SCHOOL OF PUBLIC HEALTH

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA, LEGON

THE DETERMINANTS OF TEENAGE PREGNANCY AT KPONE-ON-SEA

BY

AMUAH PRISCILLA

A DISSERTATION SUBMITTED IN PART FULFILLMENT FOR THE AWARD OF THE MASTER OF PUBLIC HEALTH (MPH) DEGREE

APRIL, 2009

DECLARATION

I achieved this work independently under the supervision of Prof. Isabella A. Quakyi and Dr. Juliette Tuakli. I declare that except for other people's investigations which have been duly acknowledged, this work is the result of my own original research, and this dissertation, either in whole or part, has not been presented elsewhere for another degree.

_____

Priscilla Amuah
STUDENT

_____

Prof. Isabella A. Quakyi
ACADEMIC SUPERVISOR

_____

Dr. Juliette Tuakli
ACADEMIC SUPERVISOR

DEDICATION

To the Almighty God who granted me admission into this School and wisdom to produce this piece of work, to my dear parents, Mr. and Mrs Amuah, my best friend Eunice Konadu Twum; a friend that sticks closer than a sister and to my siblings, Juliet, Belinda and Elizabeth.

ACKNOWLEDGEMENTS

A lot of effort and commitment went into producing this piece of work. I therefore owe a great deal of gratitude to all who contributed in diverse ways to make this study a success. I acknowledge my Creator, who endowed me with strength, wisdom, knowledge and understanding to produce this dissertation.

The quality of this work benefited from the rich and vast experiences of my supervisors, Professor Isabella A. Quakyi and Dr. Juliette Tuakli. Their guidance, encouragement and suggestions were of immense help to me. My heartfelt appreciation is extended to my field supervisor, Dr. Addison who was like a father to me and devotedly directed, supported and encouraged me throughout my stay on the field. I also recognise the assistance I received from my research assistants, Mary, Auntie Winnie, Nuertey and Nat. Mention must be made of Mr. Ankrah of the Malaria project site at Kpone-on-Sea for his support and encouragement.

I acknowledge with much appreciation, the support I received from the Tema Municipal Health Directorate, Kpone-on-Sea health centre, the chief and opinion leaders at Kpone-on-Sea and head teachers of the schools in the sub-district who participated in the in-depth interviews.

I equally recognize the assistance and encouragements I received from lecturers especially Prof. Laing, Dr. Moses Aikins and Mr. Ireneous Soyiri. To my colleagues, Emmanuel Ewuntomah Mahamah, Michael Jeroen Adjabeng, Joel Jeffrey Idun-Acquah, Onyah Basoh, Josephat Nyuzaghl; my friends, Nathaniel Kwansa, Amos Laar, Abubakar Manu, Abraham Sowah, Sybil, Fafa, Asamoah, Maxwell, Pearl and Adelaide, you were simply wonderful.

Any shortcomings in the quality of this work, however, remain my sole responsibility.

ABSTRACT

Teenage pregnancy has become an enormous global reproductive health problem as the rates continue to increase. Early pregnancy both within and outside marriage is a common experience throughout the world. Teenage pregnancy and the subsequent teen motherhood is a major societal problem confronting sub-Saharan Africa, including Ghana.

This study determined the prevalence and determinants of teenage pregnancy at Kpone-on-Sea in the Tema Municipality of the Greater Accra Region of Ghana.

The study took place in seven communities of the sub-district. The study was a cross sectional study and employed both qualitative and quantitative techniques. Structured questionnaires were administered to 500 female teenagers in the seven communities. Qualitative data was collected from 42 participants using in-depth and key informant interviews and focus group discussions. Ethical review was obtained from the ethical review committee of Ghana Health Service. Statistical analysis was done using Statistical Packages for Social Scientists (SPSS, version 16.0) and Epi Info (version 3.3.2). The qualitative data was transcribed and analyzed.

The study found that teenage pregnancy in Kpone-on-Sea sub-district was higher (11.4%) than the regional estimate of 9.5%. Lack of sex education, parental care and financial support, poverty and peer pressure were identified as key causes of teenage pregnancy in the sub-district. There were no youth friendly centres at Kpone-on-Sea. Statistically significant relationship was found between age at teenage pregnancy and age at menarche ($r=0.640$; $p<0.01$).

The findings indicate that teenage pregnancy is a problem in Kpone-on-Sea sub-district. Measures should be put in place to address the key factors that have been identified to help curb the problem of teenage pregnancy in the sub-district.

Table of Contents

de Visser RO, Smith AM, Richters J, Rissel CE. (2007). Associations between religiosity and sexuality in a representative sample of Australian adults. *Arch Sex Behav* 36:33-46. 74

Galvan FH, Collins RL, Kanouse DE, Pantoja P, Golinelli D. (2007). Religiosity, denominational affiliation and sexual behaviors among people with HIV in the United States. *J Sex Res* 44:49-58. 74

Gökçe B, Ozşahin A, Zencir M. (2007). Determinants of adolescent pregnancy in an urban area in Turkey: a population-based case-control study. *J Biosoc Sci* **39**:301-11 74

Gupta N. (2000). Sexual initiation and contraceptive use among adolescent women in northeast Brazil. *Stud Fam Plann.* 31:228-38. 74

Harden A, Ogden J. (1999). Sixteen to nineteen year olds' use of, and beliefs about, contraceptive services. *Br J Fam Plann* 24:141-4. 74

Shrestha S. (2002). Socio-cultural factors influencing adolescent pregnancy in rural Nepal. *Int J Adolesc Med Health* **14**:101-9..... 76

Trent M, Clum G, Roche KM. (2007). Sexual victimization and reproductive health outcomes in urban youth. *Ambul Pediatr.* 7:313-6. 76

Vikat A, Rimpelä A, Kosunen E, Rimpelä M (2002). Sociodemographic differences in the occurrence of teenage pregnancies in Finland in 1987–1998: a follow up study. *Journal of Epidemiology and Community Health* 56:659-668 77

LIST OF TABLES

PAGE

LIST OF FIGURES

PAGE

LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
BBC	British Broadcasting Cooperation
BECE	Basic Education Certificate Examination
FGD	Focus Group Discussion
GDHS	Ghana Demographic and Health Survey
GES	Ghana Education Service
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
IDI	In-Depth Interview
JHS	Junior High School
JSS	Junior Secondary School
KII	Key Informant Interview

NGOs	Non Governmental Organisations
RCH	Reproductive and Child Health
SHS	Senior High School
SPSS	Statistical Packages for Social Scientists
STDs	Sexually Transmitted Diseases
TMHD	Tema Municipal Health Directorate
UK	United Kingdom
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Fund
USA	United States of America
WHO	World Health Organization

DEFINITION OF TERMS

Adolescent – Young people of 10 to 19 years. Adolescent Health Committee, Canadian Paediatric Society (2003).

Adolescent Pregnancy – Pregnancies occurring in girls of 10 to 19 years.

Determinants - Direct causes and risk factors which influence directly, the level of a specific health problem.

Prevalence – The proportion of individuals in a population having a disease or condition at a given time.

Teenage – Young people in their teens; thirteen (13) to nineteen (19) years. Denotes a person between 13 to 19 years old; a teenage girl (Oxford Pocket Dictionary of Current English, 2008).

Teenage Pregnancy – Pregnancy occurring in girls of 13 to 19 years.

Young People – People aged 10 to 24 years.

CHAPTER ONE

1.0 INTRODUCTION

Adolescence is a transitional period from childhood to adulthood. This transition is a critical stage of human development during which young people take on new roles and responsibilities. Adolescent reproductive health in recent years has emerged as a major social issue of concern to governments and policy makers all over the world.

Globalization, technological advancement and widespread economic development has changed the lives of adolescents of the present generation and presented them with a wide range of employment, educational, family and health experiences that depart from those of the adolescents some generations back (Nugent, 2006). This has led to an increase in the major challenges faced by the present youth, and the consequences it presents to them, especially problems related to reproductive health.

The reproductive health risks that confront adolescents of today include teenage pregnancies and its associated complications in child birth, illegal abortions, maternal morbidity and mortality and sexually transmitted diseases including the Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS). Teenage pregnancy in recent years has become an important social issue worldwide as rates keep on rising. In the words of Maynard (1996), most of the youth are becoming parents when they are still children; a phenomenon which can best be described as "kids having kids". The term teenage pregnancy refers to a pregnancy occurring in a woman aged nineteen or younger (WHO, 2000). Once a girl has attained menarche or her first

menstrual period, she is capable of becoming pregnant even though her reproductive system might not be physiologically matured to have a baby.

1.1 Background

There are more young people (10-24 years) in the world now than before (Nugent, 2006). These over one billion (1,733 million) young people, form approximately 27% of the world's total population (Ashford et al., 2006). Teenagers, who form a greater percentage of young people, thus represent a significant proportion of people all over the world. In recent age, teenage pregnancy has become an enormous global reproductive health problem as rates continue to increase. According to a United Nation's report, among one hundred and thirty two million (132 million) babies born worldwide each year, about fourteen million (14 million) babies are born to adolescent mothers (United Nations, 2001). Early pregnancy and childbearing both within and outside marriage is a common experience throughout the world (Blum et al., 2006). It was on this note that President Bill Clinton (1995), former President of the United States of America, in his State of the Union address stated that "Teenage childbearing is our most serious social problem". Recent statistics show that teenage pregnancy and childbearing is still a problem and that the United States has the highest teenage pregnancy rate in the Western world (UNICEF, 2001).

The British Broadcasting Corporation (BBC) on Friday, 27th May, 2005 carried a story on teen pregnancy titled "Why are rates rising?" It stated that the debate on how best to tackle teenage pregnancy has arisen again as latest figures show the rate in under 16s in England and Wales has increased. Among the European countries, teenage pregnancy rates are highest in the United Kingdom (UK) and it is three times that in Germany, four times that in France and seven times the

Dutch rate (Council of Europe, 1997). In another development, news from Australia on the 13th of March, 2006 attests to the high rate of increase in teenage pregnancy, especially in the rural areas. The rate of teenage pregnancy in the rural communities is up to 50 per cent higher than in the urban areas in Australia (National Rural News, 2006).

Teenage pregnancy and the subsequent teen motherhood is also a major societal problem confronting sub-Saharan Africa, as it records the highest incidence of adolescent pregnancy of 143 per 1000 (Treffers, 2003). Even though adolescent pregnancies and subsequent childbearing has fallen by about a quarter to one-half in North Africa and the Middle East, smaller declines have occurred in sub-Saharan Africa; and in some African countries, adolescents are even more likely to give birth today than their counterparts were a generation ago (Alan Guttmacher Institute, 1999).

In Ghana, teenage pregnancy is a major issue of public health concern as rates continue to rise. The Ghana Demographic and Health Survey (GDHS, 2003), reveals that ten percent of teenagers already have a child and another four percent are pregnant with their first child. It further reveals that the rate of teenage pregnancy is higher in the rural communities as compared with the urban communities. A report by Xinhua (1996) estimated that nearly one-third of the childbirths recorded in public hospitals in Ghana to that date occurred to women less than nineteen years of age suggesting that those occurring outside the public hospitals may even be much higher. The Ghana Education service has stated that teenage pregnancy is the main cause of girls dropping out of Junior High School (JHS) level schooling (cited in Hutchinson et al., 2005).

Teenage pregnancy has no single or simple cause; its associated factors are multifaceted. These factors include poor socioeconomic background, lack of parental control, alcohol and substance use, low level of education, increase in domestic and sexual violence, peer pressure, early marriages, practices, beliefs, religion, early age at menarche, unwelcome attitude of health workers, lack of access to family planning services and lack of sex education.

Of these factors, poor socio-economic background, according to Buvinic (1998) is a critical determinant. The Social Exclusion Unit report (1999) on teenage pregnancy identified three major factors for the UK's failure to reduce teenage conception rates alongside those of other European countries. These factors according to the report are low or poor expectations of education or the job market, ignorance or inadequate knowledge about contraception and sexually transmitted diseases and mixed messages which imply that sexual activity is the norm. Craig (2004) in a study of teenage pregnancy linked to seaside and rural areas, also disclosed that poverty, school exclusion, not being in education, histories of sexual abuse, mental health difficulties or involvement in crime are strong predictors for teenage pregnancy.

Were (2007) suggests the problem of teenage pregnancy should be viewed within the broader socio-economic and socio-cultural environment in which the adolescent operate. These factors can therefore be conveniently grouped under four main headings namely social, economic, cultural and programmatic or health service factors. The social determinants of teenage pregnancy may include lack of parental control, increase in domestic and sexual violence, poor educational attainment, peer pressure, high alcohol intake and increase in social events (funerals and festivals). Economic factors may include occupation and level of income. Issues relating to

programmatic factors may include health service factors such as attitude of health workers, working environment, lack of sex education and lack of access to family planning services. Cultural factors which may contribute to teenage pregnancy are age at menarche, beliefs, practices, religion and early marriages.

A study in Senegal pointed out that, only four percent of adolescent women and seven percent of adolescent men surveyed, had ever visited a family planning clinic and reasons cited for the non-use of services included socioeconomic factors (cost), socio-cultural factors (embarrassment, lack of knowledge about sexuality, contradictory social perceptions around premarital sex and contraceptive use) and health related factors such as poor reception by clinic staff and concern about the efficacy and side effects of the contraceptives (Nare et al., 1997).

Teenage pregnancy and childbearing has potential consequences which are felt by the girl and her child with considerably fewer negative consequences for her sexual partner. A study by Renker (1999) has revealed that pregnancy complications, poverty, delayed goal attainment and incomplete education are the outcomes of teenage pregnancy and early childbearing. Births to teenage mothers have the highest infant and child mortality in Ghana and this has been attributed to pregnancy and delivery complications (cited in GSS, 2003). These determinants of teenage pregnancies must therefore be looked at to help solve the problem of teenage pregnancy and also reduce the high infant and child mortality in Ghana.

The Tema Municipal Health Directorate (TMHD) in their 2007 annual report stated that teenage pregnancy is one of the key health problems in the municipal. Kpone-on-Sea, a sub-district of the Tema Municipality is confronted with the problem of teenage pregnancy (Personal

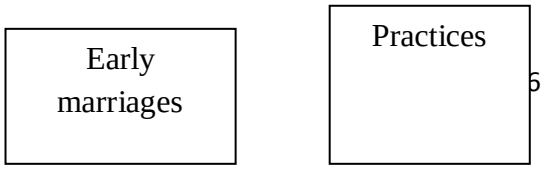
communication, The Chief of Kpone-on-Sea, 2007). This district is made up of many rural communities and the Ghana Demographic and Health Survey (2003) reveals that teenage pregnancy is a problem especially in the rural communities. According to the chief and some opinion leaders at Kpone-on-Sea, teenage pregnancy is very rampant in the community and occurs especially among JHS students and graduates often forcing these girls to drop out of school. However, the magnitude and the exact determinants (factors) contributing to this menace in the community is not known.

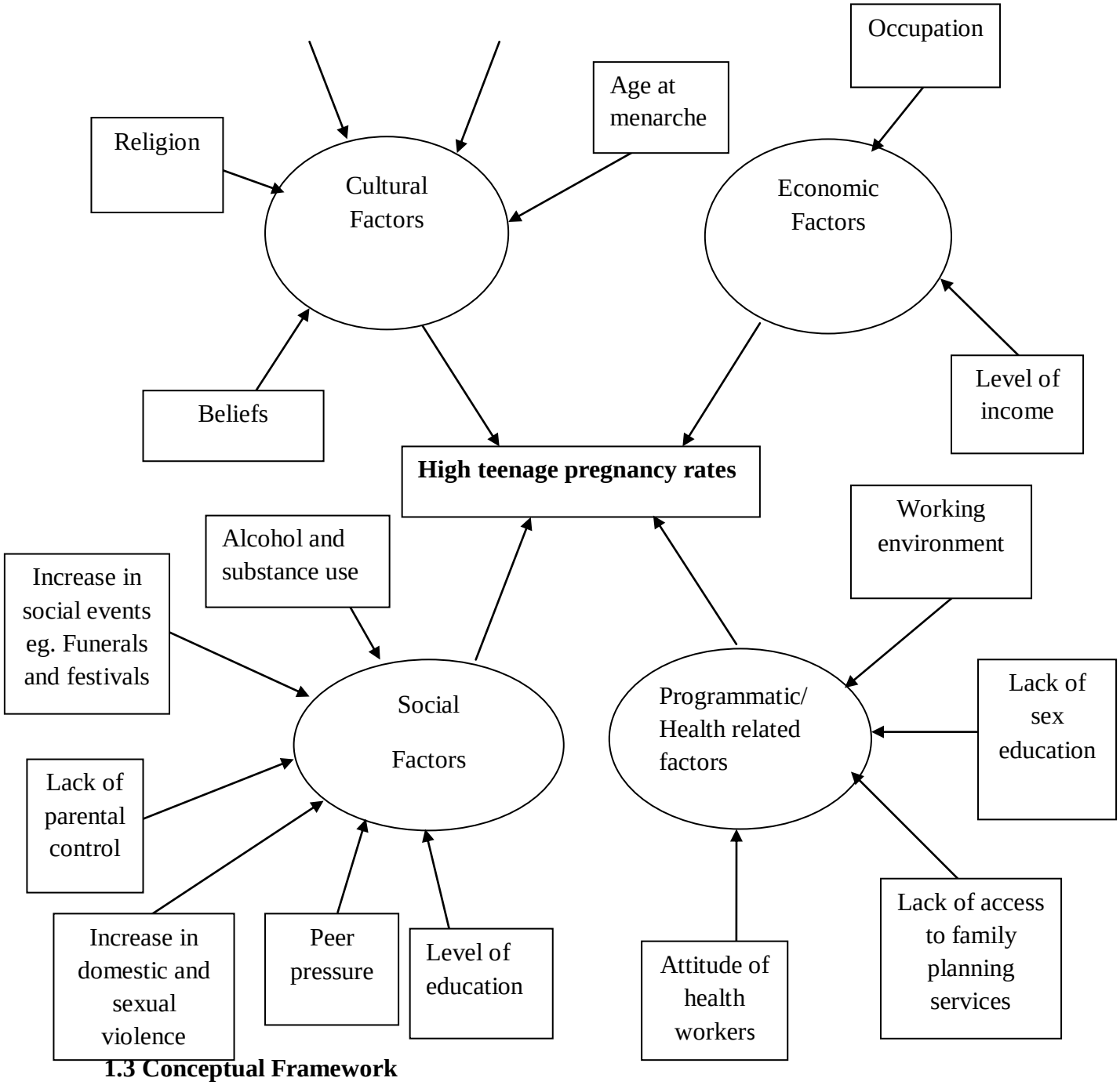
Although many people have researched into the magnitude and determinants of teenage pregnancy in the world, sub-Saharan Africa and different communities in Ghana, this research will find out the magnitude and factors contributing to the problem at Kpone-on-Sea.

