ENSIGN COLLEGE OF PUBLIC HEALTH

KPONG, EASTERN REGION, GHANA

FACULTY OF PUBLIC HEALTH

DEPARTMENT OF COMMUNITY HEALTH

DETERMINANTS OF INDUCED ABORTION AMONG WOMEN IN REPRODUCTIVE AGE AT MARIE STOPES INTERNATIONAL CENTERS OF EXCELLENCE IN THE GREATER ACCRA REGION OF GHANA

BY

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A THESIS SUBMITTED TO THE DEPARTMENT OF COMMUNITY HEALTH, FACULTY OF PUBLIC HEALTH, ENSIGN COLLEGE OF PUBLIC HEALTH IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER OF PUBLIC HEALTH DEGREE

JUNE, 2020

DECLARATION

I declare that apart from the use of materials from published sources that have been documented and duly acknowledged, the content of this work is the result of my own investigation and has not been presented for any other degree elsewhere.

Rebecca Tricia Morrison (ID – 187100124) 14/06/2020

(Student) Signature Date

Certified by:

Dr. Edward Kofi Sutherland 14/06/2020

(Supervisor) Signature Date

Dr. Stephen Manortey ..... 14-06-2020 .....

(Head of Academic Program) Signature Date

DEDICATION

This work is dedicated to all women with Sexual and Reproductive Health needs.

ACKNOWLEDGEMENT

I am sincerely grateful to the Almighty God for granting me strength and wisdom throughout my studies. I am also grateful to my project Supervisor Dr. Edward Kofi Sutherland for his help, patience, guidance and support during this course of study.

My indebtedness goes to Anne Coolen and Samuel Tagoe of Marie Stopes International Ghana for their support, guidance and efforts which made this project a reality.

Also, I am grateful to all colleagues at Family Health Division for their efforts, support and provision during this course.

I am particularly grateful to all my lecturers, especially Dr. Steve Manortey for their reassurance and directions during my study.

ABBREVIATIONS

AOR	Adjusted odds ratio
CI	Confidence interval
GDHS	Ghana Demography and Health Survey
GHS	Ghana Health Survey
GI	Guttmatcher Institute
GMHS	Ghana Maternal Health Survey
GSS	Ghana Statistical Service
MSI	Marie Stopes International
MCU	Modern Contraceptive use
MSIG	Marie Stopes International Ghana
OR	Odds ratio
WHO	World Health Organization

ABSTRACT

Background: Globally, induced abortion remains a dire public health concern, particularly in developing countries where abortion-related complications are recorded annually. There has been little research done in Ghana to answer the question as to what factors influence the choices of women in reproductive age to induce abortions rather than resorting to contraceptive services. This study thus sought to assess the determinants of induced abortion among women in reproductive age presenting at the four Marie Stopes Centres of Excellence in the Greater Accra Region of Ghana.

Methods: It was a quantitative cross-sectional study carried out between 10th January and 20th February 2020 among 342 randomly selected women aged 15 years and above using well-structured questionnaires for data collection. The data were keyed into Microsoft Excel and exported to STATA version 14.0 for descriptive and inferential analyses. The descriptive statistics involved the use of frequencies and percentages while the inferential statistics adopted Chi-square test and binary logistics analysis which reported odds ratios with their respective 95% confidence intervals signifying level of precision. The preformed statistical test was two-tailed with the significant alpha value set at 5% ($p<0.05$).

Results: Majority of the respondents were young, single, nulliparous and Christians. Women with future pregnancy intentions [OR=0.56, 95%CI=0.32-0.97] were less likely to have an induced abortion compared to those without any intention to get pregnant in the future. Women with short birth interval were more likely to resort to induced abortion to terminate their pregnancy [OR=2.48, 95%CI=1.01-6.02] compared to those who had well -spaced interval. Those who earned GHC1000 and above [OR=0.41, 95%CI=0.22-0.74] were less likely to induce abortion compared to those who earned less than GHC500 a month. Respondents with secondary or vocational [OR=0.367, CI=0.12-0.74] and tertiary [OR=0.27, 95%CI=0.13-0.58] level education were less likely to resort to induced abortion. Women who had ever

experienced contraceptive failure [OR=1.81, 95%CI=1.1-3.1] were more likely to resort to induced abortion compared to those who have never experienced contraceptive failure. In relation to the use of emergency contraception, women who indicated they have ever used emergency contraception were less likely to induce abortions [OR=0.45, 95% CI=0.28-0.73].

Conclusion: The determinants of induced abortion were future pregnancy intentions, reason for terminating pregnancy, monthly income, educational level, contraceptives failure and use of emergency contraception. Family planning educational and promotional activities should be concentrated on behaviour change to encourage contraceptive use among all age groups to help in either spacing or limiting of child birth. Women with short birth intervals should be educated by the nurses on how to space their children. Family planning services provided by the health centres and clinics in the region should focus on the use of more effective modern methods of contraception such as the long acting reversible methods.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

"Unsafe abortion is a procedure for termination of a pregnancy done by an individual who does not have the necessary training or in an environment not conforming to minimal medical standards" (WHO, 2020). Abortion may "occur spontaneously or intentionally, the later also known as induced abortion, which may be either safe or unsafe" (Yogi et al. 2018). Globally, induced abortion remains a dire public health concern, predominantly in developing countries (Mote et al., 2010). In developing countries, a woman dies every eight minutes because of complications arising from unsafe abortion (Alemayehu et al., 2017). "It is estimated that nearly half of the 56 million abortions that occur every year are unsafe and 97% of these unsafe abortions take place in developing countries" (Ganatra, et al., 2017).

"Although abortion is extremely safe when done in accordance with recommended guidelines, many women undergo unsafe procedures" (Guttmacher Institute (GI) 2018). "Nearly 7 million women in developing countries are treated for complications from unsafe abortions annually, and at least 22,000 die from abortion-related complications every year. Nonetheless, the number of induced abortions increased to 56 million worldwide between 2010 and 2014 compared to the 50 million between 1990 and 1994. However, there were 35 abortions per 1,000 women aged 15–44 in 2010–2014, down slightly from 40 per 1,000 in 1990–1994" (GI, 2018).

"Providing post-abortion service is a widely accepted public health strategy to reduce maternal morbidity and mortality. Linking abortion care and comprehensive family planning can help prevent future unwanted pregnancies and repeat abortions" (Vélez et al., 2014). "Safe induced abortion procedures are conducted in two main ways: namely, medical abortion (where pharmacological products are used to induce abortion); surgical abortion (involves extraction

of products of conception from the uterus through manual and electrical vacuum aspiration). Reports indicate that, there were about 47,000 deaths in 2008 attributable to unsafe abortion worldwide, and nearly two-thirds of all these abortion-related deaths were from Africa" (WHO, 2016).

"Most of the times, these important elements are lacking due to restrictive laws governing abortion; unnecessary requirements such as third party authorization, poor availability of services, high costs, stigma and negative attitude of health care providers. It is therefore important to create a conducive environment to ensure easy access to safe abortion in order to mitigate the numerous problems associated with unsafe abortion" (WHO, 2014).

In Ghana, unsafe abortion remains a major public health hassle inspite of the liberalization of the law on abortion over two decades ago; many women still access unsafe abortions because of lack of knowledge about the law at the population and provider levels (Boah, Bordotsiah & Kuurdong, 2019; Adanu et al., 2009; Biney, 2011). In this regard, the study seeks to take a step in exploring the determinants of induced abortion among women in reproductive age in Ghana, using Marie Stopes Centres of excellence as a unit of analysis.

1.2 Problem Statement

According to the Ghana Statistical Service (GSS), "11% of maternal deaths are abortion related and as high as 7% of all pregnancy losses are due to abortion, with the proportion of pregnancies terminated higher in women aged 24 years and below (24.9%)" (GSS, 2009). The recent GSS reports as high as 20% of women have had abortions and these numbers were highest among women with some form of education (16-24%) (GSS, 2014).

Several studies have looked into the factors that influence abortions (Yogi, Prakash & Neupane, 2018; Asiimwe, et al. 2014; Moges et al. 2018; Frederico et al., 2018); others have analyzed the determinants of unsafe abortion (Adanu, et al. 2009; Biney, 2011). Abortion services are

scarcely available in Ghana as it had been generally illegal until the law was reviewed in 1985 (and amended in 2003) (Guure et al., 2019; Acts of Ghana, 2003). This means that girls and young women expose themselves to associated risks and complications of unsafe abortions such as uterine perforation, , chronic pelvic pain , pelvic infections, bleeding and infertility (Guure et al. 2019; Der et al., 2013).

There has been little research done in Ghana to answer the question as to what factors influence the choices of women in reproductive age to induce abortions rather than resorting to contraceptive services. The study thus sought to investigate more into this at the Marie Stopes Centres of Excellence infrastructures in Ghana (MSIG). The Marie Stopes Centres of Excellence is a profit non-governmental organization in 37 countries with 4,100 social franchisees, 11,000 team members and 52,000 outreach locations. In Ghana, Marie Stopes started providing contraception and safe abortion care services in 2007 with eight (8) centres of excellence in most regions. Greater Accra has 4 centres of excellence in Tema New Town, Ashaiman, Kokomlemle and Dansoman. The choice of these centers borders on their length of service in contraceptive use education and the provision of abortion care services.

1.3 Rationale of study

According to the Ghana Statistical Service (GSS), "11% of maternal deaths are abortion related. The survey also reports that as high as 7% of all pregnancy losses are due to abortion, with the proportion of pregnancies terminated higher in women aged 24 years and below (24.9%). Abortions were highest in individuals who were pregnant for the first or second time as opposed to women with higher order pregnancies. Further analysis appears to suggest that abortions were procured as a means of contraception and to delay childbirth, especially by those desirous to continue with their education" (GSS, 2009). Additionally, the Ghana Demographic and Health Survey (GDHS) (2014), estimated that, "30% of currently married

women have an unmet need for family planning services, with 17% having an unmet need for spacing and 13% having an unmet need for limiting". This could explain the high incidence of induced abortions among women in their reproductive age.

In addressing unsafe abortion and finding solutions to this public health problem, it is crucial to unravel the factors that play an influencing role among women, especially, women who had accessed the services of Marie Stopes Centres of Excellence as a basis for proffering solutions. The study is important for designing strategies for reducing induced abortions where contraceptive use has been revealed to contribute meaningfully to the management of induced abortion (Vélez, et al. 2014).

1.4 Conceptual framework

Abortion can either be spontaneous or induced, which is influenced by several factors (Figure 1.1). These include characteristics of women such as; marital status, parity, reasons for termination. These can have effects on induced abortion. The economic factors such as occupational status, monthly income, residence and educational level will have an effect on induced abortion. Socio-demographic factors such as marital status, religion, level of education, place of residence and age has an effect on induced abortion.

