

SCHOOL OF PUBLIC HEALTH
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UNINTENDED PREGNANCY IN THE HO MUNICIPALITY OF
THE VOLTA REGION

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DECLARATION

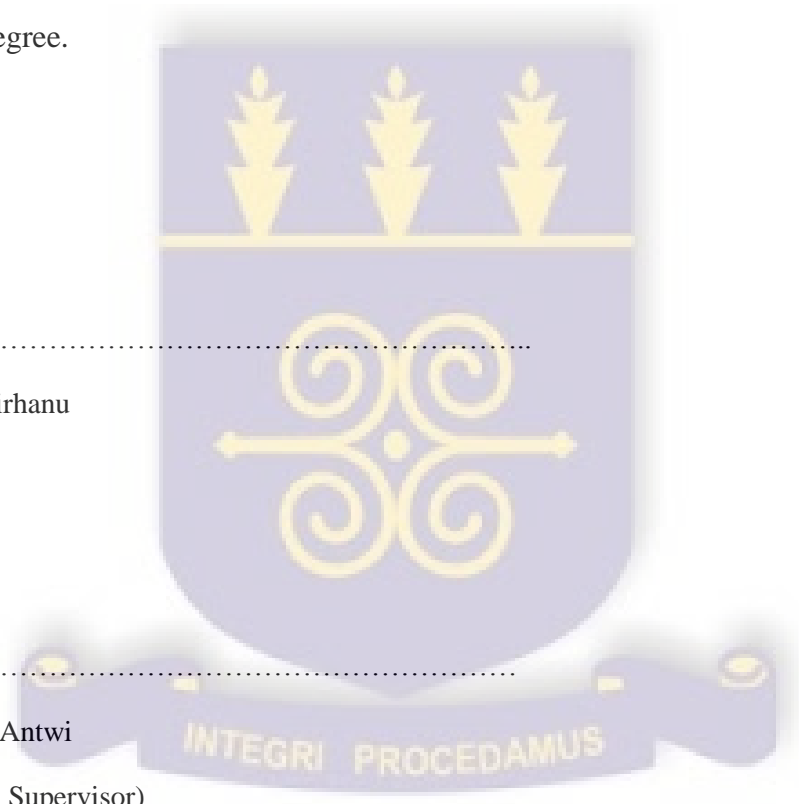
I, Zelalem Birhanu, declare that this work in its entirety is the result of my own original research. Other people's research have been duly acknowledged as reference material.

This dissertation, in whole or in part, has not been presented elsewhere for award of another degree.

.....
Zelalem Birhanu

.....
Dr Phyllis Antwi

(Academic Supervisor)



DEDICATION

This work is dedicated to all women who have suffered tremendously and continue to suffer, oftentimes life changing, and sometimes life threatening situations as a result of an unintended pregnancy.



ACKNOWLEDGMENT

This work would not have been possible if it had not been for many people who have contributed in diverse ways.

I would first like to thank my family for their patience and understanding during the past trying year.

My utmost thanks goes to all the women who responded to the questionnaires including those who were willing to sit through the in depth interview. I am humbled and awed by their courage and candor.

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Mr. Dagmawi Wendemu Kassa and Miss Hibist Wendemu Kassa deserve special recognition for their amazing speed and accuracy in the data entry process.

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Last but not the least, I wish to thank Prof. Fred Binka whose enthusiasm and commitment to student's work was an absolute inspiration.

ABSTRACT

Background: Unintended pregnancy prevalence in Ghana in married women is quoted at 37%. The Municipal Directorate of the Ho Municipality has also documented rising levels of induced abortion cases reporting for post abortion care. Recognizing that unintended pregnancies contribute to abortion and abortion related complications and their consequent contribution to increased maternal mortality ratio, the intension of the study is to determine the prevalence of unintended pregnancies in the Ho Municipality and to explore the outcomes of such pregnancies.

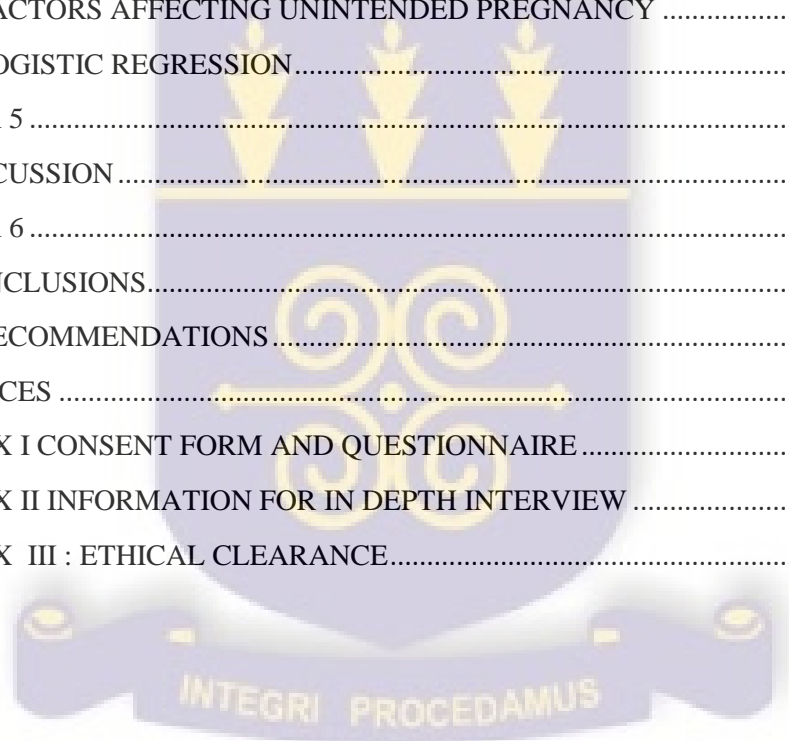
Method : A total 472 questionnaires were fielded across all 14 antenatal clinics in the Ho municipality to be administered to pregnant women attending these clinics.

Result : Four hundred and fifty women responded to the survey. The prevalence of unintended pregnancy in pregnant women in the municipality was found to be 44.1%. Of all the women who had admitted to have had a previous unintended pregnancy, 52% of those pregnancies resulted in abortion. Age, marital status and level of education attained by the women as well as a previous experience of an unintended pregnancy and the parity order were found to be significantly related to current occurrence of an unintended pregnancy

Conclusion: Almost 45% of all pregnancies in Ho are unintended. Development of instruments to detect occurrence of abortions in the community can increase the accuracy of detecting unintended pregnancy. Targeting young people from early school level can help increase family planning method uptake and reduce unintended pregnancy.

