adolescence have greater opportunities to develop their human capital by acquiring the needed knowledge and skills necessary for raising a family and competing successfully in the job market by improving on their productive capacities. Increased education is strongly associated with young women's postponement of marriage and childbearing until after her adolescent years (UN, 1994; AGI, 1998). More over, reducing illiteracy and improving the quality of education for young men and women are essential to raising their productivity and improving their employability in a highly competitive labour

market. The quality and appropriateness of education and training have an impact on the employability of young people. Again, preparing young men and women for future employment, social participation, entrepreneurship and lifelong adaptation to changing socioeconomic circumstances increasingly requires good health, higher levels of education, supportive mentors and appropriate curricula (Schultz, 1981; UN, 1994). It is therefore important to encourage adolescents to delay sexual activity in order to avoid unintended pregnancy and the risk of abortion, which has the tendency of impeding the development of human capital. Unintended pregnancy can be prevented by increased knowledge of sexuality and consistent use of contraceptives.

Adolescents and contraceptive use

One of the possible ways of preventing, spacing, delaying pregnancy and hence early childbearing is through contraception. Adolescents have the right to precise information about contraceptive methods, including correct use, side effects, and how to reach a health care provider with their concerns (UN, 1994). Contraceptive choices for sexually active young adults include: abstinence, barrier methods (male and female condoms, spermicides, diaphragm, cervical cap), hormonal methods (combined oral contraceptives, oral contraceptives for emergency contraception, progestin-only oral contraceptives, injectables and implant), intrauterine devices and traditional methods (periodic abstinence, often called rhythm or “safe period,” and withdrawal) (PAI, 1994; McCauley and Salter, 1995).

Most studies in Ghana indicate that awareness of contraceptives among adolescents is high but its use is relatively low. These studies show that both male and female adolescents (married and unmarried) were aware of at least one modern family planning method (Tweedie and Witte, 2000; Agyei et al, 2000). However, contraceptive use was relatively low. Apart from the little or incorrect information about fertility and contraception, lack of access to contraceptives as a result of the difficulty of young adults in obtaining contraceptives than for older or married couples, adolescents' contraceptive practices are affected by many contextual factors such as the extent of communication between partners, attitudes about social and sexual roles, and taboo influenced young adult's sexual decision-making (Ajayi et al, 1991; Morris, 1995).

It follows that sexual and reproductive health conditions and decisions made by young people have immediate and long-term consequences for human capital development in terms of their participation in the labour market. For instance, low and inconsistent use of contraceptive which often results in unintended pregnancy or acquisition of STIs particularly HIV can irrevocably disrupt a adolescent's life by standing in the way of further schooling, good health and employment. In terms of health it can affect their productive efficiency, learning capacity, coping skills and creativity. For instance, healthier individuals are more productive for a variety of reasons-increased vigor, strength, attentiveness, stamina, and creativity (Schultz, 1981; Gaiha, 1993). This means that when health improves the country can produce more output with any given combination of skills, physical capital and technological knowledge. Indeed, one

way of maintaining a healthy young population is to encourage the use of contraceptives and to treat health as another component of human capital, analogous to the knowledge and skill component.

Socioeconomic consequence of early childbearing

For an adolescent who is just beginning life, the risks of childbearing do not end with delivery. The adolescent is more likely to obtain less education, have fewer job possibility and lower income, be divorced or separated from her partner (Rahim and Ram, 1993). Most adolescents who start childbearing early complete less school than those who delay childbearing until their 20s. In developing countries students who become pregnant rarely return to school whether married or not (Gorgen et al, 1993). In Kenya and other countries schools routinely expel adolescents who become pregnant, while action is rarely taken against male students who cause pregnancy. Many of such girls risk unsafe abortion to avoid leaving school. As a result of the social and economic changes going on throughout the developing world, the economic consequences of early parenthood often are more extreme and long lasting than in the past. Therefore, adolescents who need higher life-time income/wage-paying jobs need additional/more education to get those jobs (Blaug, 1970; Schultz, 1981).

However, considering that women's opportunities for economic advancement are scarce, early childbearing may worsen their already poor economic prospects, the ability to acquire higher education and good health for themselves and their children. In the extreme cases unmarried adolescent mothers

may be forced to leave school and sell sex to support themselves and their infants (Weis and Muller, 1990). This behaviour inadvertently increases their vulnerability to disease and inability to further their education and/or improve upon their general health status. This may thwart efforts at improving upon their knowledge, productive skills and income potentials in future.

Sexual and reproductive health and human capital development: a conceptual approach/framework

This thesis relies on a two stage conceptual approach built to gain a clear and comprehensive understanding of how socioeconomic development is achieved through improvements in human capital development, which is inextricably linked to the promotion of sexual and reproductive health. The first stage is a conceptual framework developed by Pan American Health Organization (PAHO) on various factors at both individual and social/environmental level that promote adolescent sexual and reproductive health. The second stage comprehensively presents the mechanisms through which socioeconomic development is achieved through improved human capital development, which is also linked to the promotion of sexual and reproductive health.

Conceptual framework for adolescent sexual and reproductive health promotion/development

The conceptual framework for adolescent sexual and reproductive health development constructed by PAHO addresses the sexual and reproductive health

issues of adolescents that fall within the broader health promotion approach in human development. The framework operates on the assumption that when society does not fulfill and protect adolescent sexual rights, and fails to help youth achieve a healthy development, problems of adolescent sexual and reproductive health arise. Therefore, youth problem-prevention, youth development and community development must not be seen and considered as separable goals (Pittman, 1996). In this regard, the PAHO conceptual framework considers the sexual and reproductive health issues of adolescents in the context of development.

Thus, the PAHO conceptual framework for sexual health includes a development-centered approach within the context of the family, culture and the environment. It describes the various factors that influence sexual health and reproductive health development outcomes. These include biological, psychosocial, and cognitive development as well as moral, ethical and spiritual development, self-esteem and emotional well being, and sexual identity at the *individual level* as shown in the second circle. At the *social and environmental level*, factors such as family care, peers, education level, society, gender roles, poverty, equity, rights and empowerment influence an adolescent's sexual and reproductive health development. Other important social factors include the mass media, health services, religious disposition, cultural forces and government policy as shown by the outer circle (Figure 1). All the factors at both levels are interwoven and interdependent in influencing the sexual and reproductive health of adolescents as indicated by the double-headed arrows. The environmental

factors at one level indirectly influence the promotion of adolescent sexual and reproductive health through the individual factors. At the other level it influences the promotion of adolescent sexual and reproductive health directly.

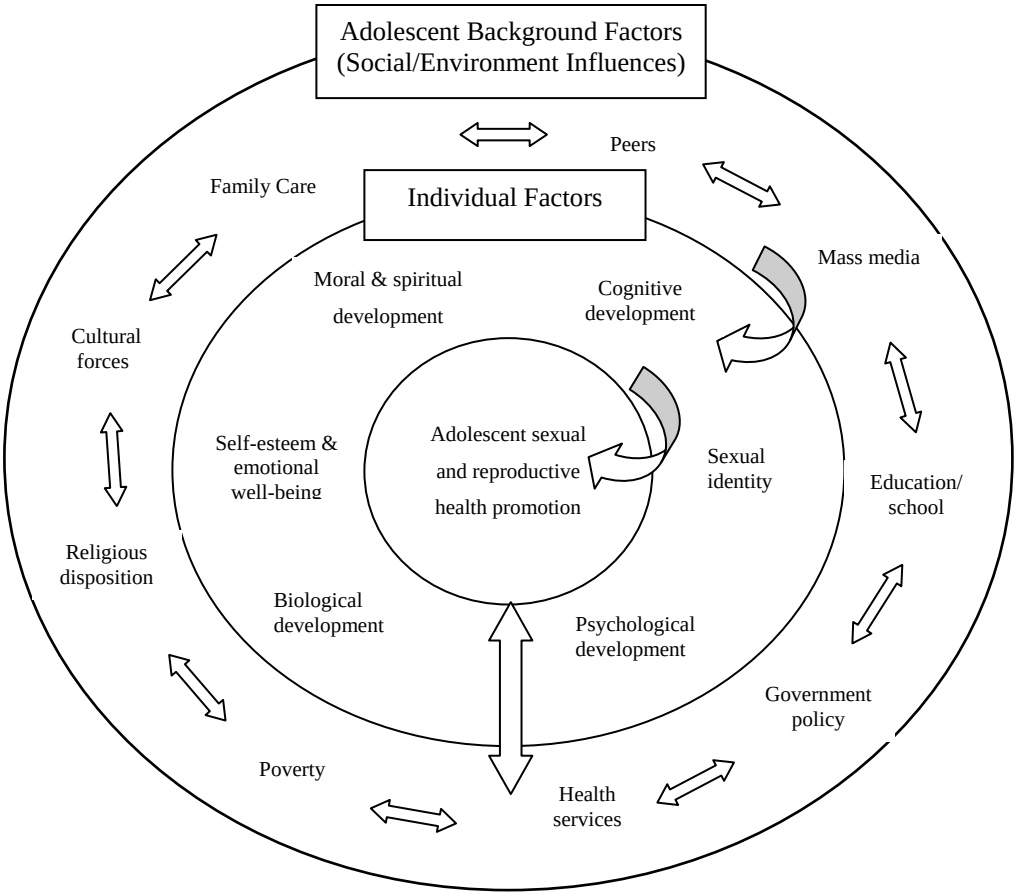

Figure 1: Conceptual framework for adolescent sexual and reproductive health promotion/development
Source: PAHO (2003).

Notably however, sexuality, including adolescent sexual and reproductive health is promoted through the interaction between the individual and social structures. The implications of the interwoven and interdependent factors at the social/environmental and individual levels that influence the promotion of the sexual and reproductive health of adolescents could be positive or negative. In the

positive sense, it can result in the prevention of STIs including HIV/AIDS thereby preventing infertility, risk of injury, illness, and infant and maternal mortality, prevention of unintended pregnancy leading to childbearing, lost education, low earnings, unsafe abortion and its complications, protection from sexual violence and coercion (sexual abuse, rape, selling sex & multiple sex partners).

On the other hand, adolescent sexual and reproductive health could be influenced leading to the contraction of STIs including HIV/AIDS thereby putting the adolescent at risk of infertility, injury, illness, and infant and maternal mortality, the risk of unwanted pregnancy leading to early childbearing, lost education, low earnings and/or unsafe abortion and its complications, the risk of sexual violence and coercion (sexual abuse, rape, selling sex and multiple sex partners). The outcome of such poor adolescent sexual and reproductive health would result in poor human capital development and hence poor socioeconomic development. However, the outcome of good sexual and reproductive health promotion would result in human capital development, and hence contribute significantly to socioeconomic development.

Indeed, the conceptual framework constructed by PAHO for adolescent sexual and reproductive health is unique, comprehensive and exhaustive. It is adolescent specific and emphasizes the need for adolescent programmes to move beyond a problem-oriented approach to a development approach that promotes protective factors and resilience in youth; from individualized interventions to family and community interventions; from youth as recipients to youth as active participants and, from vertical approaches to coordinated, integrated efforts in

health promotion and prevention. Also, the orientation of the framework for adolescent sexual health is a development-centered approach within the context of family, culture and environment. It is centered on healthy development, with sexual health and development as an integral component of overall health. Another unique feature of the framework is that, it comprehensively outlines the various factors that influence adolescent sexual health and development outcome.

However, it is significant to note that the promotion/development of adolescent sexual and reproductive health does not directly result in the development of human capital. Indeed, the framework as a development centred-approach falls short of linking the promotion of adolescent sexual and reproductive health to the development of adolescent human capital. There is, therefore, the need for the application of some sought of mechanism known as sectoral intervention through an intermediate proximate determinant for the development of adolescent human capital. This approach is the focus of the second stage of the conceptual framework for this thesis, human capital development for adolescent sexual and reproductive health.

Human capital development for adolescent sexual and reproductive health: a conceptual framework

Like the conceptual framework for adolescent sexual and reproductive health promotion developed by PAHO, the conceptual framework on human capital development for adolescent sexual and reproductive health is also development-centered. It operates on the assumption that investments that

promote adolescent sexual and reproductive health improve human capital by contributing to knowledge, skills, health, self esteem and moral values. Unequivocally, the conceptual framework is derived from the essential elements discussed in the literature reviewed which fundamentally implies that, investments geared toward promoting adolescents sexual and reproductive health has the effect of improving on their human capital potentials. This translates into the general improvements in population quality and hence socio-economic development of people. Furthermore, gross investment in human capital entails both inherent and acquired knowledge and skills through education/training, contraceptive use through family planning services, improvement in health through the provision of health services and empowerment through the creation of employment opportunities.

Consequently, Figure 2 illustrates the link between adolescent sexual and reproductive health and improvement in population quality through human capital development. Accordingly, the outer circle in the figure shows categories of sectoral interventions for adolescent sexual and reproductive health. They include education and training, knowledge of family planning (contraception), reproductive health services and expansion of economic opportunities. The sectoral interventions are interwoven and interdependent and therefore operate in a supplementary and complementary manner as indicated by the double-headed arrows. In fact each element represents a sector-specific intervention with an outcome or intermediary to the human capital development.

First of all, family planning as an intervention is seen as a means of fertility regulation and improving on child and maternal health. It impacts directly on family size and child development which has implication for human capital development. Education and training as another intervention for human capital development is a means of directly acquiring knowledge and skills through formal education/schooling or on-the-job training. This has the tendency of increasing adolescent enrolment in schools or on-the-job training, and preventing the common phenomenon of totally expelling students/trainees from school or training especially pregnant adolescent girls. This helps in ensuring manageable future family size and child development, whilst increasing the utilization of maternal and child health, which intend reduces the risk of unwanted pregnancies, early childbearing and unsafe abortions. It also increases the opportunity for labour force participation and higher educational attainment and improves on the quality of the population through human capital development.

Secondly, the reproductive health services as an intervention include services that aim at preventing unwanted pregnancy, reducing reproductive tract infections including HIV/AIDS. It also aims at reducing child and maternal morbidity and mortality, reproductive cancers, female genital cutting as well as reducing or managing infertility and preventing gender based sexual violence and coercion. Also, the development of adolescent human capital through their empowerment can be realized by expanding their economic opportunities. Adolescents can be empowered by ensuring their rights in general and in particular their sexual and reproductive health rights, increasing their access to

knowledge and employable skills as well as credit. This enhances their ability to negotiate, make wise decisions, boost their self-esteem and reduce adolescents' risk or vulnerability especially from social factors. Any measure or programme linked to sectoral interventions should have an impact on the specific factors that directly influence human capital formation. The proximate or intermediate determinants of human capital include knowledge, contraceptive, health status and empowerment as indicated in the second circle in Figure 2. Consequently, improvements in these outcomes should be expected to influence the development of human asset as illustrated in Figure 2.

Knowledge and skills as an outcome of education and training, directly improve on one's value. They are fundamental to the theory of human capital. The acquisition of more knowledge and skills raises the value of an individual's human resources, thereby increasing his/her employability, income potential and productivity. Knowledge increases an individual's awareness and general outlook about things around him and makes him better at performing task more vigorously, consistently and more efficiently.

In addition, the use of contraceptives as an element of family planning especially the use of condoms and abstinence among other measures allow individuals and women in particular to prevent early pregnancy and childbearing, and the contraction of STIs including HIV/AIDS thereby promoting good sexual and reproductive health and hence improving on their human capital. Eventually, reduced family size allows a woman to spend more time on activities that either directly improve her productive capacities (for example, by using time which

hitherto would have been spent on childbearing to work or acquire more knowledge and skills) or that help her children to develop mentally, socially, spiritually and emotionally. Moreover, the need for children has long term physical, social, and mental consequence on the health of the woman and hence stifling human capital improvement or development.

Also, the health status of both mother and child as a result of better and efficient health care or services often leads to good health, and hence improvement in human capital. Indeed better health status of a woman allows her the opportunity to undertake her roles more effectively and confidently. Thus, in most low-income Third World households, women have a triple role (Beneria, 1979). Women's work or roles include not only reproductive work but also productive work and community managing work. The reproductive role comprises childbearing, rearing responsibilities and domestic tasks. This role undertaken by women is required to guarantee the care, maintenance and reproduction of the workforce (husband and working children) and the future workforce (infants and school-going children) (Moser, 1993). Productive role according to Moser comprises work done by both women and men for payment in cash or kind. These include both market production with an exchange value, and subsistence/home production with an actual use-value, but also a potential exchange value. Community managing role consist of activities undertaken primarily by women at the community level, as an extension of their reproductive role. This is to ensure the provision and maintenance of scarce resources of collective consumption, which include water, health care and education. It is

voluntary unpaid work, undertaken in 'free time' (Moser, 1993). Such activities directly or indirectly relate to improving her children's human capital development.

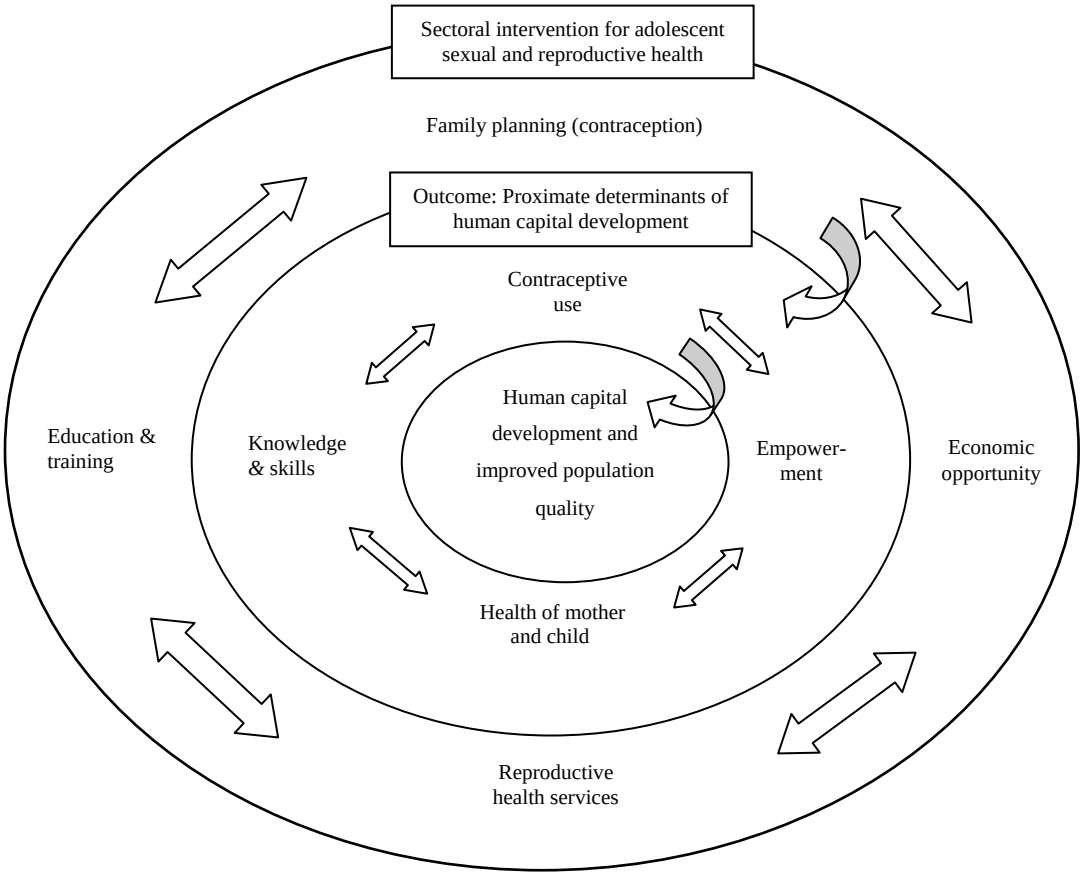

Figure 2: Human capital development for adolescent sexual and reproductive health: a conceptual framework
Source: Author's construct (2005)

Furthermore, empowerment is the fourth element of the proximate determinants of human capital development. It is an outcome of enhancing economic opportunities for women and indeed adolescents, which improves on their human capital. By enhancing the economic opportunities of women or

adolescents through empowerment, the choices available to them is expanded thereby enhancing their ability to benefit from other social investments notably education, health services and family planning. Therefore, given expanded choices and the chance to participate in decision-making at all levels, adolescents may be empowered to direct their skills and energies to activities in which they are most productive or rewarding. In sum, improved population quality as a result of improved human capital development in the third and last circles of Figure 2 respectively, is the resultant impact of the operations of the sectoral interventions leading to the proximate determinants.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter spelled out the methodology for the study. It dilated on the study design, study population, sample size and sampling procedure, sources of data, instrumentation, pre-test, field study and data processing and analysis.