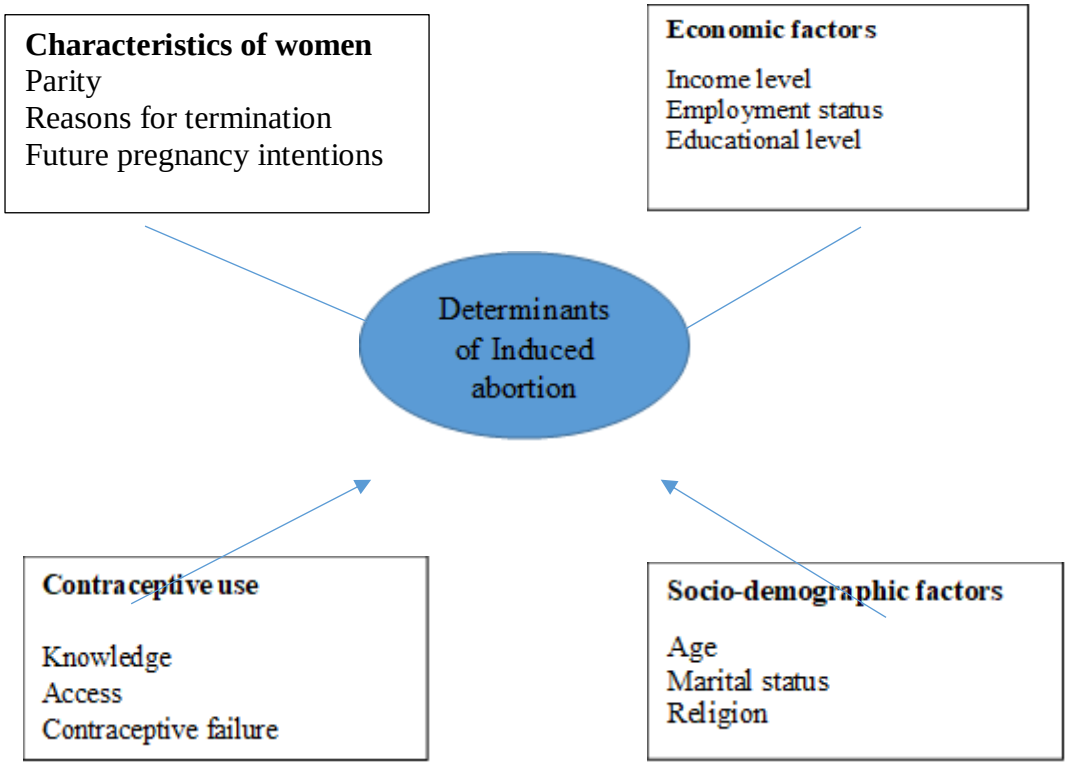

Figure 1.4: Conceptual Framework showing determinants of induced abortion

(Source: Researcher's construct, 2019)

1.5 Research questions

1. What are the characteristics of women presenting for induced abortions at MSIG?
2. How do socio-demographic factors influence induced abortion?
3. What is the relationship between economic factors and induced abortion among women?
4. What is the relationship between contraceptive use and induced abortion among women?

1.6 General Objective

To assess the determinants of induced abortion among women in reproductive age at Marie Stopes Centres of Excellence in the Greater Accra Region of Ghana.

1.7 Specific Objectives

1. To describe the characteristics of women presenting at MSI facilities.
2. To determine the relationship between socio-demographic factors and induced abortion.
3. To examine the relationship between economic factors and induced abortion among women.
4. To identify the relationship between contraceptive use and induced abortion among women.

1.8 Scope of Study

The scope of the study was delimited to include women, aged 15 years and above presenting for abortion services at the MSIG at the four locations in the Greater Accra Region of Ghana. The choice of women aged 15 years and above is consistent with literature (Guure et al., 2019; Yogi et al.. 2018). Additionally, women aged 15 years and above are more likely to bear children (GSS, 2014). Determinants of induced abortion comprised of characteristics and economic factors as well as contraceptive utilization and socio-demographic factors.

1.9 Organization of Report

The report was organized into six (6) main chapters which are the Introduction, Literature Review, Methodology, Results, Discussions, Conclusions and Recommendations. Chapter One introduced the background information of the study, the problem statement, the rationale of study, the conceptual framework, the research questions, the general objective, the specific objectives and scope of the study. Chapter Two which is the literature review presented similar studies on the topic based on the objectives of the study. Chapter three outlined the

methodology which comprised the study area, the research methods and design, data collection techniques and tools, study population, study variables, sampling, pre-testing, data handling, data analysis, ethical considerations, limitations of study and assumptions. Chapter four, the results section, provided a summary of the background variables as well as the results based on the key variables of the study. Chapter five discussed the result based on the research questions by comparing with literature. Finally, Chapter six presented the conclusion and recommendations of the study by summarizing the key findings and directing recommendations to appropriate stakeholders.

CHAPTER TWO

LITERATURE REVIEW

2.1 Abortion

"Abortion is the expulsion of the conceptus before 28 completed weeks of gestation, or a foetus weighing less than 500g" (Dohbit, 2007). Stated differently, abortion is the spontaneous or induced termination of pregnancy before foetal viability.

According to the World Health Organization (WHO), "unsafe/induced abortion is a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards, or both" (WHO, 1993). "Safe induced abortion procedures are conducted in two main ways namely medical abortion (where pharmacological products are used to induce abortion); surgical abortion (involves extraction of products of conception from the uterus through suction or dilatation of the cervix and curettage). Unsafe abortion leads to a number of complications which are short-term or long term. Some of the complications are injury to the uterus, heavy bleeding, infection, infertility, chronic pain, and death. The risk of dying from abortion is disproportionately high in developing world. Reports indicate that there were about 47,000 deaths in 2008 attributable to unsafe abortion worldwide, and nearly two-thirds of all these abortion-related deaths were from Africa" (WHO, 2016).

2.1.1 Induced Abortion in Ghana

Developing countries, including Ghana, account for the greatest proportion of the global annual maternal deaths count (WHO, United Nations Children's Fund, United Nations Population Fund, The World Bank & United Nations, 2015). "The maternal mortality ratio in Ghana is 310 per 100,000 live births and direct maternal causes account for 67% of maternal deaths" (Ghana Statistical Service, Ghana Health Service & ICF, 2017). WHO estimates, "47,000 of

these deaths per year are attributable to unsafe abortion, making abortion a leading cause of maternal mortality" (WHO 2011).

Abortion complications contribute greatly to maternal morbidity and mortality events in Ghana (Rominski & Lori 2014). According to the Ghana Medical Association, "abortion is the leading cause of maternal mortality, accounting for 15–30% of maternal deaths" (Asamoah et al., 2011). Further, it is estimated that whenever one woman dies from an unsafe abortion, 15 other women suffer short and long-term morbidities (Sedge, 2010).

2.1.2 Global Distribution of Induced Abortion

"The global maternal mortality ratio in 2010 was 210 per 100,000 population" (WHO, UNICEF, UNFPA and The World Bank, 2012). "Unsafe abortion accounted for 13 % of all direct causes of maternal death, next only to haemorrhage and infection" (WHO 2012). "Worldwide, in 2008, there were an estimated 43.8 million abortions: 22.2 million safe, and 21.6 million unsafe i.e. one in ten pregnancies ended as unsafe abortions. In 2008, there were 2 million more unsafe abortions in developing countries than in 2003. The global abortion rate was stable between 2003 and 2008, after a decline from 1995. But the proportion of unsafe abortions increased to 49 % in 2008, compared to 44 % in 1995. Unsafe abortions resulted in 47,000 maternal deaths, and 8.5 million women suffered from the complications due to unsafe abortions in 2005" (WHO 2011; Sedgh, et al. 2012; The Guttmacher Institute, 2012).

According to a study report, "around 213 million pregnancies occurred worldwide, of which 89% occurred in the developing world. Out of the total, 85 million pregnancies were unintended; of these, 50% ended in abortion" (Sedgh, Singh & Hussain, 2014). "In 2013, 43,684 women lost their lives as a result of complications from abortion worldwide" (Kassebaum et al., 2014). The WHO,(2014), report indicated that, "every year an estimated 22,000 women died in developing countries from abortion complication" .

2.2 Impact of Induced Unsafe Abortions on the Reproductive Health of the Women

Unsafe abortion-related deaths are due to severe infections or bleeding caused by the procedure, or due to organ damage. It can result in many short and long-term consequences including infertility. The global case fatality rate associated with unsafe abortion is 220 per 100,000, whilst the case fatality rate for Sub-Saharan Africa is 460 per 100,000 (WHO, 2014). In a study by Bankole et al., (2015) in Nigeria, it was observed that in some of the hospitals, unsafe abortion was one of the leading causes of all maternal mortality in the country and was responsible for up to 15% of maternal deaths. It also showed that, the case fatality rate ranged between 1.0% and 1.5%, which meant that one woman died, for every 100 illegal abortions performed. The global estimate is three times lower than this figure (WHO, 2014).

According to a cross-sectional study done in Kenya by Paul et al., (2015), using 328 health facilities in five geographical regions. A total of 157,000 women received care from the Kenyan health facilities for both induced and spontaneous complications, and this included about 120,000 women who were treated for unsafe abortion complications. This implied, that 12 per 1000 women aged 15-49 received health care for unsafe abortion complication in Kenya in the year 2012.

Also, a retrospective cross-sectional study in Botswana was conducted by Melese et al., (2017) using records of 619 women. The data was analysed with descriptive statistics and bivariate analysis and the following were found; spontaneous and induced abortion constituted 95.5% and 3.9% respectively, whilst clinically detectable anaemia 31.2%. Clinically detectable anaemia evidenced by pallor was found to be the leading major complication in 193 (31.2%) of the cases followed by hypovolemic and septic shock 65 (10.5%). The study reported an association between post-abortion complication with self-individual abortion (P-value=0.018) and delayed uterine evacuation above six hours (P-value= 0.035).

Further, a study was conducted to assess post-abortion complication severity and associated factors in Kenya by Ziraba et al (2015). This was a national survey which used 326 national and regional referral health facilities and 2, 625 women presenting with abortion complication. The study found that women who had a delay of more than 6 hours to get to a health facility had at least 2 times higher odds of having a moderate/severe complication compared to those who sought care within 6 hours from onset of complications.

Similarly, in Ghana, a study was done by Schwandt et al., (2010), wherein patients with pregnancy termination complications between June and July 2008 were studied and analysed using multinomial logistic regression. They found that the complications from induced abortion are the second leading cause of maternal mortality, even though the country has one of the most liberal abortion laws in sub-Saharan Africa.