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LIST OF ACRONYMS

ANC :Antenatal Clinic

(G)DHS : (Ghana) Demographic and Health Survey

MDHS : Municipal Directorate of Health Service



DEFINITION OF TERMS

Abortion : the forceful expulsion of a fetus from the womb before 24 weeks by any means (mechanical, chemical)

Carry to term : pregnancy progresses to a time of delivery at 37 weeks gestation or more

Live birth : delivery of a live baby

Mistimed pregnancy: occurred at a time earlier than planned or desired

Miscarriage : spontaneous fetal demise and /expulsion from the uterus before 24 weeks

Multiparous : having delivered two or more children before current pregnancy

Nulliparous : not delivered any pregnancy to term prior to current pregnancy

Parity : refers to the number of previous pregnancies carried to term

Unintended pregnancy: a pregnancy which is either mistimed or unwanted

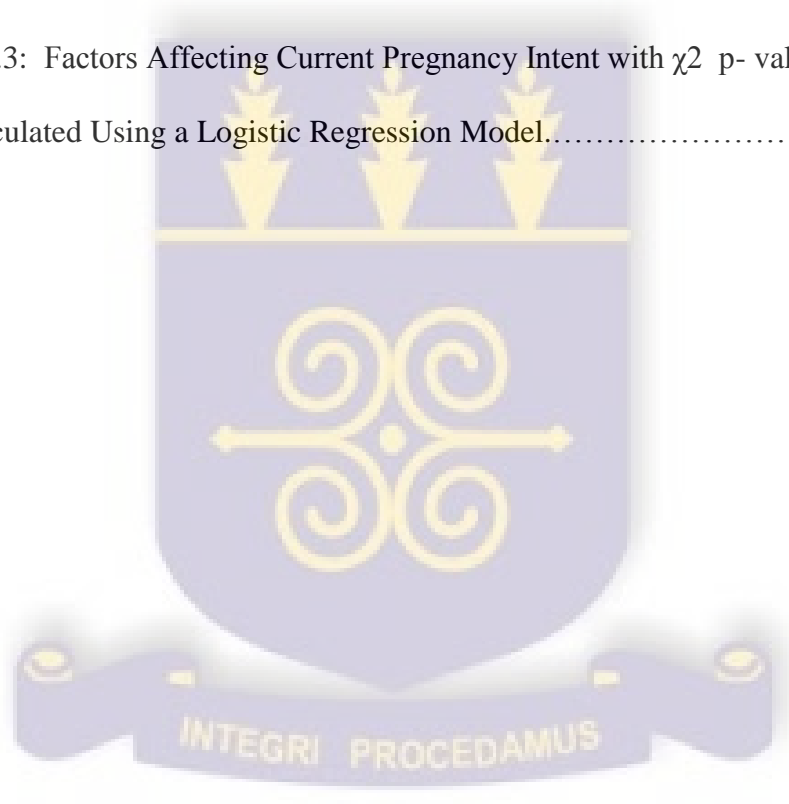
Unwanted pregnancy: occurred when (a)nother child was not wanted at all.

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CHAPTER 1

1.0 INTRODUCTION

Throughout history, the issue of unintended pregnancy has been present in every society and in some cases has been a source of anguish and difficulty for families and individuals. An unintended pregnancy has been responsible for unplanned and mostly unwanted family unions, disrupted lifestyles, a source of conflict between individuals and families as well as an integral part of the disadvantage and discrimination of the girl child. Furthermore, an unintended pregnancy is a cause of termination of pregnancy.

Within the context of reproductive health and population control, an unintended pregnancy has serious implications for the health of both the mother and child as well as in the control of population growth vis-a-viz reductions in fertility levels in any country.

In Ghana, abortion causes significant morbidity among women in the reproductive age and unsafe abortion remains a major cause of maternal morbidity and mortality(Ampofo 1970).

The 2008 Demographic and Health survey estimated the proportion of unintended pregnancy among married women to be at 37%. It also estimated that three fifth of married women have an unmet need for contraception(DHS 2008). This means that a large proportion of married women are at risk of an unintended pregnancy in any given year!

The study report was however silent on outcomes of such pregnancies. Moreover, the data does not cover the proportion of unintended pregnancies in unmarried individuals in whom it may be supposed the percentage to be higher. Especially considering that age at

sex initiation has been documented to occur at around age 17 for girls and 20 for boys in Ghana(Glover et al 2003). In addition, it has been documented that use of emergency contraception was more prevalent in unmarried sexually active women as opposed to married women (Glover et al 2003) .

1.1 STATEMENT OF THE PROBLEM

In Ho, the capital of the Volta region, abortion cases increased by a significant amount between 2007 and 2008 (2008 Annual Report, Ho Municipal Directorate). Data available is mostly from post abortion care in the two hospitals in the municipality.

There was an increase in induced abortion by 41% between 2007 and 2008.

Although traditionally, abortion and abortion related issues are a taboo in the society, the frequency of occurrence suggests a degree of tacit acceptance in the community.

Unintended pregnancy contributes to high maternal, infant and childhood mortality and significant morbidity. However, the factors that make a pregnancy unintended and the proportion of such pregnancies that end up in abortion and the reasons contributing to the decision making are not clear.

1.2 RESEARCH QUESTIONS

1. What is the prevalence of unintended pregnancy in the Ho municipality?
2. What reasons account for their occurrence and what factors influence their outcome?
3. What are the outcomes of such pregnancies?

1.3 JUSTIFICATION

The results of this study can help to reduce the incidence of unintended pregnancy by informing the development of information, communication and education materials in health education programs.

It can also help to target the focus of family planning services in the Municipality

1.4 STUDY OBJECTIVES

General objectives

To investigate the prevalence of unintended pregnancies in the Ho Municipality and explore the outcomes for such pregnancies.

Specific objectives

1. To determine the proportion of unintended pregnancy in currently pregnant women attending antenatal clinic in the Municipality.
2. To determine the proportion of the currently pregnant women who have ever had an unintended pregnancy in the municipality and the outcomes of such pregnancies.
3. To determine the factors that contribute to the occurrence of unintended pregnancies and their outcome

CHAPTER 2

2.0 LITERATURE REVIEW

In Africa, the pregnancy rate declined from 262 per 1000 women aged 15-44 in 1995 to 222 per 1000 in 2008 while the unintended pregnancy rate was documented to have only slightly declined from 95 per 1000 women in 1995 to 86 per 1000 in 2008. The pregnancy rate decline was attributed almost entirely to a drop in the rate of intended pregnancy (Guttmacher Institute 2009).

The age at first marriage is usually seen as a proxy for determining when women become exposed to pregnancy and pregnancy related issues. However, men and women engage in sex before marriage.

Age at first intercourse has therefore been used as a better marker. In Ghana the median age at first intercourse was pegged at 18.4 years for women compared to 20.0 years for men. Women tend to have earlier age at sexual intercourse than men. By age 18 years, two-fifth of women (44%) and 26% of men have had sexual intercourse (DHS 2008).

This median age at intercourse among women is in contrast to the levels which had been reported by Awusabo-Asare and colleagues who reported that the age to have risen between 1988 and 1998 from 20.0 to 20.9 years (Awusabo-Asare et al., 2004).

Comparing this figure to that of the 2008 DHS, it is clear to see that the age at first intercourse has now dropped to 18.4 years, meaning that more women are exposed to the possibility of pregnancy and hence by extension to unintended pregnancy at an earlier age.

Another study done by Glover and colleagues also supports the findings that men and women engage in sexual intercourse at lower ages, and that the median age of sexual initiation was lower for women than in men (Glover et al., 2004).

Most literature available on unintended pregnancy focuses on the unmet need in contraception levels and fertility intentions (Homco et al 2009;DHS 2008). In Ghana, Demographic and Health Surveys done throughout the years have concentrated on unmet need in contraception in married couples and has been silent on the needs of the unmarried. Furthermore, the outcomes of these pregnancies has not been fully explored. As indicated in the introduction, unintended pregnancy levels are quite high in married women with women at risk of an unintended pregnancy making up three fifth of the population (DHS 2008).

Contraceptive uptake in Ghana is estimated to be a mere 17% among women in the fertile age group 15 to 49 years. However, fertility rate in Ghana has been on the decline over the years(DHS 2008). This fact of a low level of contraceptive use coupled with reduced age at sexual debut and decline in the fertility rate exposes a contrast to the expected logic of reduced fertility with increased contraceptive uptake.