Study design

A research design can be described as a detailed plan outlining how a study is carried out. It is a detailed "blueprint" or framework for the process of collecting, discussing, analyzing, and interpreting data/information as well as related literature in order to enhance the drawing of inferences and arriving at final conclusions based on the relationships between and among the variables of interest in the study.

The research adopted the descriptive cross-sectional design in conducting the study in AEED as a case. Whereas descriptive study attempts to clearly describe systematically a problem or phenomenon in a study, cross-sectional research design takes a snapshot approach to the social world and gives the researcher the opportunity to conduct the study at one point in time. This

approach is usually the simplest and less expensive method but proves disadvantageous when applying it to investigate the development of some phenomenon over a long period of time. For example the cross-sectional design will be inappropriate if it is applied to study the developmental problems of children of adolescents or alcoholic parents in AEED.

Also, both qualitative and quantitative research techniques were used to conduct the study. A study is classified as qualitative when it basically employs descriptive and narrative techniques in studying and analyzing a phenomenon or problem without quantification. Qualitative research allows the researcher to study the phenomenon in its natural settings, gives a deeper understanding of the respondents' world and presents a more realistic view of the world. It is however, associated with extreme subjectivity, problems of representativeness and generalizability of results, objectivity and detachment of the researcher from the study. On the other hand, a study is classified as quantitative when it quantifies the variations in a phenomenon. That is, a study that employs numbers, counts, and measures of things. Thus, triangulation was employed on the basis of its quality and strength in addressing the deficiencies of the other and to overcome the weaknesses that a single method would be associated with (Sarantakos, 1998).

Study population

The totality of all possible elements of interest in a study is often referred to as population. The study population was made up of in-school and out-of-school adolescents in the study area. In-school adolescents included adolescents

in Junior and Senior High Schools. The formal school system provides the enabling environment for the socialization of adolescents, the learning of new skills and knowledge, and the acquisition of values. Out-of-school adolescents constitute a diverse group. They included adolescents who dropped out of school for various reasons or have never attended school. As a diverse group, they may be organized or not organized. The study also solicited views from teachers, parents and a health worker (RCH officer) of the district. These categories of respondents are socializing agents and hence key informants. They provided useful information with regard to adolescent sexual and reproductive health and human capital development in the district.

Sample size and sampling procedure

One of the fundamental requirements in determining the sample size is to estimate the size of the study population. To this end, various methods have been purposively designed to help in determining the sample size from a given population. One of these techniques present population figures ranging from 10 to 100,000 people and the corresponding figures for the sample size. For instance, a population of 10 people yields a sample size of 10 and a population of 100,000 people yields a sample size of 384 (Krejcie and Morgan, 1970).

Consequently, the population of 19,816 adolescents in the district would have yielded a sample size of about 377. However, the study employed both probability and non-probability sampling techniques to draw a sample size of 164 respondents made up of all the categories of respondents from the district. The

actual sample size of 164 respondents was made up of about 43.5% of the tables-based sample size of 377 as indicated in Table 2.

Table 2: Categories of selected respondents

Categories of Respondents		Freq	%
In-school adolescents:	J.H.S. students	43	26.4
	S.H.S. students	42	25.6
Out-of-school adolescents		53	32
Parents		13	8
Teachers		12	7
Health workers		1	1
Total		164	100

Source: Field Survey, 2006.

The sample size was reduced to a manageable level because of the constraints of resources such as time, money and logistics. Moreover, the concerns of adolescents, parents and teachers with regard to sexual and reproductive health and human capital development are homogeneous. They are homogenous in terms of age, needs, perceptions, challenges, and opportunities, and operate within the same environment. Therefore, a small sample size is just enough. Indeed, a small sample size may suffice a study population, which is homogenous in nature (Sarantakos, 1998). Essentially, a reduced sample size of a study population on the basis of homogeneity does not affect the representativeness, results and conclusions of the study as long as the right sampling procedure is applied.

Seven localities (Besease, Enyan Denkyira, Ajumako-Mando, Ajumako, Enyan Abaasa, Ajumako-Techiman and Enyan-Maim) with Senior High Schools (SHS), Junior High Schools (JHS) and/or hospitals/clinics were purposively selected out of the first twenty largest localities for the study. These largest localities (Besease, Nkwantanum-Essiam, Enyan Denkyira, Enyan Abaasa, Ajumako, Ochiso, Enyan-Maim, Kokoben, Entumbil, Ajumako-Mando, Osedzi, Kromaim, Onwane, Baa, Assasan, Etsi-Sonkwa, Techiman, Eshiman, Ajumako Kwanyako and Amia) were those considered during the 2000 population and housing census in the district (GSS, 2002). Simple random sampling was employed to select twelve JHS out of the sixty-three available in addition to the three SHS in the district. This was done by writing the names of the schools on pieces of paper and put in a container. Each school was then picked out at a time until the twelve schools were drawn. Systematic sampling was used to select the in-school adolescents (85) from the selected JHS and SHS after obtaining the list of students in each form in the JHS and SHS. The total number of students in each form was divided by the required sample size (7) for each form to obtain the *nth*, which was used for the selection process until the required number was obtained in each school. The teachers were purposively selected because they were either in-charge of guidance and counselling or were teaching social studies. The officer in charge of the RCH services in the District Hospital was selected by default.

Snowball and convenience sampling were adopted to select the fifty-three out-of-school adolescents because they were diverse and unorganized group who were not readily available for the study. Thirteen parents were also selected

through the convenience sampling technique. Efforts were made to ensure gender equity for all categories of respondents, using the quota system.

Sources of data

The study relied on both primary and secondary sources of data. Primary data was generated from the fieldwork using questionnaires and interview schedules. The secondary sources were;

- reports
- journals
- newsletters
- bulletins
- occasional papers
- magazines and
- books
- internet

These secondary sources of data were from the Ministry of Health and other relevant existing empirical materials from scholarly works in the areas of adolescent sexual and reproductive health and human capital development.

Instrumentation

Combinations of different instruments were employed in the collection of qualitative data and quantitative information. These included questionnaires, interview schedules and existing empirical literature. Questionnaires were

administered to in-school adolescents at the SHS and teachers because they could read and write. They were made up of open-ended and close-ended questions. Detailed interview schedules were also employed to elicit practical and factual data/information from the health worker, parents, out-of-school and in-school adolescents at the JHS. The interview sessions were guided by semi-structured interview schedules (close-ended and open-ended questions) in order to allow some degree of flexibility and free flow of information when need be. The questionnaire and interview schedules were the main data gathering instruments. Indeed, in the course the data collection interest was taken in monitoring the emotional reactions, tones of discussions, passions, mood and the general predisposition of respondents to the details of the subject matter being probed.

Thus the study employed the process of combining different methods of collecting, analyzing and interpreting data which relates to empirical literature for the purpose of drawing inferences and conclusions based on the relations and differences between the variables of interest in a study. The rationale for this method is that it has an inbuilt mechanism of checks and balances with regard to focus and orientation (Sarantakos, 1998). The flaws of one method is compensated for, supplemented and complemented by the strength of the other. It also has the strength of obtaining a variety of information on the same issue and to achieve a higher degree of validity and reliability. Such an approach nips in the bud, as Sarantakos (1998) puts it, the deficiencies of single-method-studies.

However, as it is argued in the literature, triangulation in its usage is not more valuable than single-method procedures, which can be more suitable, useful

and meaningful for certain questions. Nonetheless, the use of triangulation allows the weaknesses on a single method to be complemented by the strength of another.

Pre-test

Instruments that were used for the main study were pre-tested at Ajumako, the capital of the district. Ajumako was chosen because there is currently a programme for adolescents dubbed: 'Time with grandma" which seeks to educate and inform adolescents in the area about sexual and reproductive health. The district capital was also targeted because of its central location. The pre-test exercise generally provides the opportunity to ascertain the validity and reliability of the instruments, based on the understanding of the participating respondents. The final instruments could then be revised based on the outcome of the pre-test.

Field study

The main study was conducted over a period of 8 weeks, starting from 5th February and ending on 30th April 2006. During this period the researcher and five research assistants went to the AEED to administer the questionnaires and conduct interviews. The questionnaires were administered to in-school adolescents and teachers whilst the interview schedules were conducted on out-of-school adolescents, the health worker and parents.

Efforts were made to address pertinent problems encountered in the field. The first week was dedicated to distributing questionnaire to in-school

adolescents and teachers, and to explain the rationale and justification of the study as well as the importance of making the study useful. Four weeks, beginning from the second to the sixth week were used to interview parents, the health worker and out-of-school adolescents. The last three weeks were devoted to retrieving all the questionnaires distributed and mopping up exercise done to capture respondents who were not available during the stated period. The instruments were then prepared for the next stage of data processing and analysis.

Data processing and analysis

Following the fieldwork, the raw data gathered were scrutinized through quality control measures such as sorting, editing, and coding to identify and eliminate or minimize errors, omissions, incompleteness and general gaps in the data gathered. The refined data were imputed into computer software Statistical Product and Service Solutions (SPSS) and Excel to facilitate data description and analysis.

Descriptive statistics such as cross tabulation, frequencies and percentages were employed to summarize, organize and present the quantitative data in the form of tables, graphs and charts to facilitate interpretation of information. Inferential statistics was also used to compare the outcome of responses to the population. The qualitative aspect of the data was summarized in the form of text and quotes for easy description and analysis. Thus, both quantitative and qualitative methods were employed to summarize, describe and interpret or analyze the data collected.

CHAPTER FOUR

ADOLESCENT SEXUALITY AND HEALTH AWARENESS

Introduction

Presented and discussed in this Chapter, are the socio-demographic characteristics of respondents and the views of adolescents and key informants (parents, teachers and a health worker) on issues of adolescent sexuality health awareness and human capital development. The socio-demographic characteristics of respondents include the sex, age, marital status and level of educational attainment of respondents.

Sex of respondents

The category of participants according to sex in the study is revealed in Table 3. It shows that there is almost equal representation of both sexes of all the categories of respondents in the study. This is attributed to the need to ensure gender parity of respondents since the views of both sexes on the issues of adolescent sexuality in relation to human capital development are very important to the study. However, the 164 respondents were made up of 85(52%) in-school adolescent (49.4% males and 50.6% females) from JHS and SHS, 53(32%) out-of-school adolescents (39.6% males and 60.6% females), 13(8%) parents, 12(7%)

teachers and 1(1%) health worker. In all, there were 79 (48%) male participants and 85(52%) female participants in the study.

Table 3: Sex of respondents

Category of respondents	Sex					
	Male		Female		Total	
	Freq	%	Freq	%	Freq	%
In-school adolescents	42	53.1	43	50.6	85	52
Out-of-school Adolescents	21	26.6	32	37.6	53	32
Parents	10	12.7	3	3.5	13	8
Teachers	6	7.6	6	7.1	12	7
Health worker	-	-	1	1.2	1	1
Total	79(48%)	100	85(52%)	100	164	100

Source: Field Survey, 2006

Age of respondents

The category of respondents is presented according to their age groups. The ages of the adolescent respondents range from 10 to 24 years with a modal age of 16 years, median age of 17 years and a mean age of 17 years. Out of the 138 respondents, 116(84%) were within the age group of 10-19 years while 22(16%) were within the age group of 20-29 years. The 84% within the ages of 10 and 19 comprise of 66% (in-school adolescents) and 34% (out-of-school adolescents) as shown in Table 4.

Table 4: Category of adolescents by age

Category of respondents	Age groupings					
	10-19		20-29		Total	
	Freq	%	Freq	%	Freq	%
In-school adolescents	77	66	8	36	85	62
Out-of-school adolescents	39	34	14	64	53	38
Total	116(84%)	100	22(16%)	100	138	100

Source: Field Survey, 2006

The 22(16%) of respondents within the age group of 20 and 29 were made up of 36% (in-school adolescents) and 64% (out-of-school adolescents). Majority of the respondents were within the age group of 10 and 19 years because adolescents constituted the main focus of the study. The ages of the key informants in the study, range from 22 to 75 years. Thirteen of them (50%) were aged between 20 and 29 years, 11.5% were within the age groups of 30 and 39, and 38.5% were above 40 years of age (Table 5).

Table 5: Category of key informants by age groupings

Category of respondents	Age groupings							
	20-29		30-39		40+		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Parents	10	77	2	66.7	1	25	13	50
Teachers	3	23	-	-	9	75	12	46
Health worker	-	-	1	33.3	-	-	1	4
Total	13(50)	100	3(11.5)	100	10(38.5)	100	26	100

Source: Field Survey, 2006
N.B. Figures in parentheses represent percentages

Marital status of respondents

Of the 164 respondents, 144(87.8%) were single, 17(10.4%) were married and 3(1.8%) were divorced. Of those respondents who were single, 134 (93%) were either in-school or out-of-school adolescents while 10(7.9%) were made up of key informants (parents, teachers and a health worker). With reference to the 138 adolescents, 134(97.1%) were single and 4(2.9%) were married while none was divorced (Table 6).

Table 6: Category of adolescents by marital status

Category of respondents	Marital status					
	Single		Married		Total	
	Freq	%	Freq	%	Freq	%
In-school adolescents	84	68	1	25	85	62
Out-of-school adolescents	50	37	3	75	53	38
Total	134(97.1%)	100	4(2.9%)	100	138	100

Source: Field Survey, 2006

The majority of adolescents who were single comprised both in-school adolescents (62%) and out-of-school adolescents (38%). For those adolescents (2.9%) in marriage, 25% were in-school and 75% were out-of-school adolescents.

Majority of the respondents were single because the study focused mainly on adolescents who are expected to be in school and developing their human

capital potentials as future human resources of our society. Comparatively, out of the 26 key informants, the majority (50%) was married, 38.5% of whom were single and 11.5% divorced. Within the majority who were married, 53.8% were parents whilst 46.2% were teachers (Table 7).

Table 7: Category of key informants by marital status

	Marital status							
Category of	Single		Married		Divorced		Total	
Respondents	Freq	%	Freq	%	Freq	%	Freq	%
Parents	2	20	7	53.8	3	100	13	50
Teachers	7	70	6	46.2	-		12	46
Health worker	1	10	-	-	-	-	1	4
Total	10(38.5%)	100	13(50%)	100	3(11.5%)	100	26	100

Source: Field Survey, 2006

Educational attainment of respondents

Investment in human resource development begins with unearthing the human capital potentials of people through education, training and provision of adequate health services. Indeed, investment in education and training broadens one's perspective on global and national issues (development, health, politics, religion, population and so on) and thus, opens a lot of opportunities for improvement in productive efficiency, learning capacity, creativity and over all standards of living. In Table 8, the educational attainment levels of respondents are given of the study. It is evident in the study that out of the 164 respondents,

4(2%) had had no formal education, 87(53%) reached basic education level, 55(34%) had secondary education and 18(11%) had tertiary education. On the whole, 98% of the respondents had at least basic education and since much information is transmitted in written form or through other media the ability to read and write is very essential for human resource development - a capital asset.

Table 8: Educational attainment of respondents

	Educational attainment of respondents							
Category of	None		Basic		Secondary		Tertiary	
respondents	Freq	%	Freq	%	Freq	%	Freq	%
In-school adolescents	-	-	43	49	42	75.9	-	-
Out-of-school adolescents	2	50	39	45	12	22.2	-	-
Parents	-	-	-	-	-	-	13	72.2
Teachers	2	50	5	6	1	1.9	4	22.2
Health worker	-	-	-	-	-	-	1	5.6
Total	4(2)	100	87(53)	100	55(34)	100	18(11)	100

Source: Field Survey, 2006
N.B. Figures in parentheses represent percentages

Undoubtedly, education and training has the potential of enhancing and facilitating the acquisition of knowledge, skills and well being leading to improvement in human capital in the district. Majority of respondents had attained

at least basic education level partly due to the fact that most of the respondents were adolescents' in-school.

Sexuality: knowledge, practices and perceptions among adolescents

Issues of adolescents' knowledge of, attitudes to and experiences of sex and sexuality, as well as factors influencing adolescent early sexual activity in relation to human capital development are discussed in this section. The issues include female adolescents' knowledge of the menstrual function, male adolescents' knowledge of pubertal manifestations like wet dreams, knowledge of how pregnancy occurs, source of sexual and reproductive health information, perception of sex and sexuality and risk of pregnancy. The factors influencing early sexual activity issues discussed include: adolescents age at first sexual intercourse, reasons for engaging in sex and sources of pressure for sex and attitudes towards such sources of pressure.

Knowledge of the menstrual function

One significant event in every woman's life after the attainment of puberty is menstruation. Most societies see this event in girls as a physiological process that is considered a "rites de passage" into maturity and adulthood. In this regard, the results of the study on knowledge of menstruation shows that, out of the 75 female adolescents 72(96%) were aware of menstruation and 4% knew nothing about menstruation (Table 9).

Table 9: Knowledge of the menstrual function

Responses	Freq	%
Yes	72	96
No	3	4
Total	75	100

Source: Field Survey, 2006

Consequently, 85.3% of the 75 respondents referred to menstruation as the monthly flow of bloody fluid from a woman after attaining the age of puberty. However, 11(14.7) did not know what it meant or at best thought of it as the first experience of blood flow from a woman or when girls have sexual intercourse for the first time. It was also manifested in the study that 27(36%) of respondents experienced their first menstruation within the ages of 10 and 14 years, while 38(50.7%) experienced their first menstruation within the ages of 15 and 19 years. However, 10(13.3%) could not tell when they experienced their first menstruation.

On the whole a greater proportion of the respondents had high knowledge of menstruation because they were able to give a clear description of menstruation and shared their experiences of menstruation in terms of when they first experienced it. In terms of its implication for human capital development the study revealed that most respondents have acquired enormous stock of productive knowledge and experiences of the menstrual function. Consequently, some female respondents interviewed suggested that this has the effect of reducing the risk of

early pregnancy or unsafe sexual behaviour which can affect the education, training or health of the adolescent. Early pregnancy may also decrease their enrolment in school, thwart their ability to learn and improve upon their skills and productive capacities.

Knowledge of wet dreams

With reference to male adolescents' knowledge of the pubertal manifestations like wet dreams, the study shows that out of the 63 respondents, a large number of 49(77.7%) were aware of wet dreams and a smaller number of 14(22.3%) knew nothing about wet dreams. Consequently, 35(55.5%) referred to wet dreams as a male discharging semen while asleep and 28(44.5%) did not know what it meant or defined wet dreams as either a male dreaming about a female or a male urinating while asleep. The study also reveals that 15(23.8%) of the respondents experienced their first wet dream within the ages of 10 and 14 years while 33(52.4%) experienced their first wet dream within the ages of 15 and 19 years. However, 15(23.8%) could not recall when they experienced their first wet dream. It is also revealed that on the average respondents experience the first wet dream at the age of 15 years while most of them experienced their first wet dreams when they were 15 years. The median age at which they experienced wet dream was also 15 years.