2.3 General Characteristics of Women Clientele of Induced Abortion Services

"Most customs in Ghana frown upon pregnancy out of wedlock and consider abortion a taboo that carries profound stigma especially in traditional societies" (Baiden, 2009). "Abortion-related stigma has been described as a social phenomenon, which is reproduced in local context. For example in some parts of Cameroun, a mistimed entry into motherhood is thought to be more shameful than the act of abortion" (Kumar, Hessini, & Mitchell, 2009). "Three per cent of respondents in the last Maternal Health Survey stated that they resorted to abortion in order 'to avoid shame'" (GHS, 2009).

Common partner-related factors cited in studies as reasons for unsafe abortion by women include: fear of abandonment, denial of pregnancy, partner's insistence, casual relationship, and physical violence (Sundaram et al., 2012). In the GMHS 2007, almost 6% of women had an abortion because their partners refused to take responsibility for the pregnancy (GSS & GHS, 2009). "Although gender preferences leading to sex-selective abortions have been widely

reported in Asia, there is currently no evidence suggesting that the practice if present in Ghana is widespread. In the survey, the respondents make no mention of gender preference as a reason for abortion" (GHS &GSS, 2009).

Also, a Kenyan study to assess the prevalence and correlates of reporting a previous induced abortion with a sample size of 1,378 women aged 12-24 years chosen by way of a stratified random sampling technique from 328 abortion health service facilities found out that, a greater proportion of young women reporting a previous induced abortion (47%) used a method of contraception at the time of the index pregnancy compared with those reporting no previous induced abortion (23%) (Kabiru et al., 2016). Furthermore, in Nepal, a study based on a nationally representative sample of the Nepal Demographic and Health Survey (2,395 women) to determine the prevalence and factors associated with abortion and unsafe abortion revealed that women who were aware of safe places for abortion services (OR 4.96; 95% CI 3.04, 8.09) were more likely to go through an abortion (Yogi, Prakash & Neupane 2018).

Kant et al., (2015), assessed the rates, trends, causes and determinants of induced abortions from 2008–12 in a rural community of northern India through a secondary data analysis of pregnancy outcomes at Ballabgarh Health and Demographic Surveillance System. It showed, "higher ratio of induced abortions among upper caste (5.0), higher wealth index (5.4), paternal age >30 years, (5.6), maternal age >30 years (7.0), and birth order of four or more (8.2)". Also, in a 2018 study undertaken by Moges et al., on the factors associated with uptake of post-abortion family planning in Shire town, Tigray, Ethiopia, it was found out that counselling of family planning [AOR 3.53 95% CI (1.69, 7.37)], grand multipara [AOR 7.91, 95% CI (1.66, 37.74)] and previous contraceptive usage [AOR 3.62, 95% CI (1.77, 7.40)] were significantly associated with the post-abortion contraceptive utilization.

2.3.1 Socio-demographic Factors Associated with Induced Abortion

Some demographic determinants associated with induced abortion are modifiable. In Ghana, a report from Klutsey and Ankomah, (2014), in a quantitative, hospital-based, unmatched case-control study of eight hospitals found, "a 4% reduction in the odds of an induced abortion in married women compared with women who were single (odds ratio [OR] 0.11, 95% confidence interval [CI] 0.07–0.22); unemployed women of reproductive age were 0.35 times less likely to seek an induced abortion compared with their employed counterparts (OR 0.35, CI 0.19–0.65). Also, women with no knowledge of contraceptive method were 4.6 times likely to seek induced abortion (OR 4.64, CI 1.39–15.4), compared with women who had knowledge of contraceptive methods". A similar association with increased abortion rate was seen among female entertainment workers (EWs) in Cambodia (Sopheab et al., 2015). The study found that, "three-quarters (75%) of EWs were sexually active, of which nearly one third reported at least one abortion while working as an EW. Also, contraceptive use in the past year was low. Factors independently associated with reporting a recent abortion included: ages 25-29 (OR = 2.2, 95 % CI: 1.2-4.0), living with spouse/cohabitated partner (OR = 2.2, 95 % CI: 1.1-4.2), longer duration of entertainment work (OR = 4.8, 95 % CI: 2.5-9.2), higher number of partners (OR = 4.4, 95 % CI: 2.2-8.7) and being a karaoke worker (OR = 2.2, 95 % CI: 1.1-4.4)". Borges et al., (2015), in a prospective cohort study in Brazil assessing whether contraceptive use was associated with access to family planning services in the six-month post-abortion period, revealed that, "women who reported utilization of both contraceptive and counselling in the same month had higher odds of reporting contraceptive use during the six-month period post-abortion when compared with those who did not use these family planning services [adjusted an OR = 1.93, 95 % CI: 1.13–3.30]".

Hosseini, Erfani and Nojomi, (2017) in Iran conducted a study involving a representative sample of 3,000 married women aged 15-49 years to examine factors associated with the

incidence of abortion using logistic regression models. It showed, “the incidence of abortion was strongly associated with women’s education, type of contraceptive and family income level, after controlling for confounding factors”. Induced abortion was associated with women having a higher standard of education, those using long-acting contraceptive and those with a better income level. A cross-sectional study of the association between spontaneous abortion (SA) and socioeconomic status (SES) in Beijing, China observed, “a strong association between SA and the following; income level, place of residence and level of education; Low-income women were found to have an increased risk of SA compared to high income. The risk of SA in rural was 1.68 times greater than in urban (AOR = 1.68, 95% CI: 1.54–1), an association between education and SA in urban (AOR = 0.66, 95% CI: 0.55–0.78) but not in rural (AOR = 1.05, 95% CI: 0.34–1.17)” (Zheng et al., 2017).

An analysis was carried out on a four-year retrospective study of complicated abortion cases treated at the Niger Delta University Teaching Hospital (Ibrahim et al., 2011). They reported that the proportion of respondents who had secondary education, were teenagers and used a contraceptive method were 55.6%, 31.8% and 87.3% respectively. Also, a study was undertaken to assess the prevalence and correlates of reporting a previous induced abortion among young females aged 12–24 years seeking abortion-related care in Kenya, there were statistically significant findings by previous history of induced abortion for area of abode, occupation and religion at the bivariate level. Urban dwellers as well as unemployed young women were much more likely to report a previous induced abortion (Kabiru et al., 2016).

Furthermore, the prevalence of abortion and its associated factors amongst a nationally representative sample of 2,395 Nepalese women who had ever had a terminated pregnancy was investigated (Yogi, Prakash & Neupane 2018). The study found out that, “women who were of Buddhist religion (OR 2.15; 95% CI 1.04, 4.44), those who were literate with secondary level education (OR 1.69; 95% CI 1.22, 2.34), were more likely to undergo an abortion. On the

contrary, women in age group 25–34 years (OR 0.43; 95% CI 0.19, 0.97) were less likely to undergo an abortion". Also, in a study undertaken on the factors associated with uptake of post-abortion family planning in Shire town, Tigray, Ethiopia by Moges et al.,(2018),it was found out that women with spouses were 2.5 times more likely to utilize contraceptives as compared to those without spouses [AOR 2.59, 95% CI (1.16, 5.65)].

2.3.2 Economic Factors Associated with Induced Abortion

"Studies have shown that women in the higher wealth strata of the society have a greater likelihood of procuring a safe abortion" (Sundaram et al., 2012). According to Baiden, (2009), "the economic differential tends to stand out where inequities in access to abortion services exist. The resultant desperation accompanied by the 'illegal' nature of such services put them within reach of only those who can afford to the exclusion of those lower down the wealth ladder, who resort to substandard services out of desperation". In the Maternal Health Survey, 21% of respondents could not cater for the child and thus their reason for induced abortion (GHS, 2009). In the GMHS in 2007, 8.5% of respondents stated their desire to remain actively employed was the reason for obtaining an induced abortion (GHS, GSS & Macro International, 2009). Social support and welfare assistance vary, and range from aid in securing healthcare through support for childcare by spouse/ partner and also employer (Faúndes, 2010). The absence of this form of assistance had been established as one of the determinants of unsafe abortion (Fusco, Silva & Andreoni, 2012). Some (2.4%) of the respondents in the GMHS survey stated their desire to opt for an abortion was because of the lack of child support (GSS, 2009). The desire for higher education was also mentioned by 11% of respondents as the reason for choosing to have their pregnancies aborted (GHS, 2009).

In Nepal, Yogi, Prakash and Neupane, (2018), investigated the prevalence and factors associated with abortion and unsafe abortion based on a nationally representative sample of

2,395 women who had ever had a terminated pregnancy. The study found out that women in the richest wealth quintile (OR 0.10; 95% CI 0.04, 0.25) were less likely to opt for an unsafe abortion. Asiimwe et al., (2014), explored the factors associated with modern contraceptive use among young and older women of reproductive age in Uganda. The study used 2,814 non-pregnant married women aged 15–34 years who were sexually active within one year prior to the survey. Findings from the study showed that modern birth control methods are positively associated with level of household income. The use of modern methods was highest among women from the wealthiest households. Wealth-related disparities in contraceptive method use were greater among younger women.

A study in Ghana examined factors that are associated with the unmet need for family planning to help facilitate the usage of family planning methods (Guure et al. 2019). A descriptive, cross-sectional and inferential approach using secondary data on women of the reproductive ages (15–49 years) from the Ghana Demographic and Health Survey 2014 database was employed. The study found that socio-economic factors (respondents' educational level, wealth index, respondents and partner's occupation) were all significant determinants of unmet need for family planning and contraceptive services.

2.4 Contraceptive Usage and Induced Abortion

Several countries, including Ghana authorize abortion in circumstances of rape, incest and sexual abuse (Acts 29, section 58 of the Criminal code of 1960). Due to the fear of being stigmatized, such cases that are permitted by law are rarely reported. There is an increasing trend in the number of rape and sexual violence against women in Ghana because of the absence of befitting punishment for the perpetuators of such unsavoury crimes against women. Furthermore, research findings indicate that even after controlling for age, socioeconomic

background, parity and education, intimate partner violence related pregnancies are associated with higher incidents of abortion (Pallitto et al, 2013).

It is a proven fact that many pregnancies are terminated because of the relatively low access to modern contraceptive methods (Lauro, 2011). According to the GDHS 2008, "fertility has shown a downward trend over the past two decades, although contraceptive usage witnessed a drop from 25% in 2003 to 23% in 2008" (GSS &GHS, 2009). A study by Biney (2011), appears to corroborate findings from Nigeria that due to misconceptions regarding the effects of contraceptives, the younger generations rather resort to abortion as a means of fertility control. Also, a study was conducted to assess the prevalence and correlates of reporting a previous induced abortion among young women between 12–24 years of age seeking abortion-related care in Kenya (Kabiru et al., 2016). The study found out that, "a large proportion of contraceptive users reporting a previous induced abortion were using methods known to have high failure rates. Specifically, 42% of contraceptive users who stated that they had a previous abortion reported the use of emergency contraception while 12% reported the use of the rhythm method, withdrawal or lactational amenorrhea".