2.1 PREVALENCE OF UNINTENDED PREGNANCY

The prevalence of unintended pregnancy was reported at 65% in Argentina in 2009 (Palena et al 2009), where as in nearby Guatemala, it was reported at 32% (Singh et al., 2006). The prevalence in Nigeria is approximately 20%(Guttmacher Institute, 2009).

Approximately 49% of all pregnancies in the United States are unintended (Henshaw, 1998). In Japan, studies by Goto and colleagues put the prevalence at 46% (Goto et al., 2002). Similarly, studies in Iran and Nepal quoted the prevalence of unintended pregnancy at 35% each (Abbasi-Shavaji et al., 2004; Ministry of health Nepal, Demographic and Health Survey, 2002).

The 2008 Ghana Demographic and Health survey estimated the proportion of unintended pregnancy among married Ghanaian women to be at 37%. It also estimated that three fifth of married women have an unmet need for contraception(DHS 2008). This means that a large proportion of married women are at risk of an unintended pregnancy in any given year!

While data exists on the average proportion of unintended pregnancies ending up in abortions in countries like Nigeria, where three quarters of a million women have an abortion a year (Guttmacher Institute, 2009), Ghana's data is deficient.

In Ho, the capital of the Volta region, abortion cases increased by 14% between 2007 and 2008 (2008 Annual Report, Ho Municipal Directorate). Data available is mostly from post abortion care in the two hospitals in the municipality.

2.2 PREGNANCY INTENT

Unintended pregnancy refers to a pregnancy which is either mistimed (pregnancy occurred at a time not expected) or unwanted (when no children or no more children are wanted at the time of conception) (Adhikari et al., 2009).

A woman's intention to become pregnant and to bear a child is an important concept that needs to be clearly defined and understood. This concept underlies not only the basis for limiting family size and average number of children per woman, it also provides the basis on which family planning services and education should be targeted.

The concept of an intended pregnancy in the western model has traditionally been attributed to the individual woman and her perceived priorities as opposed to the extended family system and its attendant pressures in the developing world where the fecundity of a woman is closely linked to her identity within the social context (Alcoff, 1988).

Intention, as a function of a woman's readiness to reproduce, is a precursor of reasoned behavior targeted at becoming pregnant. This is based on the Theory of planned Behavior as postulated by Fishbein & Ajzen (Fishbein, & Ajzen 1975).

The factors which contribute to intention to become pregnant are multiple and are discussed under predictors below.

A lot of work has also been done in the field of ‘unintended’, ‘unwanted’, ‘unplanned’ pregnancy. The methods adopted have been varied and the comparability of studies has often times been questioned.(Petersen and Moos 1997).

While some authors reported prevalence of unintended pregnancy, their definitions and terminology were often not too clearly defined and were inter-changeably used with Unwanted and unplanned.

The need for a comprehensive definition of what does and does not constitute an unwanted pregnancy has therefore been emphasized. Petersen and Moos have shown that the term ‘unwanted’ for instance, to be ‘distasteful’ to respondents of questionnaires. Furthermore, the influence of the male partner’s response to a pregnancy has been documented to affect the definition of the status of a pregnancy. (Petersen and Moos 1997)

Although there is no doubt that an unintended pregnancy can cause major difficulties for individuals who find themselves in the situation, in order to develop effective programming to affect ‘intendedness’, it is important to determine whether the concept of ‘intendedness’ is a valued or desired characteristic of pregnancies by the people who experience them (Moos et al 1997).

Having local data on unintended pregnancy has been shown to be very important in the development of effective interventions (Alyson et al 2000). The issue of intent in pregnancy differs from culture to culture as does, it seems, the definition of the status of a pregnancy. Where as in the developed world, definitions of a pregnancy as intended is

mostly an individual experience, in most parts of Africa, the same intent is influenced also by societal norms as well as the influence of the extended family.

Most studies in this area of research were cross sectional in design and combined the quantitative methods with qualitative methods. The qualitative method most reported and favored by most researchers are In-depth Interviews and Focus Group Discussions.

The cross sectional studies done differed mostly in the populations they selected in conducting the research. The Ghana DHS used married women as the population in whom to obtain information. Another study concentrated on pregnant and post natal women in a Maternity and neonatal units irrespective of marital status (Palena et al., 2009).

The arguments presented by different researchers in this field highlight the need to be able to account for pregnancies that end up in abortions at the same time as the prevalence of unintended pregnancy is measured in pregnant women attending antenatal clinics. The argument is sound and assumes that all induced abortions represent unintended pregnancies and hence should be added to the numbers determined through surveys in pregnant women attending antenatal clinic (Singh et al 2006).

The populations selected need to take into account that there are many pregnancies which occur out of wedlock. This is either in single women before marriage and in women who are either divorced or widowed (Goto et al.,2002)

2.3 OUTCOME OF UNINTENDED PREGNANCY

The possible outcomes of any pregnancy are defined and determined by many factors. The possibilities however, are limited and clear. A pregnancy may be carried to term and delivered, aborted or miscarried. A pregnancy carried to term also has its sub-sets of possible outcomes. Still birth, early fetal demise, childhood illness and death or healthy development and growth into adulthood are easily recognizable possibilities.

In the social context, a child born may live within the family unit into which it is born or may be given up for adoption. In the Ghanaian context, adoption in the formal setting is generally reserved for orphans who fall into the formal Social Welfare run orphanages and children's homes. Children born from an unintended pregnancy are commonly given to family members or relatives such as grandmothers, aunts cousins etc. for upbringing.

In terms of outcomes of such pregnancies, literature available suggests that a woman who has a pregnancy that is not intended and is carried to term is more likely to initiate antenatal clinic visits much later than when a pregnancy was intended. Pregnancy related complications are also more likely in unintended pregnancies than in intended ones (Chinebuah et al., 2001)

Complications of pregnancy are associated with higher risks for perinatal maternal and neonatal morbidity and mortality (Cambel. And Monga, 2000).

The effect of unintended pregnancy on infant and child survival has also been documented. In one study, it was found that children born from pregnancies that were unintended were less likely to be breastfed than those born from intended pregnancies. (Hromi-Fiedler and Pe´rez-Escamilla, 2006).

The effects of lack of inadequate and exclusive breastfeeding on infant and child health, growth and development as well as its contribution to infant and under five mortalities have been severally documented and are outside the purview of this document except to merely list as possible complications.

Furthermore, children born to maternally unintended pregnancies are more likely to be small for gestational age at birth and stunted in their growth and development as compared to children born from intended pregnancies. (Shapiro-Mendoza et al 2004)

2.4 ABORTION AS AN OUTCOME

Abortion as an outcome is important. The contribution of abortion and abortion related complications to maternal morbidity and mortality have already been documented by several authors (Oliveras et al. 2005; IPAS 2000; Goyaux et al.,2001).

The total abortion rates in Ghana were reported at 0.4 abortions per woman and was twice as high among urban women compared to rural women (Ghana Maternal Survey 2007). However, a link between unintended pregnancy and induced abortions was not established. Studies in Nigeria have shown that more than 50% of unintended pregnancies result in induced abortion(Guttmacher Institute 2009).

In Ghana , the maternal survey of 2007 suggested that four out of five pregnancies (82%) end in a live birth while Miscarriage, induced abortion and still births accounted for the remaining 18% of pregnancies. This estimation is in all pregnancies and does not distinguish between pregnancies which were intended and unintended.