From the analysis, most respondents had acquired adequate knowledge of wet dreams, and a fairly good number were very exact in their description of that experience. Even though most respondents after the age of 15 are capable of

impregnating a woman through unsafe sexual behaviour which may eventually affect their health, training and education, the acquired knowledge and experience is an indication of enhanced human capital of respondents. In this regard, majority of the male respondents answered in the affirmative.

Knowledge of how pregnancy occurs

Similarly, most of the respondents in general knew how pregnancy occurs. One-hundred and thirty-six (98.6%) indicated that pregnancy occurs through sexual intercourse and not, as some of them (1.4%) put it, through a man touching a woman (Table 10).

Table 10: Awareness of how pregnancy occurs

Responses	Freq	%
When a man touches a women	2	1.4
Through sexual intercourse	136	98.6
Total	138	100

Source: Field Survey, 2006

Moreover, the study indicates that a sizeable number of respondents (both females and males) knew when pregnancy was most likely to occur in a monthly cycle. In this regard, a female respondent remarked: “I can get pregnant if I have unprotected sexual intercourse with a boy about two weeks before menstruation”. However, while some respondents indicated that they did not know when a girl could become pregnant, others thought pregnancy could occur during a girl’s

period of menstruation or anytime during the month. For instance, a male respondent said, “I can make a girl pregnant if I have sex with her during menstruation or anytime”.

Thus, as echoed by Awusabo-Asare et al (2006) in the 2004 national survey of adolescents, most of the respondents have adequate knowledge of how pregnancy occurs, and the period within the monthly cycle that pregnancy is most likely to occur. This is a manifestation of acquired knowledge and experience as elements of human capital. Indeed, most of the respondents shared the view that with excellent knowledge of how and when pregnancy would occur they were more likely to make efforts at preventing the incidence of early or rampant pregnancy. This situation eventually has the tendency of unearthing and enhancing their education, training and health thereby securing a qualitative and productive future workforce with the potential of contributing to economic development. On the other hand, the few respondents with scanty or no knowledge at all about how and when pregnancy occurs were more likely to become pregnant or impregnate someone at an early age thereby throwing the girls in particular out of school. The cumulative effect of this possibility is to put the development of the human capital potential of the girl at risk and thus, reducing the future skilled labour of the nation.

Sources of sexual and reproductive health information

As in other studies, it was revealed from the current study that adolescents’ sources of information on sexual and reproductive health include

peers, parents, teachers, the mass media (TV, radio, and newspapers), the church/mosque, health workers and clubs (Awusabo-Asare et al, 2006; Kumi-Kyereme et al, 2007; Hessburg et al, 2007).The results of the study show that, out of the 115 responses, 44(38.3%) depended on teachers, 18(15.7%) on peers, 18(15.7%) on parents, 11(9.6%) on radio and television, 2(1.7%) on clubs and 1(0.9%) on the church as depicted in Figure 3.

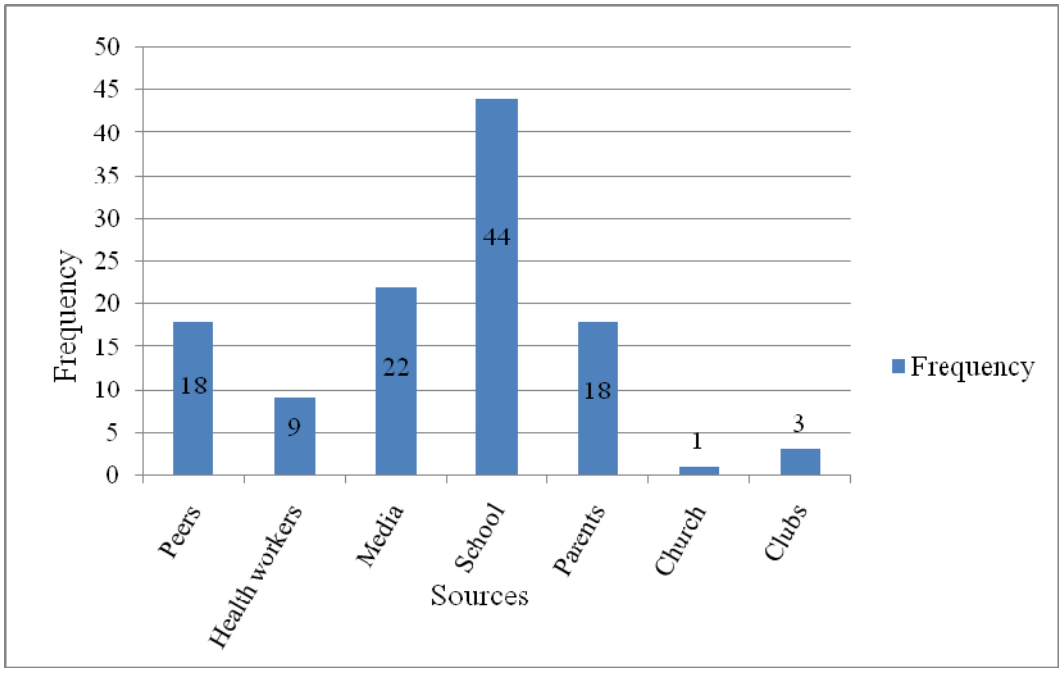

Figure 3: Sources of sexual and reproductive health information
Source: Field Survey, 2006

The school, unlike the media in other studies, served as the leading source of respondents' sexual and reproductive health information because issues of sexual and reproductive health form part of the school curriculum and most of the respondents had had at least basic education. More over, as rural district dwellers,

most of the respondents do not have regular access to the mass media. The study also points to peers and parents as the second important source of sexual and reproductive health information. The third sources are the radio and the television, whilst the church is the least. The discussions so far point to the fact that respondents have different sources of acquiring information on sexual and reproductive health issues thereby increasing their knowledge-a capital asset. However, much of the relevant information is mostly received from their schools, peers and parents. The implication is that respondents' human capital in terms of knowledge, skills, attitudes and values of sexual and reproductive health would be enhanced. This has the tendency of making respondents healthier there by enhancing their productive efficiency, learning capacity, coping skills and creativity. This assertion was agreed to by most of the respondents interviewed in the study area. Indeed, healthier individuals are more productive as a result of increased vigor, strength, attentiveness, stamina, and creativity (Schultz, 1981; Gaiha, 1993).

Significantly, parents, teachers and the health worker confirmed the assertion by the adolescents on the sources of sexual and reproductive health education. Majority of parents (90.9%), teachers (76.9%) and the health worker educate their children, students and clients respectively on sexual and reproductive health issues such as body growth and development, abstinence from sex, the use of contraceptives, STIs including HIV/AIDS, effects of abortion and teenage pregnancy among others. In addition, the health worker said that adolescent clients are provided with counselling services, treatment avenues of

STIs, and the handling of induced as well as legal abortions especially when the life of the client is in danger. Over 50% of parents and teachers occasionally provide their children with sexual and reproductive health education while 30% provide it regularly. They also agreed that such information has the tendency of making respondents healthier there by enhancing adolescent's productive efficiency, learning capacity, coping skills and creativity. But, some parents and teachers interviewed indicated that they were uncomfortable talking to their children about issues of sexuality. Others thought it was a taboo for adults to openly discuss such issues with children since it could have the opposite effect of making the children "bad" or "spoilt", that is, sexually promiscuous. In this regard, a parent stressed that "it is a taboo in our culture to talk to our children about sex because they are too young. More over, we do not want them to engage in early sex no matter the preventive measures as it could affect their schooling".

Perception of sex and sexuality

The perception of respondents on issues relating to sex and sexuality was ascertained and the results show that a greater number of the respondents are aware that a girl can get pregnant if she engages in sex for the first time. This is evident from the study because out of the 138 adolescent respondents, 82(59.4%) disagreed with the assertion that a girl cannot get pregnant if she engages in sex for the first time (Table 11). However, 35(25.4%) agreed to the assertion and 21(15.2%) were not sure of the outcome of a girl engaging in sex for the first time. It may seem gratifying that majority of the respondents, both females and

males, in the district are aware that pregnancy can result from the first attempt at sex without any protection.

The connotation for human capital development as was indicated by most respondents is that the avoidance of pregnancy has the tendency of increasing adolescent enrolment in schools or on-the-job training, and preventing the common phenomenon of totally expelling students/trainees from school or training especially pregnant adolescent girls. This helps in ensuring manageable future family size and child development, whilst increasing the utilization of maternal and child health, which intend reduces the risk of unwanted pregnancies, early childbearing and unsafe abortions. It also increases the opportunity of respondents in the study area for labour force participation and higher educational attainment and improves on the quality of the population through human capital development (Seligman et al, 1997).

On the other hand, the naivety of the rest of the respondents raises serious concerns as it puts females at higher risk of pregnancy and its consequences of staying out of schooling leading to less education, reduced employability, income potential and productivity. Indeed, poor and vulnerable as adolescents may seem lack of human capital among them takes a variety of forms such as illiteracy, less or lack of income, and morbidity resulting in lack of stamina (Gaiha, 1993). The study also reveals that in the opinion of some respondents premarital sex is acceptable for males but not for females. In this regard, 75(54.3%) out of the 138 respondents disagreed, 48(34.8%) agreed while 15(10.9%) were not sure. This is

a clear case of majority of the respondents' disapproval of gender bias in favour of the need for gender equity and equality in the area of sexual expression.

Table 11: Perception of sex and sexuality

	Agree		Disagree		Not sure	
Statement	Freq	%	Freq	%	Freq	%
A girl cannot get pregnant if she has sex for the first time	35	25.4	82	59.4	21	15.2
Sex before marriage is OK for males but not for females	48	34.8	75	54.3	15	10.9
Most people of my age think it is OK to have sex before marriage	70	50.7	56	40.6	12	8.7
I think it is OK not to have sex until marriage	100	72.5	33	23.9	5	3.6
Having sugar daddy/mummy is a good way of getting nice things	42	30.4	83	60.2	13	9.4
Sex before marriage is OK if the couple plans to marry	70	50.7	57	41.3	11	8

Source: Field Survey, 2006

Furthermore, even though most of the respondents agreed that engaging in sex for the first time could result in pregnancy, 70(50.7%) agreed that it is acceptable for most people of their age to engage in sex before marriage while 56(40.6%)

disagreed and 12(8.7%) were not sure. Similarly, 70(50.7%) agreed that sex before marriage is all right if the couples plan to marry but 57(41.3%) disapproved of it while 11(8%) were not certain.

Significantly, the results of the national survey on adolescents indicated that both males and female adolescents agreed that young women and young men should remain virgins until they marry (Awusabo-Asare et al, 2006). Similarly, the current study show that most of the respondents, both females and males, were of the view that it is acceptable to stay chaste until marriage. Hence, 100(72.5%) agreed that it is acceptable not to have sex until marriage whereas 33(23.9%) disagreed and 5(3.6%) were not sure. Interestingly, though 42(30.4%) agreed that having sugar daddy/mummy is a good way of getting nice things, 83(60.2%) disagreed while 13(9.4%) were not sure.

On respondents' perception of sex and sexuality, it has become unequivocal that they know that the very first sexual act can result in premarital pregnancy and childbirth. This was identified as a problem as it could invariably lead to pregnant females dropping out of school, thereby making it difficult to achieve their potentials in life (Kumi-Kyereme, et al, 2007). Yet most of them equally advocated for adolescents to engage in premarital sex if the couples plan to marry. Nonetheless, some agreed to abstain until marriage.

Risk of pregnancy

Adolescents' risk at making a girl pregnant or getting pregnant is presented in Table 12. Seventy-eight (56.5%) out of the 138 respondents agreed that they were either at risk of making a girl pregnant or getting pregnant.

Table 12: Risk of pregnancy

Responses	Freq	%
Yes	78	56.5
No	60	43.5
Total	138	100

Source: Field Survey, 2006

They were at risk because of the following reasons: 44(36.1%) were sexually active, 35(28.7%) had boy/girl friends, 25(20.5%) were not virgins, 8(6.6%) recently indulged in sexual intercourse, 6(4.9%) were married and 4(3.3%) were engaged to be married. On the other hand, 60(43.5%) thought they were not at risk of making a girl pregnant or getting pregnant. They were not at risk for the following reasons: 30(29.7%) were virgins, 21(20.8%) were not married, 20(19.8%) had no boy/girl friend, 13(12.9%) were sexually inactive, 11(10.9%) said sex outside marriage is against their religion and 6(5.9%) had not indulged in sexual intercourse recently.

Notably, even though most of the respondents were sexually active or had ever indulged in sex, there were some who were sexually inactive or were virgins in the district. Those who were sexually active are at risk of pregnancy, with the possibility of early birth or abortion. Significantly, majority of the respondents agreed that an adolescent at risk of early childbearing does not end with the danger of early delivery but is also more likely to obtain less education,

productive skills and capacity which can lead to fewer job possibility and low income as well as divorce from her partner (Rahim and Ram, 1993). Again, the option of abortion leaves most girls at risk of indulging in unsafe abortions in order to avoid leaving school, especially because of the social and economic consequences of early parenthood and its attendant problems of emotional distress and ill health.

On the other hand, the presence of sexually inactive or virgin respondents could be interpreted as an indication of a window of hope for improving upon their sexual and reproductive health, technical knowledge, productive skills/capacities and employability which could be reinforced by intensive education, training and medical care as was agreed to by some respondents interviewed.

Factors influencing early sexual activity of adolescents driving from boy-girl relationships

In the study, boy/girl friend relationship refers to intimate relationship between adolescents of the opposite sex. In this regard, the study revealed that out of the 138 respondents 61(44.2%) have boy/girl friend while 75(54.3%) do not have boy/girl friend. Comparatively, 35(41.2%) of in-school adolescents and 26(49.1%) of out-of-school adolescents have a boy/girl friend whilst 49(57.6%) of in-school adolescents and 26(49.1%) of out-of-school adolescents were not in a boy/girl friend relationship. Apparently, out-of-school adolescents were more in this relationship than the in-school adolescents.

Table 13 gives a "picture" of adolescents and boy/girl friend relationship. Respondents who were in a relationship did so for the following reasons: for sexual pleasure or satisfaction, companionship, future partnerships, material support, academic favour, peer pressure and for financial support.

Table 13: Boy/girl friend relationship

Responses	Category of adolescents					
	In-school adolescents		Out-of-school adolescents		Total	
	Freq	%	Freq	%	Freq	%
Yes	35	41.2	26	49.1	61	44.2
No	49	57.6	26	49.1	75	54.3
No response	1	1.2	1	1.8	2	1.5
Total	85(61.6%)	100	53(38.4%)	100	138	100

Source: Field Survey, 2006

For this reason, a female out-of-school respondent said: "I am in love and want a responsible future husband who will father my children". They also had boy/girl friends in order to avoid boredom, make fun, to share ideas, learn and to know more about the opposite sex as well as serve as study mates. Another reason expressed by some of them was to be abreast with modernity and avoid derision of their friends. In this regard, a respondent said: "I have a boyfriend because all my friends have and I too needed to get one as it is the fashion of today". From the reasons espoused by respondents for engaging in such intimate relationship, it is clear as was indicated by most respondents that they are putting themselves at

risk of early sex and pregnancy or even STI which has the tendency of affecting their health, education and training as young adults. By extension the process of acquiring the needed technical knowledge, productive capacities and skills as well as good health required for the development of future workforce for national development would be affected.

The study also indicated that most of the boy/girl friends of respondents were their peers, teachers, neighbours or sugar daddies/mummies. Accordingly, majority (73.8%) of their boy/girl friends was their peers, 16.9% were neighbours, 6.2% were teachers and 3.1% were sugar daddies/mummies. Similarly, most teachers and parents interviewed agreed that some adolescents in the district were in intimate relations with their peers/schoolmates, teachers, school administrative staff, neighbours or sugar daddies/mummies. The following observations were made as prove of evidence that students in particular were in intimate relationships: reported cases of pregnant students, fighting and quarrels over peers of the opposite sex, personal confession during such conflicts or at counselling or disciplinary committee sessions, and interception of written love letters. Reasons such as peer influence, financial support, material support, sexual pleasure, academic favours and stubbornness were given as sources of motivation for adolescents' indulging in such intimate or boy/girl friend relationships. Again, the adolescents engaged in intimate relationship with teachers in particular for fear of being victimized or even for academic and monetary favours.

The study also shows how long adolescents have been in relationship with their boy/girl friends. The number of years ranged from 1 to 6 years.

Significantly, about 71.7% of those with boy/girl friends have been in the relationship for 1 to 2 years, 21.6% have been in the relationship for 3 to 4 years while 6.7% have been in the relationship for 5 to 6 years. It is quite revealing to provide the age range at which adolescents met their boy/girl friends as the study shows. Seventy percent of the adolescents met their first boy/girl friend when they were within the ages of 15 to 19 years, 23.3% met their boy/girl friends when they were within the ages 10 to 14 years. However, 6.7% were above 20 years when they met their first boy/girl friend. On the average, the respondents met their first boy/girl friend at 16 years. Similarly, the modal age and the median ages are 16. Considering the categories of boy/girl friends of respondents, the age of respondents and the length of period in such romantic relationships, there is no doubt that the development of their human capital potential would hang in the balance. In this regard, some of the respondents accepted the assertion that not only would the focus and emotional stability required for the acquisition of knowledge and productive skills needed for future labour be hindered but the health of respondents could be affected in the event of early pregnancy, childbirth and morbidity. Indeed, the health consequence of teenage pregnancy, early child birth and morbidity has negative implications for wage rates and labour force participation (Schultz, 1981; Seligman et al, 1997).

On the contrary, respondents who were not in any form of boy/girl friend relationships did so for the following reasons: to avoid early sex, early/teenage pregnancy and early child birth. They equally wanted to avoid contracting any of the STIs including HIV/AIDS, maintain chastity and to abstain from sex until

marriage or they had acquired an appreciable level of knowledge and productive skills as an outcome of higher education and training (Kumi-Kyereme et al, 2007). Accordingly, a student indicated that: “I do not have a girl friend because; I don’t want to engage in any sexual act. I want to avoid harassment and disgrace to my family in case the girl becomes pregnant. And again, I want to avoid the consequences of contracting any STI, which can affect my health, focus, learning efficiency and effectiveness as well as schooling in general”.

Moreover, unfaithfulness, the need to concentrate on their studies or in learning a trade motivated some of them not to be in any relationship with the opposite sex. Indeed the need for much time and energy for studies and to avoid peer influence on sexual and immoral behaviour were additional factors for not having a boy/girl friend. In this regard, a 17-year-old, female student from the SHS said: “I am not interested in such relationship because my parents provide me with my needs. Moreover, I cannot combine boys with my books. The boy can even influence or force me to have sex with him and this may result in pregnancy while am still a student. This can eventually thwart my educational career”.

It is also revealing to note that a JHS student in expressing his view about not having a girl friend had this to say: “I don’t have a girl friend because it is against my religion and it can change my life negatively and curtail my schooling if I get pregnant. We can both dropout of school and people will even say bad things about my family”.

Age at first sexual intercourse

National and local studies in Ghana have revealed that adolescents in Ghana generally begin sexual activity in their middle to late teens. For instance, according to the 1998 GDHS, the median age for first sexual intercourse is 17.6 years among women aged 20-49 and 19.4 years among men aged 25-59. Again, eleven percent of women aged 20-49 had had sexual intercourse by age 15 and 78% had had sex by age 20. Thus, many of these women had had premarital sex as adolescents, because only 59% of women aged 20-49 were married by age 20. Similarly, in a study of 1,415 males and females aged 10-19 in Ketu South, Upper Denkyira and Offinso Districts, Sallar observed that the median age of first sexual intercourse for males and females aged 10-19 in these three areas in Ghana was 16. Also, in a study of unmarried young people aged 15-19 in Greater Accra and Eastern Regions, it was found that 67% of males and 78% of females have ever engaged in sex and the mean age at sexual debut among those who have ever had sex was 15.5 for males and 16.2 for females (Agyei et al, 2000).