Asiimwe et al., (2014), explored the factors associated with modern contraceptive use among women of younger and older age groups in Uganda. The study participants were 2,814 non-pregnant married women age 15–34 who were sexually active within one year prior to the survey. The study reported women desirous of a child within two years had the lowest levels of contraceptive use. Conversely, women not planning to have any additional children had the highest levels. Nevertheless, among respondents who did not want any additional children, far fewer of them age 15–24 reported current use of a contraceptive method in comparison with women aged 24–35.

CHAPTER THREE

METHODOLOGY

3.1 Research Methods and Design

This study adopted quantitative methods which is linked with deductive methods (Saunders, Lewis & Thornhill 2016). A structured questionnaire was employed to collect data on induced abortions, characteristics, economic factors, socio-demographic factors and contraceptive choices. The research design was a facility-based descriptive cross-sectional study among women of reproductive age in the Greater Accra Region of Ghana.

3.2 Study Site

The study was undertaken at the Marie Stopes Centre of Excellence facilities in the Greater Accra region. Marie Stopes International is a profit non-governmental organization in 37 countries with 11,000 team members, 4,100 social franchisees and 52,000 outreach locations. In Ghana, Marie Stopes started providing contraception and safe abortion care services in 2007 with eight (8) centres of excellence in most regions. Greater Accra has 4 centres of excellence in Tema New Town, Ashaiman, Kokomlemle and Dansoman.

3.2.1 MSIG Tema New Town

The Tema New Town clinic was established November 2009 as the Marie Stopes 3rd clinic and has been operational for the past 11 years. The clinic is located at Tema New Town which is a suburb of Tema, an industrial hub in Ghana. Tema is the eleventh most populous settlement in Ghana with a population of approximately 161,612 people. The primary occupation of the indigenous people in Tema New Town community is fishing. Tema New Town also has adjoining communities which are numbered accordingly with each of them having easy access to the basic amenities.

The clinic serves an average of 470 clients of which approximately 30% are safe abortion clients. Six (6%) of clients served by the clinic are adolescents and 23% of clients are with some or completed secondary level of education.

The services provided at this facility include pregnancy options counselling, family planning methods, obstetrics and gynaecology consultation, cervical cancer screening and treatment.

3.2.2 MSIG Ashaiman

The Ashaiman Centre was established in April 2007 and it is Marie Stopes's second clinic which has been functional till date. The clinic is located in the Ashaiman municipality which shares boundaries with Tema Metropolitan to the east, Ledzokuku Municipal to the south, Adentan Municipal to the north and to the west with La-Nkwantanang-Madina Municipal.

The population of the Municipality according to 2010 population and housing census stands at 190,972 with 93,727 males and 97,245 females. The Ashaiman community is a cosmopolitan hub and serves a transit point for many commuters.

The Ashaiman centre is one of Marie Stopes high volume centres which sees an average of 1,300 clients in a month of which nearly 30% of the clients are safe abortion clients. The centre is located in the heart of the Ashaiman Township where the Ashaiman market is also located. Eight (8%) of the clients served in Ashaiman centre are adolescents. The services provided at this facility include pregnancy options counselling, family planning methods, obstetrics and gynaecology consultation, cervical cancer screening and treatment

3.2.3 MSIG Kokomlemle

The Kokomlemle centre is the first Marie Stopes clinic which was established in April 2006. The centre is located in Kokomlemle in Accra North in the Accra Metropolitan district, a district of the Greater Accra Region of Ghana. Kokomlemle is considered as one of the planned

communities in Accra. The Kokomlemle centre has a large clientele base since it's been in operation over 14 years ago.

It is the most popular of all the Marie Stopes clinics in the country and serves high profile clients or the elite in the society. The centre serves an average of 890 client per month out of which 7% of the clients are adolescents. Half of the Kokomlemle clients are safe abortion clients who visit the clinic directly or visit by appointment. A considerable number of the clients are also students from the tertiary institution who visit the centre to seek family planning and safe abortions care services.

3.2.4 MSIG Dansoman

The Dansoman Last Stop centre is the most recently established Marie Stopes centre. It is located at Dansoman Last Stop in a quite densely populated community of about 56,000 with a predominantly middle/high-income population although some low-income people live here too**.** The Dansoman Last Stop centre was established in September 2017 with the objective to serve the Dansoman community.

The centre records relatively low volume clients since it is quite new. On the average clients seen by the centre in a month number 210 out of which 46% are safe abortion clients and adolescents served by the centre hover around 7-9%.

Figure 3.2: A map showing MSIG facility centres in the Greater Accra Region

3.3 Data Collection Techniques and Tools

A structured questionnaire adapted from Agyei (2012), employing closed ended questions was used for this study. The questionnaire was designed to reflect the specific objectives and was as well "extracted" from the literature review. The questions contained in the questionnaire focused on induced abortions, women's characteristics, economic factors, socio-demographic factors and contraceptive choices.

3.4 Study Population

The population of interest for this study were women in their reproductive age from 15 to 49 years. These women are potentially at risk of inducing unintended pregnancies because of their high fertility rates as contained in the Ghana Statistical Survey in 2014. The MSIG Centres of excellence was ideal for the study because data on women in their reproductive ages were easily obtainable from the centres. Similarly, the choice of these centres borders on their length of service in contraceptive use education and the provision of abortion care services. However, women in their reproductive age with cognitive impairment were excluded from the study.

3.4 Study Variables

3.4.1 Dependent variable

Induced abortion: Deliberate loss of pregnancy by any means before foetus is formed (excludes miscarriage).

3.4.2 Independent variables;

Socio-demographic factors: Age, marital status, educational level, ethnicity and religion, place of residence.

Characteristics of women: Parity, marital status, reasons for termination

Economic factors: Education level, occupation, income

Contraceptive use: Knowledge, access, contraceptive failure

3.5 Sampling

Using the sample size formula by Cochran (1977) for cross-sectional study:

$N = (z^2 x\ pq)/(e^2)$

Where: n = sample size

p = general rate of abortion in Ghana, 28% (0.28) (Guttmacher Institute, WHO 2011)

q = 1- p

z = reliability of coefficient (1.96)

e = Margin of error set at 0.05.

n = (1.96)^2*(0.28)*(0.72))/(0.05)〗^2

n=0.77446/0.0025= 309.7=310

The sample size for the study was thus 310 women in reproductive age. A non-response rate of 10% (corresponding to 31) was added to the initial number. Therefore, a total of three hundred and forty-two (342) respondents was estimated for the study.

A simple random sampling method was employed to distribute the three hundred and forty-two (342) women aged 15 years and above seeking abortion care services between the four MSIG Centres of excellence. At the facility level, eligible participants were randomly selected through listing all participants where secret numbers were given to these participants. The secret numbers were put into ballot boxes and picked randomly. Those whose numbers were picked were included in the study until the required sample size numbers was attained.

Proportion for each centre was calculated averagely by the percentage of each group of the total.

Table 4.1: Samples from centres selected for study

#	Centre	July- Dec 2019 Client Visits (A)	# of working days Jul-Dec 19 (B)	Average SA client per day (A/B)	% proportion of client flow	No. of respondents
1	Tema New Town Centre	826	158	5	14%	48
2	Ashaiman Centre	2099	158	13	34%	116
3	Kokomlemle Centre	2579	158	16	42%	144
4	Dansoman Last Stop Centre	587	158	4	10%	34

In arriving at the sample size, the total safe abortion client volume over a 6 month period (Jul-Dec 2019) was determined and this was divided by the total number of working days over the same period to arrive at the average safe abortion client per day. A percentage proportion of the average safe client flow was then calculated as seen in the table above.

Six (6) research assistants were trained to help monitor and follow up respondents with regards to responding to the questionnaire and to help code and enter the information obtained into Microsoft Excel (version 2016). The principal researcher supervised the entire field work.

3.6 Pre-testing

The data collection tool in the form of the structured questionnaire was pretested at the Ga South Municipality with twenty (20) respondents to authenticate the tool. This was aimed at establishing easy to understand questions, suitability of the questions posed, adequacy of response options provided, the need for additional or removal of existing questions to ensure that relevant data is collected. Appropriate revisions were made to the questionnaire where necessary before actual data collection.

3.7 Data handling

The structured questionnaire was used to gather data on the topic under study (determinants of induced abortion among women in reproductive age at the Marie Stopes Center of Excellence Centers, Accra). The research instrument (questionnaire) containing the data was coded, cleaned and saved in Microsoft Excel and saved in drop box prior to data analysis. The hard copy questionnaires containing the responses from the fieldwork were saved in locker for two years storage before disposal.

3.8 Data analysis

STATA version 14 was used for cleaning, merging and analysing the data responses from the completed questionnaires. The data was cleaned by running frequencies of inconsistently coded data prior to the analysis. The categorical and numerical data was described using simple proportions and means. Respondents' socio-demographic factors, characteristics, economic factors and contraceptive usage factors were analysed initially using simple proportions (frequencies and percentages). Chi square test and/or cross tabulation was used to estimate economic factors, characteristics of women and socio-demographic factors on induced abortion (dependent variable). Similarly, Chi square analyses was done to test the association between contraceptive use and induced abortion. Multivariable logistic regression was used to test for the strength of association between the dependent and independent variables with significant

associations. A confidence interval of 95% was used to show significant relations between the dependent variable and the independent variables.

3.9 Ethical consideration

Ethical issues related to the study were addressed by the following:

Ethical clearance: Ethical clearance was sought from the Ensign Institutional Review Board. Administrative approval was also sought from the Marie Stopes International Ghana Head office to collect data from the centre of excellence facilities.

Privacy/Confidentiality: Participants were assured of confidentiality and privacy of the information provided. The respondents were allowed enough time and privacy to respond to the questions. In order to assure respondents of privacy of information, they were not asked to provide their names, telephone numbers and house addresses.

Voluntary withdrawal: Participants were assured that participation in this research was entirely voluntary. They were free to withdraw consent and discontinue participation in the study at any time without prejudice from the study team.

3.10 Limitations of study

The study relied on self-report from the respondents and the information given by the respondents could not be verified, thus there could have been information bias.

The study considered women in their reproductive age and did not include women below 15 years, although their participation could have further substantiated the results obtained. The findings, however, may be generalized to all women who access abortion services in Marie Stopes Centres of Excellence facilities in the Greater Accra Region since the women were randomly selected.