Women in urban areas were twice as likely to have had an abortion as women from rural areas. The percentage quoted by the survey for the Volta region of Ghana was 12% (Ghana Maternal Survey 2007).

2.5 DETERMINANTS OF UNINTENDED PREGNANCY

In terms of reasons for having an abortion given by women in the Maternal survey, most women mentioned finance and partner influence as the most common motivating factors for having an abortion. Other reasons given by women for procuring abortions were 'health of mother'; 'not ready to be a mother', 'wants to continue school'; 'does not love partner/father of child', 'wants to continue working' and 'wants to space births' (Ghana Maternal Survey 2007).

Other studies however point to the age of the woman, her attendance in school and her marital status as the most important of the factors which lead women to acquire abortions followed by desires to limit or space number of children (Agadjanian 1998).

Education

Education has been linked to the occurrence of unintended pregnancies. An educated woman is less likely to have an unintended pregnancy than an uneducated one. This may be because education permits a woman to understand the need for limiting family size and also to seek family planning services. She is also more likely to understand instructions given by service providers and thereby prevent contraception failure (Bongaarts, 1997).

Other studies have, however, shown that in other settings and cultures, educational achievement seems to have a positive association with the occurrence of an unintended pregnancy. In Japan and Nigeria, university educated women were more likely to experience unintended pregnancy compared to those who did not have university education (Goto et al., 2002; Okonofua et al., 1999). The reason may be that women who have had university education were more likely not to want a child during their career development periods rather than a reflection of their access to or use of family planning methods (Pallito and Campoo, 2005).

Higher education also gives a woman more social and economic independence so that decisions she takes about her own fertility are not wholly overshadowed by a dominant male partner as opposed to a woman whose educational achievement is at a lower level.

In younger women, especially those in high school or early university level education, a pregnancy has been reported as unintended as it is seen as an interruption of education. This is also a contributory reason for many teenage unintended pregnancies (Ghana Maternal Survey, 2007).

Marital status

Marriage in the African context is seen as the socially accepted natural setting for having children and is hence associated with reduced likelihood of unintended pregnancy. Lack of family planning services coupled with desires to limit family size however theoretically contribute to unintended pregnancy.

Marriage and its socio-cultural rules and regulations play an important role in the decision making process for pregnancy and pregnancy related issues (Bankole et

al.,1998). Culturally accepted marital relationships and gender definitions dictate communication between married people. A woman's perception of a pregnancy's 'intendedness' would be markedly affected by her spouse' views whether expressed or perceived (Casterline, et al 1997).

In settings where polygamous families exist, spousal competition for favor in a husband's eye as well as respect amongst co-spouses sometimes dictates the family planning and concepts of intended and unintended pregnancy.

Single women who get pregnant out of wedlock are known to experience significant anxiety and stress. Societal accepted norms generally dictate that a woman should be married before getting pregnant. Pregnancy out of wedlock is therefore seen as a taboo and hence has a major association with the occurrence of an unintended pregnancy.

Age

A woman's age has been shown to be associated with unintended pregnancy. Studies have shown that younger age groups are associated with less likelihood of unintended pregnancy (Abbasi-Shavaji et al., 2004; Okonofua et al., 1999). Other studies done however reported no association between age and unintended pregnancy(Goto et al, 2002).

Teen-age pregnancy contributes to the rate at which pregnancies are reported as unintended. Earlier age at sexual debut means that more and more young women become at risk of unintended pregnancy.

Parity

Parity is linked to the rate at which women report a pregnancy as unintended. Higher order parity is associated with increased rates of unintended pregnancy (Abbasi-shavaji et al., 2004; Okonofua et al., 1999). This may be an explanatory variable to the increased rate of unintended pregnancy rates seen with increasing age.

Older women with many children may desire to limit or even space the birth of children. Health considerations also become important at older ages thus increasing the likelihood of a pregnancy becoming unintended.

Religion

Religious beliefs affect the health and health seeking behavior of people in diverse ways. In terms of unintended pregnancy and its associations with religion, the effect is pronounced mainly in the way religion influences people's reasons and decisions in using modern contraceptive methods.

Differences between followers of Christianity and Islam have been drawn with respect to contraceptive use. In Sierra Leone, a study found that contraceptive use prevalence was greater among Christians than in Muslims (Amin et al., 1992).

Among Christian groups, the stated opposition of the Catholic church to contraception has often been in contrast to the goals of population control policies and family planning advocates. Studies have shown that people who belong to the Catholic faith have slightly lower rates of contraceptive use than other Christian denominations(Shapiro et al.,1994).

The explanations associated with these observed differences have been attributed to the level of influence these religions have on the autonomy of women in deciding their own fertility and control of the size of their family. The faiths which have stricter codes and demands such as Islam and Catholicism, amongst the Christian denominations, have far more influence on individual choice and autonomy.

Despite all this, the author has not been able to find literature that associates in any way the occurrence of unintended pregnancy with the religious affiliation of women whether positive or negative.

CHAPTER 3

3.0 METHODS

3.1 STUDY DESIGN

A cross sectional survey was conducted among women currently pregnant and attending antenatal clinic in the Ho municipality. An interview of key informants was also carried out in order to better understand the qualitative aspects of the question raised.

3.2 STUDY AREA

The study area is the Ho municipality of the Volta region. It is located approximately 150 kilometers from Accra. Ho is the Regional capital and has an estimated population of 220 000 residents based on projections from the 2000 National Population Census with an annual growth rate of 1.9 (HMHD Annual report 2009). There are a total of 14 facilities within the Municipality which conduct Antenatal clinics. The Municipality consists of both mountainous and lowland areas but has an excellent road network with a total of 639Km of road connecting all four sub-municipalities and neighboring districts.

- v. Outcome of such pregnancy(miscarried/aborted, carried to term with live birth, child alive and well with age of child ,dead with age at death)
- vi. Influencing factors contributing to outcome (contemplated termination or not and overriding deciding factor for decision)

3.4 STUDY POPULATION

The study population was all pregnant women attending ANC in the Municipality estimated to be 8800 per annum.

3.5 SAMPLE SIZE

A sample size of 315 persons was required to accurately estimate the prevalence of Unintended Pregnancy in the Municipality using the DHS result of 37% with a margin of error of 5% at 95% confidence interval. This number was expanded to 472 to cater for non response rate and incomplete answers.

3.6 SAMPLING METHOD

Samples were selected from each of the 14 facilities in the municipality in which ANC services are offered. The sample size per facility was worked out by weighting each facility based on its average number of new clients that attend the facility per month. At each facility, a convenient sampling technique was employed.

3.7 SURVEY INSTRUMENT

A structured questionnaire was used and administered by an interviewer. The 2008 GDHS questionnaire was adapted for this study

In depth interviews were conducted with women who have sought and obtained abortions within the municipality during the study period.

3.8 QUALITY CONTROL

The data collection team was trained in the administration of the questionnaire.

The structured questionnaire was pretested in an antenatal clinic in the adjoining district capital Kpetoe to ensure quality of data collected. Data was entered twice using two independent clerks.

3.9 ANALYSIS

Data was Analyzed using Statistical Package for the Social Sciences (SPSS)TM software. Analysis involved tabulation and cross tabulations as well as tests of significance using chi square to identify important associations between unintended pregnancy and predictor variables. A logistic regression model was constructed for these predictor factors and odds ratio calculated.