1.2 Problem Analysis

Figure 1.1 analyzes the determinants of teenage pregnancy. The determinants have been grouped under four main headings namely social, economic, cultural and programmatic or health related factors. Low level of income and occupation make up the economic factors. The social determinants of teenage pregnancy include lack of parental control, alcohol and substance use, increase in social events, level of education, increase in domestic and sexual violence and peer pressure. Early marriages, practices, beliefs, religion and early age at menarche are the cultural determinants and the programmatic or health related determinants include attitude of health workers, lack of access to family planning services, the working environment and lack of sex education.

Figure 1.1: Problem analysis diagram for the determinants of teenage pregnancy





1.3 Conceptual Framework

Figure 1.2 conceptualises the problem of teenage pregnancy. The model recognises that female teenagers are influenced by the interplay of factors that result in pregnancy. It classifies the determinants (factors) into four groups namely social, economic, cultural and programmatic or health related factors.

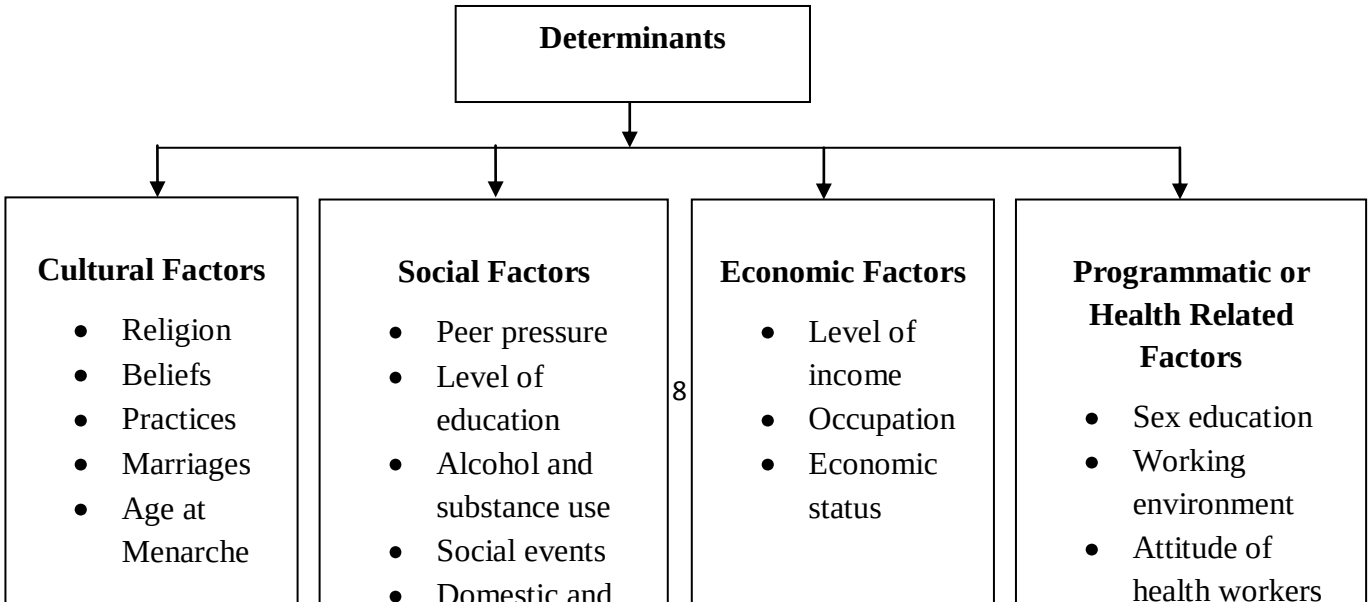
Economic factors: These are factors that deal with money, industry or a trade. Teenagers get into relationships solely to obtain money and material benefits in exchange for sex and this often result in teenage pregnancy. The economic factors in the conceptual model are level of income and occupation.

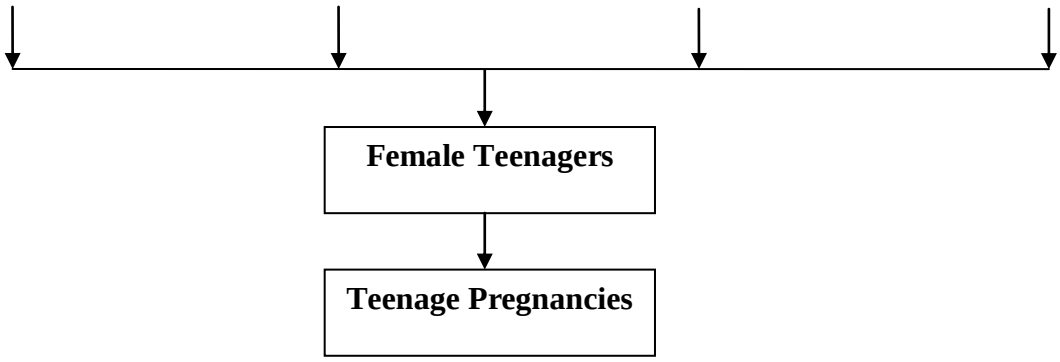
Cultural factors: They are factors relating to the way of life of a group of people. Early marriages, a cultural practice of some communities, expose the teenage girl to early pregnancy. The cultural factors represented in the model are beliefs, practices, marriage, religion and age at menarche. Early marriages for example, can lead to teenage pregnancies.

Social factors: They are factors relating to society; and parental control, level of education, social events, domestic and sexual violence, alcohol and substance use and peer pressure, are the social factors encapsulated in the model. Education is a protective factor for teenage pregnancy since an educated girl may delay the time for first sexual intercourse and also is able to prevent pregnancy by making use of family planning methods.

Programmatic or Health related factors: These are factors related to a health service or program. Access to family planning services allows the teenager to engage in safe protected sex and pregnancy is as such prevented. The health related factors in the model are sex education, attitude of health workers, access to family planning services and working environment.

Figure 1.2: Conceptual framework for a study of the determinants of teenage pregnancy





1.4 Problem Statement

Teenage pregnancy is a big public health problem worldwide. Of about 132 million babies born worldwide each year, about 14 million are born to adolescent mothers (United Nations Report, 2001). Teenage pregnancy in recent years has moved from being endemic to an epidemic especially in sub-Saharan Africa, where it records the highest rate of 143 per 1000 (Treffers, 2003). The situation is especially serious in the rural communities where poverty is endemic and as such most discussions on teenage pregnancy tend to characterize the problem as a main feature of the poor segment in a nation.

In Ghana, the problem is not different; the rate of teenage pregnancy keeps on rising. According to the 2003 Ghana Demographic and Health Survey, the number of teenagers between 15 and 19 years who were already mothers or pregnant with their first child at the time of the survey was about fourteen percent (14%); one in ten teenagers already had a child (10%) and another 4%

were pregnant with their first child. Rates in the rural communities also differ substantially from the urban communities; the percentage of rural communities was about three times that of the urban communities, 21.8 and 7.2 respectively. In the Tema municipality of the Greater Accra Region of Ghana, teenage pregnancy is one of their key health problems (TMHD Annual report, 2007). A more serious problem exists in Kpone-on-Sea, a predominantly rural sub-district in the Tema Municipality as teenage pregnancy rates keep on rising especially among JHS graduates (Personal communication, Opinion leaders at Kpone-on-Sea, 2007). The ideal situation is for these students to further their education to secondary school or to learn a trade. However, this is not the situation in the sub-district. It has been observed that the teenage girls become pregnant immediately after completing JHS (Personal communication, Opinion leaders at Kpone-on-Sea, 2007). For some, the opinion leaders reported that they even get pregnant while still in school and as such have to drop out of school. The consequences of teenage pregnancy are felt especially by the girl. These include pregnancy and delivery complications, and it may also foreclose a teenager's ability to pursue educational or job opportunities.

The factors which may contribute to the high teenage pregnancy rates in the sub-district are many and varied. This research therefore seeks to determine the extent to which teenage pregnancy is a problem at Kpone-on-Sea and to find out the exact factors contributing to this menace.

1.5 Justification

Literatures from different parts of the world including sub-Saharan Africa raise concerns on the high rates of teenage pregnancies especially in the rural communities and its attendant problems. When childbearing begins at an early age, the average number of children a woman has, tends to be on the higher side and has its own attendant problems. Adolescent childbearing has potentially negative demographic and social consequences as it has been found to have the highest infant and

child mortality in Ghana (cited in GSS, 2003). This may be attributed to the fact that teenagers are likely to suffer from pregnancy and delivery complications resulting in higher morbidity and mortality among mothers and children. Also, early childbearing may be the end of a teenager's education as they are forced to drop out of school and this has negative effects on further schooling and job opportunities (GSS, 2003). The pregnant girl is also faced with many challenges especially when the pregnancy occurs outside the context of marriage, since it often involves a social stigma.

In Ghana, similar concerns have been raised and a lot of studies have been carried out in various Ghanaian settings, but little has been done with respect to rural communities, where about seventy percent (70%) of the population live and as such Kpone-on-Sea. Media attention, public health research and programmatic responses to teenage pregnancy tend to focus mainly on urban areas. However, to plan relevant and meaningful programs, decision makers/community leaders and other stakeholders need information regarding the factors that contribute to teenage pregnancy especially in rural communities and how these factors independently and collectively impact on the teenagers, hence the need for this research in a rural setting. Secondly, the study will directly address the problem of teenage pregnancy which is a major concern of the community leaders and the TMHD as reported in their 2007 annual report.

1.6 Study Objectives

1.6.1 Main Objective

To determine the magnitude and identify the determinants of teenage pregnancy at Kpone-on-Sea.

1.6.2 Specific Objectives

- To determine the prevalence of teenage pregnancy at Kpone-on-Sea.

- To determine the social, cultural and economic factors contributing to teenage pregnancy at Kpone-on-Sea
- To determine the health related factors contributing to teenage pregnancy at Kpone-on-Sea
- To determine the availability of youth friendly facilities at Kpone-on-Sea.
- To explore the relationship between age at menarche and teenage pregnancy.

CHAPTER TWO

2.0 LITERATURE REVIEW

Teenage pregnancy has become a major health and social issue the world over and especially in developing countries. In recent times, the number of teenage pregnancies keeps on rising at an alarming rate. Early pregnancy and childbearing within and outside the context of marriage is a common experience throughout the world (Blum et al., 2006). Review of the available literature relating to the magnitude (prevalence) and the factors that contribute to teenage pregnancy is provided below. The information has been organized in line with the objectives of the study.

2.1 Magnitude/Prevalence of teenage pregnancy

Teenage pregnancy is a worldwide problem. It is estimated that worldwide, about fifteen million babies are born to adolescents (Alan Guttmacher Institute, 1996). According to Noble et al., (1996), 30% of deliveries are before age 20. Globally, teenage pregnancy rates range from 143 per 1000 in sub-Saharan Africa to 2.9 per 1000 in South Korea (Treffers, 2003). Among the developed countries, teenage pregnancy rates are highest in the United States (UNICEF, 2001). In the European countries, it is highest in the United Kingdom (UK) (Council of Europe, 1997). Teenage pregnancy rate in the UK is three times higher than in Germany, four times that in France and seven times than the Dutch rate (Council of Europe, 1997). There are more young people in the world than ever before and they are concentrated in the developing countries (Nugent, 2006). Adolescent childbearing rates therefore remain high in many parts of the developing world and it typically ranges between 120 to about 160 in most countries in sub-Saharan Africa (Blum et al., 2006). Sub-Saharan Africa records the highest teenage pregnancy rate (Treffers, 2003).

Miranda and Szwarcwald (2007); Okonofua et al., (1999) have observed that most adolescent pregnancies are unplanned and sometimes unwanted. The authors blamed this on the vulnerability of adolescents. Miranda and Szwarcwald (2007) in a cross sectional study to determine the prevalence of unplanned pregnancy among female adolescents in Vitoria, Brazil, found that the prevalence of pregnancy was 31.6%; a high prevalence of unplanned pregnancy. In another study to determine the prevalence and socio-demographic determinants of unwanted pregnancy and induced abortion in the Jos and Ife local government areas of Nigeria, Okonofua et al., (1999) showed that nearly 20 percent of the adolescents reported having had an unwanted pregnancy. The unwanted pregnancy reveals that some adolescents engage in sex without contraceptives and also without thinking of the consequences associated with it (Okonofua et al., 1999).

Although adolescent pregnancies and subsequent childbearing has fallen by about a quarter to one-half in North Africa and the Middle East due to access to education, smaller declines have occurred in sub-Saharan Africa (Alan Guttmacher Institute, 1999). In Ghana, teenage pregnancy rates keep on rising and this is particularly so in the rural areas where it ranges from 17.4% in 1999 to 21.8% in 2003 for adolescents aged 15-19 who have begun childbearing (GSS, 1999; 2003). The UN Regional Institute for Population Studies in a research conducted in the Central Region of Ghana in 1996, found that 1 out of 3 girls aged 15-19 has had a child (Xinhua, 1996). According to Xinhua (1996) nearly one-third of the childbirths recorded in public hospitals in Ghana occurred to women under 19 years of age and emphasized that the situation was more serious in the rural areas and small to medium-sized towns which are often under-represented in the hospital birth statistics. GSS (2003) observed the same trend and noted that urban teenagers differ substantially from their rural counterparts with respect to childbearing. The percentage of

women (15-19) who are mothers or pregnant with their first child, was far higher in the rural areas than in the urban areas, 21.8% and 7.2% respectively (GSS, 2003).

Most literatures have confirmed that teenage pregnancy rates are higher in rural areas than in urban areas. Bennett et al., (1997), in their study on rural adolescent pregnancy using the 1990 census and vital statistics data for eight South-eastern states of America, revealed that the teenage pregnancy rates in rural areas is higher than in urban areas. In their research on pregnancy and child health outcomes among adolescents in Ethiopia, Taffa and Obare (2004) reiterated that significantly larger proportion of teenage mothers lived in rural areas. They observed that the teenage mothers were mostly uneducated, poorer and had a history of divorce, separation or no marriage.

Although a number of teenage pregnancies occur in marriage, an increasing proportion occurs outside the context of marriage (UNFPA, 2003). In recent years, the proportion of teenage births occurring outside marriage has risen to 26% in Botswana, nearly 70% in Kenya, compared to 50% in the US since 1990 (Noble et al., 1996). In 1999, the Alan Guttmacher Institute reported a higher increase in teenage pregnancy rates among unmarried adolescents; about one-third of births to women aged 15 to 19 occur among unmarried adolescents in South Africa whiles Botswana and Namibia exceed three fourths. A study in Ghana by Hutchinson et al., (2005) has also revealed that there is increasing numbers of teenage pregnancies occurring outside marriage and this has been attributed to mass schooling which has provided a period in which young people are fertile (attain menarche early) but unmarried, a failure of sex education, a decline in traditional marriage rites and the conflict between western and traditional values.

2.2 Determinants of teenage pregnancy

The factors that contribute to teenage pregnancy are many and varied. According to Were (2007), the problem of teenage pregnancy should be viewed within the broader socioeconomic and socio-cultural environment in which the adolescent operate. For this study however, the determinants will be viewed under social, economic, cultural and programmatic/health related factors.

2.2.1 Economic determinants of teenage pregnancy

Gökçe et al., (2007) in a population-based case control study of adolescent women in Turkey have revealed that adolescent pregnancy is more frequent in women from families with low socioeconomic status, as determined by occupation (class) and income levels. Seven factors associated with adolescent pregnancy were also identified using a multiple logistic regression analysis and these are lack of social security, living in houses in which the number of persons per room is over one, unemployed women, exposure to violence within the family prior to marriage, families partially opposed or unopposed to adolescent marriage, secondary school or lower education level and having sisters with a history of adolescent pregnancy (Gökçe et al., 2007). Although the survey is good and informative, it will have been better to split the socioeconomic factors to economic and social factors so that a clear distinction can be made between the two with occupation and income levels under the economic factors and education and exposure to violence under social factors. This approach will be used in this study.

2.2.1.1 Level of income

Dangal (2005) has stated that adolescent childbearing is heavily concentrated among the poor and low income teenagers. According to Nabila and Fayorsey (1996), poverty is an important consideration in understanding adolescent childbearing in Ghana. Were (2007) has indicated that

widespread poverty predisposes girls to teenage pregnancies. A study by Rasch et al., (2000) found that the teenagers were sexually active at an early age and had sex with men who were usually older than them. Teenagers were in these relationships solely to obtain money or gifts in exchange for sex even though most of the girls were in love and enjoyed sex with these older men (Rasch et al., 2000). Another study by Silberschmidt and Rasch (2001) has reiterated that although adolescent girls are normally seen as victims and easy preys of older and married men's (sugar daddies) sexual exploitation, they are also willing preys and active social agents engaging in high-risk sexual behaviour and they do so in order to get material benefits. According to Vundule et al., (2001), teenagers from large household sizes are more likely to be at risk of teenage pregnancies than their counterparts from smaller household in that teenagers may be forced to sleep with other members of the family of the opposite sex or sometimes, sleep out with friends and this may expose them to the risk of teenage pregnancy.

2.2.1.2 Occupation

Shrestha (2002), in a retrospective exploratory study to determine adolescent pregnancy in rural Nepal found out that most adolescent mothers were from a low social class and engaged in agricultural work. Another study by Shawky and Milaat (2000) has revealed that teenage pregnancy is associated with housewives. Out of the women who were involved in the study, 92.4% were housewives (Shawky and Milaat, 2000). A contrary view made by Okonofua (1995); Marques et al., (1991) is that adolescents who were employed were four times more likely to be pregnant than those who were unemployed. This study will therefore find out what the situation is at Kpone-on-Sea.

2.2.2 Social determinants of teenage pregnancy

2.2.2.1 Low educational achievement

Empirical evidence from a research by Were (2007) indicate that girls' educational level has significant influence on the probability of teenage birth with non-schooling adolescents and those with primary school level education being more vulnerable to teenage pregnancy. A study by Shrestha (2002) indicates that teenage pregnancy is associated with girls with low literacy rate. In a study by Shawky and Milaat (2000), early teenage childbearing was found for 27.2% of the women and out of this, 57.1% were illiterates. This is no different in Ghana, as the GSS (2003) indicates that childbearing among teenagers' decreases with higher education; 26% and 20.8% of teenagers who are mothers or pregnant with their first child had no education or had achieved only primary education respectively as compared with the middle/JSS leavers and secondary school plus with 10.4 and 3.0 respectively. These results may mean that the higher ones' educational attainment, the less the probability of teenage birth and hence a higher education can be considered as a protective factor for teenage pregnancy since an educated woman has enough knowledge on contraceptives and as such is able to make choices to prevent pregnancy (Were, 2007).