3.11 Assumption

The study is based on the assumption that induced abortion among women in the Greater Accra Region is due to factors such as the women's characteristics, economic and socio-demographic as well as contraceptive choices.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents analysis and detailed description of results based on study objectives. This study sought to assess the determinants of induced abortion among women in reproductive age at Marie Stopes Centres of Excellence in the Greater Accra Region of Ghana. Specifically, the study sought to describe the characteristics of women presenting at MSI facilities, to determine the relationship between socio-demographic factors and induced abortion, examine the relationship between economic factors and induced abortion among women and to identify the relationship between contraceptive use and induced abortion among women. This section was stratified into four sections. Section one provided descriptive statistics to describe the characteristics of women presenting at MSI facilities. Section two presented the relationship between socio-demographic factors and induced abortion. Section three presents analysis on the relationship between economic factors and induced abortion among women. The fourth section also presented results on the relationship between contraceptive use and induced abortion among women.

Table 4.1: Characteristics of women presenting for induced abortions at MSIG

Variable	Frequency	Percentage
Age (In years)	**28.02±5.5SD**	
Below 25	99	29.0
25-29	106	31.0
30+	137	40.1
Marital status		
Single	174	50.9
Married/Cohabiting	168	49.1
Education		
None/primary	75	21.9
Secondary/vocational	164	48.0
Tertiary	103	30.1
Number of children		
0	135	39.5
1-4	207	60.5
Occupation		
Not working	71	20.8
Working	271	79.2
Religion		
other	77	22.5
Christian	265	77.5
Ethnicity		
Ewe/Ga	141	41.2
Akan	146	42.7
other	55	16.1
Economic		
Monthly income		
<500	111	32.5
500-999	125	36.6
1000+	106	31.0
Person paying for abortion		
Self	64	18.7
Partner	252	73.7
Parent/friend /relative	26	7.6
Financial benefit from partner		
No	4	1.2
Yes	338	98.8
Age at first sex		
below 18	131	38.30
18 or more	211	61.70
Number of partners		
1	315	92.11
2 or more	27	7.89
Previous termination of pregnancy		
No	241	70.47
Yes	101	29.53

Decision to terminate pregnancy (n=101)		
Self	34	33.66
Other	67	66.34
Reason for choosing facility		
Low cost	88	25.73
Nearby	126	36.84
Good providers	128	37.43
Intention of getting pregnant in future		
No	90	26.3
Yes	252	73.68
Reason for terminating pregnancy		
Partner refusal	27	7.89
Education	79	23.10
Short birth interval	88	25.73
Financial	114	33.33
other	34	9.94
Total	342	100

Source: Fieldwork (2020)

4.2 Background characteristic of women

Table 4.1 presents background characteristics of the women. The mean age of the women was 28.02 years ±5.5D. Majority of the women (94.4%) were aged 30 and above with 29.0% being below 25 years. Slightly more than half (50.9%) were married. With the educational level of the women, 48% had completed senior high/vocational level of education with 21.9% have either primary or no formal education. In terms of number of children, 6 out of 10 women had about 1 to 4 children with 4 out of 10 having no child. In terms of occupation, 79% of the women indicated they were working while 20.8% were not working. In terms of ethnic variations, the greater percentage of the women were Akans (42.7%), 41.2% were Ga/Ewe and 16.1% belong to other ethnic groups. It was also found that 36.6% of the women seeking abortion were earning between GHC500-999 a month while 31.0% were earning GHC1000 or above. The greater percentage 73.7% of the respondents also indicated that their partners are those bearing the cost of the abortion while 7.6% said it is either their parents, friends or other relatives. Almost all the women (98.8%) indicated they did get financial benefit from their partners while only 1.2% said they did not get any financial benefit from their partners. With

age at first sex, 61.7% indicated they had their first sex when they were 18 years or more while 38.3% said they had their first sex below 18 years. In relation to the number of sexual partners, the majority of the women (92.1%) indicated they had only one partner whereas 7.9% said they had multiple sexual partners. The majority of the women (70.47%) also said they had not terminated any pregnancy previously whereas 29.5% said they had had previous history of abortion. About 66.3% of the women also stated the decision to terminate their current pregnancy was influenced by other people such as partner, parents or friends while 33.7% said it was their sole decision to terminate their current pregnancy. About 37.4% of the women said their reason for choosing the facilities to terminate their pregnancy was due to the fact that they had good providers, 36.8% mentioned proximity of the facility while 25.7% attributing their patronage of the facility to low cost of services they rendered to their clients. About 73.7% of women who participated in this study indicated that they had intentions of getting pregnant in the near future while 26.3% said they did not intend to get pregnant again. Finally, the principal reason the women who were sampled for this study gave for terminating a pregnancy was due to financial reasons (33.33%), short birth intervals (25.73%), education (23.10%) with 7.9% also justifying their abortion by partner refusal.

4.3 Methods of abortion women sought

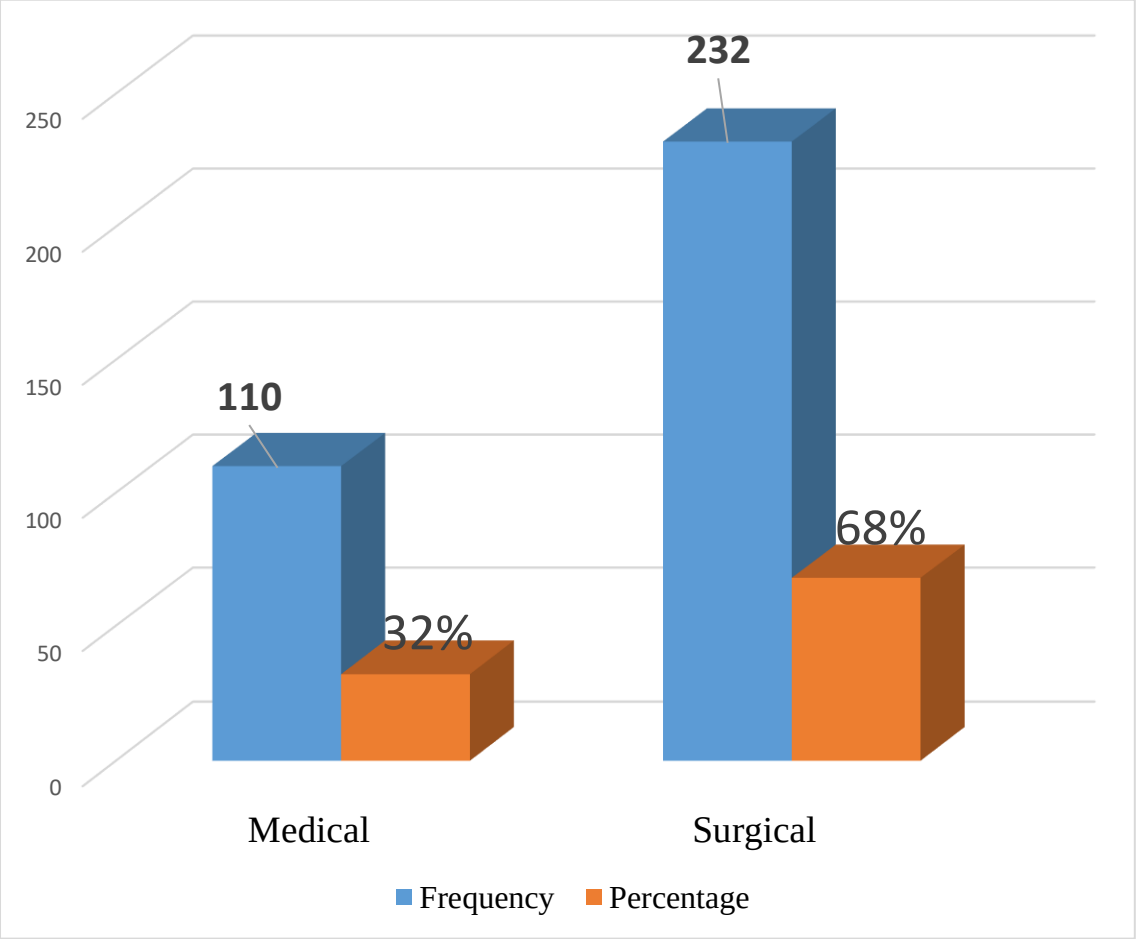

Figure 4.2: Methods of abortion women sought

Source: Fieldwork (2020)

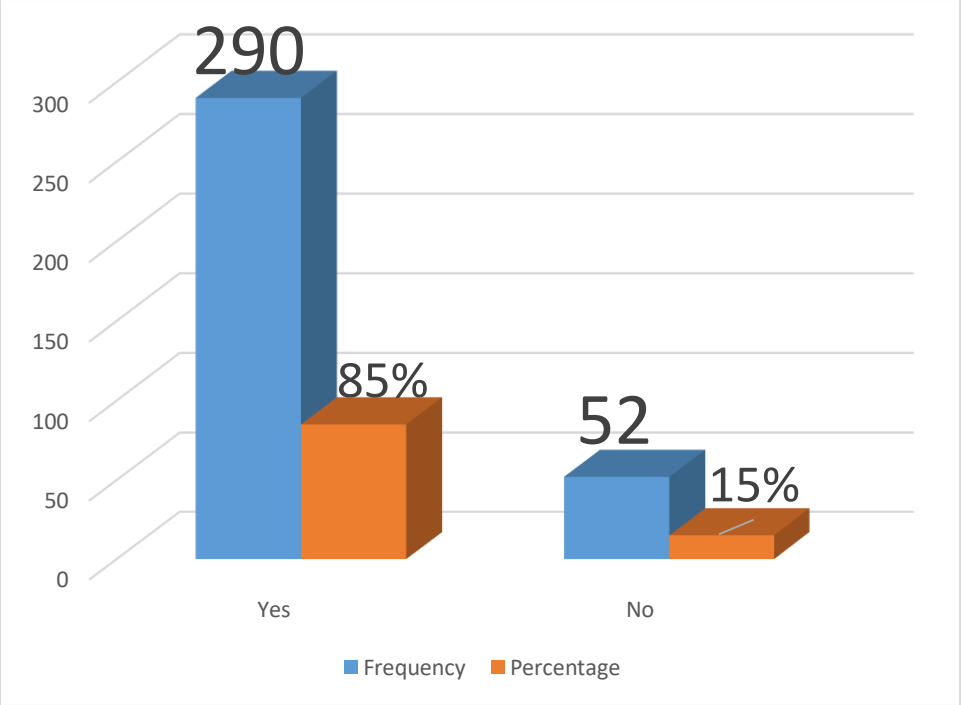

Figure 3.3: Providers explaining methods of abortion to women prior to procedure

Source: Fieldwork (2020)

In Figure 4.2, the results on the methods of abortion sought was displayed. It was found that 68% of the women opted for surgical abortion/procedure whereas 32% opted for medical procedure. As shown in Figure 4.3, the majority (85%) of the women also indicated that the providers explained the methods of abortions to them for them to make an informed decision on the method to opt for.