3.10 ETHICAL CONSIDERATION

This study was only begun after permission was obtained from the Ethical Review Board of the Ghana Health Service. Approval and participation of the Regional and Municipal Health Directorates of the Volta Region and Ho Municipality respectively were sought. Informed consent was obtained from every single participant with options for opting out clearly explained.

The identity and location of residence of respondents for the in depth interview was kept completely confidential and participants were assured of this. All respondents had a fully explanatory and standard text read to them and the contents explained and their consent to participate in the study sought prior to the administration of any questionnaires. The

consent forms made it clear that there is no penalty for refusal to participate in the study or for refusal to answer any specific questions. The purpose of the study was also explained fully. The form also made it clear that no monetary rewards would be given for participation. The full text of explanatory notes and consent forms can be found in Appendix I & II

3.11 CONFLICT OF INTEREST

There is no conflict of interest in the conduct and reportage of the study. This research was funded purely from the principal investigator's personal funds. No organization or special interest group was involved and no monetary benefits are expected from this research.

3.12 LIMITATIONS

This study was based on the annual reports generated by the Municipal health directorate. In the design, the differences between urban and rural communities was to be captured by the distribution of the Antenatal clinics by their specific facility numbers. Hence, no provision was made within the structured questionnaire for place/area of residence of respondents. During data collection, it was discovered that clinics and sites numbering about 8 in the Municipality were no longer conducting antenatal clinics for reasons varying from absence of a midwife to changes in preference of pregnant women in choosing to travel to the municipal hospital for their services. All these facilities were located in rural parts of the Municipality. Percentage allocations for these facilities was therefore accordingly adjusted and data collected from respective sites. Hence, no meaningful inference can be drawn for urban-rural comparison in terms of

unintended pregnancy prevalence and other findings presented in this work. Another limitation of this work is that the prevalence of unintended pregnancy observed in this research can only reflect the prevalence among currently pregnant women attending antenatal clinics and not necessarily all pregnant women. This is because of the obvious fact that there are an unknown number of unintended pregnancies which by default would not be attending at antenatal clinics. Had a way of measuring the number of abortions that take place in the community been available to the principal investigator, a more complete picture of unintended pregnancies may have been obtained.

CHAPTER 4

4.0 RESULTS

4.1 DEMOGRAPHIC CHARACTERISTICS

A total of 450 questionnaires were returned out of 472 distributed throughout the municipality. The demographic characteristics of the respondents are displayed in table 4.1.

The majority (342) 76.9%, of the currently pregnant women who responded to the questionnaires were married. By ethnicity, the majority (379) 84.6%, were Ewe with the other (69)14.4%, distributed evenly around other ethnic groups such as Akan, Grushi, Ga Adangbe and Mole Dagbani. Ninety six percent (428) of respondents have had at least some education. Forty eight percent(214), had education up to and below the Junior High School level and another (214) 48%, had achieved beyond Secondary High School level education.

Seventy four percent (333), of the respondents were between the ages of 20 and 35 years while (33)7.3% and (59)13.7%, were between the ages of 15-19 and 35-49 respectively. This age grouping was selected due to their inherent characteristics and differences with respect to the outcome variable expected in this study.

Christian faith followers represented (415) 92.7% of respondents while only(12) 2.7% were Muslim and other faiths represented (21) 4.7%.

The in depth interviews conducted concentrated on the factors that make a pregnancy unintended and the influencing issues in deciding the outcome of the pregnancies. All the

four respondents of the in depth interview were women who have just acquired an abortion for an unintended pregnancy or had recently (within 6 months) had an abortion.

Their ages were 18, 23, 25 and 31. The 31 year old was the only married woman amongst the respondents for the in depth interview. Both the 25 and 31 year old respondents have 3 and 5 children respectively. The 18 year old had never delivered before but had an experience of a previous unintended pregnancy and one previous abortion while the 23 year old had no children and this was her first experience of unintended pregnancy and abortion.

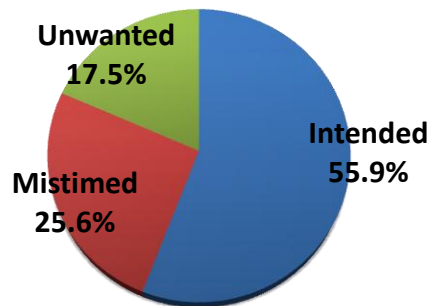
Table 4.1 Demographic characteristics of currently pregnant women in the Ho Municipality

Demographic characteristics	Frequency	Percent
Age group	N=425	
15-19	33	7.3
20-34	333	74.0
35-49	59	13.1
Marital status	N=445	
Single	60	13.5
Married	342	76.9
Cohabiting	41	9.2
Divorced	2	0.4
Educational level attained	N=446	
None	18	4
Up to JSS level	214	48
Senior secondary and higher	214	48
Ethnicity	N=448	
Ewe	379	84.6
Other	69	15.4
Religious affiliation	N=448	
Christian	415	92.7
Muslim	12	2.7
Other	21	4.7

4.2 PREVALENCE OF UNINTENDED PREGNANCY

The prevalence of unintended pregnancy in currently pregnant women in the Ho Municipality was found to be 44.1%. Of the unintended pregnancies, 58.9% were mistimed and 41.1% were unwanted. A significant 48% of those who had an unintended pregnancy had actually considered termination. Table 4.2 shows the prevalence of unintended pregnancy and associated factors.

Figure 4.1 Prevalence of Unintended Pregnancy in Ho Municipality



Unintended = Mistimed+ Unwanted = 44.1%

Thirty (30%) percent of respondent have ever had an unintended pregnancy in their lifetime. Fifty two (52)% of these unintended pregnancies ended up in abortions. The 48% who delivered were further divided into those who delivered and kept the child, delivered and gave to a family member to bring up the child. Only 10% of the total had given their children to be brought up by a family member such as grandmother or aunt and 2% said their child was delivered but died later.

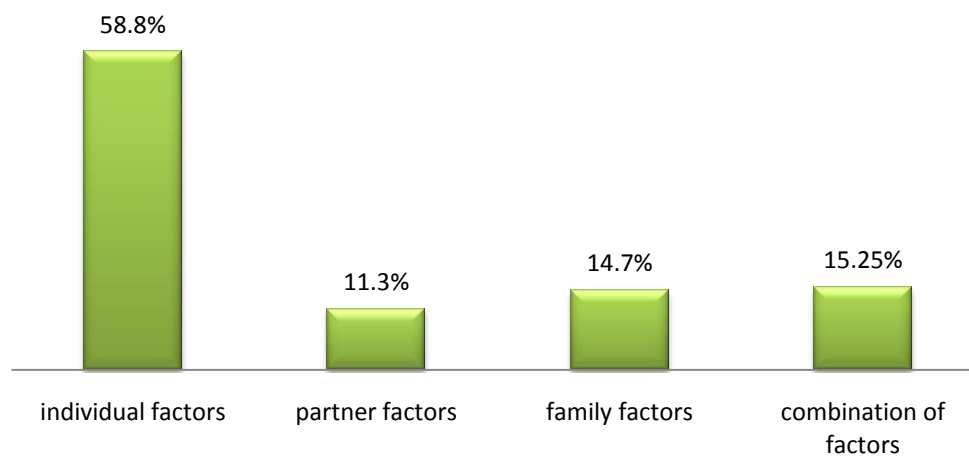
4.3 FACTORS AFFECTING UNINTENDED PREGNANCY

The factors considered by women in labeling a pregnancy unintended and the factors which influenced the outcome of these pregnancies were constructed from a series of questions and the answers were grouped into three variables. The first group is 'Individual factors'. This group included any issue directly related to the pregnant woman such as her age at the time of conception, whether or not she was in school at the time and whether or not she felt she was ready to have a baby at the time for whatever reason including finance.