2.2.2.2 Alcoholism and substance use

According to Craig (2004), alcohol is a precursor to unprotected sex. Young males emphasized that alcohol reduces inhibitions around sex and sexual behaviour and that although it increases their sexual desire, it also impedes or inhibits their cognitive ability to rationalize on the use of contraceptives and as such end up putting the young ladies in the family way during the focus group discussions (Craig, 2004). Some of the quotations from the focus group discussions are; one of the young boys remarked that "*alcohol makes you more randy; you'll fuck anything, like you forget. You don't think about it at the time* (about using condoms)", females of 12 years also remarked that "*You might be too drunk to think about contraception and get pregnant that way"* (Craig, 2004). In most rural communities, alcohol is readily available to young people and

drinking to get wasted is common from an early age and this contributes to the high incidence of teenage pregnancies due to unprotected sex (Craig, 2004). Lee and Chou (2001) in their research in Taiwan revealed that smoking cigarettes and drinking alcohol significantly increases the risk of early childbearing. Another study in one of the districts in Taiwan by Wang and Chou (1999) found out that adolescents who had smoked cigarettes were almost five times more likely to have given birth.

2.2.2.3 Lack of parental control

Vundule et al; (2001) in their matched case control study reported that teenagers not living with their biological father are at a high risk of becoming pregnant. In families where the father is not available, it contributes a large extent to the cause of teenage pregnancy since it is the father who can instil discipline and monitor the activities of his wards (Bonnel et al., 2006). Parental supervision and control may reduce the rates of teenage pregnancy by decreasing children's association with high-risk peers' and also lowering alcohol and drug use. Closely associated with parental control is lack of guidance and counselling. Were (2007), stated that teenagers who lack parental guidance and counselling are more likely to become pregnant. This may be due to the fact that teenagers who do not receive any form of guidance or counselling resort to other means of obtaining information such as from newspapers, the internet and from friends which may rather lead them into getting pregnant. According to Vikat et al., (2002), teenage girls who do not live with both parents are at higher pregnancy risk than those who live with both parents and also girls who live in a stepfamily have a higher risk than those who live in a one parent family. In a study by Cohen et al., (2002), it was revealed that teenagers who spend most of their time without adult supervision reported that they have sex at home after school since there will be no adults around to monitor their activities.

2.2.2.4 Increase in domestic and sexual violence

Saewyc et al., (2004) has confirmed a strong link between adolescent pregnancy and sexual abuse history by examining the association between pregnancy involvement, risk behaviours and sexual abuse. Results revealed that reports of pregnancy involvement were significantly more common among abused adolescents than the non-abused adolescents (Saewyc et al., 2004). Roosa et al., (1997) have also demonstrated that sexual abuse has some link to teenage pregnancy in their study on "the relationship of childhood sexual abuse to teenage pregnancy". Childhood sexual abuse history was assessed by respondent's age at menarche, first coital experience, use of birth control and pregnancy and results showed that 21% had not been abused, 9% were contact molestation victims, 39% were coercion victims, 26% were attempted rape victims and 43% were rape victims having a teenage pregnancy (Roosa et al.,1997). The results by Roosa et al., (1997) also showed that both precocity (voluntarily having sex before age sixteen) and sexual abuse (especially by a boyfriend) are related to much higher incidence of teenage pregnancy. Family violence which includes child maltreatment and domestic violence has emerged as a major social and health issue over the past decades and has been associated with teenage pregnancy, alcoholism and drug use (Chalk and King, 1998). Trent et al., (2007) in their study using cross sectional data have found that teenagers in urban communities with a history of sexual abuse are more likely to become pregnant as compared to those without sexual abuse.

2.2.2.5 Peer pressure

In a research by Were (2007), the study participants (adolescents) reported peer pressure as being a contributory factor to teenage pregnancy. Vundule et al., (2001) in their study, found out that a teenager who has a friend who has been pregnant has a higher risk of becoming pregnant. A risk ratio of 4.38 was obtained for teenagers who perceive most friends to be pregnant revealing that the influence of friends and for that matter, bad friends can lead a teenager into engaging in sexual intercourse which can result in pregnancy (Vundule et al., 2001). In a study on teenage sexual

behaviour: attitudes towards and declared sexual activity by Burrack (1999), peer pressure was identified as increasing the likelihood of putting teenagers at risk of teenage pregnancy.

2.2.3 Cultural determinants of teenage pregnancy

2.2.3.1 Early marriages

In certain societies and typically in sub-Saharan Africa, early marriage and traditional gender roles are important factors attributed to the rate of teenage pregnancy since early pregnancy is viewed as a blessing and a proof of fertility (Population Council, 2006). A retrospective exploratory study by Shrestha (2002) was carried out to determine factors contributing to adolescent pregnancy in rural Nepal, using a sample of 575 mothers and it was found that adolescent mothers were married at a comparatively younger age with a mean age of 15.9 years. Parents or elders, with or without the girl's consent, decided the majority of adolescent marriages, and age at marriage exposed women to early pregnancy regardless of who decided the marriage (Shresha, 2002). In another study, the relationship between marriage before 16 years and pregnancy outcome throughout the childbearing period was examined and early teenage childbearing was found for 27.2% of the women and most of these women were illiterate (57.1%) and housewives (92.4%) (Shawky and Milaat, 2000). Taffa and Obare (2004) have revealed that teenage mothers initiated unprotected sex early in life which exposed them to young parenthood and this took place within marital union.

2.2.3.2 Religion

De Visser et al., (2007) in their study on religion and sexuality using four religious groups (Protestant, Catholic, Buddhist, Muslim) and two levels of frequency of attendance at religious service revealed that greater attendance at religious service is associated with more conservative patterns of behaviour and attitude. Adamczyk and Felson (2008) in their study revealed that religiosity and denominational affiliation influence the probability that a girl will have an out-of-wedlock pregnancy. Religiosity therefore indirectly reduces the chances that a girl will get pregnant before marriage (Adamczyk and Felson, 2008). Another study by McCree et al., (2003) also confirms that religiosity has a relationship with sexual behaviour. The results of their study indicates that adolescents with higher religiosity scores are more likely to prevent pregnancies and also in refusing an unsafe sexual encounter. These adolescents are also more likely to initiate sex at a later age and possess positive attitudes toward condom use. Another study by Galvan et al., (2007), found religiosity to be associated with fewer sexual partners as well as a lower likelihood of engaging in unprotected sex, suggesting that religious teachings may promote safer sex among teenagers. Among the Christians, Catholics were less likely to engage in unprotected sex as compared to the other Christians and non Christian religions as well as those with no religious affiliations. Also, Catholics were less likely to engage in high-risk sex and also reported fewer sexual partners as compared to the non-Christians. No difference was however observed between the Catholics and the Evangelicals as regards sexual behaviour. Greater frequency of attending religious services and greater exposure to television are also associated with lower rates of sexual initiation and higher use of contraceptives (Gupta, 2000).

2.2.3.3 Beliefs

According to Harden and Ogden (1999), unwanted pregnancies, sexually transmitted diseases and unprotected sex in young people draw attention to the need to improvement of family planning services for these young people. Their study was therefore to examine young people's beliefs

about contraceptive services and results showed variability in service use, and beliefs about services were related to the youth's sexual experience as well as gender. Although condom machine was regarded as the easiest and most comfortable to use in terms of beliefs, it was the least confidential for the youth with males finding it easier to use than females and non virgins who reported more positive beliefs (Harden and Ogden, 1999).

2.2.3.4 Practices

Henrion (2003) has stated that traditional practices such as female genital mutilations and forcible childhood marriages have a close link with adolescent pregnancies. The consequences of these practices are not only the violation of the girl's dignity, but also the damaging or destruction of the girl's health and to some extent, her life. Forcible child marriage which is a disguised form of rape also has deleterious effects on the adolescent and this leads to adolescent pregnancies (Henrion, 2003). Mensch et al., (1999) in their study in the Kassena-Nankana District in northern Ghana where traditional patterns of marriage, family formation and social organization persists, found a considerable increase in girl's education. However, the social institutions, systems and practices such as female circumcision that previously structured the lives of adolescents had been destroyed or removed and this had led to an apparent increase in premarital sex.

2.2.3.5 Age at first menstruation/menarche

Buga et al., (1996), in a cross sectional descriptive study, found out that the age of initiation of sexual activity is positively correlated with the age of first dating and the age of menarche. Menarche occurred at 13.90 years and the prevalence of adolescent school girl pregnancy was 31.3%. According to Noble et al., (1996), at least eighty percent of sub-Saharan African youth are

sexually experienced by age twenty. Seventy three percent of all Liberia women, fifty three percent of Nigerians, forty nine percent of Ugandan and thirty two percent of Botswana's women aged between 15-19 have had sexual intercourse (Noble et al., 1996). Roosa et al., (1997) stated that age at first sexual intercourse is positively related to teenage pregnancy; with older adolescents being more disposed to pregnancies as more than 88% of the women had had sexual intercourse with 15.4 years as the average age (Roosa et al., 1997).

2.2.4 Programmatic/Health related factors

2.2.4.1 Lack of sex education

According to Were (2007), lack of parental guidance on issues of sexuality and sex education are reinforced by cultural taboos that inhibit such discussions. In Ghana, some parents are shy to talk to the children about sex and sexuality and teenagers are therefore left to themselves and so take decisions from especially their friends. Where parents educate teenagers on sex and sexuality, it often involves warnings and threats about the dangers of sexual activity and thus preach abstinence to them which does not help in reducing teenage pregnancy because teenagers of today find it difficult to abstain (Hutchinson et al., 2005).

2.2.4.2 Attitude of health workers

French (2002) found out that teenagers who patronise family planning clinics are not given enough time to discuss personal factors that may affect contraceptive decision making and hence the effective use of methods. Warenius et al., (2006), in their study to investigate attitudes among Kenyan and Zambian nurse-midwives toward adolescent sexual and reproductive health problems, in order to improve services for adolescents, revealed that nurse-midwives disapproved of adolescent sexual activity, including masturbation, contraceptive use and abortion, but also had a

pragmatic attitude to handling these issues. It was realised that those with more education and those who had received continuing education on adolescent sexuality and reproduction showed a tendency towards more youth-friendly attitudes (Warenius et al., 2006). It is therefore important that barriers in the service delivery are tackled to ensure that young people receive effective contraceptive advice.

2.2.4.3 Lack of access to family planning services

Hutchinson et al., (2005), have revealed that the availability and accessibility of any form of sexual health resources is lacking, especially in rural areas. Social and cultural barriers, such as embarrassment about buying contraceptives, attitudes towards girls who suggest contraceptive use, and religious beliefs regarding sexual activity, as well as mixed messages regarding sexuality and fertility, also contribute to the low rates of contraceptive use (Hutchinson et al., 2005). Mashamba and Robson (2002) found out that even in places where clinics are spatially accessible, barriers to access such as lack of factual knowledge and stigmatization prevents people from accessing the reproductive healthcare services. Garwick et al., (2008), in their study using focus group discussions found out that the youth perceived limited access to comprehensive pregnancy prevention education, community-based programs and contraceptives. Some cultures also define who is entitled to access reproductive health services, sometimes by social control, laws, policy restrictions or other measures. According to Bledsoe and Cohen (1993), in most African communities, only married women have access to family planning and other health services.

2.3 Youth friendly services

Parker (2000) has stated that teenagers who seek advice on contraceptives need teen-friendly services and these services must be accessible, free or low cost, confidential and convenient. Clinical staff must know that it is their responsibility to teach these youngsters on what to do since they have never acted independently in the area of sexuality and contraceptives before (Parker,

2000). Rasch et al., (2000) have reiterated the need for youth-friendly family planning services that will help to reduce unwanted pregnancies by making abortion safe and legal as well as making these family planning services accessible to them. According to McIntyre et al., (2003), adolescent friendly services meet the needs of young people and these services deliver on the rights of young people as well as represent an efficient use of precious health resources.

2.4 Summary

The above factors have been identified by many researchers as contributing to high rates of teenage pregnancy. A coordinated attempt to tackle all these factors is vitally necessary. For this to be achieved, the views and experiences of young people must be taken into account of if programmes to reduce teenage pregnancy are to succeed. This research will find out the prevalence of teenage pregnancy and the factors contributing to teenage pregnancy at Kpone-on-Sea to inform opinion leaders and other stakeholders for measures to be taken to curb this menace, using a cross sectional study.

CHAPTER THREE

3.0 METHODS

The study was both qualitative and quantitative and data was collected through the use of techniques such as Focus Group Discussions (FGDs), In-depth Interviews (IDI), Key Informant Interviews (KI) and a structured questionnaire. Quantitative data was analyzed using Statistical Packages for Social Scientists (SPSS, version 16.0) and Epi Info (version 3.3.2). Qualitative data was transcribed and triangulation was used to combine the quantitative and qualitative data.

3.1 Type of study/ Design

The study was a cross sectional study which determined the prevalence of teenage pregnancy and identified its determinants at Kpone-on-Sea.

3.2 Study Location/Area

Kpone-on-Sea, one of the four sub-districts in the Tema Municipality, Greater Accra Region, Ghana, West Africa, was the area from which the study participants were selected. It is bordered on the east by Prampram, on the south by Gulf of Guinea, on the west by Tema town, and on the north by the proposed Industrial Free Zone. The sub-district had a population of approximately 27,382 in 2007. Based on this information, the projected population for 2008 was approximately 28,587. Most of the residents were Ga, the predominant ethnic group in the region. The main occupation of the people was fishing, although a sizable proportion was engaged in agriculture. A centrally located clinic in the Kpone town, founded in 1992 by the Rotary Club of Tema was completed and equipped with the assistance of the Tema Municipal Assembly and was the main health facility providing health care services to the people.

Kpone-on-Sea in the Tema municipality was chosen as the study site because of the high teenage pregnancy rate in the sub-district and the willingness of the opinion leaders especially the chief to

look into the determinants or factors contributing to this menace in order to put up interventions to curb the problem.

3.3 List of variables

Age	Sex education
Religion	Family planning services
Education level	Health workers attitude
Occupation	Age at menarche
Marital status	Parental control
Community of residence	Age at first sexual intercourse
Peer pressure	Financial support
Alcohol intake	Poverty
Sexual violence	Parental care
Cultural practices	Cultural beliefs

3.4 Study Population

Four study populations were used. These were teenagers of 13 to 19 years, opinion leaders, health workers and teachers in Junior High Schools. The study units included one each of the different study populations.

3.5 Sampling

The study employed both quantitative and qualitative techniques. Seven out of the twelve communities in the sub-district were used. All female teenagers in the houses which were selected participated in the structured interview, which gave an idea of the prevalence and determinants of teenage pregnancy at Kpone-on-Sea. Participants of the qualitative study were selected from the seven communities.

3.6 Sample size

3.6.1 Sample size calculation for quantitative data

The projected population for Kpone-on-Sea for 2008 was approximately 28,587. According to the 2000 Population and Housing Census, the proportion of adolescents of 10-19 years in Tema municipality is 22.7 percent. Based on this, the proportion of adolescents in this age range was calculated for the Kpone-on-Sea sub-district which gave a total of 6,489 adolescents. The proportion of males 10-19 years in the Tema municipality was 21.2% whiles that of the females was 24.3% of the total male and female population respectively (Population and Housing Census, 2000). Based on this information, the total population of females 10-19 years in the Kpone-on-Sea sub-district was calculated to be 3,466. The proportion of pregnant teenagers was not known therefore 9.5 percent, which is the percentage of women age 15-19 years in the Greater Accra Region who are mothers or pregnant with their first child in the GDHS (2003) was used as the expected frequency of teenage pregnancy in the sub-district. From this, Epi Info software version 6.0 was used to calculate the sample size. At 95 percent confidence level and a worst acceptable frequency of 12.0, a minimum sample size of 459 was computed.

3.6.2 Sample size for qualitative data

The sample size for the qualitative data was forty two. This comprised eleven in-depth interviews which included three opinion leaders at Kpone-on-Sea (the chief, the assembly man and the queen mother), two professional health workers (head of the health centre, midwife) and six educationists (two head teachers, two male teachers and two female teachers). A total of four focus group discussions were conducted with seven teenagers in each group giving a sample size of twenty eight whiles the key informant interviews consisted of three participants (a parent whose daughter was currently pregnant, a teenager who was currently obviously pregnant and a teenager who had given birth within the last two years).

3.7 Sampling Method

3.7.1 Sampling method for quantitative study

The Kpone-on-Sea sub-district had a total of twelve communities. The Kpone-on-Sea town, which is a peri-urban community, was purposively selected for the study. Six out of the eleven rural communities in Kpone-on-Sea were selected using simple random sampling technique. A list of all the communities in the sub-district was obtained from the Tema Municipal Health Directorate (TMHD), the names were written on pieces of papers, mixed and selected without replacement till the six communities were selected.

Selection of houses in the peri-urban and the six rural communities was by simple random sampling technique. Kpone town had four sectors, A, B, C and D. The middle of each of the sectors was located and a bottle was spun. The direction of the bottle's head was used to locate the first house. From the first house, we followed the direction of the next door facing us to get the subsequent houses. This direction was followed till all the required number of study participants was obtained. For the other communities, the middle of the community was located and the same procedure was used. In each of the houses selected, all female teenagers who accepted to be part of the study were interviewed.

In every house selected, teenagers in one household were interviewed. In a house with more than one household, simple random sampling was used to select one household by writing on pieces of papers for them to pick.

3.7.2 Sampling method for qualitative study

The qualitative study included focus group discussions, in-depth interviews and key informant interviews. Simple random sampling was used to select the communities for the focus group discussions, the in-depth interviews involving the teachers and the key informant interviews with teenagers and a parent. Participants for the key informant interviews, the focus group discussions and the in-depth interviews involving the chief, queen mother, assembly man, head of the health centre, midwife and the head teacher were purposively selected.

3.8 Data Collection Techniques/Methods and Tools

3.8.1 Data collection techniques/Method

The data collection techniques used were in depth-interviews, focus group discussions, key informant interviews and structured interview to elicit information from study participants.

3.8.2 Data collection tools

Tools which were employed to accomplish the study included checklists, digital camera, structured questionnaires, interview guides, note pads and tape recorders.

3.9 Training of research assistants

There was a two day intensive training of the research assistants by the researcher, assisted by the field supervisor. Four research assistants who had been engaged in previous surveys and could speak and understand the local language were used for the study. The content of the training included the purpose and objectives of the study, data collection techniques and tools to be used, translation of questionnaires into their local language (Ga), actual data collection and ethical issues or considerations.