Table 4.2: Reasons for choosing method of abortion procedure

Statements	Medical	Surgical
It was a cheaper option	26.53	73.47
I wanted to avoid pain	21.18	78.82
I thought it would be simpler and faster	10.33	89.67
I was afraid of/wanted to avoid side effects	11.23	88.77
I wanted to have more control	40.00	60.00
I thought it would be more natural	42.03	57.97
The provider said this was the better option for me	40.00	60.00
The provider recommended this option	75.00	25.00

**** Multiple response Table.**

Source: Fieldwork (2020)

4.4 Reasons for choosing method of abortion procedure

In Table 4.2, the multiple responses on the reason for choosing a particular method of abortion are presented. It was shown that the top five reasons for choosing medical procedure are providers recommendation(75%), feeling that it would be more natural (42%), wanting to have control and provider saying that is the best option (40%) and cheap (26.5%). On the other hand, the main reasons for choosing surgical procedure are feeling it would be simpler and faster ((89.7%), fear or wanting to avoid side effects (88.8%), to avoid pain (78.8%) and cheap (73.4%) (see Table 4.2 for details)

Table 2.3: Socio-demographic factors influencing induced abortion

	Method of abortion		χ^2 (p-value)	OR[95%CI]
Variables	**Medical**	**Surgical**		
Age			6.3(0.043)	
Below 25	29.29	70.7		**Ref**
25-29	41.51	58.5		0.58 [0.42-1.04]
30 and above	27.01	73.0		1.1(0.63-1.99]
			0.2(0.637)	
Marital status				
Never married	33.33	66.67		**Ref**
Married	30.95	69.05		1.1[0.71-1.75]
Number of living children			1.2(0.278)	
0	35.56	64.44		**Ref**
1-4	29.95	70.05		1.2[0.81-2.04]
Religion			1.1(0.297)	
Other	27.27	72.7		**Ref**
Christian	33.58	66.42		0.74[0.4-1.30]
Ethnicity			3.96(0.146)	
Other	21.8	78.2		**Ref**
Ewe/Ga	36.3	63.7		0.60[0.2-1.24]
Akan	31.9	68.1		0.49[0.24-1.01]
Age at first sex			0.0425(0.837)	
below 18	32.82	67.18		**Ref**
18 or more	31.75	68.25		1.05[0.65-1.67]
Number of partners			0.0184(0.892)	
1	32.06	67.94		**Ref**
2 or more	33.33	66.67		0.94[0.41-2.17]
Previous termination of pregnancy			0.7823(0.376)	
No	33.61	66.39		**Ref**
Yes	28.71	71.29		1.25[0.75-2.09]
			2.27(0.132)	
Decision to terminate pregnancy				
Self	38.24	61.76		**Ref**
Other	23.88	76.12		1.97[0.80-4.81]
Reason for choosing facility			1.2958(0.523)	
Low cost	32.95	67.05		**Ref**
Nearby	28.5	71.43		1.22[0.68-2.21]
Good providers	35.16	64.8		0.91[0.51-1.61]
Future pregnancy intentions			4.3652(0.037)	
No	23.33	76.67		**Ref**
Yes	35.32	67.84		*0.56[0.32-0.97]
Reason for terminating pregnancy				
Partner refusal	48.15	51.85		**Ref**
Education	29.11	70.89		2.26[0.92-5.55]
Short birth interval	27.27	72.73		*2.48[1.01-6.02]
Financial	31.58	68.4		2.01[0.85-4.72]
Other	41.18	58.82		1.33[0.48-3.67]

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ Ref=Reference , CI=Confidence Intervals , OR= Odds

Ratio
Source: Fieldwork (2020)

4.5 Socio-demographic factors and their influence on induced abortion

The socio-demographic factors considered in this study to influence type of abortion uptake were age, marital status, number of living children and ethnicity. Also age at first sex, number of partners, previous termination of pregnancy, decision to terminate pregnancy, reason for choosing facility, future pregnancy intentions, reason for terminating pregnancy. From Table 4.3, it was shown that 73% of those aged 30 and above opted for surgical abortion, 69.05% of the married, 70.05% of those with 1-4 children, 72% of those belonging to other religion and 78.2% of those belonging to other ethnic groups opted for induced surgical abortion. It was shown that 68.5% of those who had their first sex at age 18 or more, 67.9% of those with 1 partner, 71.3% of those who had terminated pregnancy previously, 71.43% of those who indicated the reason for choosing the facility was due its closeness, 76.7% of those without future pregnancy intentions and 70.89% of those who indicated their reason for abortion was education used induced surgical abortion as a means of terminating their pregnancy. Chi-square test of independence was employed to test whether the differences reported in terms of method of abortion procedure women opted for were statistically significant or not.

Binary logistic regression analysis was used to measure which category of women were more likely to opt for which method of abortion. The chi-square analysis showed that age **[**χ^2=6.3, p<0.05], and educational level **[**χ^2=12.8, p<0.01] showed statistically significant association with pregnancy termination. The binary logistic regression analysis showed that those with future pregnancy intentions [OR=0.56, 95%CI=0.32-0.97] were less likely to use surgical abortion to terminate their pregnancy compared to those without any intention to get pregnancy in the future. However, those who indicated their reason for birth interval was short birth interval were more likely to resort to surgical procedure to terminate their pregnancy [OR=2.48,

95%CI=1.01-6.02] compared to those who indicated partner refusal as their reason for terminating.

Table 4.4: Economic factors influencing induced abortion among women

Variables	Method of abortion		χ^2(p-value)	OR[95%CI]
	Medical	Surgical		
Financial benefit from partner			1.0(0.613)	
No	25.00	75.0		**Ref**
Yes	32.25	67.75		0.70[0.07-6.8]
Person paying for service			8.3742(0.015)	
Self	25.00	75.00		**Ref**
Partner	36.11	63.89		0.589[032-1.10]
Parents/friend/relative	11.54	88.46		2.66[0.67-9.68]
Average monthly income			8.9953(0.011)	
<500	22.52	77.48		**Ref**
500-999	32.80	67.20		0.60[0.33-1.07]
1000+	41.51	58.49		**0.41[0.22-0.74]
Educational level			12.7783(0.002)	
None/primary	16.00	84.00		**Ref**
Sec/vocational	34.15	65.85		**0.367[0.12-0.74]
Tertiary	40.78	59.22		**0.27[0.13-0.58]
Working status			0.6553(0.418)	
Not working	28.17	71.83		**Ref**
Working	33.21	66.79		0.79[0.44-1.40]

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ Ref=Reference , CI=Confidence Intervals , OR= Odds Ratio

Source: Fieldwork (2020)

4.6 Economic factors influencing induced abortion among women

The economic factors considered in this study to influence method of abortion uptake were receiving financial benefit from partner, person paying for service, average monthly income, educational level and working status. It was shown that 75.0% of those who indicated they do not get any financial benefit from their partners, 88.46% who indicated the person paying for the service is a parents/friend/relative, 77.5% of those who earn less than GHC500 a month, 84.0% of those with no formal education/primary education and 71.8% of those who are not working opted for surgical abortion. Chi-square test of independence was employed to test

whether the differences reported in terms of methods of abortion procedure women opted for were statistically significant or not.

The Chi-square analysis showed that Person paying for service [χ^2=8.4, p<0.05], average monthly income [χ^2=9.0, p<0.05], educational level [χ^2=12.8, p<0.01] showed statistically significant association with pregnancy termination. Binary Logistic regression analysis was used to measure which category of women were more likely to opt for which method of abortion. The logistic regression analysis showed that those who earn GHC1000 and above [OR=0.41, 95%CI=0.22-0.74] were less likely to induce abortion compared to those who earn less than GHC500 a month. With educational level, those with secondary or vocational [OR=0.367, CI=0.12-0.74] and tertiary [OR=0.27, 95%CI=0.13-0.58] were less likely to resort to induced abortion compared to those with none/primary level of education.

Table 4.5: Relationship between contraceptive use and induced abortion among women

Variable	Method of abortion		$\chi^2_{(p\text{-value})}$	OR[95%CI]
	Medical	Surgical		
Contraceptive knowledge			4.3168(0.038)	
No	10.53	89.47		**Ref**
Yes	33.44	66.56		0.23[0.05-1.03]
Contraceptive use			1.2780(0.258)	
No	40.91	59.09		**Ref**
Yes	32.26	67.74		1.45[0.75-2.78]
Contraceptives failure			4.8094 (0.028)	
No	37.67	62.33		**Ref**
Yes	25.00	75.00		***1.81[1.1- 3.1]
Easy access to contraceptives			0.0783 (0.780)	
No	35.00	65.00		**Ref**
Yes	31.99	68.01		1.14[0.44-2.96]
Use of emergency contraception			10.6723(0.001)	
No	26.86	73.14		Ref
Yes	45.00	55.00		***0.45[0.28-0.73]

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ Ref=Reference , CI=Confidence Intervals , OR= Odds Ratio

Source: Fieldwork (2020)

4.7 Relationship between contraceptive use and induced abortion among women

The contraceptive use factors considered in this study were contraceptive knowledge, contraceptive use, contraceptives failure, use of emergency contraception. The study showed that 89.5% of those do not have knowledge on contraception, 67.7% of those who used contraception, 75% of those who indicated contraceptives have ever failed them and 73.1% of those who do not use emergency contraceptives indicated they used surgical methods to abort their pregnancy.

The Chi-square analysis indicated that there were statistically significant differences in terms of contraceptive knowledge [χ^2=8.4, p<0.05], contraceptives failure [χ^2=4.8 <0.05], and use of emergency contraception [χ^2=10.7, p<0.05] and induced abortion. The logistic regression analysis indicated that those who indicated they have ever experienced contraceptive failure [OR=1.81, 95%CI=1.1-3.1] were more likely to resort to induced abortion compared to those

who had never experienced contraceptive failure. In relation to the use of emergency contraception, women who indicated they have ever used emergency contraception were less likely to induce their abortions [OR=0.45,95% CI=0.28-0.73].

CHAPTER FIVE

DISCUSSION OF RESULTS

5.1 Introduction

This study sought to assess the determinants of induced abortion among women in reproductive age at Marie Stopes Centres of Excellence in the Greater Accra Region of Ghana. This chapter discusses the findings of the study in relation to the specific objectives. Specifically, the findings are synthesised in relation to the socio-demographic factors influencing induced abortion, the economic factors influencing induced abortion among women and relationship between contraceptive use and induced abortion among women.