As in the national and local surveys of adolescents, it has been observed in this study, as shown in Figure 4, that out of the 64(46%) adolescent respondents, both females and males, who indicated their age at first sexual intercourse; 69% broke their virginity within the ages of 15 and 19, 19% broke their virginity within the ages of 10 and 14 while 12% broke their virginity when they were 20 years and above. The mean age at first sex is 16 years but the modal and median age is 17. It is quite obvious that majority of the adolescents, both females and males, in the district become sexually active by their nineteenth year in life.

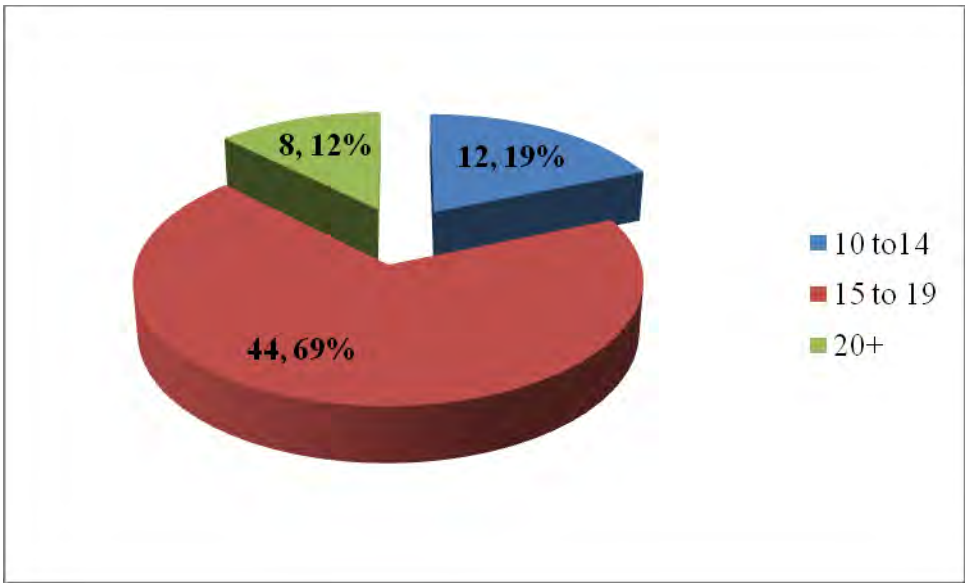

Figure 4: Age at first sexual intercourse
Source: Field Survey, 2006.

Furthermore, countrywide studies in the 1998 GDHS show that, almost 40% of girls and 19% of boys aged 15 to 19 become sexually active, and by age 20, over 80% of adolescents have experienced their first sex. Even though the median age at first sex is estimated at 17.6 years, studies in Kumasi and Accra showed that some adolescents start sex as early as 10 years (Nabila and Fayorsey, 1996; GSS, 1999). Considering the age at first sex, most of the respondents equally agreed that this could result in early pregnancy and childbearing and/or contracting STIs which has the possibility of affecting their education and training process and by extension their productive capability, employability and income potentials.

Reasons for engaging in sexual intercourse

Several studies in Ghana have found that young people indulge in sexual intercourse for variety of reasons which include: financial support, sexual

pleasure, peer pressure, material support, experimentation, future marriage or partnership, academic favours, proof of male masculinity, and for fun (Sallar, 2001; Henry and Fayorsey, 2002; Afenyadu and Goparaju, 2003; Awusabo-Asare et al, 2006). Significantly, results on the reasons advanced by adolescents, both females and males, in the study area did not differ significantly from observations made in the literature (Table 14).

Table 14: Reasons for engaging in sexual intercourse

	Boys		Girls	
Responses	Freq	%	Freq	%
Sexual pleasure	46	29.7	41	19.9
Peer pressure	38	24.5	47	22.8
Financial reasons	26	16.8	48	23.3
Future marriage	26	16.8	42	20.4
Academic favours	-	-	28	13.6
To show maleness	19	12.3	-	-
Total	*155	100	*206	100

* The responses are more than the respondents because of multiples responses
Source: Field Survey, 2006

Again, these reasons were well corroborated by parents and teachers in the district. For instance, most teachers in the district agreed that students, who were in intimate relationship with (peers, schoolmates, teachers, school administrative staff, neighbours or sugar daddies/mummies) of the opposite sex, did so for sexual

pleasure, future marriage, academic favours, and fear of being victimized. Other reasons are financial and material support as well as due to peer influence.

Relationships with schoolmates and teachers in particular were for academic favours and fear of victimization while relationships with adults were for sexual pleasure, future marriage and due to peer influence as well as financial/material support. As such 47 boys, representing 29.7%, and 41(19.9%) girls attributed the cause of an adolescent engaging in sexual intercourse to the need for sexual enjoyment or satisfaction while 38(24.5%) boys and 47(22.8%) girls attributed it to peer influence or pressure. Financial support and the need for future partnership or marriage were also given as reasons for which adolescents engage in sex. Twenty-six (16.8%) boys and 48(23.3%) girls attributed it to financial reasons whereas 26(16.8%) of boys and 42(20.4%) of girls attributed it to the need for future marriage.

Furthermore, the study indicated that some boys entered into sexual relationship to show their masculinity over their female counterparts. This was accounted for by 19(12.3%) of the boys. On the part of the females, they entered into sexual relationship to seek academic support from their male counterparts, particularly school/classmates and teachers. Twenty-eight girls representing 13.6% pointed to this reason for engaging in sex. Emphatically, the reasons stated by adolescents for indulging in sex are not limited to the Ajumako-Enyan-Essiam district. For example, reasons such as feeling like it, pressure from peers, deception by partners, poverty/sex for money, experimentation, and satisfaction of sexual desires were given for engaging in sexual intercourse in Dodowa and

national survey of adolescents in Ghana (Afenyadu and Goparaju, 2003; Awusabo-Asare et al, 2006). Again, a case study of 29 females aged 13-19 in Ga Mashi who had experienced at least one unintended pregnancy, Henry and Fayorsey (2002) established that obtaining financial support and affection were the main reasons for starting a relationship. Moreover, financial support from boyfriends was an integral part of a relationship and was used for daily needs, including food, medical expenses, school fees and clothing. Thus, respondents' reasons for having sexual intercourse range from pleasure to peer pressure to financial reasons/poverty.

From the discussions, it has become apparent that respondents do not engage in sexual relationships without any motivation. They are principally motivated by sexual pleasure, peer influence and financial support/gifts. It must be noted that under no circumstance are the reasons advanced by the respondents for engaging in sexual relation justifiable if the development of their human capital potentials are to be taken seriously. For most of the respondents, not only does early sexual intercourse expose them to the risk of early pregnancy, childbearing or abortion but also risk acquiring STIs which affects their welfare (Awusabo-Asare et al, 2006). All these outcomes have implications for their education, training and reproductive health and subsequently the development of their productive skills, technical knowledge and physical fitness. Again, in the event of the young girls and their babies surviving, not only do they face enormous health risks but risk loosing the benefits associated with investing in human capital development of their children. For instance, young parents,

especially girls, are often compelled to leave school, resulting in limited economic opportunities that may adversely affect their well being and that of their children. More so, higher wage-paying jobs require individuals with higher quality education and training. In this regard, additional education, training and medical care pays off in the form of higher life-time incomes in the long run (Blaug, 1970; Gaiha, 1993).

Sexual partners and source of pressure for sex

It appears that there are very few studies on sexual partnership and sexual coercion of young people. In the few studies available young peoples' sexual partners (coerced and not coerced) included boy/girl friends, teachers, school/classmates, school administrative staff, neigbours, "sugar mummies/sugardaddies" and relations (Awusabo-Asare et al, 1999; Tweedie and Witte, 2000; Afenyadu and Goparaju, 2003; Awusabo-Asare et al, 2006). For instance, Tweedie and Witte (2000) observed in the 1998 GYRHS that most first sex partners of young people were boyfriends or girlfriends and that about four out of every five adolescents who had ever had sex reported that they experienced first sexual intercourse with a boyfriend or girlfriend.

Similarly, it was observed in the current study that respondents indulged in sexual relationship (willingly and unwilling) with boy/girl friends, school/classmates, teachers, neighbours, school administrative staff and relations. In this regard, Table 15 depicts a summary of adolescents' sexual partners and source of pressure and persuasion for sex. Accordingly, out of the 138

respondents, 32.1% have ever been persuaded by their boyfriends or girl friends for sex, while 67.9% have not been persuaded for sex. As to whether teachers coerced them for sex, 8.4% answered in the affirmative whilst 91.6% answered in the negative. School mates and neigbours were also sources of pressure on respondents for sex. While 18.3% agreed, 81.7% disagreed that school/classmates persuaded them for sex. To their neighbours, 22.1% said yes but 77.9% said no. Furthermore, school administrative staff and relations were other sources of pressure on adolescents for sex. Four (3.1%) and 5(3.9%) of respondents attributed the sources of pressure for sex to school administrative staff and relations respectively whereas almost 97% did not answer in the affirmative.

Table 15: Sexual partners and source of pressure for sex

	Yes		No		Total	
Sources of pressure	Freq	%	Freq	%	Freq	%
Boy/girl friend	42	32.1	89	67.9	131	100
Teacher/master	11	8.4	120	91.6	131	100
School/classmate	24	18.3	107	81.7	131	100
Neighbour	29	22.1	102	77.9	131	100
School administrative staff	4	3.1	127	96.9	131	100
A relation	5	3.9	122	96.1	131	100

Source: Field Survey, 2006.

In all, respondents were usually persuaded by their boy/girl friends, teachers, school/classmates, neighbours, school administrative staff and relations

for sex. However, they were most coerced by their boy/girls friends for sex with a few of them being persuaded by their teachers, school/classmates, neighbours, school administrative staff and relations.

Attitude towards the source of pressure for sex

A 'picture' is given of adolescents' attitude to the sources of pressure for sex on Table 16. According to the study respondents who experienced the pressure for sex reacted in three ways by either refusing, accepting willingly or giving in unwillingly. To their boy/girl friends, 26(59.1%) refused but 14(31.8%) accepted willingly while 4(9.1%) gave in unwillingly.

Table 16: Attitude towards the source of pressure for sex

Sources of pressure	Refused		Accepted Willingly		Accepted under pressure	
	Freq	%	Freq	%	Freq	%
Boy/girl friend	26	59.1	14	31.8	4	9.1
Teacher/master	11	91.7	1	8.3	-	-
School/classmate	17	77.3	4	18.2	1	4.5
Neighbour	24	88.9	2	7.4	1	3.7
School administrative staff	4	100	-	-	-	-
A relation	5	100	-	-	-	-

Source: Field Survey, 2006.

On the part of teachers who put pressure on them for sex, 91.7% refused and 8.3% accepted willingly. Again, whereas 77.3% refused advances from school/classmates, 18.2% accepted willingly while 4.5% accepted unwillingly.

The study also showed that school administrative staff or relation who made sexual advances did not succeed at all. Even though 7.4% accepted willingly and 3.7% accepted when they were pressurized by their neighbours 88.9% refused the advances made by their neighbours for sex.

The experiences of adolescents of sexual coercion in the district is similar to the observations in a study conducted among young people aged 12-24 in Junior High, Senior High and the University in the Central Region by Awusabo-Asare et al (1999). They observed that among 415 adolescents who had had sex with their boyfriends or girlfriends, 19% reported that they were forced; of the 211 who had had sex with schoolmates, 13% reported being forced; of the 234 who had had sex with neighbours, 13% reported they were forced; and of the 101 who had had sex with teachers, 6% reported that they were coerced. Thus, while a fairly good number of the adolescents could not resist pressure for sexual advances particularly from their boy or girl friends and teachers, majority of them refused all sorts of sexual persuasion from teachers, school or classmates, neighbours, school administrative staff and relations.

It has become apparent from the current study that respondents have acquired adequate knowledge of, shared their experiences of and attitude to sexuality and are becoming sexually active at an early age. This is manifested in the early age at attaining pubescent and indulging in early sexual intercourse. Undoubtedly, this condition in the opinion of most respondents can results in early/unwanted pregnancy, childbearing, abortion, maternal/infant morbidity and mortality which has serious repercussions for the development of respondents'

human capital potentials in terms of the acquisition of the needed physical fitness, technical knowledge, productive skills/capacities, abilities, values, attitudes and competences as an outcome of good health, education and training. Undeniably these are significantly required for effective future labour force participation and acquisition of higher life-time wages/salaries as returns on investment. Hence, adolescent sexuality has implications for human capital development in the district.

CHAPTER FIVE

ADOLESCENT REPRODUCTIVE HEALTH AWARENESS

Introduction

Results of the findings on the knowledge of, and attitudes to, prevailing health hazards facing adolescents and its effects on human capital development in the study district are presented in two parts in this chapter. The first section consists of the knowledge and attitude of respondents to STIs including HIV/AIDS. The second segment concentrates on respondents' knowledge and practice of contraceptive use.

Knowledge and attitudes towards STIs including HIV/AIDS

Adolescent's knowledge of, signs and symptoms of STIs including HIV/AIDS, mode of transmission, and prevention and protective measures are discussed in this part of the study. The views of parents, teachers and a health worker on respondents' reproductive health issues are also captured in the following discussions.

Sexually transmitted infections (STIs)

As already observed from the literature, STIs are diseases that can spread from one person to another through sexual contact. Such diseases are HIV/AIDS,

gonorrhea, syphilis, chlamydial infection, herpes, candidiasis and chancroid among others. Indeed, respondents are at higher risk of exposure to STIs than adults because of their immaturity, misconceptions and inadequate knowledge of STIs (Nabila et al, 1997; Tweedie and Witte, 2000). Respondents' knowledge of STIs is presented in the following discussions. The results of the study indicated that, majority of the respondents were aware of at least one STI. Hence, out of the 138 respondents 109(79%) were aware of at least one STI while 29(21%) were not aware of any infection. Respondents identified HIV/AIDS, gonorrhea, syphilis and candidiasis among other infections (Figure 5).

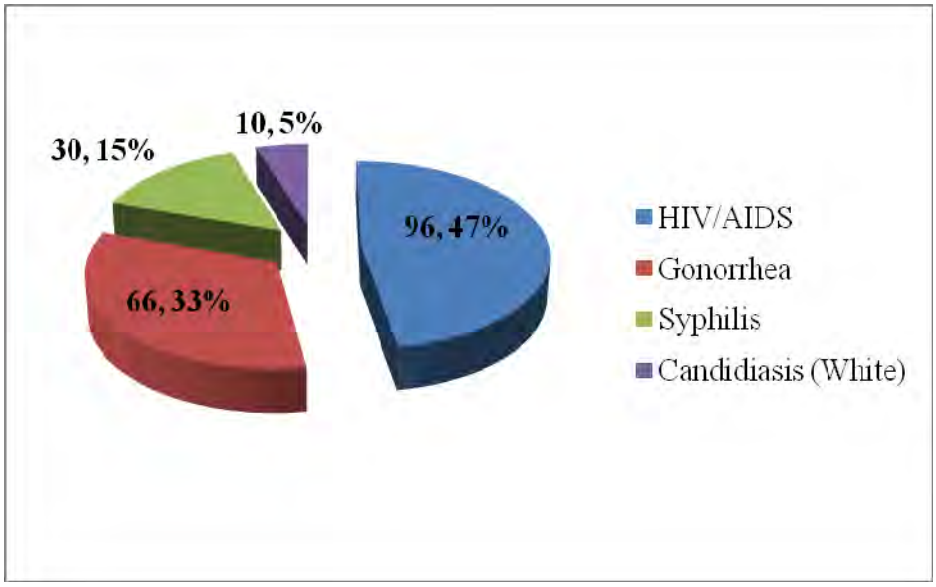

Figure 5: Sexually transmitted infections identified by adolescents
Source: Field Survey, 2006.

Similar studies in Ghana have pointed to adolescents' level of knowledge of STIs. For instance, a study by Awusabo-Asare and Anarfi (1995) observed that 97% of males and 94% of females aged 15 to 24 had heard of STI. Among the infections stated in this study (Figure 5), the most commonly identified infection

was HIV/AIDS, mentioned by 47% of the respondents. After HIV/AIDS, 33% of the respondents knew of gonorrhea, followed by syphilis (15%), and candidiasis (5%). HIV/AIDS obviously became the most known STI because of the medical and social hazard it poses and inflicts on humanity. This has resulted in all kinds of media hype to create enormous awareness of the incurable disease.

Responses of key informants on STIs are shown in Table 17. HIV/AIDS, gonorrhea, syphilis and candidiasis were also commonly identified by parents and teachers as key informants of the study. Indeed, out of the 31 multiple responses of parents, 38.7% identified HIV/AIDS, 35.5% (gonorrhea), 16.1% (syphilis) and 9.7% (candidiasis). However, out of the 36 multiple responses of teachers, gonorrhea (33.3%) was the commonly identified infection. This was followed by HIV/AIDS (30.6%), syphilis (25%) and then candidiasis (11.1%).

Table 17: Sexually transmitted infections identified by key informants

Responses	Key informants			
	Parents		Teachers	
	Freq	%	Freq	%
HIV/AIDS	12	38.7	11	30.6
Gonorrhea	11	35.5	12	33.3
Syphilis	5	16.1	9	25
Candidiasis (white)	3	9.7	4	11.1
Total	*31	100	*36	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006

The ability of respondents to identify specific STIs is a manifestation of acquired stock of knowledge as an outcome of reproductive health education and services provided by key informants. This directly improves and raises the value of respondents' human capital. In effect the acquired knowledge is an increase in human capital of the respondents. However, it is worth noting that respondents in the study area are completely unaware of similar diseases such as herpes, chlamydia infection, chancroid and hepatitis B among others. These are equally as dangerous and infectious as the others identified. This is probably due to the similarity in the signs and symptoms of most STIs. It can also be attributed to the fact that the precise identification of STIs is exclusively medical or an individual might have read or contracted it before.

Knowledge of the signs and symptoms of STIs

It is apparent from the divergent views of respondents in the district that they are aware of some signs and symptoms of STIs. Notable among the signs and symptoms identified were: burning sensation when an infected person is urinating, itching and sores around the genitals and discharge from the genitals. Twenty-two percent of adolescent respondents identified pain/burning sensation when urinating, 20% recognised itching and sores around the genitals and 11.6% were familiar with discharge from the genitals. Similar observations have been reported in the 2004 national survey of adolescents by Awusabo-Asare et al (2006). Respondents' ability to satisfactorily identify the signs and symptoms of STIs is an indication of acquired knowledge which has the effect of equipping

them with the skill and attitude of taking effective measures of curing such infections and therefore enhancing their health capital. Nonetheless, 10.8% were unfamiliar with any of the signs and symptoms of STIs (Table 18).

Table 18: Signs and symptoms of STIs identified by respondents

Signs and symptoms of STIs	Freq	%
Itch around the genitals	70	20
Sores on the genitals	70	20
Gives bad smell	55	15.6
Gives pain/burning sensation when urinating	78	22
Discharge from the genitals	41	11.6
Nothing	38	10.8
Total	*352	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006.