3.10 Quality Control

The following measures were put in place to ensure the quality and validity of the data and findings of the study:

1. Research assistants or data collection personnel with the requisite background were recruited and trained well (intensively) for the study.
2. Researcher was with the data collectors throughout the data collection period to ensure that the relevant data was collected and recorded.
3. Each day, data was checked on the field to ensure that all information had been properly collected and recorded.
4. Errors and omissions detected were discussed with the respective research assistants and they were asked to go back and make the necessary corrections.
5. Data which was clearly inconsistent were excluded from processing and analysis since it could affect the consistency and validity of the results.
6. All data collected were entered twice by two different qualified personnel in Statistical Packages for Social Scientists (SPSS) (version 16.0) to ensure validity.
7. Questionnaires were marked after entry to prevent double entry.

3.11 Data Processing and Analysis

3.11.1 Statistical Methods

Data processing and analysis were done manually and by computer. Analysis of the quantitative study was by a computer and the qualitative study was done manually. This involved coding of the questions and responses into numeric form for data entry. A data entry structure was developed in SPSS (version 16.0) and EPI Info (version 3.3.2). Data verification was done in SPSS (version 16.0) and Microsoft Office Excel (2007). The data analysis was done by the computer using the same software. For categorical data, frequency distributions were done and summarised in tables. Correlation analysis was done using Pearson correlation coefficients. Multiple regression analysis was also done.

3.12 Ethical Consideration/Issues

The proposal was first reviewed and vetted by the Proposal Review Board of the School of Public Health for appropriateness and scientific content. Ethical approval was afterwards sought from the Ethical Review Committee of the Health Research Unit of Ghana Health Service.

Permission was sought from the Municipal Director of the Tema Municipal Health Directorate, the opinion leaders at Kpone-on-Sea (Chief, assembly members) and the head of the Kpone-on-Sea health centre. The purpose of the study was communicated to them and they were assured of confidentiality.

Written informed consent was obtained from each study participant, the parent or legal guardian at the beginning of the study. These participants prior to signing the informed consent were made aware of the purpose, objectives as well as the method/techniques of the study and were also assured of confidentiality. Participants were educated to make a decision as to whether to participate in the study or not and to consent to take part in the study at will.

Privacy and confidentiality of interviews were ensured. Data collected were kept under lock and key and were only available to the field supervisor and the research assistants.

3.13 Pre-test

The data collection techniques and tools were pre-tested to determine the clarity of the questions and also to reveal any problems that may be encountered in the main study. The pre-test was done in one of the rural communities at Kpone-on-Sea which was not chosen for the study. The data collection techniques and tools were fine tuned before the actual data collection for the study was initiated.

3.14 Limitations of the study

The topic is sensitive and discouraged some of the respondents from answering some of the questions or hid the real facts. This was however controlled for by ensuring absolute confidentiality and privacy to respondents. In addition, in-depth interviews, focus group discussions and key informant interviews were done to probe issues which were sensitive and were not properly answered or explained by the questionnaire.

Some teenagers may have been pregnant at the time of the study but may not have been aware of it. This may underestimate the magnitude of teenage pregnancy but again, the sample size was increased to take care of this.

During data collection, not all the teenagers in the houses that were sampled were interviewed. This was because during the day time, most of them were in school because of the free compulsory education. After school hours, some of them also go out to sell and for other activities. This was a challenge (as more time was spent on data collection than estimated). However, this was all controlled for by an increase in the sample size.

Reliability was however, achieved through proper training of the research assistants and also through a thorough pre-testing of the interview schedules.

CHAPTER FOUR

4.0 RESULTS

4.1 Characteristics of the study population

A total of 500 teenage girls aged 13 to 19 years were sampled from seven communities (Kpone town, Gbetsile, Sebrepor, Saki, Kpoi Ete, Kokompe and Kakasunanka Number one) in the Kpone-on-Sea sub-district of the Tema Municipality in the Greater Accra Region of Ghana. Exactly 96.2% of the teenage girls were educated, however, only 9.4% had more than Junior High School (JHS) education. The majority (93.4%) had never married before (single), 2.4% were cohabiting and 0.4% each were widowed or separated and the remainder (3.4%) were married. As expected, all of them belonged to various religious groups with 95% of them being Christians. Quite a number (23.2%) of the study participants were unemployed, over half (50.8%) were still in school (students/pupils) and for those who were employed, majority of them were traders. For the caregivers of the study participants, close to half of them (43.8%) were traders, followed by farmers and fisher-folks with 7.6% and 6.6% respectively. However, a number of them (6.8%) were unemployed. About two thirds (67.2%) of study participants were cared for by their parents, with a number of them (16.6%) being cared for by their relatives. The predominant ethnic group was Ga (28.8%), though it did not differ so much from Akan, Ga-Dangmbe and Ewe which recorded 20.4, 26.8 and 20.6 respectively.

Over half (53.8%) of the study participants had partners/boyfriends and a little below half (46.6%) had had sexual intercourse before.

Table 4.1 highlights the characteristics of the study participants.

Table 4.1: Characteristics of study participants, Kpone-on-Sea, 2008

Characteristic	Frequency	Percent (%)
Background and demographics		
Age distribution		
13	49	9.8
14	70	14.0
15	89	17.8
16	87	17.4
17	71	14.2
18	77	15.4
19	57	11.4
Total	**500**	**100.0**
Level of education		
No formal education	19	3.8
Primary	137	27.4
Junior High (JHS)	297	59.4
Senior High (SHS)	45	9.0
Tertiary	2	0.4
Total	**500**	**100.0**
Marital status		
Single	467	93.4
Married	17	3.4
Cohabiting	12	2.4
Separated	2	0.4
Widowed	2	0.4
Total	**500**	**100.0**
Religion		
Christian	475	95.0
Moslem	12	2.4
Traditionalist	10	2.0
Ekankah	3	0.6
Total	**500**	**100.0**
Occupation of respondent		
None	116	23.2
Farmer	7	1.4
Teacher	1	0.2
Seamstress	22	4.4
Hairdresser	12	2.4
Trader	86	17.2

Characteristic	Frequency	Percent (%)
Occupation of respondent		
Stone wining	2	0.4
Pupil/student	254	50.8
Total	**500**	**100.0**
Occupation of caregiver		
None	34	6.8
Farmer	38	7.6
Fisherman/Fishmonger	33	6.6
Teacher	16	3.2
Trader	219	43.8
Nurse	5	1.0
Civil servant	14	2.8
Pastor	4	0.8
Factory hand	27	5.4
Driver	19	3.8
Pensioner	4	0.8
Artisan	25	5.0
Self employed/business man	24	4.8
*Other	38	7.6
Total	**500**	**100.0**
Ethnicity		
Akan	102	20.4
Ga	144	28.8
Ga-Dangme	134	26.8
Ewe	103	20.6
Hausa	6	1.2
Frafra	4	0.8
Dagomba	5	1.0
Fulani	2	0.4
Total	**500**	**100.0**

***Other included photographers, herbalists, butchers and security men.

4.2 Prevalence of teenage pregnancy

Less than half (46.6%) of the study participants had had sex before and 57 of the 233 were either pregnant or had given birth before, giving a teenage pregnancy rate of 11.4% which is higher than the regional estimate of 9.5%. One of the assembly men at Kpone town observed the high rate of teenage pregnancy when he stated during an in-depth interview:

> *"Okay, I cannot give you the right figure, but I can say a number of them. Even in my area, this area is called Agormeda, I can count about five people at a go. Even yesterday, I was interviewing one of them. She was only fourteen years and she is pregnant so it is a problem, it is a problem".*

Analysis by communities revealed that teenage pregnancy was rather too high (50%) in Kpoi Ete which is a rural community with a relatively small number of female teenagers. It lacked electricity and social amenities such as schools, hospitals, recreational facilities, etc. Gbetsile, which has almost the same features like Kpoi Ete, however, recorded a teenage pregnancy rate of 5.0 percent. An assistant head teacher at a JHS in Gbetsile commented:

> *"We have had about four cases of teenage pregnancy, and in some cases, some even abort the pregnancy. As I told you, in a village like this, there are no recreational facilities, parents are peasant farmers so they go to work and come back tired, so the only means of entertainment is sex and if you look at their way of life, you see about ten people sleeping in one room together with the children, the parents and others and it is likely when the parents are engaging in acts of this nature, they see it and they will like to practice".*

Kpone town also recorded 15.6% teenage pregnancy rate which is higher than the regional rate. The lowest teenage pregnancy rate by community was recorded in Saki, a rural community which was fast developing into a peri-urban community. The highest and lowest percentage of the total teenage pregnancy count was recorded in Kpone town and Saki respectively. A head teacher at one of the JHS schools at Kpone town recognised the fact that teenage pregnancy rates are high in the town when he asserted:

> *"Teenage pregnancy is a problem. In that the way I think of it; they are becoming liabilities than an asset in the town because when we look at the way of living now, and we look at those who have fallen into it, they cannot cater for the children that they bring into the world. The past one year it seems they are about five or so, yeah, five people in the JHS were pregnant last year".*

One of his male teachers in the JHS department also had this to say to confirm the high rate of teenage pregnancy in the Kpone town.

> *"It's a very serious problem. Even if I will just want to go with the recent Basic Education Certificate Examination (BECE) that was written; in our school alone, three girls were visibly pregnant. Later on, those who aborted which were found, in fact substantiate the fact that this problem is very serious. I don't want to go the years by because if you want to talk about that; even those in town, those who are just below eighteen, there are even some of them who are not up to sixteen; they've given birth to more than one".*

Teenage pregnancy rate was quite low in Saki (2.0%, 0.2%) and Sebrepor (4.0%, 0.4%); both within the community and within the total count. The headmistress of a JHS in Sebrepor had this to say on teenage pregnancy:

"In fact, it is a problem. I've been here for two years and last year, I had one in my school."

One of the female teachers at the school commented on the fact that although teenage pregnancy is not so much of a problem in the school, it is a problem in the community.

> *"In the community, it is a problem but in the school, I don't see it so much as a problem because so far in our department, the JHS department, since I came here, I think we've had just one, as far as I can remember, we have had one case, but in the community, its common".*

All these comments emphasize the fact that teenage pregnancy is really a problem in Kpone-on-Sea sub-district. All the communities which were used in the study had cases of teenage pregnancy.

The distribution of study participants by pregnancy state and analysis by community of residence is shown in Table 4.2.

Table 4.2: Distribution of study participants by pregnancy state and communities of residence, Kpone-on-Sea, 2008

Variable	Frequency	Percent (%)	
Pregnancy status			
Not pregnant	443	88.6	
Pregnant	57	11.4	
Total	**500.0**	**100.0**	
Communities of residence			
	Frequency	**% within Community**	**% of Total Count**
Kpone	39	15.6	7.8
Gbetsile	2	5.0	0.4
Sebrepor	2	4.0	0.4
Saki	1	2.0	0.2
Kokompe	3	5.0	0.6
Kpoi Ete	6	50.0	1.2
Kakasunanka No. 1	4	10.5	0.8
Total	**57**		**11.4**

4.3 Determinants of teenage pregnancy at Kpone-on-Sea

4.3.1 Economic factors

Four hundred and sixty six (93.2%) of the study participants received financial support from their caregivers. However, 230 (85.2%) out of the 270 who had partners/boyfriends stated that they received financial support from their boyfriends. It was observed that although more than 90% of the study participants received financial support from the person they lived with, almost the same percentage (85.2%) of teenagers in relationship also received financial support from their partners. Details of this are seen in Table 4.3. A teenager who was visibly pregnant and another who had given birth, during a key informant interview asserted that:

> *"Please when I'm going to school, my mother gives me forty pesewas. When I was in class one, she will give me thirty pesewas and I will pay studies fee of ten pesewas and use twenty pesewas to buy food. The money was not enough for me. That is why I took the money from the man and allowed him to have sex with me (pregnant teenager)".*

"When we don't get enough money from our mothers, we are easily wooed by money. My mother gave me two thousand cedis to and from school. My boyfriend gave me five thousand so I allowed him to sleep with me, laughs (teenager with a child)".

During a focus group discussion, one of the participants stated:

> *"Okay in my case, my mother was away and I was staying with my father. He provided but not on a regular basis. So if he does not provide, who then should do that? I consequently got a boy who was giving me money; he paid my school fees and provided other needs. I got closer to him and it happened that I got pregnant with him and gave birth".*

This indicates that although most of the teenagers received financial support from their parents or the person they lived with, the money was not enough to cater for their feeding and their basic needs. The only alternative therefore was to get boyfriends who could provide for their needs. For some, their parents encouraged them to go after boys so that they could bring money home. This came out during a focus group discussion when one girl remarked:

"These problems, some are from our parents, maybe they don't have money, so they will let you go to the boys so that the boys will have sex with you so that if you bring the money, they will collect it".

An in-depth interview came out with the same point.

"These days you see a mother or a father, when the child comes for fees or to buy something for them, they tell them; go and see your boyfriend, you have a boyfriend, go and see him. You see, so you are giving that child the licence to do that and this is becoming so serious that even some mothers collect monies from their children. If you are collecting, where did she get the money from? She is not working and you collect money from her".

Some of the parents even coerce their daughters into relationships with men because of money. During a key informant interview, a pregnant teenager remarked:

"The man came to tell my mother to let me cook for him. Myself, I didn't want to go, but my mother said I should go and that when she needs money she goes to collect money from him and pays back when she gets money. So, when I was going for utensils from his room, he deceived me and I also left myself for him".

It is therefore not surprising that only a little over 40% of teenagers had boyfriends who were teenagers and about 57% had boyfriends above 20 years since they go for partners who can cater for their needs.

Table 4.3: Distribution of study participants by some economic indicators, Kpone-on-Sea, 2008

Variable	Frequency	Percent (%)
Receives financial support from the person they live with		
Yes	466	93.2
No	34	6.8
Total	**500**	**100.0**
***Receives financial support from partner*/boyfriend**		
Yes	230	85.2
No	40	14.8
Total	**270**	**100.0**
Age distribution of study participants' partners/boyfriends		
13-19	109	40.4
20-24	93	34.4
25+	56	20.7
Don't know	12	4.4
Total	**270**	**100.0**

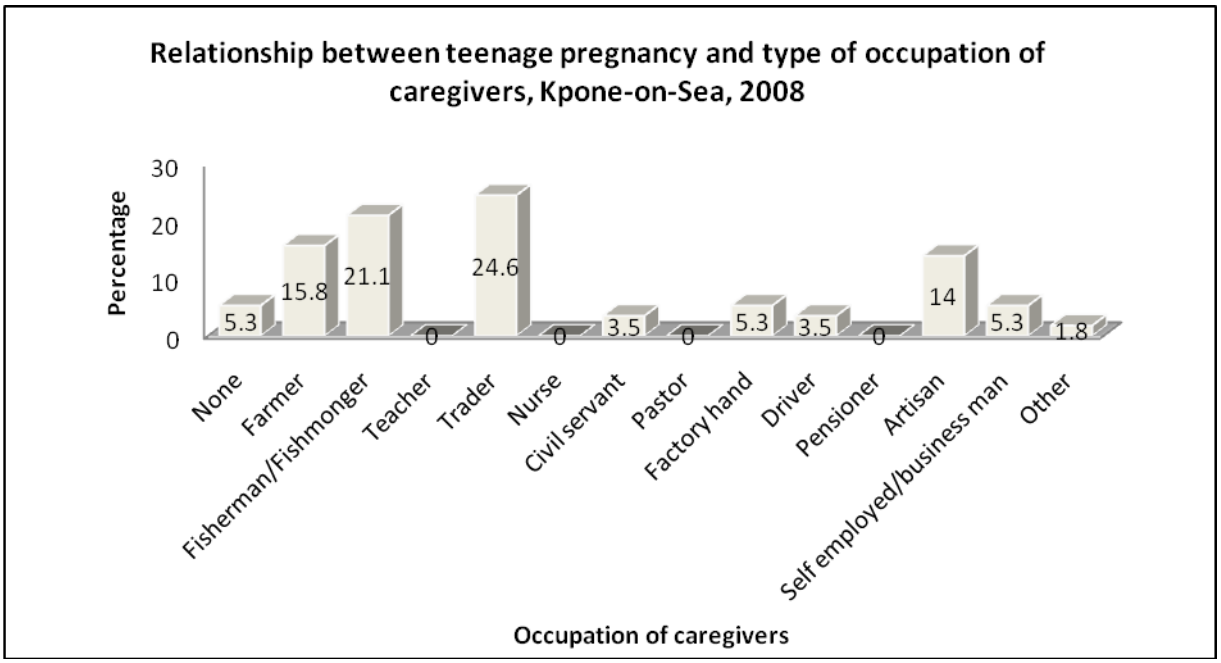
The study showed that 93% of the 57 who were pregnant received financial support from their partners. However, only one person who did not receive financial support from her partner ended up pregnant. This is represented in Table 4.4 below.

Table 4.4: Distribution of study participants' teenage pregnancy status and financial support from partner, Kpone-on-Sea, 2008

Receives financial support from partner	Pregnant or given birth		Total
	Yes	No	
Yes	53	177	**230**
No	1	39	**40**
Has no partner	3	227	**230**
Total	**57**	**443**	**500**

Analysis of caregivers' occupation and girls who were pregnant or had given birth revealed that almost a quarter (24.6%) of teenage pregnancy was from teenage girls whose caregivers were traders. This was closely followed by the fisher-folks and farmers with 21.1% and 15.8% teenage pregnancy rate respectively. Artisans had an appreciable rate of 14%. As expected, teachers, nurses and pastors did not contribute to the teenage pregnancy rate.

Figure 4.1



4.3.2 Social factors

4.3.2.1 Educational achievement and teenage pregnancy

Analysis of educational achievement and teenagers who were pregnant or had given birth revealed that 94.7% of the 57 who were pregnant had JHS education and lower. Out of this, half (47.4%) had primary education, 40.4 had JHS and the remainder (7.0%) did not have any formal education. This is represented in Table 4.5.

Table 4.5: Distribution of study participants according to educational achievement and teenage pregnancy status, Kpone-on-Sea, 2008

Educational level	**Pregnant or given birth**		**Total**
	Yes	No	
No education	4	15	**19**
Primary	27	110	**137**
JHS	23	274	**297**
SHS	3	42	**45**
Tertiary	0	2	**2**
Total	**57**	**443**	**500**

4.3.2.2 Person study participant lives with

About one third (35.8%) of the study participants lived with both parents. Quite a number (28.8%) lived with a single parent, 5.4% lived with either their husband or boyfriend and a substantial amount also lived with relatives. Details of the person study participants live with are shown in Table 4.6.