5.2 Socio-demographic factors and their influence on induced abortion

One of the objectives of this study was to assess the socio-demographic factors associated with induced abortion. The study revealed from the logistic regression analysis that women with future pregnancy intentions were 0.56 times less likely to resort to induced abortion. This is consistent with previous studies in other parts of the world such as Ethiopia (Yilma et al., 2003; Tesfaye et al., 2014). The findings are also congruent to that of Asiimwe et al., (2014), in Uganda who found that women who wanted a child within two years reported the lowest levels of contraceptive use in order to attain their fertility desires. Conversely, women who did not want any more children had the highest levels. The probable explanation to this finding is that women who desire to have more children in the future might be afraid to subject themselves to any complication in the abortion process which can prevent them from achieving their future pregnancy intentions.

In relation to birth interval, the study however found that those who indicated they have short birth interval were 2.48 times more likely to have induced abortion. This is consistent with a study by Ganatra and Faundes, (2016), on the role of birth spacing, family planning services on safe abortion services and post-abortion care. The probable explanation to this finding could

be that women might see that if they give birth to the other child, they would have some challenges in term of child care due to the fact that both children would warrant a lot of attention from the mother. In cases where the woman does not have any person to support her to take care of these children, the probability of she engaging in induced abortion is high.

5.3 Economic factors influencing induced abortion among women

The other objective of the study was to examine the economic factors associated with induced abortion among women. The results indicated that women who earn GHC1000 and above were 0.41 times less likely to have an induced abortion compared to those who earn less than GHC500 a month. This finding is similar to what has been reported in previous studies on the association between wealth and abortion or pregnancy termination. In Nepal, Yogi, Prakash and Neupane, (2018), investigated the prevalence and factors associated with abortion. The study found out that women in the richest wealth quintile were less likely to have an induced abortion. Similar finding was obtained in China by Zheng et al., (2017), who observed a strong association between abortion and income level of women. In particular, low-income women were found to have an increased risk of abortion compared to high income. However, some previous studies in Ghana by Klutsey and Ankomah, (2014), indicate that the likelihood of having a pregnancy terminated was high among richer women compared to poorest women. The findings are also different from the findings from a study in Cambodia (Sopheab et al., 2015) which showed that richer women who were employed had higher odds of pregnancy termination compared to those who were poor and not working. Also a study in Nigeria indicated that rich women who were working had the highest likelihood of induced abortion compared to those who were not working (Biney 2011). The possible explanation to this study is that women from richer households and those who were working may be financially

empowered and could afford to cater for the cost associated with induced abortions compared to poor women and those who were not working.

Another significant finding in this study was the association between level of education and induced abortion. This current study exhibited that those with secondary or vocational and tertiary were less likely to resort to induced abortion compared to those with none/primary level of education. This is consistent with a previous study in Nepal by Yogi, Prakash and Neupane, (2018). Their study used the data from their national Demographic and Health Survey where 2,395 women who had ever had a terminated pregnancy were studied. The study found out that women who were literate with secondary level education, were more likely to undergo an abortion.

5.4 Relationship between contraceptive use and induced abortion among women

Another objective of the study was to assess the Relationship between contraceptive use and induced abortion among women. The study showed that there was statistically significant association between contraceptive use and induced abortion. Empirical evidence suggests that high levels of abortion occur with low access to modern contraception (Lauro, 2011). In this current study it was found that women who indicated they have ever experienced contraceptive failure were more likely to resort to the use of surgical abortion compared to those who have never experienced contraceptive failure. This corroborated a previous study in Kenya which was undertaken to assess the prevalence and correlates of reporting a previous induced abortion (Kabiru et al. 2016). The study found out that a large proportion of contraceptive users reporting a previous induced abortion were using methods known to have high failure rates. Specifically, 42% of contraceptive users who stated that they had a previous abortion reported the use of emergency contraception while 12% reported the use of the rhythm method, withdrawal or lactational amenorrhea.

The findings in this current study are further supported by a study in Iran by Hosseini, Erfani and Nojomi (2017) involving a representative sample of 3,000 married women aged 15-49 years to examine factors associated with the incidence of abortion using logistic regression models. They found that the incidence of abortion was strongly associated with those using long-acting contraceptive. The results are still consistent with what was found by Klutsey and Ankomah (2014) in Ghana who also found that women with no knowledge of contraceptive method were 4.6 times likely to seek induced abortion compared with women who had knowledge of contraceptive methods. In addition the findings confirm what was found by Borges et al., (2015), who also conducted a prospective cohort study in Brazil to assess whether contraceptive use is associated with access to family planning services and abortion. They found that women who reported utilization of both contraceptive and counselling in the same month had higher odds of reporting contraceptive use during the six-month period post-abortion when compared with those who did not use these family planning services. The practical implication of these findings is that women who resort to methods of contraception that are not reliable often than not get unintended pregnancy and some have to resort to pregnancy termination to take care of the unintended pregnancy. To avoid unintended pregnancies and abortions, women were counselled to resort to highly efficacious means of contraception such as implants and intrauterine device which has about 99.6% protection level and not the use of emergency contraceptive which is not considered as a regular method of contraception. Specifically, women who indicated they have ever used emergency contraception were less likely to induce their abortions.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Introduction

This chapter presents the summary of the study, the conclusions and some recommendations. This study sought to assess the determinants of induced abortion among women in reproductive age at Marie Stopes Centres of Excellence in the Greater Accra Region of Ghana. Specifically, the study sought to describe the characteristics of women presenting at MSI facilities, determine the relationship between socio-demographic factors and induced abortion, examine the relationship between economic factors and induced abortion among women and to identify the relationship between contraceptive use and induced abortion among women. The study was a quantitative study that was carried out in Marie Stopes Centres of Excellence in the Greater Accra Region of Ghana. Questionnaires were used to collect data from 342 women. The data was entered into SPSS version 25 and exported to STATA version 14.0 for further analyses. Both descriptive and inferential statistics were employed to analyse the data. The descriptive statistics involved the use of frequencies and percentages while the inferential statistics adopted Chi-square test and binary logistics analysis which reported odds ratios with their respective 95% confidence intervals signifying level of precision. The preformed statistical test was two-tailed with the significant alpha value set at 5% ($p<0.05$).

6.2 Conclusion

The following conclusions can be drawn based on the objectives of the study**.**

Findings from the study revealed that majority of respondents were young, single, nulliparous and Christians. Most of them had not attained SHS education but only few had no formal education. Findings from this study, however, showed that most respondents were employed although most were young. The findings that women in non-marital unions are more likely to

choose induced abortion support the fact that single women have fewer options when faced with unintended pregnancies.

Women with future pregnancy intentions were less likely to induce an abortion to terminate their pregnancy compared to those without any intention to get pregnancy in the future.

Data also revealed that, most women who experienced an induced abortion failed to use a method prior to the termination of pregnancy. The study seemed to suggest a low contraceptive prevalence rate due to few women using a contraceptive method at the time they got pregnant. Moreover, some participants had no knowledge of contraceptives prior to the study and for those who had ever used a contraceptive, only a few were still using it. A small percentage of women used a method but reported experiencing contraceptive failure.

The fact that those who use modern contraceptives have also had an induced abortion due to their experience with contraceptive failure suggests lack of in-depth knowledge about consistent and effective use of contraceptives. This suggests a gap in educational and promotional activities of family planning programmes, and activities in the region hence continuous education and support is needed to ensure proper family planning.

The study also confirmed that women with short birth intervals are more likely to resort to induced abortion.

Educational level, previous abortion experience, birth interval, employment status and future pregnancy intensions were found to be associated with the decision to have an induced abortion.

Wealthy people were less likely to induce abortion compared to those who had low income jobs.

This current study presented that, those with secondary or vocational and tertiary level of education were less likely to resort to induced abortion compared to those with none or primary level of education.

Improved provision of family planning counselling and methods of contraception, and better accessibility of contraceptives, may reduce the prevalence of induced abortions among women who indicated they have ever used emergency contraception. Women accessed services at Marie Stopes International because it had good service providers, was low comparatively to cost and was nearer to them.

6.3 Recommendations

Based on the forgoing conclusions drawn from the study, the following recommendations are being made.

Women in Reproductive Age

1. Women with future pregnancy intentions should be educated to the importance of contraceptive usage to help in either spacing or limiting of their children
2. Women with short birth intervals should be educated by the nurses on the need to space their children to help improve their own health and that of their children
3. Women who use contraceptive methods that are not reliable such as 'withdrawal method should be encouraged by the healthcare providers to use more effective ones such as the female condom
4. Women can also be educated on the appropriate ways to use emergency contraceptive pills

Service Providers.

- Family planning educational and promotional activities should be concentrated on behaviour change to encourage contraceptive use among all age groups to help in either spacing or limiting of child birth

- Family planning services provided by the health centres and clinics in the region should focus on the use of more effective modern methods of contraception such as the long acting reversible methods for example implants and intrauterine device
- Strategies to intensify education on the appropriate ways to use emergency contraceptive pills should be put in place

Ghana Health Service

- Health organizations should be obliged to strengthen Family Planning services and respond to the gaps in contraceptive services, especially in Sub-Saharan Africa, including Family Planning for post-abortion care clients
- Decentralization of services to midlevel clinicians will require collaboration and teamwork among nursing, midwifery and medical providers and professional organizations as a means of bringing attention to the urgency of the need to strengthen post abortion Family Planning

Ministry of Health

- Policies and funding decisions need to emphasize post-abortion family planning needs. Providing sufficient resources for post-abortion family planning from national budgets and international donors is crucial. These resources include not only the training for post-abortion care services, but family planning commodities and other equipment needed to provide the package of post-abortion care services, which must be included in national, regional, district and facility budgets. Training for in-service and pre-service providers should reflect the new priorities. Accordingly, job descriptions would need to change so that the scope of work is inclusive of post-abortion family planning counseling and service delivery.
- In Ghana, contraceptive use has not kept up with the desire for smaller family size. There is an unmet need for family planning. A range of contraceptive options should

be made available and accessible to women while intensifying education on contraceptive options and its side effects. This will go a long way to reduce the number of unintended pregnancies and reduce the incidence of unsafe abortion.

- Ministry of health should continue to provide technical support to GHS to adapt sexual and reproductive health guidelines to specific contexts and strengthen national policies and programmes related to contraception and safe abortion care.

Marie Stopes International Ghana

- A qualitative study on the post abortion care experiences of women is recommended as this would shed more light on their level of satisfaction with service delivery at the MSIG facilities. Future research should examine in greater depth the personal, social, economic, and health factors that inform a woman's decision to have an abortion as these reasons may shed light on the potential consequences that unintended births can have on women's lives.