The second group was 'Partner factors'. This group included a partner's response to the pregnancy, acceptance of responsibility, partner's ethnicity and also explored the pregnant woman's desire or otherwise to having a child with that particular partner.

The third and last group created was the 'Family factor' group. In this, pressures from family members, family acceptance or otherwise, shame and/or embarrassment about a pregnancy were included. The group also included a pregnant woman's feeling about the age of a previous child if any i.e. reasons involving 'my last baby was too young'.

In terms of the influencing factors for the outcome of the pregnancies, 59 % of those who had had an unintended pregnancy gave the main influencing factor as 'Individual factors' in deciding the outcome of the pregnancy. The most common reason being 'I was too young', 'Not ready to have a child' and 'I was in school'.

Figure 4.2 Reasons for not Giving Birth

Family factors such as shame or disapproval from the family accounted for almost 15% and ‘Partner factors’ accounted for about 11%. A combination of all three main factor groups was reported by 15% .

In the in depth interviews, factors were mainly referable to the individual woman experiencing the unintended pregnancy. The age of conception was important to the 18 and 23 year olds. They felt they were too young and therefore unprepared for motherhood. The 25 year old felt that her last child was too young at 1 year 2 months while the 32 year old did not want any more children.

The influence of a partner seemed to be minimal across board. Only the married woman seemed to have had a consultation with her partner and seemed confident that it was a shared and agreed decision. A partner’s ethnicity, marital status, age and income levels had very little effect on deciding the outcome of the pregnancy in the other three. The 25 year old had ‘informed’ her partner but she had been responsible for the decision. The other two had not even told their partners but had reached their decision of their own

accord. None of the respondents believed that their decision was affected in any way by monetary considerations.

Table 4.2 Prevalence of Unintended Pregnancy and Associated Factors in currently pregnant women In the Ho Municipality

Variables	Frequency	Percent
Current Pregnancy Intent	N=433	
Intended	242	55.9
Unintended (Mistimed) (Unwanted)	191 111(58.1%) 80 (40.9%)	44.1
Considered termination of current pregnancy	N=191	
Yes	92	48
Previous experience of intent	N=430	
Ever had unintended pregnancy	132	30.7
Never had unintended pregnancy	298	69.3
Outcome of previous unintended pregnancy	N=205	
Delivered	98	47.8
Aborted	107	52.2
Factors influencing outcome decisions	N=177	
Individual based factors	104	58.8
Partner based factors	20	11.3
Family based factors	26	14.7
Combination of factors	27	15.3
Ever used Family planning	N=420	
Have ever used family planning	258	61.4
Have never used family planning	162	38.6

Respondents were asked if they had ever used any form of family planning. Thirty nine percent (38.6%) of all respondents in this research had never ever used any form of family planning. This number does not include individuals who said they used ‘timing of safe periods’ as the intent was to elicit the proportion who have any degree of consciousness about planning and/or preventing a pregnancy. The figure for those who

had never used any modern method of family planning would have been higher as 30% of all those who said they had ever used family planning only used 'timing the safe period for sex'!

Of the four women interviewed, the youngest had used the condom before as a protective measure against pregnancy, but readily admitted that it was not all the time she used it. All the other three had not used any form of family planning. The oldest amongst them has had some experience with injectable contraceptives but that was before her first child was born.

4.4 LOGISTIC REGRESSION

The educational level to which a respondent had attained, her marital status, previous number of babies delivered, age and previous experience of an unintended pregnancy were the variables which were significantly associated with the current intent of pregnancy.

The chi-square (χ^2) test of significance was calculated for each of the factors associated with unintended pregnancy. Educational level attained was significant with a value of 10.251 with 1 degree of freedom. Marital status, Age group at the time of pregnancy, number of babies previously delivered and history of previous unintended pregnancy had χ^2 values of 42.430, 31.000, 9.868 and 14.716 respectively each with 2 degrees of freedom, except history of previous unintended pregnancy which was at 1 degree of freedom.

A logistic regression analysis was done to further explore the relationship between these predictor variables and unintended pregnancy in the currently pregnant women in the Municipality. Odds ratio was calculated and the values are as shown in Table 4.3.

Table 4.3 Factors Affecting Current Pregnancy Intent with χ^2 p- values and Odds Ratio Calculated Using a Logistic Regression Model

	Current pregnancy intended	Unintended	P-value	Odds ratio	Confidence Interval
Educational status					
Up to JSS level	104	108	0.001	1.270	0.795-2.029
Senior secondary and above*	130	71			
Marital status					
Single	16	44	0.000	1.064	0.401-2.826
Married	212	117		0.270	0.127-0.573
Cohabiting*	12	29			
Babies delivered (Number)					
None	81	70	0.000	0.232	0.090-0.593
≤ 3	147	95		0.316	0.140-0.714
≥4 *	13	25			
Age group					
15-19	3	29		8.562	1.946-37.665
20-34	195	127		0.810	0.404-1.624
35-49*	30	26			
History of Unintended pregnancy					
Ever had unintended pregnancy	53	75	0.001	1.795	1.099-2.933
Never had unintended*	177	110			

* Reference group for Logistic Regression Model

It is significant to note that the Odds of a woman below the age of 19 years experiencing an unintended pregnancy is 8.56 times the Odds of a woman above the age of 35 years and the odds of a woman below the age of 19 years experiencing an unintended

pregnancy is 10.57 times that of a woman between the ages of 20 and 34 years. The odds of a single woman having an unintended pregnancy is 3.94 times the odds of a married woman experiencing an unintended pregnancy.

The odds of a multiparous woman with 4 or more previous deliveries experiencing an unintended pregnancy was 4.31 times the odds of a nulliparous woman experiencing an unintended pregnancy and the odds of a multiparous woman with three or less previous deliveries experiencing an unintended pregnancy was 3.16 times the odds of a nulliparous woman experiencing an unintended pregnancy.

The odds of a woman who has ever had an unintended pregnancy to experience a current unintended pregnancy was 1.795 times that of the odds of a woman who had never had an unintended pregnancy.

The religious affiliation of the respondents and their ethnicity had no association with the occurrence of unintended pregnancy.

CHAPTER 5

5.0 DISCUSSION

The prevalence of unintended pregnancy in the Ho municipality as determined by this study was 44% and is greater than the 37% found in the National population as reported in the Ghana Demographic and Health Survey (DHS 2008). It is difficult to compare these two findings because the National prevalence obtained from the DHS was based on married women only and did not take into account single women.

A similar study done in Argentina in 2009 at a hospital in Cordoba, however, found a prevalence of 65% (Palena et al 2009). It was a facility based survey in a Maternity and Neonatal hospital to determine proportion of unintended pregnancy. The comparability is based on the similar methodology used in conducting the research in antenatal and post natal populations.

The demographic distribution of these unintended pregnancies is instructive in that it is far more prevalent among the younger age groups especially in those below 19 years of age. The reasons for not wanting to have a child given by the majority of women who had ever had an unintended pregnancy reflected personal issues; mainly their age at the time of being pregnant. Their assertion of having been 'too young' and 'in school at the time' reinforce the finding of greater odds at a young age for experiencing unintended pregnancy compared to older age groups.