Table 4.6: Distribution of study participants by the person they live with, Kpone-on-Sea, 2008

Variable	Frequency	Percentage
Person study participant lives with		
Both parents	179	35.8
Mother only	129	25.8
Father only	15	3.0
Sibling	31	6.2
Grandparent	33	6.6
Alone	2	0.4
Spouse/Husband	15	3.0
Partner/Boyfriend	12	2.4
Relative	67	13.4
Step parent	9	1.8
Employer	2	0.4
Good Samaritan	3	0.6
Total	**500**	**100.0**

4.3.2.3 Restriction of study participants

300 (60.2%) out of the 500 participants mentioned that their movements were restricted by their caregivers. Out of this number, two thirds' (71.3%) level of restriction was moderate, almost a thirds' (24.7%) level of restriction was high and the remainder (4%) was low.

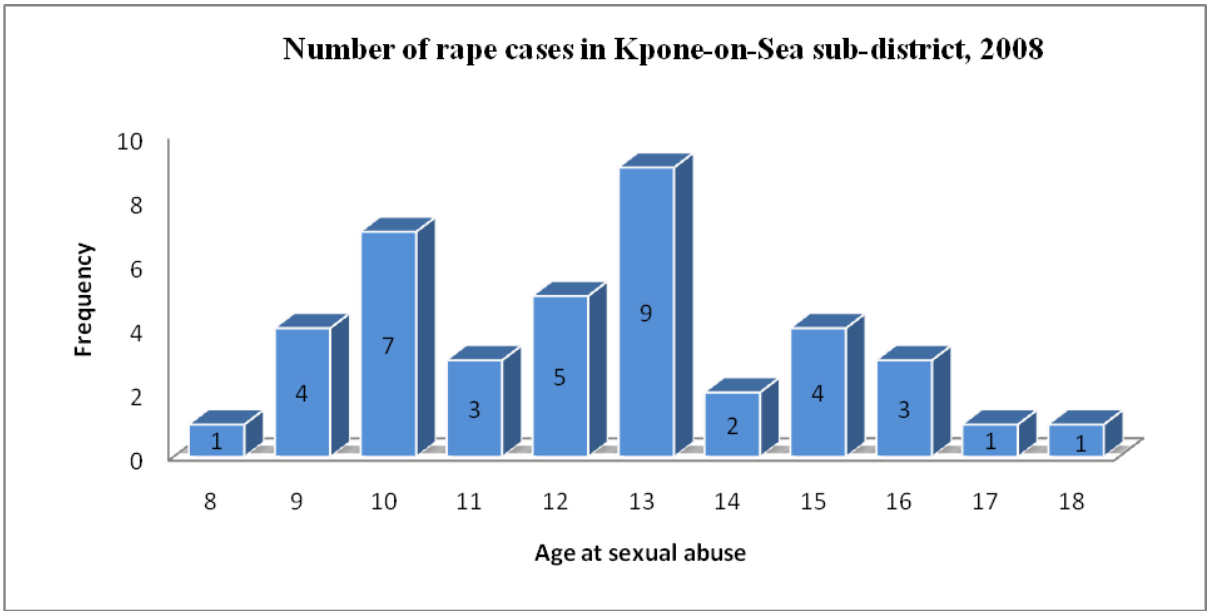
Table 4.7: Distribution of teenagers by restriction status and level of restriction, Kpone-on-Sea, 2008

Variable	Frequency	Percentage
Restriction status		
Restricted	300	60.2
Not restricted	200	40.0
Total	**500**	**100.0**
Level of restriction		
High	74	24.7
Moderate	214	71.3
Low	12	4.0
Total	**300**	**100.0**

4.3.2.4 Sexual abuse

40 (8.0%) of rape was reported by the study participants. The age at sexual abuse ranged from as low as 8 years to 18 years with 13 years recording the highest frequency of 9 victims.

Figure 4.2



Analysis by communities revealed that Kpone town recorded the highest number (75%) of rape cases. Kpoi Ete and Kakasunanka No. 1 did not report any case of rape. From the results, it is observed that rape cases are rampant in Kpone town. A four-month pregnant teenager, during a key informant interview, had this to say when questioned on whether her first sexual act resulted in the pregnancy:

> *"Please no. There was someone who raped me but my mother and my relatives made it a family issue. At that time, I had not started menstruation, so my mother and relatives took it as a family issue and demanded money from the old man. And when they took the money, they did not bring some of the money to take me to the hospital. Some of my relatives went for the money from the man and used it".*

With the trauma these teenagers go through, they are not taken to the hospital after the rape and this may develop into other complications. Although rape was quite rampant in the Kpone town, the perpetrators were often not prosecuted. The assertion of the teenager was confirmed by an in-depth interview with an assembly man.

"You see, this community is the children of two people; one male and one female who have given birth to children, the people in the community are therefore related to one another. So when there is a rape case, you cannot report it because you are related to the person in some way. As you know, even Auntie Mary can testify (referring to one of the research assistants) to what I am saying. Even rape cases have to be covered because if you report, it will bring other issues".

4.3.2.5 Alcohol intake

Alcohol consumption was quite low among study participants. 351 (71%) had never consumed alcohol before. With those who had, only one person consumed alcohol daily with the majority (84.1%) taking alcohol only occasionally. Out of the 233 sexually active teenagers, only 10 took alcohol the last time they had sex. When study participants were questioned on whether alcohol can lead to unintended/unprotected sex, 274 (55.6%) answered yes, 2.2% did not know and the remainder didn't think that alcohol can lead to unintended/unprotected sex. Table 4.8 highlights this information.

Table 4.8: Distribution of study participants by alcohol intake, Kpone-on-Sea, 2008

Variable	Frequency	Percentage
How often alcohol is consumed by study participants		
Daily	1	0.2
Regularly	22	4.4
Occasionally	122	24.4
None	355	71.0
Total	**500**	**100.0**
Consumed alcohol last time of sex		
Yes	10	4.3
No	223	95.7
Total	**233**	**100.0**
Taking alcohol leads to unintended/unprotected sex		
Yes	278	55.6
No	211	42.2
Don't know	11	2.2
Total	**500**	**100.0**

4.3.3 Cultural factors

Some of the study participants (24.2%) perceived that some cultural practices, especially puberty rites, exposed teenagers to pregnancy. The majority (75.6%) of them however, did not agree that cultural practices expose teenagers to teenage pregnancy. During a key informant interview, however, a teenager commented;

"Sometimes it is the dance they go to and the dipo that is done for the men to see them. That is why they go when they are called by the men".

When asked to explain further as to how dipo can expose teenagers to pregnancy, she said;

"It is the beads and the exposure of their buttocks during dipo. When they (men) see their buttocks, then they get to know their structure, then they propose to them. When they (teenagers) also agree, then they get the chance to have sex with them".

She therefore advocated that dipo should be banned.

Table 4.9: Distribution of study participants by some cultural indicators, Kpone-on-Sea, 2008

Variable	Frequency	Percentage
Cultural practices expose teenagers to teenage pregnancy		
Yes	121	24.2
No	378	75.6
Don't know	1	0.2
Total	**500**	**100.0**
Types of cultural practices which expose teenagers to pregnancy		
Bethrothal by parents	21	4.0
Arranged marriages via family members	47	8.9
Puberty rites	81	15.3
None	380	71.8
Total	**529**	**100.0**

4.3.3.1 Religion

The study showed a high majority (93%) of the 57 pregnant teenagers were Christians. However, none of the pregnant teenagers were either Moslem or Ekankah. The remaining 7.0% were traditionalists. This is represented in Table 4.10.

Table 4.10: Distribution of teenagers according to type of religion and pregnancy status, Kpone-on-Sea, 2008

Religion of respondent	Pregnant or given birth		Total
	Yes	No	
Christian	53	422	**475**
Moslem	0	12	**12**
Traditionalist	4	6	**10**
Ekankah	0	3	**3**
Total	**57**	**443**	**500**

4.3.4 Health related factors

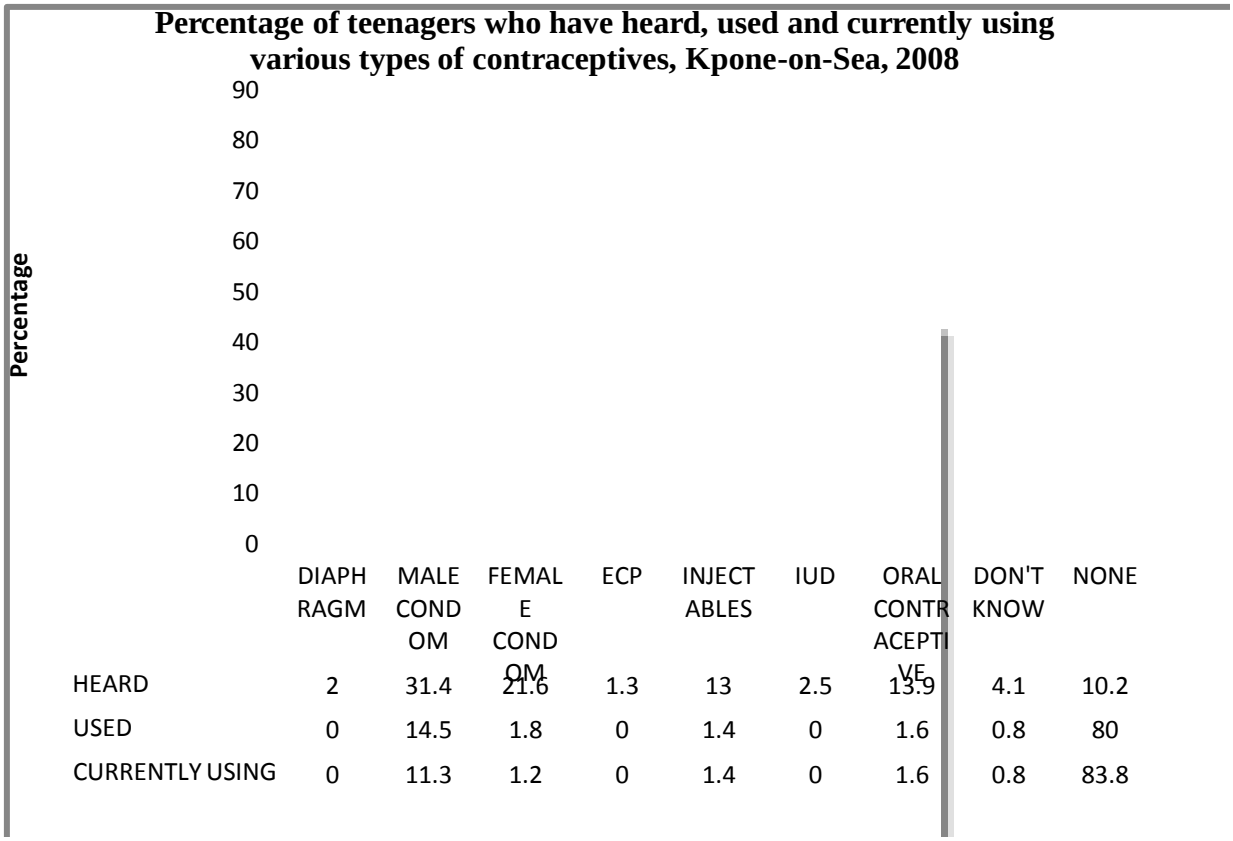
Table 4.11 shows the number of teenagers who had heard about contraceptives/family planning. Out of 500 study participants, 395 (79%) had heard about contraceptives/family planning. Rather surprisingly, only 14 (3.5%) out of 395 heard about contraceptives/family planning from their parents. The common sources where the teenagers heard of contraceptives were friends, media and school/books.

Table 4.11: Distribution of study participants by knowledge of contraceptives/family planning, Kpone-on-Sea, 2008

Variable	Frequency	Percentage
Heard about contraceptives/family planning		
Yes	395	79.0
No	105	21.0
Total	**500**	**100.0**
Heard contraceptives/family planning from		
Friends	74	18.7
Town/community	52	13.2
Clinic/hospital/drug store	33	8.4
Media	76	19.2
Home/family members	52	13.2
Parents	14	3.5
School/Books	56	14.2
Peer educators	9	2.3
Church	2	0.5
Other	27	6.8
Total	**395**	**100.0**

Figure 4.3 shows the percentage of study participants who have heard about the various types of contraceptives, those who have used them before and those who are currently using contraceptives. It was observed that out of the study participants' (79.0%) who had heard about contraceptives/family planning, 10.2% did not know the various types of contraceptives, 80% had not used the various types of contraceptives before and 83.8% had not currently used the various types of contraceptives, representing low use of contraceptives by study participants. Male condom was the commonest contraceptive heard (31.4%), used before (14.5%) and currently being used (11.3%) by the study participants.

Figure 4.3



Although the number of teenagers who had heard about contraceptives/family planning was satisfactory (79%), only 80 out of the 233 sexually active teenagers used contraceptive the last

time they had sex with their partners. For the few who used a contraceptive, 81.3% used the male condom. The reasons for the low use of contraceptives during the last time of sex and the views of study participants on what prevents teenagers from using contraceptives are represented in Tables 4.12 and 4.13.

Table 4.12: Reasons why study participants did not use contraceptives the last time of sex, Kpone-on-Sea, 2008

Variable	Frequency	Percent (%)
Why study participants did not use contraceptives the last time of sex		
Not available	1	0.7
Didn't think of it	24	15.7
Partner objected	6	3.9
Don't like it because of side effects	7	4.6
Didn't think it was necessary	12	7.8
Prevents full enjoyment	8	5.2
We are children	2	1.3
It was an abuse/rape	8	5.2
Don't know	62	40.5
None	23	15.0
Total	**153**	**100.0**

Out of the 153 sexually active study participants who did not use contraceptives the last time they had sex, majority (40.5%) did not know what prevented them from using contraceptives while 15.7% did not even think of contraceptives. Twelve (7.8%) respondents thought of contraceptives but did not think it was necessary to use it. Rape victims accounted for 5.2% while another 5.2% did not use contraceptives because it prevents full enjoyment (referring to the condoms). During focus group discussions, these comments were made that contraceptive (condoms) prevents full enjoyment.

"For some of the girls, any time they are having sex with the young men, they want taste, they say you cannot eat a banana without peeling it".

"Some of the men, when you are having sex with them and you mention condom, then they get mad at you that nobody eats toffee with the wrapper over it. So they like it raw; that is why they have sex with us without protection".

> *"If you use condom and you are having sex, it will not be sweet. If you use condom and you are having sex, it is like eating toffee with the wrapper, so you have to remove the wrapper before you will be able to eat the toffee itself. If you remove the wrapper from the toffee, it is very sweet so they don't want condom, they want it raw".*

Table 4.13: Views of study participants on factors which prevents teenagers from using contraceptives, Kpone-on-Sea, 2008

Variable	Responses	
	Frequency	Percentage
Cultural factors	10	1.7
Religious factors	46	8.0
Parents not encouraging them to use	40	7.0
Media not promoting contraceptive use	6	1.0
Lack of access to contraceptives	14	2.4
Health workers/shop attendants' attitude	5	0.9
Lack of sex education	113	19.7
Afraid to use because of side effects	13	2.3
Feel shy because of where they sell them	6	1.0
Intentional to get pregnant	11	1.9
Don't feel comfortable using them	5	0.9
Avoids total enjoyment/like it raw	33	5.8
Drunkenness (alcohol intake)	1	0.2
Don't know	237	41.4
None	33	5.8
Total	**573**	**100.0**

The study participants identified lack of sex education (19.7%) as the main factor that prevents teenagers from using contraceptives although majority (41.4%) of them stated that they did not know the factors accounting for the low uptake of contraceptives by teenagers. Religious factors (8.0%) and parents not encouraging teenagers to use contraceptives (7.0%) were other factors that prevent teenagers from using contraceptives. Drunkenness/alcohol intake (0.2%) did not play any significant role as a factor that prevents contraceptive usage among teenagers.

4.3.4.1 Patronage of family planning services and attitude of health workers

Only 1% of the study participants patronised family planning clinic at the Kpone health centre. They commended the reception (60%) of health workers when they go for these services. Details of this is shown in Table 4.14

Table 4.14: Patronage of family planning services and attitude of health workers, Kpone-on-Sea, 2008

Variable	Frequency	Percent (%)
Study participants who patronise family planning clinic		
Patronise	5	1.0
Don't patronise	495	99.0
Total	**500**	**100.0**
Attitude of health personnel towards study participants who patronise family planning clinic		
Poor	0	0.0
Average	2	40.0
Good	3	60.0
Total	**5**	**100.0**

4.3.5 Views of study participants on the determinants of teenage pregnancy

Poverty (13.3%), lack of financial support (15.3%), lack of parental care (15.2%), peer pressure (15.0) and lack of sex education (12.9%) accounted for the main reasons for teenage pregnancy. Lack of access to contraceptives (2.8%) did not play any significant contribution to the factors contributing to teenage pregnancy. Details are represented in Table 4.15.

Table 4.15: Study participants' views on factors contributing to teenage pregnancy at Kpone-on-Sea, 2008

Factors	Responses	
	Frequency	Percent (%)
Economic factors		
Lack of financial support	163	15.3
Poverty	146	13.7
Social factors		
Lack of parental care	162	15.2
Peer pressure	160	15.0
Maltreatment and rape	79	7.4
Broken homes	54	5.1
Lack of parental control	66	6.2
Health related factors		
Lack of sex education	138	12.9
Lack of access to contraceptives	30	2.8
Don't know	**66**	**6.2**
None	**3**	**0.3**
Total	**1067**	**100.0**

Some of these factors identified as contributing to teenage pregnancy were expressed by participants during a focus group discussion.

> *"To me, if someone had told me that I will give birth at this age, I would have said the person does not have my interest at heart. Maybe you did not have such intention but because you are not properly catered for and you find someone who gives you, you get close and then the pregnancy comes in. When my brother and I were going to school, we were given five thousand to share. When we go too, we have to pay studies fees. So the money was just not adequate, so for my brother, when I go to my boyfriend and he gives me money I give him some. I even send him sometimes to call the boy for me because the boy was giving us money".*

> *"The reason why I started a relationship with a boy was because I was not getting any help. Actually, both of my parents are alive, but my mother was jobless, it was my father who was working, but it got to sometime he stopped taking care of me. That was why I also went into such a relationship and got pregnant".*

Some of the factors were also identified during the in-depth interviews.