It was also observed that parents and teachers in the study were very much aware of the signs and symptoms of STIs such as gonorrhea, syphilis, candidiasis and HIV/AIDS as shown in Table 19. Like adolescents, parents(10.9%) and teachers (24.6%) identified the signs and symptoms of STI as itching around the genitals; sores on the genitals was identified by 27.3% (parents) and 17.4% (teachers), bad smell was specified by 14.5% (parents) and 15.9% (teachers), pain or burning sensation when urinating was stated by 25.5% (parents) and 17.4% (teachers), and discharge from the genitals was indicated by 18.2% (parents) and

20.3% (teachers). However, 3.6% and 4.3% of parents and teachers respectively knew nothing about the signs and symptoms of any of the STIs identified.

Table 19: Knowledge of key informants of signs and symptoms of STIs

Signs and symptoms of STIs	Key informants			
	Parents		Teachers	
	Freq	%	Freq	%
Itch around the genitals	6	10.9	17	24.6
Sores on the genitals	15	27.3	12	17.4
Gives bad smell	8	14.5	11	15.9
Gives pain/burning sensation when urinating	14	25.5	12	17.4
Discharge from the genitals	10	18.2	14	20.3
Nothing	2	3.6	3	4.3
Total	*55	100	*69	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006

Mode of transmission of sexually transmitted infections

Respondents' knowledge of the modes of transmission of STIs is presented in this section of the study. Generally, the opinions of the respondents showed that they have acquired adequate knowledge of the mode of transmission of STIs. Sexual intercourse was identified as the principal mode of transmitting any STI. Adultery and eating of lots of sweets were also stated as sources of STIs. Eating of lots of sweets is mostly associated with candidiasis (white). Curses and juju were yet some misconceptions held by some respondents as reasons for contracting an STI. Comparatively, adolescents' knowledge of the modes of

transmission of STIs as presented in Table 20 show that respondents know of the mode of transmission of STIs. Unprotected sexual intercourse was identified by the adolescents in the study area as the main mode of transmission of STIs. Accordingly, out of the 335 responses, 177(52.8%) pointed to sexual intercourse as the main mode of transmission of STIs. In this regard, the respondents also agreed that the acquisition of accurate knowledge about the various modes of transmitting STIs raises the value of their human capital by enhancing their ability and capacity to protect themselves from contracting such disease, which has the potential of affecting their learning efficiency and capacity.

Table 20: Knowledge adolescents of the mode of transmission of STIs

Mode of transmission	Freq	%
Sexual intercourse	177	52.8
Juju	17	5.1
Adultery	106	31.6
Eating lots of sweets	22	6.6
Curses	10	3.0
Don't know	3	0.9
Total	*335	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006.

It has been observed that the misconceptions and misinformation about the mode of transmission of STIs expressed by the respondents in the study are not

peculiar to the study area. For example, it has been found in a study involving students in Cape Coast, adolescents in Ketu South, Upper Denkyira and Offinso districts as well as youth on the streets of Accra that one could get an STI through witchcraft or through juju as penalty for committing adultery, or an outcome for females for "eating lots of sweets" (Awusabo-Asare et al, 1999; Sallar, 2001).

Preventive and protective measures against STIs

In view of the devastating and hazardous nature of STIs particularly if not cured at the onset; there is the need for preventive and protective measures in order to avoid such consequences there after. For prevention they say is better than cure. Prominent among the preventive and protective measures identified by respondents were abstinence and condom use respectively (Table 21).

Table 21: Knowledge of the preventive and protective measures against STIs

Preventive and protective measure	Freq	%
Abstaining from sex	175	44.4
Use of condoms	150	38.1
Non-penetrative sex	37	9.4
Fewer sex partners	17	4.3
Washing/douching after sex	11	2.8
Avoiding lots of sweets	4	1.0
Total	*394	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006.

One hundred and seventy-five (44.4%) and 38.1% of the respondents were familiar with the use of abstinence and condom as ways of preventing and protecting oneself against contracting STIs respectively. However, 4.3% and 2.8% thought that having fewer sex partners, washing or douching after sex respectively could protect one from contracting an STI. This is a clear instance of misinformation and misrepresentation of the facts about the preventive and protective measures against STIs. This practice would only gradually facilitate the spread of STIs in the district if early precautionary measures are not taken.

Notwithstanding respondents' satisfactory knowledge of the preventive and protective measures against STIs, the study revealed that some of the respondents had either been infected with the STIs in the past or they knew of someone who had been infected by the disease. Indeed, 4.4% of the respondents had been infected by an STI in the past whilst 29.5% knew of someone who had been infected by an STI. Notably among the STIs were gonorrhea and candidiasis (white). Accordingly, the respondents agreed that the prevalent rate of STIs in the district may appear relatively low but has implications for the development of respondent's human capital by directly affecting their health capital and indirectly restrains the acquisition of knowledge and skills. Most of the respondents also indicated that the spread of STIs in the district can affect the future labour inputs of respondents by increasing production losses caused by worker illness; by decreasing the enrolment of respondents in school and thwarting their ability to learn; and by putting pressure on resources - both public and private - that would have to be spent on treating infected respondents instead of investing them in

other kinds of human capital development activities (World Bank, 1993). Thus, an unhealthy and illiterate young population does not enhance the productive skills, capacities and the agility expected of young workforce to contribute to a nation's development in future.

In determining the prevalence rate of STIs among young people, Tweedie and Witte (2000), in a similar study asked adolescent respondents to mention the number of people they knew who currently or previously had an STI. It was revealed that 27% of males and 22% of females reported that they knew one or more people who had ever had an STI (Tweedie and Witte, 2000). The prevalent rate of STIs among young people in the district and else-where in Ghana is an indication that adolescents do not go strictly by the preventive and protective measure against STIs, or its use is inconsistent, and thus, putting them at higher risk of contracting STIs. Indeed most respondents intimated that poor reproductive health as a result of contracting STIs can affect learning efficiency, effectiveness and capability as well as productive capacity and subsequently employability and income potentials. The study also revealed that antibiotics and herbal medicine were used to cure STIs. While 25.5% of the adolescents recognised antibiotics as a cure to STIs, 20.5% identified the use of herbal medicine as a curative measure of STIs (Table 22). However, 13% claimed they did not know of any cure for the STIs they identified. With regard to HIV/AIDS in particular 41% stated that there was no cure for it.

Table 22: Curative measures of STIs identified by adolescent respondents

Responses	Freq	%
No cure	88	41
Full course antibiotics	55	25.5
Herbal medicine	44	20.5
Don't know	28	13
Total	*215	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006

Similarly, parents and teachers also identified antibiotics and herbal medicine as curative measures against STIs. For this reason, antibiotics and herbal medicine were identified by 46.2% and 50% of parents and teachers respectively as curative measures against STIs. Even though, 2.6% (parents) and 2.8% (teachers) were unfamiliar with any cure of the STIs, 23% (parents) and 22.2% (teachers) confirmed the view that there is no cure for an STI like HIV/AIDS.

Awareness of the reality of HIV/AIDS

At present, general knowledge of HIV/AIDS is widespread, with over 95% of adolescents in the 1998 and 2003 GDHS indicating that they had heard of HIV/AIDS. Results from the 2004 national survey of adolescents also indicate that 96-97% of adolescents were aware of HIV/AIDS (Awusabo-Asare et al, 2006). It was also revealed in the present study (Table 23) that a vast majority of

the adolescents are well aware and very much certain of the reality of the deadly pandemic of HIV/AIDS. Almost 95% of the 138 respondents indicated their knowledge of the reality and existence of HIV/AIDS. They also reported that they had actually seen people suffering from the disease. In view of that, 59.4% indicated that they had seen someone living with the disease while 39.9% had never seen anyone suffering from the disease.

Table 23: Awareness of adolescents of the reality of HIV/AIDS

Awareness of the reality of HIV/AIDS	Yes		No		No response	
	Freq	%	Freq	%	Freq	%
Awareness of HIV/AIDS	133	96.4	3	2.2	2	1.4
Reality of HIV/AIDS	131	94.9	6	4.4	1	0.7
Someone suffering from HIV/AIDS	82	59.4	55	39.9	1	0.7
A person with HIV/AIDS appears to be healthy	39	28.3	99	71.7	-	-
Cure for HIV/AIDS	16	11.6	122	88.4	-	-

Source: Field Survey, 2006

Furthermore, majority of the respondents declared that a person living with HIV appears to be healthy. Over 71% consented to it whereas only 39% said a person living with HIV does not appear to be healthy. Similarly, the 1998 GDHS found that only 65% of young females and 71% of young males agreed to the statement that "a healthy looking person can have the AIDS virus." It was also evident in the study that most of the adolescents knew that the HIV/AIDS disease had no cure as yet. Hence, more than 88% indicated that the HIV/AIDS

has no cure but 11.6% thought the disease has a cure. The awareness of the reality of HIV/AIDS among majority of the respondents is an indication of acquired knowledge of the disease. Thus investment geared towards increasing adolescent stock of embodied knowledge is a direct improvement in their human capital potentials.

Knowledge of the mode of transmission of HIV/AIDS

Data in many developing countries indicates that up to 60% of all new infections of HIV cases occur among young adults of 15 to 24 years old, with unsafe heterosexual intercourse as the main mode of transmission (UNAIDS, 2003). In an attempt to understand respondent's knowledge of the dynamics of HIV/AIDS in the district, the study considered identifying the level of knowledge of respondents in respect of the mode of transmission of HIV/AIDS. In this direction, the study revealed that respondents in the district had adequate knowledge of the various means of contracting the disease.

The adolescent respondents were asked if they were conscious of the mode of transmission of HIV/AIDS. Like in the 2004 national survey of adolescents by Awusabo-Asare et al (2006) , their response rightly pointed to unprotected sexual intercourse (casual sex), kissing, sharing of infected sharp objects, transfusion of infected blood and from an infected mother to a child as the common mode of contracting the disease (Table 24). To this end, 22.4% of the respondents identified unprotected sex, 22.2% indicated the sharing of infected sharp objects, 20.1% were familiar with the transfusion of infected blood and

19.6% identified the transmission of the disease from an infected mother to child. This is possible when the child is in the infected mother's womb, during the course of delivery or during breast feeding.

Table 24: Adolescents' knowledge of the mode of transmission of HIV/AIDS

Mode of transmission	Freq	%
Unprotected sexual intercourse	126	22.4
Mosquito bite	25	4.5
Kissing	53	9.4
Sharing infected sharp objects like needles/blades	125	22.2
Transfusion of infected blood	113	20.1
From infected mother to child	110	19.6
Casual contact	9	1.6
Don't know	1	0.2
Total	*562	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006

Even though, most of the adolescents identified unprotected sex, sharing of infected sharp objects, transfusion of infected blood and pre-natal transmission, minority of the adolescents still had misconceptions about the mode of HIV transmission. They believe HIV/AIDS could also be transmitted through mosquito bite (4.5%) and casual contact (1.6%) involving shaking of hands or hugging, whilst less than 1% did not know the mode of transmission of the disease.

Comparatively, it appears a relatively small number of respondents in the district have serious misconceptions about the mode of contracting HIV/AIDS. However small it may seem; there is the greatest tendency of this believes hampering the conscious effort at educating people to relatively tolerate and extending a lot of sympathy to People Living with HIV/AIDS (PLWA) as a major step at curbing the spread of the disease. The key informants in the study somewhat share the same views per the mode of HIV transmission expressed by the adolescent respondents with the exception of casual contact.

Table 25: Mode of transmission of HIV/AIDS by key informants

Mode of transmission	Key informants			
	Parents		Teachers	
	Freq	%	Freq	%
Unprotected sexual intercourse	12	21.1	12	23.1
Mosquito bites	3	5.3	-	-
Kissing	9	15.7	5	9.5
Sharing infected sharp objects	11	19.3	12	23.1
Transfusion of infected blood	11	19.3	12	23.1
From infected mother to child	11	19.3	11	21.2
Total	*57	100	*52	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006

They agreed perfectly with the view that HIV is transmitted through unprotected sexual intercourse, sharing of infected sharp objects, transfusion of infected blood and a child contracting the disease from an infected mother (Table 25). Unsafe

sexual intercourse or casual sex was identified by 21.1% of parents and 23.1% of teachers, sharing of infected sharp instruments/objects was indicated by 19.3% of parents and 23.1% of teachers, and 19.3% (parents) and 21.2% (teachers) recognized the contraction of the disease by a child from an infected mother.

Nonetheless, some key informants still believe HIV can be contracted through mosquito bites. A little over 5% of parents pointed to mosquito bites. It has been observed from the discussion that respondents have acquired adequate stock of knowledge of HIV/AIDS transmission which has the potential of enhancing the development of skills, behaviours or attitudes for preventing and protecting themselves from reproductive health hazards (HIV/AIDS). In fact, the contraction of these health hazards have the potential of affecting the health capital of respondents and hence restricting the development of their capacity to acquired knowledge, skills, attitudes and abilities required of productive labour force as a result of less or inadequate education, training and health benefits.

Respondents' knowledge of the signs and symptoms of AIDS

The study was also concern about the diversity of knowledge of respondents about the signs and symptoms of AIDS. Some of these signs and symptoms include: rapid weight loss, loss of hair, persistent diarrhea, T.B., difficulty in swallowing food, and skin disease such as sloughs. Broadly, respondents seem to have a good understanding of some of the signs and symptoms of the disease. Specifically, twenty-one percent (21%) of the adolescents recognised weight loss, 10.4% loss of hair, 13.8% persistent diarrhea,

12.4% T.B., and 14.3% recognised skin diseases such as sloughs (ananse) as presented in Table 27. Others, (5.7%) recognised itching around the genitals, 5.9% discharge from the genitals and 7.6% recognised painful sensation when urinating as aspects of HIV/AIDS symptoms.

Table 26: Knowledge of adolescents on signs and symptoms of AIDS

Signs and symptoms	Freq	%
Weight loss	129	21.0
Itching around the genitals	35	5.7
Loss of hair	64	10.4
Persistent diarrhea	85	13.8
Discharge from the genitals	36	5.9
Tuberculosis (T. B.)	76	12.4
Difficulty in swallowing food	55	8.9
Painful/burning sensation when urinating	47	7.6
Skin disease such as sloughs (Ananse)	88	14.3
Total	*615	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006.

The views of key informants were sought on the signs and symptoms of HIV/AIDS in order to ascertain their level of knowledge on the issue concerned. Like the adolescents, the parents and teachers had adequate knowledge of the signs and symptoms of the deadly pandemic of HIV/AIDS. Prominent among the

signs and symptoms identified (Table 27) were weight loss, loss of hair, persistent diarrhea, tuberculosis and skin disease such as sloughs (ananse).

Table 27: Key informants' knowledge of signs and symptoms of HIV/AIDS

Signs and symptoms	Key informants			
	Parents		Teachers	
	Freq	%	Freq	%
Weight loss	11	18	12	20
Itching around the genitals	3	5	4	7
Loss of hair	9	15	7	11
Persistent diarrhea	12	19	11	18
Discharge from the genitals	4	6	2	3
Tuberculosis (T. B.)	8	13	6	10
Difficulty in swallowing food	3	5	5	8
Painful/burning sensation when urinating	2	3	3	5
Skin disease such as sloughs (Ananse)	10	16	11	18
Total	*62	100	*61	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006

The study shows that, out of the 62 responses 18% of parents identified weight loss as sign and symptom of HIV/AIDS, 15% (loss of hair), 19% (persistent diarrhea), 13% (tuberculosis) and 16% (skin diseases like sloughs). On the other hand, weight loss was identified by 20% of teachers out of the 61

responses recorded. Loss of hair constituted 11% of teachers, persistent diarrhea (18%), tuberculosis (10%) and skin diseases like sloughs (18%).

Even though weight loss, loss of hair, persistent diarrhea, tuberculosis and skin diseases like sloughs were relatively high-flying among the signs and symptoms of HIV/AIDS; itching around and discharge from the genitals, difficulty in swallowing food and painful/burning sensation when urinating were also captured. Notwithstanding, the misconceptions stated by the respondents, it is clear that they are imbued with adequate stock of knowledge of the signs and symptoms of HIV/AIDS-an aspect of human capital. Having identified the symptoms, the next problem area is prevention.

Respondents' knowledge of the preventive and protective measures against HIV/AIDS

It is a well-known fact that HIV/AIDS has no known cure. Therefore, the ultimate consequence of an infected person is death. In the circumstance, prevention would supersede and be better than cure. To this end, the study considered determining the respondents' knowledge of how to prevent and/or protect oneself from contracting HIV. Regarding the ways of reducing the risk of HIV/AIDS transmission, 83% or more of all adolescents in the national survey mentioned abstinence, monogamy, not sharing needles, toothbrushes and blades with an infected person and consistent condom use among others as risk reduction mechanism (Awusabo-Asare et al, 2006). In general, the study revealed that respondents were aware of the ways of preventing and/or protecting oneself from

catching HIV/AIDS. The preventive measures against HIV/AIDS identified by the respondents were abstinence and avoiding sharing of sharp instruments whilst the protective measures include using condoms and being faithful to one's partner. Particularly, adolescents' knowledge of preventive and protective measures against HIV/AIDS is depicted on Table 28. Out of the 493 respondents, 26% were familiar with abstinence as a preventive measure against HIV/AIDS, 22% were familiar with condom use and avoiding sharing of sharp instruments such as needles, blades, shaving sticks and scissors among others.

Table 28: Preventive and protective measures against HIV/AIDS

Responses	Freq	%
Abstaining from sexual intercourse	130	26
Using juju	9	2
Being faithful to one's partner	107	22
Having sex partners	13	3
Using condoms	109	22
Washing or douching after sex	15	3
Avoiding sharing of sharp instruments	110	22
Total	*493	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006.

It is quite significant to note that there were some adolescents who were still naive about the ways of preventing and protecting themselves from contracting HIV/AIDS. Two percent of the respondents thought HIV/AIDS could

be prevented through juju, 3% mentioned washing or douching after sex and having fewer sex partners could protect one from contracting the disease.

Generally, VCT has been identified as very critical in preventing the spread of HIV/AIDS. It was observed in the study that most of the respondents were aware of VCT and willing to go through the VCT to know their HIV status. In like manner, Sallar (2001) found that 82% of youth were aware of a blood test to ascertain their HIV statuses. Similarly, this study shows that, out of the 138 respondents, 56.5% were aware of the VCT and 72.5% were willing to undergo the VCT to know their HIV/AIDS status. Correspondingly, majority of the key informants had high knowledge of VCT and were enthusiastic in discovering their HIV statuses through the process of VCT. The knowledge of the status can help them live a responsible life. For those who declined carrying out the test said they wanted to avoid psychological trauma and as a respondent put it “I want to allow sleeping dogs to lie and believing that I do not have the HIV in me even though I have not done the test”. Indeed, 54.5% and 83.3% of teachers and parents respectively knew of VCT whiles 70% and 91.7% of teachers and parents correspondingly were eager to undertake the test. Most of the respondents (37.7%) knew of the VCT through the radio, 19.9% through the TV and 20.3% through health workers. The least source of information about VCT was the church, since only 1.4% knew of VCT through the church. Considering the stock of knowledge of respondents on preventive and protective measures against HIV, it is obvious that their human capital potential can be enhanced. In this regard, most of the respondents agreed that good health status as a result of preventive

and protective measures against HIV improves on their learning efficiency and productive capacity and employability in the future.

On HIV/AIDS, the mass media (43%) comprising the radio 109(16%), T.V. 103(12%), and newspapers 79(11.7%) as well as teachers 105(15.5%), parents 81(12%) and health workers 86(12.7%) served as the common sources of HIV/AIDS information for the respondents. The radio appears to be the main source of HIV/AIDS information for most adolescents in the district, whilst, the church/mosque and friends are the least sources of information on HIV/AIDS as indicated by the study. Nine percent and 63(7.5%) of the adolescent respondents indicated the church/mosque and friends/peers respectively as the source of HIV/AIDS information (Figure 6).