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APPENDIX A: QUESTIONNAIRE

CLIENT INFORMATION SHEET
PEASE READ TO THE RESPONDENT:
My name is ……I am a Student at Ensign College of Public Health, Kpong. I am conducting a research on the determinants of induced abortion among women in reproductive age. I would be grateful if you could spare some time to answer this questionnaire. You are hereby assured of anonymity and that any information provided will be treated with the utmost confidentiality. If at any point you feel reluctant to participate you have the right to drop out without any offense or hindrance. Thank you. We will not write your name on any of the questionnaires and it will not be linked with your private medical records. It will not be possible to identify you from any information we release or use. We will not discuss your individual answers with the staff members. Whether you decide to take part in this survey is voluntary – this means that you do not have to answer these questions. Whether you take part or not will not affect any future care that you receive. Additionally, you may decline to answer any question or withdraw from the interview without giving a reason. If you have questions about *this survey*, please contact Samuel Tagoe on 0208260846 or Tricia Morrison on 0204949797 any time for further clarification Do you want to ask me anything now? If not, may I continue with the interview? Thank you for your time.
I certify that I have read the Client Information Sheet and have explained this survey to the participant, and that s/he understands the nature and the purpose of the study and consent to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily. *Please tick one box:* ☐ **The client declines to be interviewed** ☐ **The client agrees to be interviewed** **Respondent Signature……..** ☐ **Name of interviewer: _____** **Signature:_____Date: _____**

INTERVIEW AND SITE INFORMATION			
PLEASE COMPLETE BEFORE THE INTERVIEW.			
I1 QNUM	Unique questionnaire number	_ / _ _ / _ _ _ _ [service delivery channel code] [facility code] [respondent number]	
I2 NAME	Name of facility	Ashiaman Centre .....1 Kokomlemle Centre .....2 Tema New Town Centre .....3 Dansoman Last Stop …….4	
I4 DATE	Today's date	_ _ / _ _ / _ _ _ _ (dd / mm / yyyy)	

SECTION A: DEMOGRAPHICS			
READ TO RESPONDENT: *"I would like to ask you some questions about yourself including your age, education and occupation, in order for us to ensure our services are reaching everyone in the community."* READ QUESTIONS TO RESPONDENT. DO NOT READ OUT ANSWERS UNLESS STATED.			
D2 (AGE)	**How old are you?** WRITE '999' IF THE RESPONDENT DOESN'T KNOW	_____ years	
D3 **(RES)**	**Place of residence?**	_____	
D4 (EDU)	**What is your highest level of education?**	None / non-formal…….....1 Some / Completed primar……..….2 .....3 Some / completed secondary, vocational or technical…..…….…….....4 Some tertiary or higher.....5	

		Declines to answer 999	
	PROBE IF THE RESPONDENT COMPLETED THIS LEVEL OF EDUCATION, OR ATTENDED SOME OF IT, AND CIRCLE THE CORRESPONDING NUMBER		
D5 (MAR)	**What is your marital status?**	Single .....1 Married .....2 Living with partner……..……..3 Widowed / Divorced / Separated….....4 Declines to answer.....999	
D6 (CHILD)	**How many living children do you have?** WRITE '0' IF THE CLIENT HAS NO CHILDREN. WRITE '999' IF THE RESPONDENT DOESN'T KNOW.	_____ children	
D7 (JOBC)	**What is your occupation, that is, what kind of work do you mainly do?**	Unemployed, not looking for work……1 Unemployed, looking for work……...2 Agriculture…….……....3 Unskilled manual……...….4 Skilled manual……..……..….5 Sales & services……..…6 Clerical…….……..……7 Professional technical / managerial….……..…..8 Student…….…….……9 Declines to answer…….……..…999	
D8 (REL**)**	**What is your religious affiliation?**	Christian……1 Muslim…….……..….. 2 Traditionalist……...3	

		Other, Specify…….4	
D9 (ETH)	**What is your ethnicity?**	Akan ……1 Ga……..2 Ewe……3 Northern ……..4 Other, Specify…….5	

SECTION B: SERVICE USE			
READ TO RESPONDENT: READ QUESTION TO RESPONDEN. DO NOT READ OUT ANSWERS UNLESS STATED.			
S1 (SERV)	What service(s) did you actually receive today?	Surgical procedure……..1 Medical procedure……..2	
S2 (EXP)	Did the provider explain both options to you for your SA/PAC service today, using pills or having a surgical procedure?	Yes…….1 No……..2	If No skip E1
S3 (OPT)	**Why did you opt for the type of SA/PAC service that you had today?** DO NOT READ OUT OPTIONS CIRCLE ALL THAT APPLY A. It was a cheaper option (SACPRICE) B. I wanted to avoid pain (SACPAIN) C. I thought it would be simpler and faster (SACSIMP) D. I was afraid of/wanted to avoid side effects (SACSEFF) E. I wanted to have more control (SACOWN) F. I thought it would be more natural (SACNAT) G. The provider said this was the better option for me/ the provider recommended this option (SACREC) H. It was the only option for me(SACNOP)	Yes No A. .....1....…….....0 B. .....1....…….....0 C. .....1....…….....0 D. .....1....…….....0 E. .....1....…….....0 F. .....1....…….....0 G. .....1.....…….....0 H. ….....1.....….....0	

	If Other, specify:_____ (SACOTH)		

SECTION C: ECONOMIC FACTORS			
READ TO RESPONDENT: "I would like to ask you some questions about yourself including your age, education and occupation, in order for us to ensure our services are reaching everyone in the community." READ QUESTIONS TO RESPONDENT. DO NOT READ OUT ANSWERS UNLESS STATED			
E1 (BEN)	Do you benefit financially from partner	A. Yes……1 B. No……..0	
E2 (BENY)	If no, why?	…… …… …… ……	
E3 (PAYW)	Who is paying for today's service?	A. Self……1 B. Partner……2 C. Parent……3 D. Friend……4 E. Relative……5	
E4 (INC)	What is your average monthly income?	A. Less than 500……1 B. 500 – 999……..2 C. 1,000- 1,499……3 D. 1,500- 2,000……4 E. Moree than 2,000……5 _____ - (In GH cedis)	
SECTION D: CHARACTERISTICS OF WOMEN			
C1 (SI)	Age at first sexual intercourse?	_____years	
C2 (PNT)	How many partners do you have currently?	One……1 Two……2 More than two……..……3 Declines to answer……999	

C3(TM)	Before your visit today, have you ever terminated a pregnancy before?	_____ _____	
C4 (TT)	If yes, how many times before your visit today have you terminated pregnancy?	_____ _____	
C5 (TMA)	If yes, at what age(s)?	Age1: _____ , Age2:_____, Age3:_____years 1st TOP:____yrs, Don't Remember1 ☐ 2nd TOP:____yrs, Don't Remember1☐ 3rd TOP:____yrs, Don't Remember1☐	
C65 (TMF)	If yes, at which facility?	Yes No At Home……..1……..0 This facility…….1……..02 Other private facility……..……..13 Public facility……..……..2 Home……..……..3 Other, Specify……..44 1st TOP:_____, 2nd TOP:_____, 3rd TOP:_____,	
C76. (IFN)	Who influenced your decision most to terminate this pregnancy?	A. Self……1 B. Partner……2 C. Parent……3 D. Friend……4 E. Relative……5	
C87. (REAF)	What is the main reason for choosing this facility today?	A. Low cost……1 B. Range of services offered…….2 C. Convenient Location……3 D. Good provider attitude…….4 E. Nearby……5 F. Other, Specify……6	
C98. (PREG)	Do you intend to get pregnant again?	A. Yes……..1 B. No……0 C. Not sure……..2	

C9. (PREGR)	What is your main reason for terminating this pregnancy	A. Partner refusal……..1 B. Education……2 C. Rape/Incest…….……3 D. Foetal abnormality……..……4 E. Birth Interval too short……5 F. Financial constraints…….……6 G. Other Specify……7	

SECTION E: CONTRACEPTIVE USE			
READ TO RESPONDENT: *"I would like to ask you some questions about yourself including your age, education and occupation, in order for us to ensure our services are reaching everyone in the community."* READ QUESTIONS TO RESPONDENT. DO NOT READ OUT ANSWERS UNLESS STATED.			
P1 (CHRD)	**Have you heard of contraceptives?**	A. Yes ……..1 B. No……..0	**If No, skip to P10**
P2 (FPHRD)	**If yes, which ones did you hear of?** *Multiple response required*	A. Injectable ……...1 B. Pills ……..……0 C. Implant …… 1 D. IUD……1 E. Condom……...1 F. Other, please state……..……1……0	
P3 (CUSE)	**Have you ever used contraceptives?**	A. Yes ……..1 B. No……..0	**If No, skip to P7**
P4 (EVUSE)	**If yes or ever used which type of contraceptive use?**	A. Injectable ……1……0 B. Pills ……1……0 C. Implant……..…… 1……0 D. IUD…….……1……0 E. Condom…… 1……0 F. Other, please state……1……0	
P5 (CFAIL)	**Has your contraceptives ever failed?**	A. Yes ……..1 B. No……..0	**If No, skip to P7**

P6 (OUTPG)	**If yes, what was the outcome of the pregnancy?**	A. Kept the pregnancy ……1 B. Aborted by self ……..2 C. Aborted in the hospital ……..3	
P7 (CACC)	**Do you have easy access to contraceptives?**	A. Yes ……..1 B. No……..0	**If No, skip to P9**
P8 (CWHR**)**	**If yes, where do you access contraceptives?**	A. Pharmacy……1 B. Chemical sellers ……..…..2 C. Friends and family ……..……3 D. Hospital/Clinics ……4 E. Other, please specify……5	
P9 (RNOA)	**If no, why don't you have access?**	A. Religious reasons ……1 B. Very far from source……..…2 C. Too expensive ……..…3 D. Others, please specify……..…4	
P10(EC)	**Have you ever used emergency contraceptives (EC)**	A. Yes ……..1 B. No……..0	**If No, skip to P13**
P11 (ECP**)**	**After what period did you use EC?**	A. Within 1 day ……..1 B. After 1 day ……..2 C. After 2 days ……..3 D. After 3 days ……4	
P12 (FRTR**)**	**Do you know when fertility is returned after terminating a pregnancy?**	A. Yes ……..1 B. No……..0	
P13. (PAFP1)	**Did you take any contraceptive after your procedure today?**	A. Yes ……..1 B. No……..0	**If No, skip to P15**
P14 (PFP)	**If yes, which method?**	A. Injectable ……1 B. Pills ……..2 C. Implant ……3 D. IUD……4 E. Condom……..……..…5 F. Other, please state……6	

P15. (PAFP2)	**If no, will you take contraceptive elsewhere or return to this facility within 2 weeks to take it here?**	A. Yes ……..1 B. No……...0	**If Yes, end interview, Otherwise skip to P16**
P16 (WHYN)	**If no, why not?**	…… …… …… ……	