The finding that a young age and fears of interrupted school were main motivating factors in unintended pregnancy and critical point for deciding the outcome of a

pregnancy is similar to that found by Bankole and colleagues in their paper covering 27 countries (Bankole et al 1998). This is however in contrast to the findings by Abbasi-shavaji and colleagues and Okonofua and colleagues, in Iran and Nigeria, respectively which reported that unintended pregnancy was less likely in the younger age group compared to the older age groups (Abbasi-shavaji et al 2004; Okonofua et al 1999).

The Nigerian study was remarkable in that it showed a direct positive link between increasing age and increasing rate of unintended pregnancy.

The age factor perhaps provides a basis from which to launch intervention programs to reduce unintended pregnancies as it provides distinct populations for targeting.

The finding of 'being married' as a protective factor, highlights the socially accepted norms of having children within wedlock and may also imply a desire by women in the municipality to associate pregnancy with intent.

The level of education attained by respondents in this research and the distribution of unintended pregnancy by this variable is instructive. Having Senior High School education or higher is protective. This finding is similar to those reported by other authors who found that higher education had a negative association with reportage of unintended pregnancy (Bongaarts, 1997). In contrast, the findings by Okonofu and colleagues in Nigeria found that women who had university level education were more likely to have unintended pregnancy (Okonofua et al 1999).

This, coupled with the age grouping discussed above, indicates that intervention programs would be beneficial in reducing the prevalence of unintended pregnancies. The incidence of an unintended pregnancy may also account for reduced numbers of girls

who progress further than the Junior High School level as indicated by the Ghana Living Standards survey (GLSS 2006).

Parity contributed significantly to unintended pregnancy in this study. Therefore, desires by a woman to limit the number of children she bears, or even to space her births are important factors. In this research, multiparous women were far more likely to experience an unintended pregnancy as compared to those with lower parity order. The incremental rise in risk of unintended pregnancy with increased numbers of deliveries is also a reflection of the expressed fertility expectation of Ghanaian women to have fewer children as noted by the average number of children per woman of 4 reported by the Ghana DHS. (DHS 2008) This is also a strong indication of consciousness of women to link intention to pregnancy.

The finding that women who had previously had an unintended pregnancy were more likely to experience an unintended pregnancy in this population could be an expression of age group distribution and parity since with increasing age and parity, the likelihood of experiencing an unintended pregnancy may increase.

However, it may also be an indication that there could be lost opportunities for women, who have had an unintended pregnancy previously, to be empowered to prevent a recurrence through education to the knowhow and means of family planning methods. This is reinforced by the data that shows that almost 40% of the respondents had never ever used any form of family planning methods and by the experiences of the in depth interview respondents in this study.

The finding that 52% of all previous unintended pregnancies ending up in abortions in this study is comparable to the percentage reported in Nigeria (Guttmacher Institute, 2006) where more than half of unintended pregnancies end in abortions. This population represents the base population which contributes to Maternal mortality rates from abortion and abortion related complications.

In contrast to the findings in the 2007 Ghana Maternal report, the major reason reported for an unintended pregnancy in this study was a woman's age and her desire not to interrupt school. Financial consideration was minimal while in the Maternal report, financial considerations had ranked highest.

CHAPTER 6

6.0 CONCLUSIONS

The prevalence of unintended pregnancy in currently pregnant women in the Ho municipality is 44%. More than 50% of unintended pregnancies end up in abortions.

The predicting factors which play an important role in the occurrence of an unintended pregnancy are Level of education attained, Age at which pregnancy occurs, Marital status, Parity and an experience of previous unintended pregnancy. The majority of women who get pregnant in the Municipality have never used any form of family planning before.

The predicting factors are important in pointing out the distinct groups which can be targeted by various intervention programs in order to reduce the high prevalence rate.

6.1 RECOMMENDATIONS

The main recommendations to be made from this research are targeted at the Municipal health directorate. They are,

- Family planning education should begin at an early age and should specifically target young people, both male and female, from early teenage years and needs to be made a sustained and continuous effort as new cohorts of teenage groups begin

every year. This can be done through the existing School Health Education Program and can be expanded in collaboration with Ghana Education Service.

- Post abortion care in hospitals should be strengthened to provide education on family planning methods available and encourage the women in such care to take up appropriate family planning methods to prevent future unintended pregnancy.
- The Municipal Health Directorate should consider collecting data on unintended pregnancy from all its facilities on a continuous basis to enable monitoring and evaluation of any intervention program that may be instituted. A simple survey instrument such as used in this research can be adapted for use in its facilities.

Recommendation to the Ghana Education Service

- Encouragement of girls to continue their education to the Senior High School level and beyond should receive priority attention as this research shows that Senior High School and higher level education attainment reduces the risk of unintended pregnancy.

Recommendation to the Ghana Statistical Service and the Ghana Health Service in preparation for future Demographic and Health Survey reports;

- Future research in unintended pregnancy should be expanded to include all women regardless of marital status. There is also a need to develop methods for identifying and quantifying abortion rates in Ghana to enable more accurate estimation of unintended pregnancy rates in the country.

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APPENDIX I CONSENT FORM AND QUESTIONNAIRE

Consent Form for Respondents of the Questionnaire

Title of research: Unintended pregnancy in Ho Municipality

The following statement should be read and explained to the respondent.

I would like you to be part of a research we are conducting in Ho. The research is about pregnancy and whether or not people plan or intend to get pregnant and what they do when they get pregnant when they have not planned for it.

The purpose of the research is to find out some of the important reasons why people get pregnant without intending to. We also want to find out what motivates some of the decisions people make when they do get pregnant unintentionally. This will help us to plan health programs to help people avoid unintended pregnancy and protect them from some of the consequences.

We will not record your name and the answers you provide will not be traced back to you.

The questionnaire will take less than 7 minutes. I will ask you the questions from the papers I am holding and I will mark your responses. Some of the questions I will ask are very personal and may make you a little uncomfortable.

You have the right to refuse to participate in this questionnaire. You can also stop or refuse to answer some of the questions if you do not want to. There is no penalty for not answering any of the questions. For further information, please contact the investigator, Dr Zelalem Birhanu-0244262811.

The purpose of the research has been read and explained to me. I agree of my own free will to participate in this study.

Sign or mark of respondent.....

Facility

Date

I have read and explained the research to the participant and the participant has accepted to take part in the study without any duress.

Signature

Date

	QUESTIONNAIRE NO.	<input type="text"/> <input type="text"/>	FACILITY NO.	<input type="text"/> <input type="text"/>									
Q	QUESTION	RESPONSE			ANSWER CODE	SKIPS							
1.	AGE	<input type="text"/> <input type="text"/>											
2.	PARITY	G	<input type="text"/>	P	<input type="text"/>	D	<input type="text"/>	SPONT	<input type="text"/>	ABORT	<input type="text"/>		
3.	MARRITAL STATUS	SINGLE MARRIED COHABITING DIVORCED			1 2 3 4								
4.	WHAT IS YOUR RELIGION	CATHOLIC ANGLICAN METHODIST PRESBYTERIAN..... PENTECOSTAL/CHARISMATIC OTHER CHRISTIAN MOSLEM TRADITIONAL/SPIRITUALIST NO RELIGION OTHER			1 2 3 4 5 6 7 8 9 10								
5.	WHICH ETHNIC GROUP DO YOU BELONG TO?	AKAN. GA/DANGME . EWE . GUAN MOLE-DAGBANI GRUSSI GRUMA MANDE OTHER			1 2 3 4 5 6 7 8 9								
6.	HAVE YOU EVER ATTENDED SCHOOL?	YES NO			1 2	IF NO SKIP TO Q 8							
7.	WHAT LEVEL OF SCHOOL DID YOU ATTEND?	PRIMARY MIDDLE/JSS SECONDARY/SSS . HIGHER			1 2 3 4								
8.	HOW MANY MONTHS PREGNANT ARE YOU?	<3 MONTHS 3-6MONTHS >6 MONTHS			1 2 3								
9.	FOR THIS PREGNANCY, DID YOU	INTEND TO GET PREGNANT AT THIS TIME? WANT TO GET PREGNANT AT A LATER TIME? NOT INTEND TO GET PREGNANT AT ALL?			1 2 3								
10	DID YOU CONSIDER GETTING RID OF THE BABY FOR THIS PREGNANCY?	YES NO			1 2								