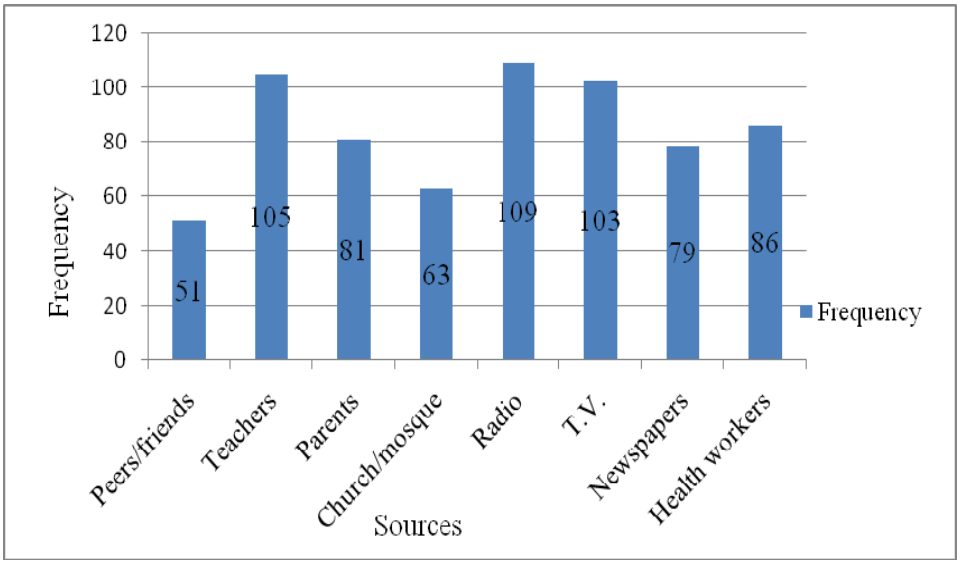

Figure 6: Sources of HIV/AIDS education/information

Source: Field Survey, 2006.

Comparatively, data from the 1998 GDHS on adolescents' sources of information for HIV/AIDS also indicated the mass media as the main source. For

instance, among those aged 15-19 who had heard of HIV/AIDS, radio (66% for females and 68% for males) and TV (49% for females and 46% for males) were reported as sources of information. But, only 2% of the females and 3% of the males referred to health workers as sources of information, whilst the print media (e.g., newspapers and pamphlets) were referred to by 13% of females and 18% of males aged 15-19. Friends and relatives were referred to by 7% of females and 5% of males (GSS. 1999).

To corroborate some of the sources of receiving HIV education, the views of parents, teachers and the health worker were sought. The results of the study confirmed that all the teachers and 91.7% of the parents talk about HIV/AIDS to their students and/or children respectively. The issues discussed include the reality of HIV/AIDS, modes of transmission, preventive and protective measures and the effects of contracting the disease. These issues were relatively informally talked about sometimes to the students and/or children.

From the above discussions, it has become clear that the mass media continues to be the main source of enhancing the human capital stock of respondents by providing HIV/AIDS information and knowledge for young people, compared to interpersonal contacts such as those being promoted through peer education, teachers, health workers, religious leaders and parents. The rather weak dependence on interpersonal communication with parents for sexual and reproductive health information is due to the uneasiness faced by adolescents when discussing such issues with parents, religious leaders and health workers. It is generally assumed that youngsters avoid discussing such issues with parents for

fear of being branded as bad boys and girls. This has the effect of restraining the deepening and widening of information, knowledge exchange or change of attitudes towards HIV/AID and hence the development of human capital.

Attitude to talking about STIs including HIV/AIDS

Communication is an important element in human life. It simply means to make common, to share, to impart or to transmit information about something to another. Table 29 presents adolescents' attitude to communicating STI information to parents and siblings, friends, religious leaders, teachers and health workers.

Table 29: Adolescents' attitude to talking about STIs including HIV/AIDS

	Yes		No	
Responses	Freq	%	Freq	%
Parents	66	48.2	71	51.8
Siblings	70	51.1	67	48.9
Friends/school mates of the opposite sex	78	56.9	59	43.1
Friends/school mates of the same sex	87	63.5	50	36.5
Religious leaders	27	19.7	110	80.3
Teachers/masters	50	36.5	87	63.5
Health workers	57	41.6	80	58.4

Source: Field Survey, 2006.

Out of the 138 respondents, 48.2% stated that they converse about STIs to their parents while 51.8% indicated they do not communicate to their parents. On

whether they communicate about STIs to their siblings, 51.1% answered in the affirmative whilst 48.9% answered in the negative.

The study also revealed that, over half of the adolescent respondents communicate to their friends/schoolmates of the same/opposite sex. While 56.9% of the adolescents communicate about STIs to their friends of the opposite sex, 43.1% do not communicate with the friends/schoolmates of the opposite sex about STIs. To their friends/classmates of the same sex, 63.5% communicate about STIs to them but 36.5% do not communicate about STIs to them. The study further showed that over 80% of the adolescents do not communicate about STIs to religious leaders but only 19.7% are able to do so.

Similarly, it was observed that, 63.5% and 58.4% talk about STIs to their teachers and health workers respectively. Communication between respondents and their parents, friends, school/classmates and other stakeholders about STIs shows the prevalence of social support or networking, that is, social capital which engenders and enhances awareness of the infections thereby increasing the stock of knowledge and change of attitudes and behaviour of respondents. This situation eventually lends support to the widening, deepening and acceleration of knowledge which also leads to the development of respondents' human capital.

Contraception: knowledge, attitude and practice

The areas discussed under contraception comprise adolescents' knowledge and practice of contraceptive use. The discussion also consists of respondents'

attitude to conveying and/or receiving information about contraceptive use, and attitudes of sex and the use of abstinence and condom in particular.

Respondents' knowledge and practice of contraceptives use

One of the principal ways of preventing, spacing, delaying or postponing pregnancy and consequently early childbearing is through contraception or family planning. Contraceptives are devices or means employed to prevent conception- the union of an ovum, or egg cell, with a sperm. Contraceptive choices for sexually active young adults include: abstinence, barrier methods (use of male and female condoms, spermicides, diaphragm, cervical cap), hormonal methods (consisting of combined oral contraceptives, oral contraceptives for emergency contraception, progestin-only oral contraceptives, injectables and norplant implant), intrauterine devices and traditional methods (periodic abstinence, often called rhythm or "safe period," and withdrawal) (PAI, 1994; McCauley and Salter, 1995). The study shows that a greater proportion of respondents in the district are aware of the methods of preventing pregnancy. They were able to identify the following methods of pregnancy prevention: abstinence, condom, pills, tubal ligation, vasectomy, injectables, norplant, fertility awareness and vaginal base methods (Table 30).

By and large, out of the 138 adolescent respondents, 112(81.2%) were aware of at least one contraceptive method. Similarly, over 90% of adolescents in the 2004 national survey had heard of at least one contraceptive method (Awusabo-Asare et al, 2006).

Table 30: Adolescents' knowledge and practice of contraceptives use

	Knowledge		Practice		Total	
Contraceptives	Freq	%	Freq	%	Freq	%
Abstinence	113	87.6	58	42	129	100
Withdrawal	60	46.5	16	11.6	129	100
Tubal ligation	70	54.3	-	-	129	100
Vasectomy	41	31.8	-	-	129	100
Injectables	83	64.3	-	-	129	100
Norplant	41	31.8	-	-	129	100
Condom	117	90.7	32	23.2	129	100
Pills	94	72.9	5	3.6	129	100
IUCD/Loop	44	34.1	-	-	129	100
Spermicide	48	37.2	2	1.5	129	100

Source: Field Survey, 2006

More over, all the teachers and 91.7% of the parents were aware of one of the methods of pregnancy prevention. The ability of most respondents to at least identify a contraceptive method shows the stock of knowledge and information they posses on contraceptives. Indeed, the acquired knowledge signifies enhanced human capital potentials as far as the identification of contraceptives is concern. Similarly, most studies in Ghana indicate that contraceptive awareness among respondents and their knowledge about where they can be obtained is high but its use is relatively low. For instance, results from the 1998 GYRHS indicate that 76% of females and 88% of males aged 15-19 were aware of at least one modern

family planning method. However, in specific cases of adolescents' knowledge of contraceptives in the current study it was realized that over 60% had very high knowledge in the following methods: abstinence, injectables, condoms and pills. For instance, out of the 129 respondents, 90.7% indicated that they were aware of condoms whereas 87.6% were aware of abstinence (Table 30). On the other hand, the adolescents had moderately low knowledge of some contraceptive methods such as withdrawal, vasectomy, norplant, IUCD and spermicide. Specifically, 46.5% were aware of withdrawal, 31.8% of vasectomy and norplant, 34.1% of IUCD/Loop and 37.2% of vaginal methods like spermicide.

Similarly, the study revealed that there is generally low adolescents' practice of contraceptive use in the district. Even though it is quite clear from Table 31 that adolescents had high knowledge in most of the contraceptive methods they only patronized abstinence, withdrawal, condoms, pills and spermicide. Indeed, 42% practised the use of abstinence or had ever used abstinence, 11.6% had ever used withdrawal, 23% had ever used condoms, and 3.6% had ever used pills while less than 2% had ever used spermicide. Indeed studies in Ghana and else-where confirm that there is significantly low use or practice of contraceptives. For instance, a study conducted by Awusabo-Asare et al (2004) indicated that though condom use is one effective, protective mechanism for sexually active people, the vast majority of sexually active adolescents are not using condoms. One reason for the low level of condom use is that young people do not feel confident in insisting on condom use in a relationship. The low contraceptive use among respondents who indulge in early

sexual activity is a recipe for early pregnancy and childbearing or abortion as well as the spread of STIs in the district. This condition eventually affects the development of respondents' human capital by restraining the process of knowledge and skill acquisition as a result of dropping out of school or education. The contraction of an infection can also have a devastating consequence on the health capital of the respondent and subsequently, their employability, productivity and future earnings would be greatly affected.

Furthermore, the current study also revealed that adolescents were aware of a friend(s) who had ever used at least one of the contraceptive methods. Notable among the contraceptive methods identified were abstinence, condom, pills, tubal ligation, vasectomy, injectables, norplant, fertility awareness and vaginal base methods. In all, the methods which had comparatively been practised widely, or had ever been used were abstinence, condoms and pills. Almost 70% of the adolescents were aware of a friend who had ever practised the use of abstinence, 66.7% were aware of a friend who had ever used condoms and 47.3% were aware of a friend who had ever used pills.

It also became apparent in the study that of the 42% who practised the use of abstinence, about 24% indicated they had been abstaining from sex for the past 10 to 14 years, 69% indicated 15 to 19 years and 6.9% indicated 20 years. About 87.5% of the 11.6% adolescents who had ever used withdrawal reported they started using withdrawal when they were between the ages of 15 and 19 years, while 75% of the 23% who had ever used condom reported they started using condoms between the ages of 15 and 19 years, while a little over 6% started using

condoms between the ages of 10 and 14 years. Undoubtedly, adolescents have high knowledge of contraceptives such as abstinence, condoms, withdrawal and pills. However, there is low or little use of the known contraceptives making them prone to pregnancy and contraction of STIs including HIV/AIDS, which has the potential of affecting the capacity of respondents in the process of human capital development.

With regard to key informants' knowledge of contraceptive methods (Table 31), the study revealed that they are quite aware of the various ways of preventing pregnancy such as abstinence, condom use, pills, sterilization, injectables, norplant, withdrawal, vaginal base methods and fertility awareness methods. Parents and teachers in the district were very much conversant with condom use, pills and abstinence compared with the other methods. While not less than 12% of both teachers and parents identified abstinence, over 20% of both respondents were familiar with condom use and pills. Again, with exception of 16% of parents who knew of fertility awareness method, less than 11% of both respondents knew of vasectomy, withdrawal, injectables, norplant implant, IUD and tubal ligation.

It was also observed that about 90.9% of teachers and 41.7% of parents formally (40%) or informally (60%) talk about contraceptives to their students and children respectively. Even though 90.9% of teachers and 41.7% of parents talked about contraceptives; such talks were mostly centred on abstinence and condom use. On which contraceptives teachers recommend for students' use, respondents' advice to students was the use of abstinence and condom.

Table 31: Knowledge of key informants of contraceptive methods

Contraceptives	Key informants			
	Parents		Teachers	
	Freq	%	Freq	%
Abstinence	3	12	5	12.8
Condom use	6	24	11	28.2
Pill	7	28	9	23.1
Vasectomy	-	-	1	2.6
Withdrawal	-	-	2	5.1
Injectables	2	8	4	10.3
Norplant	2	8	2	5.1
Fertility awareness	4	16	2	5.1
Vaginal methods	1	4	3	7.7
Total	*25	100	*39	100

* The responses are more than the number of respondents because of multiple responses
Source: Field Survey, 2006

Indeed various reasons were given for preference to abstinence and condom use. A teacher who advised on the use of condoms said: “The use of condoms is relatively flexible, simple and cheap. It is also the surest way of preventing pregnancy and STIs including the deadly disease HIV/AIDS”. Another teacher who recommended the use of abstinence indicated that: “The use of abstinence

was the best because adolescents were young people who should avoid early sex but concentrate on their books. The use of abstinence is the safest, reliable and morally good". Like the adolescents, the key informants have showed how adequately they are imbued with information and knowledge of contraceptives. The acquired knowledge can then be passed on to their children and students as a way of preventing and/protecting themselves from the risk of pregnancy or STIs, which has the tendency of thwarting their capacity for acquiring knowledge, productive skills and good health required for employability and productivity leading to returns on investment in education, training and health services.

Attitude to conveying and/or receiving information about contraceptive use

Table 32 presents adolescents' attitude to communicating about contraceptive methods to parents, siblings, friend/schoolmates, religious leaders, teachers/masters and health workers. It was noticeable in the study that a moderate segment of the respondents (above 40%) communicated more comfortably about contraceptives to their siblings and friends/schoolmates of both sexes than their parents, religious leaders, teachers and health workers. A female adolescent who was interviewed said: "I do not feel shy talking to a female classmate about condoms but I cannot talk to my father or pastor about condoms. They will say I am 'spoilt'". It is therefore observed in the study that 55.6% of respondents were very much comfortable talking to their friends/schoolmates of the same sex than friends/schoolmates of the opposite sex.

Table 32: Attitude to conveying and/or receiving information about contraceptive use

	Yes		No	
Responses	Freq	%	Freq	%
Parents	44	32.8	90	67.2
Siblings	56	41.8	78	58.2
Friends/school mates of the opposite sex	60	44.8	74	55.2
Friends/school mates of the same sex	75	55.6	60	44.4
Religious leaders	16	11.9	118	88.1
Teachers/masters	46	34.1	89	65.9
Health workers	41	30.4	94	69.6

Source: Field Survey, 2006.

Comparatively, it can also be seen from Table 33 that, less than 30% of the respondents were comfortable talking to their parents, religious leaders or health workers about contraceptive methods. Another adolescent respondent who was interviewed said: 'My mother always talks to me about the need to abstain from sex or use condoms if I feel like having sex in order to prevent pregnancy or catching HIV/AIDS'. It is worthy of note that only a few of the adolescents (about 11%) were able to talk about contraceptives to their religious leaders. The existence of social support and networking in terms of interaction between adolescent respondents on one hand and their siblings, friends, school/classmates and key informants on the other hand is a form of building social capital which supports the development of human capital development. Indeed, the interactions

engender discussions on contraceptives, which then have the potential of deepening, widening and accelerating the process of knowledge and skill acquisition and change of attitudes and behaviour towards contraceptive knowledge and practise.

Attitudes of adolescents to sex and the use of abstinence and condom

A picture of adolescents' attitude to sex, and the use of abstinence and condom are presented in Table 33. On the issue of adolescents' attitude to sex, the study revealed that majority of the respondents (64.7%) would refuse to have sex with some one they met for the first time. However 25.7% would not refuse to have sex with some one they meet for the first time while 9.6% could not decided on the issue. With regard to abstinence, it was observed from the study that 69.2% indicated that they could abstain from sex until marriage, 25.7% would not abstain from sex until marriage while 5.1% could not be sure.

Condom use has been touted as one of the surest and most effective protective mechanisms for sexually active people particularly sexually active adolescents. However, a number of studies on adolescent sexual and reproductive health prove that lack of confidence on the part of young people in insisting on condom use in relationships often leads to its low use (Awusabo-Asare et al, 2004). Similarly, the study showed that although majority of the respondents (47.1%) were not confident enough to buy a condom at the shop which has the tendency of contributing to the low use of condoms, 56.6% would be confident in insisting on condom use with a partner.

Table 33: Attitudes to sex and the use of abstinence and condom

	Yes		No		Not Sure	
Statement	Freq	%	Freq	%	Freq	%
Buy a condom at the shop	54	39.7	64	47.1	18	13.2
Be confident in insisting on condom use with a partner	77	56.6	41	30.2	18	13.2
Refuse to have sex with someone I have met for the first time	88	64.7	35	25.7	13	9.6
Use condom correctly if my sexual partner wanted to	66	48.5	54	39.7	16	11.8
Convince a partner that he or she should use condom	86	63.2	32	23.5	18	13.2
Abstain from sex until marriage	94	69.2	35	25.7	7	5.1

Source: Field Survey, 2006

Furthermore, the study showed that more than 63% of the respondents could convince a partner that he or she should use condom and a fairly good number of the respondents (48.5%) indicated they could use condoms correctly if their sexual partner wanted to. Implied in this revelation concerning the attitude of adolescents to sex in relation to the practice of condom use and abstinence, is that most adolescents in the district are more likely to prevent and/or protect themselves from contracting STIs including HIV/AIDS and avoiding teenage pregnancy and its attendant problems. In the end, the sexual and reproductive health of adolescent as well as their human capital potential is well developed.

This safe sexual behaviour and attitude enhances their health status, increases their employability and stock of productive capability for social and economic development.

In the current study it has become obvious that respondents have accumulated adequate knowledge of reproductive health hazards such as STIs including HIV/AIDS in terms of their modes of transmission, signs and symptoms, preventive and protective measures against these infections. Respondents have also demonstrated some positive attitudes and behaviour towards the reproductive health hazards. There were also traces of adequate stock of contraceptive knowledge, safe sexual behaviour and attitude but low use/practice of contraceptives. Consequently, the state of respondents' knowledge of, attitudes to and experiences of STIs and contraceptives has implications for human capital development. Thus, the acquired knowledge and attitudes are direct manifestations of human capital development. However, the low or inconsistent use of contraceptives indirectly affects the development of respondents' human capital by restraining the acquisition of knowledge, skills, abilities and physical fitness through education, training and health services as a result of the early pregnancy, childbearing or abortion and maternal/infant morbidity and mortality. Eventually these conditions affect the employability, productive capacities/skills, labour participation and future life-time earnings of respondents. Indeed, respondents' knowledge of and attitudes to reproductive health hazards and contraceptive practice has implications for human capital development in the AEE district.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

In the preceding chapters, the background of the study, statement of the problem, objectives of the study, research questions and significance of the study were presented. It also reviewed relevant literature on adolescents' sexual and reproductive health and human capital development. Methodology of the study, discussions and analysis of the findings of the study were also presented. In the following chapter, a brief summary of the findings, conclusions and implications, recommendations and areas for further studies are presented.