> *"I can say broken homes and this peer pressure; they are the two major factors that is over here. Most of them are not even staying with their parents. Most of them are staying with their aunties, their uncles and those things. If you ask them, they will tell you my mother is no more staying with my father, my father is staying at this side, and they are*

those people getting themselves pregnant and those things, so peer pressure and broken homes".

"First of all, let me talk about poverty. In Kpone-on-Sea as we are saying, the only job here is fishing and farming and it is seasonal. So when the season passes, then the women have to rely on farming. And the fishermen have to go to sea; when the season passes, then they have to also go to farm. So because of the seasons; the lean and the major season, at times most of the women don't have a lot of money to cater for the children. So I think poverty takes about 50% of that problem of teenage pregnancy because the parents do not get enough money to cater for them".

4.4 Youth friendly facilities at Kpone-on-Sea

Personal observations and interviews showed that there were no youth friendly facilities at Kpone-on-Sea. In-depth interviews with some of the teachers in the JHS department confirmed this.

"Oh, I don't think that there is something of that sort"

"None that I know of"

An assembly man summed up

"Well, as at now, we don't have any place like that but they are now putting up a place for that purpose, so I think within a short time, things will be okay".

4.5 Relationship between age at menarche and teenage pregnancy

Table 4.16 shows the correlations between present age, age at menarche, age at first sexual intercourse and age at teenage pregnancy. A significant correlation was found between age at menarche and age at teenage pregnancy ($r=0.640$; $p<0.01$).

Even after controlling for education, age at menarche was found to be significantly associated with age at teenage pregnancy ($r=0.646$; $p<0.01$; Table 4.17).

Table 4.16: Correlates among present age, age at menarche, age at first sexual intercourse and age at teenage pregnancy, Kpone-on-Sea, 2008

Variables		Age	Age at Menarche	Age at first sex	Age at pregnancy
Age	r	1.000			
	N	500			
Age at menarche	r	0.403**	1.000		
	N	461	461		
Age at first sex	r	0.579**	0.285**	1.000	
	N	237	235	237	
Age at Pregnancy	r	0.509**	0.640**	0.712**	1.000
	N	57	57	57	57

**Correlation is significant at 0.01 level (2-tailed)

Table 4.17: Correlates among present age, age at menarche, age at first sexual intercourse and age at teenage pregnancy, controlling for level of education, Kpone-on-Sea, 2008

Variables		Age	Age at Menarche	Age at first sex	Age at pregnancy
Age	r	1.000			
Age at menarche	r	0.421**	1.000		
Age at first sex	r	0.455**	0.482**	1.000	
Age at Pregnancy	r	0.511**	0.646**	0.719**	1.000

**Correlation is significant at 0.01 level (2-tailed)

In the regression model, age at teenage pregnancy was considered as the dependent variable. Significant interaction was found between a person's age at menarche and age at teenage pregnancy.

Table 4.18: Influence of subject's age, age at menarche and age at first sexual intercourse on age at pregnancy, multiple regression analysis, Kpone-on-Sea, 2008

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval B	
Age at Pregnancy	***B***	***Std. Error***	***Beta***			***Lower bound***	***Upper bound***
Constant	1.576	1.718		0.917	0.363	-1.871	5.022
Age	0.149	0.105	0.138	1.416	0.163	-0.062	0.361
AgeM	0.337	0.098	0.344	3.453	0.001	0.141	0.533
AgeSX	0.469	0.100	0.478	4.710	0.000	0.270	0.669

AgeM (Age at menarche), AgeSX (Age at first sexual intercourse)

MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.794	0.631	0.610	0.952

Predictors: (Constant-Age at pregnancy), Age of study participant, Age at menarche, Age at first sex

Table 4.18 shows the multiple regression output, where age at which a teenager got pregnant was the dependent variable and teenager's present age, age at menarche and age at first sexual intercourse were predictors. In this model, statistically significant relationships were found between age at pregnancy and age at menarche, age at pregnancy and age at first sexual intercourse but not age at pregnancy and present age. For instance, a unit increase in the age at which a girl attained menarche increased the age at which a teenager got pregnant by four months (0.337 years). Also a unit increase in the age at which a girl had her first sexual encounter increased the age at which a teenager got pregnant by about six months (0.466 years).

CHAPTER FIVE

5.0 DISCUSSION

5.1 Background information and characteristics of the study population

Worldwide, teenage pregnancy has become a common experience both within and outside marriage. It has become an enormous global reproductive health problem as rates continue to increase. UN (2001) estimates that among one hundred and thirty two (132 million) babies born worldwide each year, about fourteen (14) million are born to adolescent mothers. In sub-Saharan Africa, it is a major societal problem as it records the highest incidence of 143 per 1000 (Treffers, 2003). Despite efforts made by the government of Ghana to address the sexual and reproductive health needs of adolescents, including the 2000 Adolescent Reproductive Health Policy and the 2001 National HIV/AIDS and Sexually Transmitted Infections, teenage pregnancy rates continue to rise (Akwasi Ampratwum-Mensah, 2008). The Ghana Demographic and Health Survey (2003), states that teenage pregnancy rate in Ghana is 14%. It further revealed that the rate of teenage pregnancy is higher in the rural communities as compared with the urban communities.

The study was carried out in Kpone-on-Sea sub-district in the Tema Municipality of the Greater Accra Region of Ghana, which is confronted with the problem of teenage pregnancy. The Tema Municipal Health Directorate in their 2007 annual report has stated that teenage pregnancy is one of the key health problems in the municipal. The chief and other opinion leaders at Kpone-on-Sea have stated that teenage pregnancy is a problem in the sub-district.

5.2 Prevalence of teenage pregnancy at Kpone-on-Sea

The results from the study showed that teenage pregnancy is really a problem at Kpone-on-Sea. The teenage pregnancy rate of 11.4% recorded is far higher than the regional estimate of 9.5% (GSS, 2003). Some opinion leaders at the Kpone town commented on the fact that teenage pregnancy is a problem at Kpone-on-Sea:

"Even in my area called Agormeda, I can count about five people at a go"

"When you go to antenatal clinic nowadays, most of the people there are teenagers, if you are above twenty and you go there, it is as if you are an old woman"

Agormeda is a small section in the Kpone town and if an assembly man can count about five pregnant teenagers outright, then it confirms the high rate of teenage pregnancy at Kpone-on-Sea. The Reproductive and Child Health (RCH) half year report (2008) for the Tema municipality showed that Kpone health centre which serves all the communities under the Kpone-on-Sea sub-district, recorded 33 teenage deliveries (births). This number may be less representative of the study population as it was indicated by the head of the health centre during an in-depth interview that many of the teenagers deliver at Tema general hospital as compared to Kpone health centre.

> *"Well, it is a problem here especially; you know that teenagers haven't reached the ages of about twenty to bring forth, so because of that when they come to the clinic, the midwives find it difficult to attend to them. Moreover, when it is time for them to bring forth, many a times, they are sent to the Tema general hospital to go and bring forth over there".*

This statement shows that many more teenagers from Kpone-on-Sea deliver at the Tema General Hospital and may not be captured in the RCH report for Kpone sub-district. Hence the thirty three for the half year may be an understatement. This confirms that teenage pregnancy is a key health

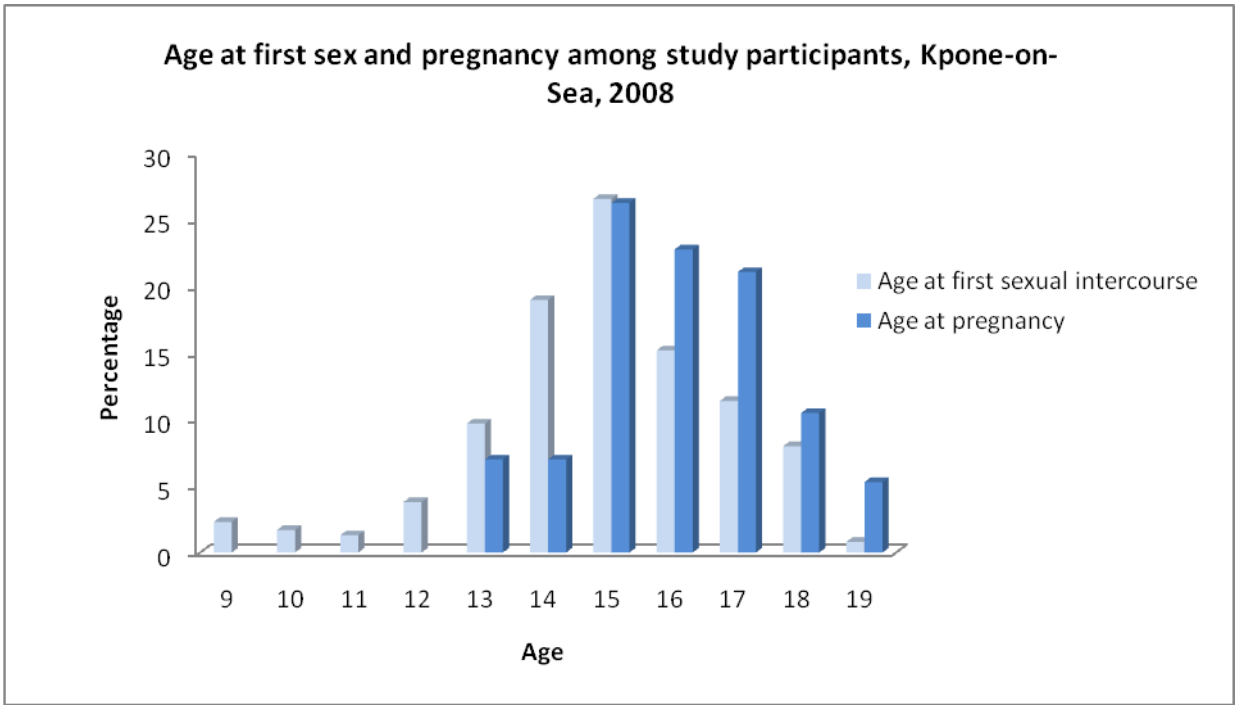
problem in the Kpone-on-Sea sub-district. The Tema municipality also recognises that teenage pregnancy is a key health problem in the municipality (TMHD annual report, 2007).

Analysis of teenage pregnancy within communities revealed that although teenage pregnancy was a problem in all the communities, it was higher in the rural communities than in the peri-urban communities. Taffa and Obare (2004), Bennett et al., (1997) had similar findings in their study in Ethiopia and America respectively. The Ghana Demographic and Health Survey (2003) also confirmed that teenage pregnancy was far higher in the rural areas (22%) than in the urban areas (7%) as found by this study. Kpoi Ete, a village in Kpone-on-Sea had the highest teenage pregnancy rate of 50%. Observations made during the study were that the community had a relatively few number of inhabitants. It lacked electricity and other social amenities such as hospitals and recreational facilities. The absence of electricity and recreational facilities leaves the teenagers with the option of using sex as a form of entertainment and this might have contributed to the high teenage pregnancy rate.

The results also showed that teenage pregnancy was higher outside marriage (73.7%) than within marriage (26.3%). UNFPA (2003) and Hutchinson et al., (2005) in their study also revealed that although a number of teenage pregnancies occur in marriage, an increasing proportion occur outside the context of marriage. Hutchinson (2005) attributed this to mass schooling which has provided a period in which young people attain menarche early but unmarried and a failure of sex education. This study's finding confirms Hutchinson's findings, as the results indicated that a large proportion (96.2%) of teenagers were in school probably due to the free compulsory primary education.

The study revealed that age at first sexual intercourse was from 9 to 19 years; however, it was very prominent from 13 to 17 (81.9%) years. This showed that girls initiated sexual activities very early in life, when they may not have had access to comprehensive and accurate information about sexual and reproductive health issues to help them make informed decisions about their reproductive health. This was probably why age at pregnancy was from 13 to 19 years with a peak at 15 years.

Figure 5.1



5.3 Determinants of teenage pregnancy at Kpone-on-Sea

The factors that contribute to teenage pregnancy are many and varied. The results showed that teenage pregnancy does not have a single cause. It is associated with economic, social, cultural and programmatic/health related factors. This confirms Were's (2007) suggestion that the problem of teenage pregnancy should be viewed under the socioeconomic and socio-cultural environment in which the adolescent operates and this is in line with the framework of this study.

5.3.1 Economic factors

The study clearly demonstrated that majority of teenagers engage in sexual activities for financial/economic reasons. Even though the majority (93.2%) of the study participants received some form of financial support from their caregivers, a substantial proportion (85%) received extra financial support from their partners/boyfriends. The fact that 85% of the respondents received financial benefits from their partners/boyfriends suggests that the support that these teenagers get from their caregivers is not adequate. Poverty may probably be the underlying factor as poverty is typically a rural phenomenon. It was also evident that most (55.1%) of the teenagers were in relationships with older men who provide some of their financial needs. Teenagers are in these relationships solely for money or gifts in exchange for sex because the financial support from their caregivers is not enough for their upkeep. In-depth interviews revealed that teenagers get pregnant because of the full financial support they don't receive from their caregivers and thus get into relationship with men who can cater for their needs:

"When you ask them, you will see that it is their background. It is because of the care; that is why they get into that problem. No food, or things they need, they don't get, so this makes them to go outside".

Yes, some of the problem comes from us the parents, because when a child is going to school, she needs something to take to school. If the mother cannot get these things for the daughter and a man deceives her, she will give in and that will cause the problem.

Silberschmidt and Rasch (2001) found similar results in their research when they stated that teenagers were sexually active at an early age and had sex with men who were usually older than them, solely for money or gifts. This may have been the reason for Nabila and Fayorsey (1996) to

state that poverty is an important consideration to understanding adolescent childbearing in Ghana.

The result of the study showed that teenage pregnancy was more associated with girls whose caregivers were traders, farmers, fisher-folks and artisans. These people are often considered as low social class and low income earners. As such, they do not earn much and so cannot cater for their children very well. In-depth interviews revealed this:

"Yeah, it is the society, the type of work they do; most are fisher-folks".

"First of all, let me talk about poverty. In Kpone-on-Sea as we are saying, the only job here is fishing and farming and it is seasonal. So because of this, at times most of the women don't have a lot of money to cater for the children".

The teenage girls therefore have to look for other alternatives. They get into relationships with men who are often older than them so that they can get money and other material things; in doing so, they get pregnant.

5.3.2 Social factors

The results indicated that teenage pregnancy decreased with higher levels of education. Out of the teenagers who were pregnant or had given birth, 47.4% and 40.4% had achieved only primary education and JHS respectively as compared with those in SHS and Tertiary education with 5.3% and 0% respectively. GSS (2003) recorded similar results that indicated that childbearing among teenagers' decreased with higher education; 26%, 20.8% and 10.4% with no education or primary education or JHS respectively as compared to those with Secondary plus (3.0%). Higher education can therefore be seen as a protective factor for teenage pregnancy. An educated

teenager may have enough knowledge on sexual and reproductive health issues and as such make choices to delay childbearing. It is however interesting that study participants with no level of education showed low percentage (7.0%) of teenage pregnancy. This may be attributed to the fact that the country is now enjoying free compulsory primary education and as such most of these teenagers are in school.

Results also showed that 28.8% of study participants lived with single parents; majority (25.8%) lived with only their mothers. This could contribute to teenage pregnancy since it is the father who most often can instil discipline and monitor the activities of his wards (Bonnel et al., 2006). During an in-depth interview, single parenthood was identified as one of the causes of teenage pregnancy at Kpone-on-Sea.

> *"Broken marriage is one of them, parents staying away, that is single parenthood, that also is a factor whereby the parents don't know where their children sleep and then how to cater for them especially when they are coming to school; to give them money for their needs and then buy food when they come; that has been a problem for them, that is why when they lure them, they become victims".*

It was also observed that teenagers whose movements were restricted at home had the less likelihood of becoming pregnant (42.1%) than those who were not restricted. The high level of supervision (restriction) by parents may have reduced the girls' association with high risk peers and as such prevented pregnancy since peer pressure was identified as one of the key causes of teenage pregnancy in the sub-district.

> *"Sometimes people talk about poverty as a factor. In reality, I will say okay, to some extent, poverty may be a factor, but I also think that you know these days, most of these girls; their peer groups are actually influencing them. I know of a girl in my house, formerly, I never knew she was in that business (prostitution). Because she had a friend who comes from Kokompe and she is sleeping with men, coming with different phones, this girl tried to follow her so that she will also get some of these items".*

"I can say, broken homes and this peer pressure, they are the two major factors that is over here".

Sexual abuse (rape) was reported by 40 (8.0%) of the study participants. However, report of pregnancy was not common (14%) among abused (rape) teenagers as compared with the 86% non-rape victims. All the rape cases were observed in Kpone town. Unfortunately, such cases were treated as a family matter and the perpetrators were not brought to book. The results differ from the results of a study by Saewyc et al., (2004) which confirmed a strong link between adolescent pregnancy and sexual abuse history.

The results further indicated that alcohol intake played less significance in teenage pregnancy. Out of 29% of study participants who consume alcohol, only one person consumes it daily. In addition, only 4.3% took alcohol during sex. Study participants acknowledged that alcohol can lead to unprotected sex and this probably explains the low percentage of alcohol intake during sex.

5.3.3 Cultural factors

Cultural practices such as puberty rites did not seem to be a key cause of teenage pregnancy. The majority (75.6%) of study participants did not think that culture exposes teenagers to pregnancy. This was revealed during an in-depth interview with an opinion leader;

"Formerly, we had the customary rite we call dipo, where incoming girls are put at one place and then they are taken through the roles of womanhood, but it died by itself as a result of the spread of Christianity".

The issue of early marriages was not a problem in the sub-district; only 3.4% were married and as such, their contribution to the teenage pregnancy rate was very minimal. Even though early marriage was a culture among the fisher-folks, education had faded away that practice.

> *"Early marriage has become a practice among the fisher folks especially, but the town itself hasn't got a culture that allows people to marry at a very tender age. These days*

> *there is the tendency to minimise this teenage pregnancy because of education, since most of them are now in school".*

The study showed that 93% of those who were pregnant or had given birth were Christians. Majority of them were Charismatics (84.2%) with a few from Methodist and Presbyterian (8.8%). Orthodox churches (Catholic and Anglicans) however did not record any teenage pregnancy or birth. This confirms the findings of Galvan et al., (2007) who stated that Catholics were less likely to engage in unprotected sex as compared to the other Christians and non Christian religions and those with no religious affiliation.