11	HOW MANY TIMES HAVE YOU DELIVERED A BABY BEFORE?	1 2 3 4 5 >5	1 2 3 4 5 6	
12	HOW MANY TIMES HAVE YOU BEEN PREGNANT BEFORE?	1 2 3 4 5 >5	1 2 3 4 5 6	
13	HAVE YOU EVER HAD A PREGNANCY AND YOU DID NOT WANT TO GIVE BIRTH?	YES NO	1 2	
14	HAVE YOU EVER HAD AN ABORTION?	YES NO	1 2	
15	WHAT HAPPENED TO THAT PREGANANCY?	1.I DELIVERED THE BABY AND IS LIVING WITH ME TODAY 2.I DELIVERED THE BABY AND GAVE IT TO MOTHER/ G.MOTHER/AUNT/SISTER 3.I DELIVERED BUT CHILD DIED LATER 4.PREGNANCY 'SPOILED' BY ITSELF 5.I HAD AN ABORTION	1 2 3 4 5	IF ANSWER IS 1,2 OR 3 SKIP TO Q.18

16	WHAT INFLUENCED YOU TO MAKE A DECISION ABOUT THE PREGNANCY? (MORE THAN ONE ANSWER CAN BE GIVEN)	<p>1.I WANTED IT BUT WAS JUST NOT READY TO HAVE A CHILD. 1</p> <p>2.MY PARTNER WANTED ME TO GET RID OF IT. 2</p> <p>3.I DID NOT WANT TO HAVE A CHILD WITH THAT PARTNER 3</p> <p>4.I DID NOT WANT MY FAMILY TO KNOW 4</p> <p>5.I COULD NOT AFFORD TO LOOK AFTER THE BABY 5</p> <p>6.MY PREVIOUS BABY WAS TOO YOUNG 6</p> <p>7.I WAS TOO YOUNG FOR A BABY 7</p>		
17	WHY DID YOU NOT WANT TO GIVE BIRTH AT THAT TIME? (MORE THAN ONE ANSWER CAN BE GIVEN)	<p>I WAS NOT READY TO HAVE A BABY 1</p> <p>-I WAS IN SCHOOL 2</p> <p>-I WAS NOT MARRIED 3</p> <p>- I WAS TOO YOUNG 4</p> <p>-MY LAST BABY WAS TOO YOUNG 5</p> <p>MY PARTNER DID NOT WANT IT 6</p> <p>-HE DENIED RESPONSIBILITY 7</p> <p>-HE SAID IT WAS NOT HIS 8</p> <p>-HE WAS NOT FROM MY TRIBE 9</p> <p>MY PARENTS DID NOT WANT IT 10</p> <p>I DID NOT WANT MY FAMILY TO KNOW I WAS PREGNANT 11</p> <p>I DID NOT HAVE ENOUGH MONEY 12</p>		
18	HAVE YOU EVER USED ANY METHOD TO PREVENT A PREGNANCY?	<p>YES 1</p> <p>NO 2</p>		

20	WHICH METHOD HAVE YOU USED BEFORE? (MORE THAN ONE ANSWER CAN BE GIVEN)	1.TIMING THE SAFE PERIOD FOR SEX 2.TAKE MEDICINE AFTER SEX 3.TAKE MEDICINES WHEN I MISSED A PERIOD 4.TOOK ALCOHOLIC DRINK WHEN I MISSED MY PERIOD 5.USED A CONDOM ALWAYS 6.TOOK INJECTIONS FROM A CLINIC EVERY MONTH/THREE MONTHS 7.TOOK TABLETS EVERYDAY 8. HAD AN ABORTION	1 2 3 4 5 6 7 8	
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APPENDIX II INFORMATION FOR IN DEPTH INTERVIEW

Information for In Depth Interview Participant

Title of research: Unintended pregnancy in Ho Municipality

I would like you to be part of a research we are conducting in Ho. The research is about pregnancy and whether or not people plan or intend to get pregnant and what they do when they get pregnant when they have not planned for it.

The purpose of the research is to find out some of the important reasons why people get pregnant without intending to. We also want to find out what motivates some of the decisions people make when they do get pregnant unintentionally. This will help us to plan health programs to help people avoid unintended pregnancy and protect them from some of the consequences.

We will not record your name and the answers you provide will not be traced back to you.

The questions I will ask are sensitive and personal. You have the right to refuse to participate in this interview. You can also refuse to answer any question you don't want to answer and can even terminate the interview at any point in time.

The purpose of the research has been read and explained to me. I agree of my own free will to participate in this study.

Sign or mark of respondent.....

Date

I(interviewer's name)... have read and explained the research to the participant and the participant has accepted to take part in the study without any duress.

Signature

Date

Question framework for In-depth Interview

Q1. How old are you?

Q2. Do you have any children? If yes how many? How old are they?

Q3. Have you ever had a pregnancy which was miscarried(spoiled by itself)?

Q4. Is this the first time you had an abortion? If yes, how many times have you had an abortion before?

Q5. What are the reasons that made you decide to have an abortion this time?

Q6. Did you discuss the option of an abortion with your partner? If yes, whose idea was it for you to have an abortion?

Q7. Did your partner object to the abortion or was he supportive?

Q8. Does your family (parents, siblings etc.) know about this abortion/ pregnancy?

Q9. How are you funding the abortion? Was it a problem to raise money?

Q10. Have you ever used any family planning method?

APPENDIX III : ETHICAL CLEARANCE

GHANA HEALTH SERVICE ETHICAL REVIEW COMMITTEE

*In case of reply the
number and date of this
Letter should be quoted.*

*My Ref. :GHS-ERC: 3
Your Ref. No.*



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Zelalem Birhanu - Principal Investigator

ETHICAL CLEARANCE - ID NO: GHS-ERC: 16 /4/10

The Ghana Health Service Ethical Review Committee has reviewed and given approval for the implementation of your Study Protocol titled:

“Unintended Pregnancy in the HO Municipality of the Volta Region”

This approval requires that you submit periodic review of the protocol to the Committee and a final full review to the Ethical Review Committee (ERC) on completion of the study. The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Please note that any modification of the project must be submitted to the ERC for review and approval before its implementation.

You are also required to report all serious adverse events related to this study to the ERC within seven days verbally and fourteen days in writing.

You are requested to submit a final report on the study to assure the ERC that the project was implemented as per approved protocol. You are also to inform the ERC and your mother organization before any publication of the research findings.

Please always quote the protocol identification number in all future correspondence in relation to this protocol

SIGNED.....

MR. ANNOR NIMAKO
(GHS-ERC VICE CHAIRMAN)

Cc: The Director, Research and Development Division, GHS, Accra