Summary of the findings

Human capital development and the sexual and reproductive health of the world's population especially of the adolescent has become an issue of global concern. It has therefore become essentially fundamental to the success of the MDGs and the objectives of 1994 ICPD. The stage in life when an individual become sexually active is within the second decade of life. However, adolescents at this stage are faced with inadequate guidance and counselling about sexual responsibility, severe influence of their peers and the mass media as well as poverty. Furthermore, they attain menarche and indulge in sexual relationship at

an early age and are therefore exposed to the risk of unwanted pregnancy which may result in unsafe induced abortions and its complications. They are also exposed to the risk of injury, ill-health and maternal and child death as a result of early pregnancy and childbearing. In addition, they risk contracting STIs including HIV/AIDS and finally missing out on social and economic benefits of life particularly education, training and health care. Over all, the adolescent sexual and reproductive health has ramifications for their human capital development in terms of gaining knowledge, skills, abilities, physical fitness and indeed general well being. Consequently the summary of the findings are as follows:

Majority of the respondents were adolescents (84%) in and out-of-school, and key informants (16%) constituting parents (8%), teachers (7%) and health worker (1%). The study focused mainly on adolescents with almost equal representation of both sexes (48% male and 52% female participants). Respondents ages ranged from 10 to over 60 years with the young adults falling within the age range of 10 and 19 years. The modal age of the adolescents was 16 years while the median and mean ages were 17 years. However, the ages of the key informants ranged from 22 to over 60 years.

Majority of the respondents were not married (87.7%), and those married or divorced, 10.4% and 1.8% respectively. Unmarried adolescents constituted 97.1% (62.7% in-school adolescents and 37.3% out-of-school adolescents) and those married constituted 2.9%. The dominance of the unmarried respondents was because adolescents were the main focus of the study. Few (2%) of the respondents were illiterates with no formal education and majority (98%) were

literates with at least basic education. Majority of the respondents were literates because in-school adolescents constituted a big chunk of the study. The literate state of most respondents is a veritable source of enhancing the process of obtaining knowledge, skills, physical fitness, stamina, health and positive attitudes and values.

Adolescents have very high knowledge of their sex and sexuality and were equally conscious of development and experiences during puberty. For example, 96% of the female respondents and 77.7% of male respondents were conscious of menstruation and wet dreams respectively. Majority of both male and female respondents usually experience their first menses and wet dreams in their middle to late adolescents. Most respondents (98.6%) have very high knowledge of how and when pregnancy is most likely to occur. The school (38.3%), peers (15.7%) and parents (15.7%) were the main sources of sexual and reproductive information. Even though most of the adolescents (56.5%) were sexually active or have ever indulged in sex, there is a fairly good number (43.5%) who are not sexually active or are still virgins in the district. Furthermore, although majority of the respondents (59.4%) agreed that adolescents' first sexual encounter can result into pregnancy as much as (50.7%) thought that it was acceptable for most people of their age to engage in pre-marital sex if the couples plan to marry. Whilst 72.5% of the respondents agreed that it is acceptable to stay chaste until marriage, 30.4% agreed that having sugar daddy/sugar mummy is a good way of getting nice things. In reality, most respondents observed that early pregnancy, childbearing and abortion as a consequence of pre-marital sex of adolescents has

the tendency of producing unhealthy youthful population without industrious skills and technical knowledge embodied in labour as a means of production (Becker et al, 1990).

Most respondents (44.2%) were in intimate relationship with their peers, teachers, neighbours or sugar daddies/mummies of the opposite sex, for sexual pleasure or satisfaction, companionship, future partnerships, material support, academic favour, peer pressure and for financial support. They also wanted to avoid boredom, make fun, share ideas and to know more about the opposite sex as well as serve as study mates. Another reason expressed by some of them was to be abreast with modernity and avoid mockery of their friends. Most of the respondents (70%) met their partners in their middle to late adolescence. Considering the period and reasons for which respondents indulge in intimate relationships, it is most likely that the development of their human capital (knowledge and skill acquisition, health status, abilities and attitudes) would be affected in the event of likely early pregnancy, childbirth or contraction of STIs. It can ultimately result in lack of productive skills/capacities and higher income. On the other hand, the avoidance of early sex, early/teenage pregnancy and early child birth informed the decision of 54.3% of adolescents not to indulge in any intimate relationship with the opposite sex. They equally wanted to avoid contracting any of the STI including HIV/AIDS, remain chaste or abstain from sex until marriage. Moreover, unfaithfulness and the need to concentrate on their studies or in learning a trade were other reasons for not indulging in intimate relationship with the opposite sex. The need for much time and energy for studies

and to avoid peer influence on sexual and immoral behaviour were additional factors for not having a boy/girl friend. In view of the reasons advanced by respondents for not indulging in intimate relationship, it is obvious that they wanted to safeguard the development of their human capital by acquiring knowledge, skills, physical fitness and positive attitudes required to enhance their productive capacities and future earnings.

Majority of the respondents (68.8%) broke their virginity in their middle to late adolescence and became sexually active before their twentieth year in life. The main reasons advanced by adolescents for engaging in sexual relationship were: sexual pleasure, peer influence and financial support. Future marriages, academic favour on the part of the girls and to show masculinity on the part of the boys were other contributory factors. Adolescents' sexual partners and source of persuasion for sex were identified as their peers (boy/girl friends), teachers, school/classmates, neighbours, school administrative staff and relations. To the source of coercive sex, while a relatively small number of the adolescents (31.8%) accepted willingly and 9.1% could not resist pressure for sex particularly from their boy/girl friends, majority refused all sorts of persuasion for sex from teachers, school/classmates, neighbours, school administrative staff and relations. Certainly, engaging in early sexual relationship puts respondents at higher risk of early pregnancy and childbearing or contracting STIs, which has the possibility of thwarting their efforts at widening, deepening and accumulating knowledge, skills, attitudes and abilities needed to improve upon their level of productivity and higher income/earnings.

Majority of the respondents (79%) and the key informants were aware of at least one STI. The most commonly identified diseases were HIV/AIDS (47.5%), gonorrhea (32.7%), followed by syphilis (14.9%) and candidiasis (white), with 4.9%. Notable among the signs and symptoms identified by both key informants and adolescents include: burning sensation when an infected person is urinating, itching and sores around the genitals and discharge from the genitals. Although misconceptions such as juju and curses were identified by adolescents in relation to the mode of contracting STIs, the main mode was through sexual intercourse. Increased knowledge of adolescents of STIs and its consequences means having the ability and skills to take preventive and curative measures, which can result in building a healthy workforce in future with the potential of enhancing their productive abilities and skills required in contributing to economic production (World Bank, 1993).

Prominent among the preventive measures identified by both majority of respondents were abstinence and condom use. Nonetheless, 4.4% of the adolescents have ever been infected by an STI and 29.5% knew of someone who has ever been infected by an STI. Notably among the STIs were gonorrhea and candidiasis (white). In fact, unhealthy outcome of adolescents population as a result of STI infections are associated with production losses, poverty and social inequity, inadequate health care and poor school achievements (Tsui et al, 1997; Singh, 1998). Consequently, the development of their capital asset is affected. While 25.6% of the adolescents recognised antibiotics as a cure to STIs, 20.5% relied on herbal medicine. However, 13% were ignorant of any cure for STIs.

Similarly, parents and teachers also identified antibiotics and herbal medicine as curative measures against STIs.

Most key informants and a vast majority of the adolescents (95%) were certain of the reality of HIV/AIDS and 59.4% have ever seen someone suffering from the disease. Furthermore, majority of the adolescents (71%) declared that a person living with HIV appears to be healthy. They also recognised unprotected intercourse (casual sex), kissing, sharing of infected sharp objects, transfusion of infected blood and from an infected mother to a child as the common mode of contracting the disease. However, some of the adolescents still had misconceptions (mosquito bite and casual contact) about the mode of HIV transmission. On respondents' knowledge of the signs and symptoms of AIDS, rapid weight loss, loss of hair, persistent diarrhea, T.B., difficulty in swallowing food and skin disease such as sloughs were commonly identified beside misconceptions such as itching around the genitals, discharge from the genitals and painful sensation when urinating. Though majority of the respondents were familiar with the 'ABC' methods of preventing AIDS, 2% of adolescents had false impression of using juju, 3% thought of washing or douching after sex while 2.6% said having fewer sex partners can prevent one from contracting the disease.

Furthermore, most of the respondents (56.5%) were aware of VCT and (72.5%) of those aware of VCT are willing to go through the test to know their HIV status. The study also revealed that the common source of information on VCT and HIV/AIDS is the mass media rather than interpersonal contact with teachers, parents, peers, health worker and religious leaders. For example, while

37.7% of the respondents learnt about VCT from the radio, only 1.4% knew about it from the church/mosque.

Majority of the respondents, with 51% talk to their siblings, 56.9% talk to their friends/classmates of the opposite sex, and 63.5% talk to their friends/classmates of the same sex about STIs including HIV/AIDS. Considerably, improved and consistent inter-personal communication about STIs including HIV/AIDS means increased awareness of such infections. This translates into creating the enabling conditions for healthy youthful population characterized by increase employability, income potential and productivity (McIntyre, n.d.; Becker, 1964). However, respondents (51.8%) do not talk to their parents, 80.3% do not talk to their religious leaders, 63.5% do not talk to their teachers and 58.4% do not talk to health workers about STIs including HIV/AIDS.

Finally, adolescents have high knowledge of contraceptives such as abstinence, condoms, withdrawal and pills. Significantly, over 90% of the respondents were aware of condoms while 87.6% were aware of abstinence. However, there was low or little practice of the known contraceptives making them prone to pregnancy and contraction of STIs including HIV/AIDS. For instance, of those who knew about the condom and abstinence only 23% practiced the use of condoms and 42% were able to abstain. The low and inconsistent practice of contraceptives among the adolescent has the greater implications for the sexual and reproductive health of adolescents. Resultant illness and other conditions can lead to increase in productive losses, reduction in school

enrolment, and increase use of resource for treatment instead of investing in other forms of human capital development (World Bank, 1993).

Although majority of the respondents consented to pre-marital sex, 64.7% would refuse to have sex with strangers. With regard to abstinence, 25.7% could not abstain from sex until marriage. Interestingly, even though majority of the adolescents (47%) were not confident enough to buy a condom at the shop, they (56.6%) would be confident in insisting on condom use with a partner. Similarly, over 63% of the adolescents could convince a partner to use condom and 48.5% said they could use condoms correctly if their sexual partner wanted to. It follows that most respondents are more likely to prevent and/or protect themselves from contracting STIs including HIV/AIDS and avoiding teenage pregnancy and its attendant problems. In the end, the health of adolescent and their human capital potential would be secured and developed. This behaviour and attitude enhances their health status, increases their employability and stock of productive capability for improved social and economic development.

Conclusions and implications

On the basis of the findings, it can generally be concluded that though respondents had acquired adequate knowledge of and shared their attitudes and experiences of sexuality and reproductive health hazards they still engaged in early sex due to their values and attitudes. This does not entirely jeopardize the development of their human capital potential. However the following specific conclusions should be made:

1. Although the adolescents' knowledge of their sexuality (pubescent and pregnancy) was very high most of them were sexually active or have ever indulged in sex. Ideally, majority of the adolescents thought it was good to stay chaste until marriage. In reality, they did not see anything wrong with pre-marital sex particularly if the couples plan to marry. Nonetheless, early sexual activity results in health risk of early pregnancy and childbearing, STIs, unsafe abortions, and lost of socio-economic benefits of education, training and health services in the form of acquired knowledge, skills, abilities, attitudes and physical fitness/stamina-capital assets. These have the benefits of increasing productivity and future earnings as a result of improves productive capacities, skills and vigour.
2. Quite significantly, adolescents (44.2%) were in intimate relationship with their peers, teachers, neighbours or 'sugar daddies' of the opposite sex for sexual pleasure, companionship, future partnerships, material support, academic favour, peer pressure and for financial support among others. Notwithstanding the perceived benefits associated with the relationships, the development of the human capital (acquired knowledge, productive skills/efficiency, learning capacity and creativity) of respondents can be affected.
3. Of those adolescents in intimate relationship, 68.8% broke their virginity in their middle to late adolescence and become sexually active before their twentieth birthday. For whatever reasons, the development of their human capital can be affected by the early age at breaking their virginity because

unprotected sexual activity at that age can result in health risk of early pregnancy, childbearing or abortion and STIs. Consequently, lack of adequate education and training affects the knowledge, productive skills/capacities and future earnings of respondents.

4. Adolescents have acquired adequate knowledge of STIs (HIV/AIDS, gonorrhea, syphilis and candidiasis). They were aware of the common signs and symptoms, mode of contraction and the preventive measure of these diseases but had the misconception that one could contract some of the diseases particularly HIV/AIDS through juju or curses. However, they were unaware of equally dangerous STIs such as chancroid, genital herpes, chlamydial infection and hepatitis B. Nevertheless, 4.4% of the adolescents have ever been infected by an STI and 29.5% knew of someone who has ever been infected by an STI. Notwithstanding the acquired knowledge of STIs, the contraction of such infections particularly HIV/AIDS can have devastating effect on human capital development. Apart from directly affecting the health capital of respondents, it indirectly restrains the acquisition of knowledge and skills, affects their future labour inputs by increasing production losses caused by worker illness; by decreasing their enrolment in school and thwarting their ability to learn. It also puts pressure on public and private resources that would have to be spent on treating infected respondents instead of investing them in other kinds of human capital development activities (World Bank, 1993).

5. Adolescents' high knowledge of their sex and sexuality, STIs and other issues concerning their reproductive health is attributed to the following sources of information: radio, T.V., peers, teachers, parents, religious leaders and the activities of health workers. However, the main source of information was the radio. The use of the media and other socializing agents in providing sexuality education and health services implies creating the enabling environment to improve upon the stock of adolescents' knowledge, abilities, productive skills/capacities and to raise their monetary and psychic income (Becker, 1964; Schultz, 1981).
6. Although adolescents have adequate knowledge of STIs including HIV/AIDS, their attitude towards talking about it to their siblings and friends or school/classmates is good but poor when talking to their parents, teachers and most especially religious leaders. They are more comfortable talking about issues of sexuality with their peers than parents, teachers, health workers and religious leaders.
7. Adolescents and key informants have high knowledge of contraceptives. The commonly identified ones were: condoms, abstinence, pills and withdrawal. However, the practice of these contraceptives especially condoms was very low in the district. Certainly, low or inconsistent use of contraceptive vis-à-vis early sexual relationship among adolescents can result in the health risk of early pregnancy, childbearing or abortion and contraction of STIs. These conditions indirectly affect the development of human capital (acquired knowledge, skills, abilities and stamina) as an

outcome of education, training and health services. In the long-run the productive capacities, workforce participation, and future earnings are affected.

Recommendations

In view of the findings and conclusions of the study, the following recommendations are made:

1. Provision of sustained and strategic education, training and health services on sexual and reproductive health to adolescents (in-school and out-of-school), teachers, parents, health workers and opinion leaders in communities by the GHS in collaboration with GES and AEED. This measure has the capacity of directly and indirectly improving on the human capital of respondents and the district as a whole.
2. Adoption of an integrated social support and networking (social capital) approach in providing sexual and reproductive health education, training and health services to adolescents' in-school and out-of-school is a veritable source of developing their human capital.
3. Provision of skills based health education (life skills) to young adults in and out-of-school by GHS. Indeed, young people with the required skills; positive attitudes and values on STI prevention, reproductive health, early pregnancy and contraceptive use are capable of making

healthy life-style choices geared towards developing their human capital.

4. Provision of entrepreneurial skills training to adolescents by the AEED in order to empower them economically. This has the potential of making them self reliant, assertive and boosting their confidence in becoming less vulnerable. Indeed, if stresses of poverty could be lightened through poverty intervention and appropriate health care provided young people's health might have fewer negative consequences (Coupey and Klerman, 1992, Schultz, 1981). This approach strengthens human capital formation.

Areas for further studies

An overview of the literature and the summary of the key findings of the study revealed the following areas as a challenge to researchers interested in adolescent sexual and reproductive health for further studies.

1. Adolescents' behavioural and attitudinal change as a way of minimizing sexual and reproductive health hazards.
2. Risk and protective behaviour of young adults in the era of the HIV/AIDS pandemic.
3. Health and educational seeking behaviour of adolescents in the era of STIs including HIV/AIDS.
4. Enhancing adolescent sexual and reproductive health through skills based health education and training.

5. Enhancing human capital through sexual and reproductive health promotion.

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APPENDIX A: INTERVIEW SCHEDULE FOR IN-SCHOOL AND OUT-OF-SCHOOL ADOLESCENTS

Please answer each question by ticking where appropriate and fill in the spaces provided to the best of your knowledge. Please be as honest as possible. Thank you.

SECTION A: SOCIO-DEMOGRAPHIC BACKGROUND OF RESPONDENTS

1. Age [ ]

2. Sex 1. Male [ ] 2. Female [ ]

4. Marital status 1. Married [ ]2. Single [ ]3. Divorced [ ]4. Other[ ](specify).....

IN-SCHOOL ADOLESCENTS ONLY:

5. Form 1. JSS1 [ ]2. JSS2 [ ]3. JSS 3 [ ]4. SSS1 [ ] 5. SSS2 [ ]6. SSS3 [ ]

OUT-OF-SCHOOL ADOLESCENTS ONLY:

6. Level of education 1. Primary [ ]2. JSS [ ]3. SSS [ ]4. Never been to school [ ]

SECTION B: KNOWLEDGE OF AND ATTITUDES TO SEX, SEXUALITY AND REPRODUCTIVE HEALTH

FEMALE ADOLESCENTS ONLY:

7. Do you know of menstruation? 1. Yes [ ] 2. No [ ]

8. What is menstruation?.....……..

9. At what age did you experience your first menstrual period? ……

MALE ADOLESCENTS ONLY:

10. Do you know what wet dream is? 1. Yes [ ] 2. No [ ]

11. What is wet dream?.....

12. At what age did you experience your first wet dream? [ ]

BOTH MALE AND FEMALE ADOLESCENTS

13. How does a woman become pregnant?.....

14. When in the monthly cycle is pregnancy likely to occur?.....

15. Do you know of sexual and reproductive health education? 1. Yes [ ] 2. No[ ]

16. If yes, how did you know of sexual and reproductive health education?

……

17. Which sources do you often receive sexual and reproductive health education?

……

18. Do you think you are at risk of making a girl pregnant or getting pregnant?

1. Yes [ ] 2. No [ ]

19. Why do you think you are at a risk of making a girl pregnant or getting pregnant?.....

20. Why do you think you are not at risk of making a girl pregnant or getting pregnant?.....

Please read each statement carefully and indicate if you agree or disagree.

Statement	Agree	Disagree	Not sure
21. A girl cannot get pregnant if she has sex for the first time			
22. Sex before marriage is O.K. for males but not for females			
23. Most people of my age think it is OK to have sex before marriage			
24. I think it is OK not to have sex until marriage			
25. Having sugar daddy/mummy is a good way of getting nice things			
26. Sex before marriage is OK if the couple plans to marry			

SECTION C: FACTORS INFLUENCING EARLY SEXUAL ACTIVITY

27. Do you have a boy/girl friend? 1. Yes [ ] 2. No [ ]

28. Why do you have a boy/girl friend?.....

29. My boy/girl friend is a? 1. Peer [ ] 2. Teacher [ ] 3. Neighbor [ ]

4. Sugar daddy/mummy [ ] 5. Other (specify)……

30. How long have you been together? ……..

31. At what age did you meet your first boy/girl friend?.....years.

32. Why don't you have a boy/girl friend?.....

33a. Have you ever been pressured to have sex with any of the people below?	1. Yes [ ] 2. No [ ] (If yes, go to 39b) →	b. If yes, what happened? 1. refused 2. accepted willingly 3. accepted under pressure 4. other (specify)…….
Boy/girl friend	[ ]	[ ]
Teacher/master	[ ]	[ ]
School/classmate	[ ]	[ ]
A neighbour	[ ]	[ ]
School administrative staff	[ ]	[ ]
A relation (specify)…….	[ ]	[ ]
Other (specify) ……..	[ ]	[ ]

Indicate by ticking whether you agree or disagree with the following statements.