5.3.4 Health related factors

Results showed that even though lack of access to family planning services contributed to teenage pregnancy at Kpone-on-Sea, lack of sex education (19.7) was the key health related factor that was identified. Although 79% had heard about contraceptives/family planning, only 3.5% heard about it from their parents and this may have helped fuel teenage pregnancy. *"Partly, it is because the actual sex education is lacking and we can trace some of the root causes from home that is why it is on the ascendency".*

> *"Sometimes even some of the parents find it a problem, they feel embarrassed to talk to some of their children about things regarding their sexual life, like at this stage, my daughter, you have to know how you move and you should be very careful with your life, how to even talk to them is a problem".*

The nurses did not help the situation much as they undertook sex education once in a while. This came out during an in-depth interview;

"As for this question, the family planning people, I think they do it but once in a blue moon".

Common sources of information on contraceptives were from friends and the media; media information is not targeted at teenagers and also does not answer whys, what to do and when to do, as regards family planning/contraceptives. Information may therefore not be correct and

reliable and these teenagers fall victims to pregnancy. Future education on contraceptives/family planning by the media must therefore target the adolescents as well as the elderly.

Views of study participants on factors which prevent teenagers from using contraceptives identified sex education as the main factor and parents not encouraging them to use (which can be incorporated into lack of sex education) as another factor. Attitude of health workers was not found to be a factor contributing to teenage pregnancy at Kpone-on-Sea. Again, probably due to lack of sex education, many teenagers (99%) do not patronise family planning services at the Kpone health centre. Of the 1% who patronised, attitude of health workers towards them was good.

5.3.5 Views of study participants on the determinants of teenage pregnancy in Kpone-on-Sea sub-district

The study showed that all the factors except cultural factors contribute to the problem of teenage pregnancy at Kpone-on-Sea. The key factors indicated by study participants as contributing to the problem were economic factors such as lack of financial support (15.3%) and poverty (13.7%), social factors such as lack of parental care (15.2%) and peer pressure (15.0%) and health related factors such as lack of sex education (12.9%). These views were also expressed by some opinion leaders and teachers in the JHS during in-depth interviews.

"To some extent, poverty may be a factor, but I also think that these days most of these girls, their peer groups are actually influencing them".

"I think poverty takes about 50% of that problem of teenage pregnancy because the parents do not get enough money to cater for them".

"Yes, some of them, they join bad friends. Bad friends too, make them to enter such a problem and some of them too, I'll say disobedience; they don't obey their parents".

"The actual sex education is lacking".

Results from other studies have confirmed these factors. Nabila and Fayorsey (1996) identified poverty; Were (2007) identified peer pressure and lack of parental care and guidance, and Hutchinson et al., (2005) identified lack of sex education as a key cause of teenage pregnancy.

Other minor factors which were mentioned as contributing to teenage pregnancy are social factors (maltreatment and rape, broken homes, lack of parental control) and health related factors (lack of access to contraceptives). Future interventions must therefore be targeted at especially the key factors to help curb the problem of teenage pregnancy.

5.4 Youth friendly facilities at Kpone-on-Sea

There were no youth friendly services at Kpone-on-Sea. This may have contributed to the high rates of teenage pregnancy in the sub-district since teenagers who seek advice on contraceptives need teen-friendly services which are accessible, free or low cost, confidential or convenient (Parker, 2002). Youth friendly services may also help reduce unwanted pregnancies by making abortion safe and legal as well as making family planning services accessible to them (Rasch, 2000).

5.5 Relationship between age at menarche and teenage pregnancy

Results showed that there was a significant relationship between age at menarche and teenage pregnancy and also age at first sexual intercourse and teenage pregnancy. A teenager who attains menarche later in life is more likely to delay age at teenage pregnancy as compared to teenagers who attain menarche early. In the same sense, a teenager who delays sexual intercourse is more

likely to delay age at pregnancy as compared to teenagers who initiate sexual activities at an early age. Buga et al., (1996) found out that age of initiation of sexual activity is positively correlated with age at menarche. Roosa et al., (1997) also confirmed this when he stated that age at first sexual intercourse is positively related to teenage pregnancy. Future interventions must therefore target adolescents early in life, since girls of today attain menarche at an early age.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

- Teenage pregnancy rate (11.4%) in the sub-district was higher than the regional average of 9.5% in the GSS (2003).

- Teenage pregnancy rate was higher in the rural communities as compared to the peri urban communities in the sub-district and its burden was higher outside marriage than within marriage due probably to mass schooling by the institution of the free compulsory primary education in the country.

- Teenagers in the sub-district initiated sexual activities very early in life when they may not have had access to comprehensive and accurate information about sexual and reproductive health issues.

- Teenage pregnancy was caused by interplay of factors; economic, social, cultural and health related factors, with key factors being economic (poverty, lack of financial support), social (peer pressure and lack of parental care), and health related (lack of sex education).

- Health education campaign by nurses in the health centre was inadequate and could have contributed to the high rate of teenage pregnancy.

- Rape cases were peculiar to Kpone town; however, perpetrators are not brought to book. They believe that they are all from the same family and such cases must be treated as a family matter.

- There were no youth friendly services at Kpone-on-Sea and this may have contributed to the high rate of teenage pregnancy since teenagers need teen-friendly services which are accessible, free or low cost, confidential and convenient.

- There was a significant correlation between age at menarche and age at teenage pregnancy ($r=0.640$; $p<0.01$).

6.2 Recommendations

1. Sexual and reproductive health education programmes should include up-to-date information about puberty, abstinence, pregnancy and contraception, since the delay of sexual intercourse can reduce the likelihood of sexual risk-taking that might lead to teenage pregnancies.

2. Ghana Education Service (GES) should increase its collaboration with the Ghana Health Service (GHS) in order to increase the effectiveness of the school health education programme. GES should also train more teachers in family life education programmes to handle family life education classes at the basic level. For the teachers who are already on the field, in-service training should be organized for them.

3. Adolescents' access to quality reproductive health services, especially family planning services should be improved. Youth friendly facilities should therefore be established at Kpone-on-Sea sub-district and peer educators stationed at these facilities to help reduce the problem of peer pressure, lack of sex education and access to family planning services which contribute to the problem of teenage pregnancy.

4. Extra-curriculum activities should be organised for teenagers through the various religious groups and community organizations. Teenagers should be encouraged to engage in income generating activities such as petty trading in household consumable items. In addition, parents should be empowered through education and income generation (entrepreneurial skills) so that they can have enough funds to take care of their children. The school feeding program should also be extended to the JHS level to lessen the burden of feeding on the families and to retain more students in school.

5. Summary of study to be communicated to the council of elders and the chief of Kpone-on-Sea at a community workshop during School of Public Health (SPH) research outreach.

REFERENCES

Adamczyk A, Felson J. (2008). Fetal positions: Unravelling the influence of Religion on Premarital Pregnancy Resolution. *Social Science Quarterly* **89**:17-38.

Adolescent Health Committee, Canadian Paediatric Society (2003).

Akwasi Ampratwum-Mensah. Research into adolescent health needs. *Ghana Daily Graphic* Monday, June 30th 2008. pp 44.

Alan Guttmacher Institute. (1999). Sharing responsibility: women, society and abortion worldwide. New York.

Alan Guttmacher Institute. (1996). Facts in Brief: Teen Sex and Pregnancy, New York

Ashford, L, Clifton, D, Kaneda, T. (2006). The World's Youth. *Population Reference Bureau*; cited in Youth in a Global World.

Bennett, T, Skatrud, J.D, Guild, P, Loda, F, Klerman, L.V. (1997). Rural Adolescent Pregnancy: A view from the South. *Family Planning Perspectives* **29**:256-260, 267.

Bledsoe, C.H and Cohen, B, (1993). Social dynamics of adolescent fertility in sub-Saharan Africa. Washington D.C.; *National Academy Press*.

Bonnel C, Allen E, Strange V, Oakley A, Copas A, Johson A, Stephenson J. (2006). Influence of family type and parenting behaviours on teenage sexual behaviour and conceptions. *J Epidemiol Community Health*. **60**:502-6.

Blum, R.W, Mmari, Nelson, K. (2006). Risk and Protective factors affecting Adolescent Reproductive Health in developing countries. WHO, Geneva 126.

British Broadcasting Corporation (2005).

Buga GA, Amoko DH, Ncayiyana DJ. (1996). Adolescent sexual behaviour, knowledge and attitudes to sexuality among school girls in Transkei, South Africa. *East Afr Med.* **73**:95-100.

Burack R. (1999). Teenage sexual behaviour: attitudes towards and declared sexual activity. *Br J Fam Plann* **24**:145-8.

Buvinic, M. (1998). The costs of adolescent childbearing: Evidence from Chile, Barbados, Guatemala, and Mexico. *Stud. Fam. Plan* **29:**201-9

Chalk R, King P.A (1998). Violence in Families: Accessing Prevention and Treatment Programs. *The National Academics Press.*

Cohen DA, Farley TA, Taylor SN, Martin DH, Schuster MA (2002). When and where do youths have sex? The potential role of adult supervision. *Pediatrics* **110**:66.

Council of Europe (1997). *Recent Demographic Developments in Europe.* Strasbourg: Council of Europe Publishing

Craig, G (2004). Teenage pregnancy and alcohol in rural areas. *Presentation to the rural drug and alcohol prevention conference.* Accessed-11th January, 2008.

Dangal, G (2005). An Update on Teenage Pregnancy. The Internet Journal of Gynecology and Obstetrics **5**:1

de Visser RO**,** Smith AM**,** Richters J**,** Rissel CE**.** (2007). Associations between religiosity and sexuality in a representative sample of Australian adults. *Arch Sex Behav* **36**:33-46.

Epi Info (TM) (26th April, 2004): Database and statistics software for public health professionals. (Version 3.3.2)

French RS. (2002). The experience of young people with contraceptive consultations and health care workers. *Int J Adolesc Med Health* **14**:131-8.

Galvan FH**,** Collins RL**,** Kanouse DE**,** Pantoja P**,** Golinelli D**.** (2007). Religiosity, denominational affiliation and sexual behaviors among people with HIV in the United States. *J Sex Res* **44**:49-58.

Garwick AW, Rhodes KL, Peterson-Hickey M, Hellerstedt WL.(2008). Native teen voices: Adolescent pregnancy prevention recommendations. *J Adolesc Health* **42**:81-8

Ghana Statistical Service (2000). Population and Housing Census. pp 18.

Ghana Statistical Service (GSS) and Macro (1999). *Ghana Demographic and Health Survey 1998.* Calverton, Maryland: GSS and MI. pp 36-37

Ghana Statistical Service (GSS), Noguchi Memorial Institute for Medical Research (NMIMR), and ORC Macro (2004). *Ghana Demographic and Health Survey 2003.* Calverton, Maryland:GSS, NMIMR, and ORC.Macrol. pp 62-63

Gökçe B, Ozşahin A, Zencir M. (2007). Determinants of adolescent pregnancy in an urban area in Turkey: a population-based case-control study. *J Biosoc Sci* **39**:301-11

Gupta N**.** (2000). Sexual initiation and contraceptive use among adolescent women in northeast Brazil. *Stud Fam Plann.* **31**:228-38.

Harden A**,** Ogden J**.** (1999). Sixteen to nineteen year olds' use of, and beliefs about, contraceptive services. *Br J Fam Plann* **24**:141-4.

Henrion R. (2003). Female genital mutilations, forced marriages, and early pregnancies. *Bull Acad Natl Med.* **187**:1051-66.

Hutchinson H, Domhnaill, B.M, Miley, A, Miley, Y. (2005). Teenage Pregnancy in the Schools of the Ho Municipality in Ghana. Village *Exchange International-Village Exchange Ghana*. Accessed-11th January, 2008.

Lee, M.C, Chou, M.C (2001). Association of Risk Taking Behaviours with Adolescent Childbearing. *J Formos Med Assoc* **100**:533-538.

Mashamba A, Robson E. (2002). Youth Reproductive Health Services in Bulawayo, Zimbabwe. *Health Place* **8**:273-83

Marques et al (1991). The Antecedents of Adolescent Pregnancy in a Brazilian Squatter Community. *J Trop Pediatr* **37**: 194-198

Maynard, R.A (1996). Kids having kids: *A Robin Hood Foundation Special Report on the Costs of Adolescent childbearing.* NY: R.H. Foundation).

McCree DH, Wingood GM, DiClemente R, Davies S, Harrington KF.(2003). Religiosity and risky sexual behavior in African-American adolescent females. *J Adolesc Health* **33**:2-8.

McIntyre, P, Williams, G, Peattie, S. (2003). Adolescent Friendly Health Services; An Agenda for Change. *World Health Organization*.

Mensch BS, Bagah D, Clark WH, Binka F. (1999). The changing nature of adolescence in the Kassena-Nankana District of northern Ghana. *Stud Fam Plann.* **30**:95-111.

Microsoft Office Excel (2007)

Miranda, A.E & Szwarcwald, C.L (2007). Pregnancy Rate and Risk Behaviours Among Female Adolescents in Vitoria, Brazil. *Women Health* **45**:17-30

Nabila, J.S., Fayorsey, C. (1996). Adolescent Fertility and Reproductive Behaviour in Ghana. *Presented at community seminar organized by FADEP*, Cultural center, Kumasi, 11th October.

Nare C, Katz K, Tolley E. (1997). Adolescents' access to reproductive health and family planning services in Dakar (Senegal). *Afr J Reprod Health* **1**:15-25.

National Rural News (2006). Teenage pregnancy rates higher in rural areas. Australia; *ABC Rural*

Noble, J, Cover J, Yanagishita M (1996). The World's Youth. Washington D.C; *Population Reference Bureau*, Inc.

Nugent R (2006). Youth in a Global World. Washington D.C: *Population Reference Bureau.*

Okonofua (1995). Factors Associated with Adolescent Pregnancy in Rural Nigeria. *J Youth Adolesc* **24**:419-438.

Okonofua, F.E, Odimegwu, C, Ajabor, H, Daru, P.H, Johnson, A.(1999). Assessing the Prevalence and Determinants of Unwanted Pregnancy and Induced Abortion in Nigeria**.** *Studies in Family Planning* **30**: 67–77

Oxford Pocket Dictionary of Current English (2008). *HighBeam Encyclopedia.*

(Population Council (2006). Unexplored Elements of Adolescence in the Developing World; *Population Briefs*, Retrieved April 18, 2007).

Parker BL.(2000). Teen-friendly services. Advocates for successful teen contraception. *N J Med* **9**:41-4.

President Bill Clinton (1995). State of the Union Address. United States of America. *BNET Network.*

Rasch V, Silberschmidt M, Mchumvu Y, Mmary V.(2000). Adolescent girls with illegally induced abortion in Dar es Salaam: the discrepancy between sexual behaviour and lack of access to contraception; *Soc Sci Med* **8**:52-62.

Renker, P.R. (1999). Physical Abuse, Social Support, Self-care, and Pregnancy Outcomes of older adolescents. *Journal of Obstetric, Gynecologic and Neonatal Nursing* **28**:377-388.

Roosa, M.W, Tein, J, Reinholtz, C, Angelini, P.J. (1997). The Relationship of Childhood Sexual Abuse to Teenage Pregnancy. *Journal of Marriage and the Family* **59**:119-130.

Saewyc E. M, Magee, L.L, Pettingell, S.E (2004). Teenage Pregnancy and Associated Risk Behaviours Among Sexually Abused Adolescents. *Perspectives on Sexual and Reproductive Health.* **36**:98-105

Shawky S, Milaat W. (2000). Early teenage marriage and subsequent pregnancy outcome. *East Mediterr Health J* **6**:46-54.

Shrestha S. (2002). Socio-cultural factors influencing adolescent pregnancy in rural Nepal. *Int J Adolesc Med Health* **14**:101-9

Silberschmidt M, Rasch V. (2001). Adolescent girls, illegal abortions and "sugar-daddies" in Dar es Salaam: vulnerable victims and active social agents. *Soc Sci Med*, **52**:1815-26.

Social Exclusion Unit (1999). Teenage pregnancy report. *London: The Stationery Office.*

Statistical Packages for Social Scientists; SPSS, Version 16.0 (13th September, 2007). *SPSS Inc.*

Taffa, N, Obare, F. (2004). Pregnancy and Child Health Outcomes among Adolescents in Ethiopia. *Ethiop. J. Health Dev*. **18**:90-95

Tema Municipal Health Directorate (2007): Ghana Health Service. Annual Report, pp 13.

Tema Municipal Health Directorate (2008): Ghana Health Service. Reproductive and Child Health half year report.

Treffers, P.E (2003). Teenage pregnancy, a worldwide problem. *Ned Tijdschr Geneeskd.* **147**:2320-5.

Trent M, Clum G, Roche KM. (2007). Sexual victimization and reproductive health outcomes in urban youth. *Ambul Pediatr.* **7**:313-6.

United Nations Population Fund (UNFPA, 2003). Achieving the millennium development goals. Population and reproductive health as critical determinants. New York, UNFPA.

UNICEF (2001). A League Table of Teenage Births in Rich Nations. Innocenti Report Card; 3. UNICEF Innocenti Research Centre.

United Nations World Population Prospects.(2001). Comprehensive tables, New York, *United Nations Publication*.

Verbal citation (2007). Nii Tetteh Otu; Chief of Kpone-on-Sea traditional area.

Vikat A**,** Rimpelä A**,** Kosunen E**,** Rimpelä M (2002)**.** Sociodemographic differences in the occurrence of teenage pregnancies in Finland in 1987–1998: a follow up study. *Journal of Epidemiology and Community Health* **56**:659-668

Vundule C, Maforah F, Jewkes R, Jordaan E.(2001). Risk Factors for Teenage Pregnancy Among Sexually Active Black Adolescents in Cape town. A case control study. *S Afr Med J*. **91**:73-80.

Wang C.S, Chou P (1999). Risk Factors for Adolescent Primigravida in Kaohsiug County, Taiwan. *Am J Prev Med* **17**:43-47

Warenius LU, Faxelid EA, Chishimba PN, Musandu JO, Ong'any AA, Nissen EB (2006). Nurse-midwives attitudes' towards adolescent sexual and reproducative health needs in Kenya and Zambia. *Reprod Health Matters*. **14**:119-28

Were M (2007). Determinants of teenage pregnancies: the case of Busia District in Kenya, *Econ Hum Biol*. **5**:322-39.

World Health Organization (2000). Progress in reproductive health research. No. 53, Geneva, WHO.

Xinhua News Agency (20th June, 1996) "Teenage pregnancy high in Ghana's Central Region". *Infonautics Electric Library*.

APPENDICES

Appendix I: Sample Informed Consent Form

Informed Consent Form

Project Title:

The determinants of teenage pregnancy at Kpone-on-Sea.

Institutional affiliation:

School of Public Health, College of Health Sciences, University of Ghana, Legon

Background

Greet! My name is Priscilla Amuah. I am a student from the School of Public Health. I am conducting a research study on the determinants of teenage pregnancy at Kpone-on-Sea. This academic research is part of my student project work, Master of Public Health Degree Program.