Statement	Agree	Disagree	Not sure
34. Boy/girl friend relationship is for companionship only			
35. Boy/girl friend relationship is for companionship and sex			
36. Boy/girl friend relationship is for sex only			
37. Boy/girl friend relationship is for studies and sex			
38. Boy/girl friend relationship is for studies only			
39. If you don't have sex early you can become a fool			
40. Having sex early reduces menstrual pains.			

41. MALES ONLY: Why will a boy have sex with a girl? ……

42. FEMALES ONLY: Why will a girl have sex with a boy? …….

43. How old where you when you first had sexual intercourse? …….. years.

SECTION D: KNOWLEDGE OF AND ATTITUDES TO SEXUALLY TRANSMITTED INFECTIONS

44. Do you know of sexually transmitted disease/infections? 1. Yes [ ] 2. No [ ]

Fill in the blank spaces and indicate the corresponding numbers to the responses in the boxes provided in the table.

45. If yes, state the sexually transmitted infections in the blank spaces provided below	46. What do you know about the disease/infection? 1. itch around the genitals 2. it causes sores on the genitals 3. gives bad smell 4. give burning sensation when urinating 5. Discharge from the genitals	47. Which of the following ways can infection be transmitted 1. sexual intercourse 2. juju 3. adultery 4. eating lots of sweets 5. curses 6. Don't know	48. How can you protect yourself from getting the disease/infection? 1. abstaining from sex 2. use condom 3. Non-penetrative sex 4. fewer sex partners 5. washing or douching after sex
…….	[ ][ ][ ][ ]	[ ][ ][ ][ ]	[ ][ ][ ][ ]
…….	[ ][ ][ ][ ]	[ ][ ][ ][ ]	[ ][ ][ ][ ]
…….	[ ][ ][ ][ ]	[ ][ ][ ][ ]	[ ][ ][ ][ ]
…….	[ ][ ][ ][ ]	[ ][ ][ ][ ]	[ ][ ][ ][ ]
……..…	[ ][ ][ ][ ]	[ ][ ][ ][ ]	[ ][ ][ ][ ]

Fill in the blank spaces and indicate the corresponding numbers to the responses in the boxes provided in the table.

Disease/infection	49. How can disease be cured? 1. No cure 2. full course antibiotics 3. herbal medicine 4. Don't know	50. Do you know anyone (friend) who has ever had disease? 1. Yes 2. No	51. Have you ever had the disease? 1. Yes 2. No (if yes, go to question 58)	52. How did you cure it? 1. No cure 2. Full course antibiotics 3. Herbal medicine 4. Visited the hospital 5. Other (specify)…..
1……	[ ][ ]	[ ]	[ ]	[ ][ ]
2……	[ ][ ]	[ ]	[ ]	[ ][ ]
3……	[ ][ ]	[ ]	[ ]	[ ][ ]
4……	[ ][ ]	[ ]	[ ]	[ ][ ]
5……	[ ][ ]	[ ]	[ ]	[ ][ ]

SECTION E: KNOWLEDGE OF AND ATTITUDES TO HIV/AIDS

53. Do you know of the disease called AIDS? 1. Yes [ ] 2. No [ ]

54. Do you think AIDS is real or exist? 1. Yes [ ] 2. No [ ]

55. Have you ever seen someone who is suffering from AIDS? 1. Yes [ ] 2. No [ ]

56. Does a person with HIV/AIDS appear to be healthy? 1. Yes [ ] 2. No [ ]

57. In what ways do you believe AIDS can be transmitted? ……

58. What are some of the possible signs/symptoms of AIDS? …….....

59. Is there any form of cure for HIV/AIDS? 1. Yes [ ] 2. No [ ]

60. Do you know of Voluntary Counseling and Testing (VCT)? 1. Yes [ ] 2. No []

61. If yes, how did you know about VCT?.....

62. Would you like to go for VCT to know your HIV status? 1. Yes [ ] 2. No [ ]

63. How can you protect yourself from contracting HIV/AIDS? …….

64. Which sources do you often receive education about HIV/AIDS? ……

65. Do you talk about contraceptives to the following people? 1. Yes 2. No

1. Parents [ ] 2. Siblings [ ] 3. Friends/school mates of the same sex [ ]

4. Friends/school mates of the opposite sex [ ] 5. Religious leaders [ ]

6. Teachers/masters [ ] 7. Health workers [ ] 8. Other (specify)……

SECTION F: KNOWLEDGE OF, ATTITUDES TO AND PRACTICE OF CONTRACEPTIVE

66. Do you know about the ways of preventing pregnancy? 1. Yes[ ] 2. No [ ]

67. If yes, state the ways/methods of preventing pregnancy you know……

Indicate the corresponding numbers to the responses in the boxes provided.

METHODS	68. Do you know of the following ways of preventing pregnancy? 1. Yes 2. No	69. Do you know of a friend who has used any of the methods before? 1. Yes 2. No	70. Have you ever used any of the methods? 1. Yes (If yes, go to 75)→ 2. No	71. If yes, at what did you start using the method?
a. Abstinence	[ ]	[ ]	[ ]	[ ]
b. Withdrawal	[ ]	[ ]	[ ]	[ ]
c. Female sterilization	[ ]	[ ]	[ ]	[ ]
d. Male sterilization	[ ]	[ ]	[ ]	[ ]
e. Injectables	[ ]	[ ]	[ ]	[ ]
f. Norplant	[ ]	[ ]	[ ]	[ ]
g. Condom	[ ]	[ ]	[ ]	[ ]
h. Pills	[ ]	[ ]	[ ]	[ ]
i. IUCD/LOOP	[ ]	[ ]	[ ]	[ ]
j. Spermicide	[ ]	[ ]	[ ]	[ ]

72. Do you talk about contraceptives to the following people? 1. Yes [ ] 2. No [ ]

1. Parents [ ] 2. Siblings [ ] 3. Friends/school mates of the same sex [ ]

4. Friends/school mates of the opposite sex [ ] 5. Religious leaders [ ]

6. Teachers/masters [ ] 7. Health workers [ ] 8. Other (specify)……

Indicate how sure you are about being able to do the following things

Statements	Yes	Not sure	No
73. Buy a condom at the shop			
74. Be confident in insisting on condom use with a partner			
75. Refuse to have sex with someone I have met for the first time			
76. Use condom correctly if my sexual partner wanted to			
77. Convince a partner that he or she should use condom			
78. Abstain from sex until marriage			

APPENDIX B: INTERVIEW SCHEDULE FOR PARENTS

SECTION A: SOCIO-DEMOGRAPHIC BACKGROUND OF RESPONDENTS

1. Age [ ]

2. Sex 1. Male [ ] 2. Female [ ]

3. Highest level of education reached

1. Primary [ ] 2. JSS [ ] 3. SSS [ ] 4. Vocational/Technical [ ]

5. Training College [ ] 6. Polytechnic [ ] 7. University [ ] 8. None [ ]

4. Marital status 1. Married [ ]2. Single [ ]3. Divorced 4. Other (specify)……..

SECTION B: KNOWLEDGE OF, AND ATTITUDES TO SEX, SEXUAL AND REPRODUCTIVE HEALTH EDUCATION

5. Do you know about adolescent sexual and reproductive health education?

1. Yes [ ] 2. No [ ]

6. Do you give sexual and reproductive health education to your adolescent child (ren)? 1. Yes [ ] 2. No [ ]

7. If yes, what kind of sexual and reproductive health education do you give to your adolescent child (ren)? ……

8. How do you provide sexual and reproductive health education to your adolescent child (ren)? 1. Formally [ ] 2. Informally/casually [ ]

9. How often do you give sexual and reproductive health education to your child (ren)?……..……

10. Do you feel comfortable talking to your adolescent child (ren) about sexual and reproductive health issues? 1. Yes [ ] 2. No [ ]

11. Do you have sexual and reproductive health education clubs in schools/ community in the district? 1. Yes [ ] 2. No [ ]

12. If yes, what kind of sexual and reproductive health education will you provide?……..……

SECTION C: FACTORS INFLUENCE EARLY SEXUAL ACTIVITY

13. Do you think your child(ren) have boy/girl friends? 1. Yes [ ] 2. No [ ]

14. If yes, why?……

15. Why will an adolescent girl have sex with a colleague parent ……..…….

16. Do you know about sexually transmitted disease/infection? 1. Yes [ ]2. No[ ]

Fill in the blank spaces and indicate the corresponding numbers to the responses in the boxes provided in the table.

17. If yes, state the sexually transmitted infections you know in the blank spaces below.	18. What do you know about the infection? 1. itch around the genitals 2. It cause sores on genitals 3. Gives a bad smell 4. Gives pain/burning sensation when urinating 5. discharge from the genitals 6. nothing	19. Which of the following ways can infection be transmitted 1. Sexual intercourse 2. juju 3. Adultery 4. eating lost of sweets 5. curses 6. don't know	20. How can people protect themselves from getting disease? 1. Abstaining from sex 2. Use condom 3. non-penetrative sex 4. fewer sex partners 5. washing or douching after sex
1…….	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]
2……..	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]
3……..	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]
4…….	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]
5……..	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]

Fill in the blank spaces and indicate the corresponding number to the responses in the boxes provided in the table.

Disease/ infection	21. How can disease be cured? 1. No cure 2. full course antibiotics 3. Herbal medicine	22. Do you know any one (adolescent) who has ever had disease? 1. Yes 2. No
1…….	[ ] [ ]	[ ] [ ]
2……..	[ ] [ ]	[ ] [ ]
3……..	[ ] [ ]	[ ] [ ]
4…….	[ ] [ ]	[ ] [ ]
5……..	[ ] [ ]	[ ] [ ]
6……	[ ] [ ]	[ ] [ ]

23. Do you provide your adolescent child(ren) with education about sexually transmitted infections? 1. Yes [ ] 2. No [ ]

24. If yes, what kind of information do you provide your adolescent child(ren) with about sexually transmitted infections?……...

25. How do you provide your adolescent child(ren) with sexually transmitted education? 1. Formally [ ] 2. Informally [ ]

26. If no, why?.....……

SECTION E: KNOWLEDGE OF AND ATTITUDES TO HIV/AIDS

27. Do you know of the disease called AIDS? 1. Yes [ ] 2. No [ ]

28. Do you think AIDS is real? 1. Yes [ ] 2. No [ ]

29. Have you ever seen someone who is suffering form AIDS? 1. Yes [ ]2. No [ ]

30. Does a person with HIV/AIDS appear to be healthy? 1. Yes [ ] 2. No [ ]

31. In what ways do you believe AIDS can be transmitted? ……..

32. What are some of the possible sings/symptoms of AIDS?.....……..

33. Is there any form of cure for HIV/AIDS? 1. Yes [ ] 2. No [ ]

34. How can you protect yourself form contracting HIV/AIDS? …….

35. Do you know of Voluntary Counselling and Testing (VCT)?1. Yes [ ]2. No [ ]

36. Would you like to go for VCT to know your HIV status? 1. Yes [ ] 2. No [ ]

37. Do you talk to your adolescent child(ren) about HIV/AIDS? 1. Yes[ ]2. No [ ]

38. If yes, what kind of information do you give to your adolescent child(ren) about HIV/AIDS?....……

39. How do you provide your adolescent child(ren) with education about HIV/AIDS? 1. Formally [ ] 2. Informally [ ]

40. How often do you do this?.....

41. If no, why? ……

SECTION F: KNOWLEDGE OF ATTITUDES TO AND PRACTICE OF CONTRACEPTIVES

42. Do you know about the methods of preventing pregnancy (Tick where appropriate) 1. Yes [ ] 2. No [ ]

43. If yes, state the methods of preventing pregnancy that you know……

Indicate the corresponding numbers to the responses in the boxes provided

Methods of preventing pregnancy	44. Do you know of the following methods of preventing pregnancy? 1. Yes 2 No	45. Do you know if any of your adolescent child(ren) has/ have used method before? 1. yes (if yes, go to 53) → 2. No	46. If yes, at what age did he/here start using the methods?
a. Abstinence	[ ]	[ ]	[ ]
b. Withdrawal	[ ]	[ ]	[ ]
c. Female sterilization	[ ]	[ ]	[ ]
d. Male sterilization	[ ]	[ ]	[ ]
e. Injectables	[ ]	[ ]	[ ]
f. Norplant	[ ]	[ ]	[ ]
g. Condom	[ ]	[ ]	[ ]
i. Pills	[ ]	[ ]	[ ]
j. IUCD/LOOP	[ ]	[ ]	[ ]
k. Spermicide	[ ]	[ ]	[ ]

47. Do you talk to your adolescent child(ren) about contraceptives? (Tick where appropriate) 1. Yes [ ] 2. No [ ] If no, skip to 50)

48. If yes, what kind of contraceptive education do you to your adolescent child(ren)?……..…

49. How do you provide your adolescent child(ren) with education about contraceptive? 1. Formally [ ] 2. Informally [ ]

50. If no to question 47, why? ……

APPENDIX C: QUESTIONNAIRE FOR TEACHERS

Please answer each question by ticking where appropriate and fill in the spaces provided to the best of your knowledge. Please be as honest as possible.

Thank you.

SECTION A: SOCIO-DEMOGRAPHIC BACKGROUND OF RESPONDENTS

1. Age [ ]

2. Sex [Tick] 1. Male [ ] 2. Female [ ]

3. Marital Status [Tick]

1. Married [ ] 2. Singe [ ] 3. Divorce [ ] 4. Separated [ ] 5. Other(specify)…..

SECTION B: KNOWLEDGE OF, AND ATTITUDE TO SEX, SEXUAL AND REPRODUCTIVE HEALTH EDUCATION

4. Do you know of sexual and reproductive health education? 1. Yes [ ] 2. No [ ]

5. Do you give sexual and reproductive health education to your students?

6. If yes, what kind of sexual and reproductive health education do you give to your students? ……...

7. How often do you give sexual and reproductive health education to your students……..

SECTION C: FACTORS INFLUENCING EARLY SEXUAL ACTIVITY

8. Do you think students in your school are in intimate relationships with the opposite sex? 1. Yes [ ] 2. No [ ]

9. If yes, why?.....……..

10. Do you know whether any of your students have any form of sexual relationship with the following?

1. Peers [ ] 2. Schoolmates [ ] 3. Teachers [ ] 4. School administrative staff [ ]

5. Neighbours [ ] 6. Relations [ ] 7. Sugar daddy/mummy [ ] 8. Other (specify)...

11. Give reasons (evidence) for your response in question 15. ……...

12. Do you know of any colleague teacher in a sexual relationship with a student(s)? 1. Yes [ ] 2. No [ ]

13. Give reasons (evidence) for your response in question 17. ……...

14. Why will a student girl have sex with a teacher/master?.....……

SECTION D: KNOWLEDGE OF AND ATTITUDE TO SEXUALLY TRANSMITTED INFECTIONS

15. Do you know about sexually transmitted infections? 1. Yes [ ] 2. No [ ]

Fill in the blank spaces and indicate the corresponding numbers to the respondents in the boxes provided in the table.

16. If yes, state the sexually transmitted infections you know in the blank spaces below	17. What do you know about the infection? 1. Itch around the genitals 2. It cause sores on genitals 3. Gives a bad smell 4. Gives pain/burning sensation when urinating 5. Discharge from the genitals	18. Which of the following ways can infection be transmitted. 1. Sexual intercourse 2. Juju 3. Adultery 4. Eating lost of sweets 5. Curses 6. Don't know	19. How can people protect themselves from getting infection? 1. Abstaining from sex 2. Use condom 3. Non-penetrative sex 4. Fewer sex partners 5. Washing or douching after sex 7. Other (specify) …

	6. Nothing		
1. ……	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]
2. ……	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]
3. ……	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]
4. ……	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]
5. ……	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ]

Fill in the blank spaces and indicate the corresponding numbers of the respondents in the boxes provided in the table.

Disease/infection	20. How cane disease/infection be cured? 1. No cure 2. Full course antibiotics 3. Herbal medicine 4. Don't know	21. Do you know any student who has never had disease/infection? 1. Yes 2. No
1. ……..	[ ] [ ]	[ ]
2. ……..	[ ] [ ]	[ ]
3. ……..	[ ] [ ]	[ ]
4. ……..	[ ] [ ]	[ ]
5. ……..	[ ] [ ]	[ ]

22. Do you provide students with information about sexually transmitted infections? 1. Yes [ ] 2. No [ ] (If No, skip to question 29).

23. If yes, what kind of information do you provide students with about sexually transmitted infections?.....……

24. If No to question 27, why?.....

SECTION E: KNOWLEDGE OF AND ATTITUDES TO HIV/AIDS

25. Do you know of the disease called AIDS? 1. Yes [ ] 2. No [ ]

26. Do you thing AIDS is real? 1. Yes [ ] 2. No [ ]

27. Have you ever seen someone who is suffering from AIDS? (Tick where appropriate) 1. Yes [ ] 2. No [ ]

28. Does a person with HIV/AIDS appear to be healthy? 1. Yes [ ] 2. No [ ]

29. In what ways do you believe AIDS can be transmitted? ……

30. What are some of the possible signs/symptoms of AIDS? …….

31. Is there any form of cure for HIV/AIDS? 1. Yes [ ] 2. No [ ]

32. How can you protect yourself from contracting HIV/AIDS? ……

33. Do you know of voluntary counseling and testing (VCT)? 1. Yes [ ] 2. No [ ]

34. Would you like to go for VCT to know you HIV status? 1. Yes [ ] 2. No [ ]

35. Give reasons for your response in question 39……

36. Do you talk to your students about HIV/AIDS? 1. Yes [ ] 2. No [ ] (If No, skip to question 39)

37. If yes, what kind of information do you give to your students about HIV/AIDS

……

38. How often do you do this.…….

39. If no to question 36, why?....……

SECTION F: KNOWLEDGE OF, ATTITUDES TO, AND PRACTICE OF CONTRACEPTIVES

40. Do you know about the methods of preventing pregnancy? (Tick where appropriate) 1. Yes [ ] 2. No [ ]

41. If yes, state the methods of preventing pregnancy that you know. …….

Indicate the corresponding number to the responses in the boxes provided in the table.

METHODS	42. Do you know of the following methods of preventing pregnancy? 1. Yes 2. No
a. Abstinence	[ ]
b. Female sterilization	[ ]
c. Male sterilization	[ ]
d. Injectables	[ ]
e. Norplant	[ ]
f. Condom	[ ]
g. Pills	[ ]
h. IUCD/loop	[ ]
f. Spermicide	[ ]

43. Do you talk to students about the methods of preventing pregnancy? (Tick where appropriate) 1. Yes [ ] 2. No [ ]

44. If yes, which methods of preventing pregnancy do you educate your students on?……..…….

45. Which of the methods of preventing pregnancy do you advice students to practice?……why ……

APPENDIX D: INTERVIEW GUIDE FOR THE HEALTH WORKER

1. Age
2. Sex
3. Marital status
4. Position
5. Do you have adolescent clients? If yes, what are some of the sexual and reproductive health services you provide to your adolescent clients?
6. What are the attitudes of adolescents toward the sexual and reproductive health education you give to them?
7. Do you often have cases of adolescent pregnancies?
8. Do you have cases of adolescent sexually transmitted infections? If yes, state the common STIs that mostly infect adolescents?
9. Do you provide contraceptive services to adolescent? If yes, which contraceptive service do you provide to adolescents?
10. Which of the contraceptive services do adolescents patronise most?
11. What factors influence adolescents to engage in early sexual activity?