Procedures:
The information that would be collected includes background data of respondents and economic, social, cultural and health related factors contributing to teenage pregnancy at Kpone-on-Sea.

Risks and Benefits
You may feel uneasy with some of the questions we will be asking you. However they will be helpful to us and the opinion leaders at Kpone-on-Sea and the providers of healthcare if you could answer all the questions. The information you provide will contribute to the efforts aimed at curbing the problem of teenage pregnancy. The findings will as such inform community leaders about the factors contributing to teenage pregnancy and also add up to existing knowledge.

Right to refuse:

Your consent to participate in this study is voluntary and you are not under any obligation to do so. You are at liberty to withdraw from the study. However, I will plead with you to complete it since your opinion is needed to help curb this menace.

Anonymity and Confidentiality

Be assured that the information you will provide will be handled with strict confidentiality and will be used purely for research purposes. Your responses will not be shared with anybody who is not part of the study team. Data analysis will be done at the aggregate level to ensure anonymity.

Before taking consent

Do you have any questions that you wish to ask? Yes…… (If yes, questions to be noted below)
……
……
…….....

If you have questions later, you may contact **Miss Priscilla Amuah on 0243541370**

Consent

I……., having understood the study, after having the consent form thoroughly explained to me in English/Twi/Ga/GaDagbme language do hereby agree to enroll and participate in this study.

Signature/Thumbprint of Participant/Guardian ……

Date …….....

Interviewer's statement:

I, the undersigned, have explained to the subject in the language that she understands the procedures to be followed in this study and the risks and benefits involved. The subject has agreed to participate in the study.

Signature of Interviewer ……

Date ……..

Appendix II: Sample Questionnaire

Title: The determinants of teenage pregnancy at Kpone-on-Sea

Identification:

Questionnaire ID: _____ **Date of Interview: _____** **Study Area: _____**	**Name of Research Assistant: _____** **_____** **Name of Supervisor: _____** **_____**

Directions: Please answer all questions by writing the number of your choice(s) in the boxes provided or writing in the spaces provided where applicable.

SECTION A: SOCIODEMOGRAPHIC DATA			
No	**QUESTIONS**	**CODING CATEGORY**	**VARIABLE NAME**
A1	Age (in complete years)	☐☐	A1AGE
A2	Level of educational attainment	1-No education 2-Primary 3-JHS 4-SHS 5-Tertiary 6-Other;specify_____ ☐	A2EDU
A3	Marital status	1-Single 2-Married 3-Cohabiting 4-Divorced 5-Separated 6-Widowed ☐	A3MARIT
A4	Religion	1-Christian; specify denomination_____ 2-Moslem 3. Traditionalist 4-Other; specify _____ ☐	A4RELIGN
A5	Occupation of respondent	1-Unemployed 2-Farmer 3-Fisherman 4-Teacher 5-Trader 6-Seamstress 7-Hairdresser 8-Student/Pupil 9-Other;specify _____ ☐	A5OCCUP
A6	Occupation of caregiver	1-Unemployed 2-Farmer 3-Fisherman 4-Teacher 5-Trader 6-Seamstress 7-Hairdresser 8-Other_____ ☐ 99-Don't know	A6OCCARE

A7	Relationship to caregiver	1-Spouse 2-Father 3-Mother 4-Boyfriend 5-Sugar daddy 6-Friend 7-Other _____ ☐	A7RECARE
A8	Place of residence	1-Kpone 2-Gbetsile 3-Sebrepor 4-Saki 5-Kokompe 6-Kpoi Ete 7-Kakasunanka No.1 ☐	A8PRES
A9	Ethnicity (Tribe)	1-Akan 2-Ga 3-Ga-Dangme 4-Ewe 4-Other, specify _____ ☐	A9ETHN
SECTION B-PREVALENCE OF TEENAGE PREGNANCY			
B1	Are you in a relationship with a man	1-Yes 2-No ☐	B1RELATN
B2	If no, have you been in a relationship before?	1-Yes 2-No ☐	B2BNREL
B3	Have you had sex before?	1-Yes 2-No ☐	B3SEX
B4	Are you currently pregnant	1-Yes 2-No ☐	B4PREG
B5	Have you ever been pregnant?	1-Yes 2-No ☐	B5EVERP
B6	If yes, which year did you get pregnant	Specify _____ ☐	B6YEARPG
SECTION C-DETERMINANTS OF TEENAGE PREGNANCY(ECONOMIC FACTORS)			
C1	Do you have a partner? **[*If no, skip to C7*]**	1-Yes 2-No ☐	C1PARTNR
C2	How old is your partner? (in complete years)	☐☐	C2PTAGE
C3	Is he living on his own?	1-Yes 2-No ☐	C3LIVE
C4	Is your partner gainfully employed?	1-Yes 2-No ☐	C4PTEMP
C5	Do you receive any financial support from	1-Yes 2-No ☐	C5FINSP

	your partner?		
C6	If no, where do you get financial support from?	Specify _____ ☐	C6IFNO
C7	Who do you live with?	1-Mother only 2-Father only 3-Both parents 4-Step father 5-Step mother 6-Relative 7-Partner 8-Other;specify ☐	C7LIVE
C8	How many are you in your household?	Specify _____	C8NUMBER
C9	Do you receive any financial support from the person you live with?	1-Yes 2-No ☐	C9FINSPT
C10	If no, where do you get financial support from?	Specify _____	C10STFM
C11	What in your opinion make teenagers engage in sex (***tick as many as apply***)	1-Lack of financial support from parent ☐ 2-Lack of parental care ☐ 3-Watching pornographic movies ☐ 4-Poverty ☐ 5-Pleasure ☐ 6-Peer pressure ☐ 7-Curiosity ☐ 8-Other ☐ 99-Don't know ☐	C11TGSEX
C12	What in your opinion make teenagers become pregnant (***tick as many as apply***)	1-Lack of financial support from parents ☐ 2-Lack of parental care ☐ 3-Poverty ☐ 4-Peer pressure ☐ 5-Lack of sex education ☐ 6-Maltreatment and rape ☐ 7-Broken homes ☐ 8-Lack of parental control ☐ 9-Lack of access to contraceptives ☐ 10-Other _____ 99-Don't know ☐	
DETERMINANTS OF TEENAGE PREGNANCY-SOCIAL FACTORS			
C13	Do your parents restrict your movements? **[*If no, skip to C14*]**	1-Yes 2-No ☐	C13RESTR
C14	If yes, how do you rate the level of restriction	1-High 2-Moderate 3-Low ☐	C14RATE

C15	Have you ever been a victim of sexual abuse? **[*If no, skip to C18*]**	1-Yes 2-No ☐	C15VICTM
C16	If yes, at what age did this happen? (in complete years)	☐☐	C16VTAGE
C17	Were you under the influence of alcohol or drugs at the time of sexual assault	1-Yes 2-No ☐	C16ALC
C18	Did the sexual abuse result in pregnancy	1-Yes 2-No ☐	C17RPREG
C19	How often do you take alcoholic beverages	1-Daily 2-Regularly 3-Occasionally 4-Other ☐	C18OFTEN
C20	Did you take in alcohol the last time you had sex?	1-Yes 2-No ☐	C19ACLST
C21	Does taking alcohol and drugs lead to unintended sex?	1-Yes 2-No ☐	C20ACLD
DETERMINANTS OF TEENAGE PREGNANCY-CULTURAL FACTORS			
C22	Do cultural practices expose teenagers to pregnancy?	1-Yes 2-No ☐	C21CULP
C23	If yes, which cultural practices expose teenagers to pregnancy? (***tick as many as apply***)	1-Bethrothal by parents ☐ 2-Arranged marriages via family members ☐ 3-Puberty rites ☐ 4-Other; Specify_____ ☐	C22CULPT
C24	How do they expose teenagers to pregnancy	Specify _____ _____	C23EXP
DETERMINANTS OF TEENAGE PREGNANCY-HEALTH RELATED FACTORS			
C25	Have you heard	1-Yes ☐	C24HEARD

	about family planning? **[*If no, skip to C33*]**	2-No	
C26	If yes, where did you hear about it	Specify _____	C25WHERE
C27	Which methods have you heard of or used or are currently using. ***(Tick as many as apply)***	**Heard of** / **Used** / **Currently using** 1-Diaphragm 1-Diaphragm 1-Diaphragm ☐ 2-M-Condoms 2-M-Condoms 2-M-Condoms ☐ 3-F-Condoms 3-F-Condoms 3-F-Condoms ☐ 4-ECP 4-ECP 4-ECP ☐ 5-Injectables 5-Injectables 5-Injectables ☐ 6-IUDs 6-IUDs 6-IUDs ☐ 7-Oral cont. 7-Oral cont. 7-Oral cont. ☐ 8-Other 8-Other 8-Other ☐ 99-Don't know 9-Don't know 9-Don't know ☐	C26CONT
C28	Where do you get contraceptives from in this community? ***(Tick as many as apply)***	1-Pharmacy/drug store ☐ 2-Supermarket ☐ 3-Clinic/Hospital ☐ 4-Peer educator ☐ 5-Family planning center ☐ 6-Bar/guesthouse/hotel ☐ 7-Other _____ 99-Don't know ☐	C27WHERE
C29	Which of these places do you find as a most convenient source of obtaining a contraceptive?	1-Pharmacy/drug store 2-Supermarket 3-Clinic/Hospital 4-Peer educator ☐ 5-Family planning center 6-Bar/guesthouse/hotel 7-Other _____ 99-Don't know	C28WHICH
C30	Did you use a contraceptive the last time you had sex with your partner?	1-Yes 2-No ☐	C29LAST
C31	If yes, state the type of contraceptive you used	1-Diaphragm ☐ 2-M-Condoms ☐ 3-F-Condoms ☐ 4-ECP ☐ 5-Injectables ☐ 6-IUDs ☐ 7-Oral contraceptives ☐ 8-Other_____ ☐ 99-Don't know ☐	C30IFYES

C32	Who suggested the use of contraceptives during sex	1-Myself 2-My partner 3-Joint decision ☐	C31WHOSG
C33	If no, what prevented you and your partner from using a contraceptive device	1-Not available 2-Didn't think of it 3-Too expensive 4-Partner objected ☐ 5-Don't like them 6-Didn't think it was necessary 7-Prevents full enjoyment 8-Other _____ 99-Don't know	C32IFNO
C34	Which factors do you think prevent teenagers from using contraceptives (***tick as many as apply***)	1-Cultural values ☐ 2-Religious values ☐ 3-Parents not encouraging them to use ☐ 4-Media not promoting contraceptive use ☐ 5-Lack of access to contraceptives ☐ 6-Health workers attitudes ☐ 7-Lack of sex education ☐ 8-Other _____ ☐	C33FACTS
C35	Do you go to the health centre for family planning services? ***(If no, skip to D1)***	1-Yes 2-No ☐	C34FAMPL
C36	If yes, what is the attitude of health workers towards you when you go for family planning services	1-Poor 2-Average 3-Good 4-Excellent ☐ 5-Other	C34HTWKS
SECTION D-YOUTH FRIENDLY SERVICES			
D1	Are there any youth friendly services at Kpone-on-sea **[*If no, skip to E1*]**	1-Yes 2-No ☐	D1YOUTH
D2	If yes, list the youth friendly services at Kpone-on-sea	_____ _____	D2IFYES

SECTION E-AGE AT MENARCHE AND TEENAGE PREGNANCY			
E1	At what age did you have your first menstruation? (Age in complete years)		E1AGE
E2	Did your first menstruation show that you are mature enough to have sex?	1-Yes 2-No	E2FSMENS
E3	At what age did you have your first sexual encounter (Age in complete years)		E3AGESX
E4	At what age did you first get pregnant (Age in complete years)		E4AGEPG

Appendix III – Sample Interview Guides

In-depth interview guide for opinion leaders (Chief, Queen mother and Assembly man) on the determinants of teenage pregnancy at Kpone-on-Sea

Introduction: Greet! Introduce yourself and the project being undertaken

Section A – Prevalence of teenage pregnancy

1. Of late, throughout the country, people have been complaining that teenage girls are becoming pregnant. Is our community facing the same problem? ***(Probe for reason why it is a problem; number of teenage pregnancies they know of)***
2. What might be accounting for this?
3. Is there any forum where teenagers are educated on sex?
4. Is there any culture that prevents teenagers from practising family planning and also using contraceptives?
5. Are there cultural beliefs that promote early marriages among teenage girls?
6. What in your opinion are the effects or consequences of teenage pregnancy; on the teenager and the sub-district (***Probe for more effects***)
7. What efforts are being instituted to curtail the problem of teenage pregnancy in the communities?

Section B – Youth friendly services

1. Are there any youth friendly facilities at Kpone-on-Sea?

2. If yes, are these facilities far away from the people

3. If there is none, are you planning to get such facilities in your communities?

In-depth interview guide for health workers (Head of health centre and midwives) on the determinants of teenage pregnancy at Kpone-on-Sea

Introduction: Greet! Introduce yourself and the project being undertaken

Section A – Prevalence of teenage pregnancy

1. What can you say about teenage pregnancy numbers at Kpone-on-Sea?

2. If teenage pregnancy is a problem, do you have any plans to help curb this situation?

Section B – Determinants of teenage pregnancy

1. In your opinion, what are the factors that contribute to teenage pregnancy at Kpone-on-Sea?

2. How often do teenagers access family planning services in the health centre?

3. Do you face any problems in administering family planning services to teenagers? (***Probe for problems encountered***)

4. Do you undertake sex education campaign in the sub-district? (***Probe for topics on education***)

Section C – Youth friendly services

1. Do you know of any youth friendly services in the sub-district?

2. Do you think these services are able to cater for the health needs of teenagers?

In-depth interview guide for teachers (Head teacher and class teachers) on the determinants of teenage pregnancy at Kpone-on-Sea.

Introduction: Greet! Introduce yourself and the project being undertaken

Section A – Prevalence of teenage pregnancy

1. Do you think teenage pregnancy is a problem at Kpone-on-Sea?
2. Can you please tell me the number of students from your school who got pregnant whiles in school or immediately after completing school?
3. What sanctions are given to pregnant teenagers and their boyfriends?
4. What are the efforts being made to curtail the problem of teenage pregnancy?

Section B – Determinants of teenage pregnancy

1. Do you have sex education programmes in your school? (***Probe for content of the education programme***)
2. What is the impact of this on students?
3. In your opinion, what are the factors that contribute to teenage pregnancy especially among JHS students?

Section C – Youth friendly services

1. Do you know of any youth friendly services at Kpone-on-Sea?

2. What programmes or services are available to teenagers at these centres?

3. Do the youth patronise them? (***Probe for reason for answer***)

Key informant interview guide for a pregnant teenager on the determinants of teenage pregnancy at Kpone-on-Sea

Introduction: Greet! Introduce yourself and the project being undertaken

Age

Occupation

Residence (who are you living with)

Age of first menstruation

Age at first sexual encounter

Age of pregnancy

1. Before getting pregnant, did you hear and use contraceptives?
2. If yes, which type of contraceptive and if no, why not?
3. What type of contraceptive are you currently using?
4. Where in the community can you get contraceptives?
5. Do you have programmes on sex education at home, social gathering or in school?
6. What factor(s) contributed to your getting pregnant?

Find out how they affect

- Implications
- Suggested solutions

7. Any other comments (any questions bothering your mind)

Key informant interview guide for a teenager who has delivered within the last two years on the determinants of teenage pregnancy at Kpone-on-Sea.

Introduction: Greet! Introduce yourself and the project being undertaken

Age

Occupation

Residence (who are you living with)

Age of first menstruation

Age at first sexual encounter

Age at pregnancy

1. Before getting pregnant, did you hear and use contraceptives?
2. If yes, which type of contraceptive and if no, why not?
3. What type of contraceptive are you currently using?
4. Where in the community can you get contraceptives?
5. Do you have programmes on sex education at home, social gathering or in school?
6. What factor(s) contributed to your getting pregnant?

Find out how they affect

- Implications
- Suggested solutions

7. Any other comments (any questions bothering your mind)

Key informant interview guide for a parent whose teenage daughter is pregnant or has delivered within the last two years on the determinants of teenage pregnancy at Kpone-on-Sea

Greet! Introduce yourself and the project being undertaken

1. In your opinion, why do teenagers become pregnant nowadays?
2. Is it the same condition that led to "our sister's" pregnancy?
3. Did your daughter get pregnant whiles in school?
4. If yes, what sanctions were meted out to her when she got pregnant?
5. Do you discuss issues on sex and their implications with your child?

- Implications of teenage pregnancy
- Suggested solutions

6. Any other comments (any questions bothering your mind).

Focus group discussion guide for teenagers on the determinants of teenage pregnancy at Kpone-on-Sea

Greet! Introduce yourself and the project being undertaken

SOCIODEMOGRAPHIC DATA			
No.	QUESTIONS	CODING CATEGORY	VARIABLE NAME
1	Level of education	1-None 2- Primary 3- JHS 4-SHS 5- Tertiary 6- Other; specify _____	EDU
2	Marital status	1-Single 2-Married 3-Cohabiting 4-Divorced 5-Separated 6-Widowed	MARIT
3	Religion	1-Christian; denomination_____ 2-Moslem 3-Traditionalist 4-Other; specify _____	RELIG
4	Occupation of respondent	1-Unemployed 2-Farmer 3-Fisherman 4-Teacher 5-Trader 6-Seamstress 7-Hairdresser 8-Student/Pupil 9-Other;specify _____	OCUPRES
5	Occupation of caregiver	1-Unemployed 2-Farmer 3-Fisherman 4-Teacher 5-Trader 6-Seamstress 7-Hairdresser 8-Other_____ 99-Don't know	OCUPCARE
6	Relationship to caregiver	1-Spouse 2-Father 3-Mother 4-Boyfriend 5-Sugar daddy 6-Friend 7-Other _____	RELCARE
7	Community of residence	1-Kpone 2-Gbetsile 3-Sebrepor 4-Saki 5-Kokompe 6-Kpoi Ete 7-Kakasunanka No.1	CTYRES
	Ethnicity (Tribe)	1-Akan 2-Ga 3-Ga-Dangme 4-Ewe 4-Other, specify _____	ETHNIC

1. Why do you think teenagers go into relationships with men? (***Probe***)

2. What forces teenagers to have sex, especially unprotected sex?

3. Why do teenagers become pregnant?

4. What factors (social, economic, cultural, health related) contribute to teenage pregnancy?

   (***Probe for more factors***)

5. In your opinion, how can we stop/reduce teenage pregnancies?

6. Any other comments (any questions bothering your mind)