UNDERSTANDING THE TRENDS AND VARIATIONS OF ABORTION IN REGIONS OF GHANA

Abstract

Information on the rates and trends of abortion could be important in identifying gaps in contraceptive use and unwanted pregnancies because many of the abortions that occurs in African settings are unsafe and has been linked to maternal mortality and morbidity. Ghana becomes an important setting for this study because of the estimated deaths of women which occurs as a result of unsafe abortion. We used the Demographic and Health Surveys of 1998, 2003, 2008 and 2014 to explore the trends and variations of abortion rates in the regions of Ghana. The results show that abortion rate is inconsistently high in Ghana with a decline from 19.1% in 1998 to 17% in 2003, but with increase from 16.1% to 21.4% in 2014. The result also showed that abortion rate is inconsistent across all regions of Ghana from 1998 to 2014. In conclusion, this study showed that abortion rate is still very high in Ghana and differs by regions. Prompt implementation and revision of abortion law may have a significant effect on the reduction of maternal mortality and morbidity.

Introduction

Safe and viable use of contraceptive can considerably improves women reproductive health. Contraceptive use allows the aversion of unintended pregnancies, improve child spacing and reduce transmission of Sexually Transmitted Diseases (STD) including HIV (Frost & Lindberg, 2013; Patton et al., 2012). Contraceptive use is also recognize as one of the fundamental strategies of reducing the risk of unwanted pregnancy, thereby, reducing maternal mortality caused by unsafe abortion (Frost & Lindberg, 2013; Patton et al., 2012; Tamang, Raynes-Greenow, McGeechan, & Black, 2017).

Unsafe abortion is a serious public health problem for many sub-Saharan African countries although actions on tackling this problem is lacking. Information on the rates and trends of abortion could be important in identifying gaps in contraceptive use and unwanted pregnancies. Based on available evidence, it has been posited that the use of abortion in sub-Saharan Africa is sometimes substituted for modern contraceptive practices (Lauro, 2011; Singh, 2006). In many sub-Saharan African countries, abortion appears to be the method of choice for birth spacing, especially in the context where the use of contraceptives is low (Lauro, 2011).

Globally, maternal mortality is the leading cause of death among women aged 15-49 years old and has been estimated to be around 550,000 maternal deaths annually with most of these deaths occurring in sub-Saharan Africa (WHO, 2012). The rate of maternal mortality in Ghana is estimated at 350 deaths per 100,000 live births compared to 210 maternal mortality rates per 100,000 live births in the rest of the developing world (WHO, 2012). Although, there are many causes of maternal mortality but unsafe abortion is one of the major causes of maternal deaths which is very high among Ghanaian women (Sundaram, Juarez, Sundaram, & Singh, 2012).

Unsafe abortion is associated with morbidity and mortality. Unsafe abortion and inadequate post-abortion care are one of the major causes of mortality among women within the reproductive age worldwide (WHO, 2011). According to the World Health Organization (WHO) 2011, it is estimated that 42 million abortions are performed annually and about 47,000 women die annually as a result of complications from unsafe abortions (WHO, 2011). In addition, due to unsafe abortion, about 5 million women from developing countries are being hospitalized for complications which can lead to long-term health problems (Singh, 2006).

Understanding the trends of abortion rate is important for public health interventions that is target towards sexual and reproductive health of women. This is important, particularly for countries where abortion rate is high. In addition, exclusive focus on the associated socio-demographic factors is also important for policy makers and public health specialists to in providing interventions to address the problem of sexual and reproductive health.

While studies have explored various factors associated with abortion (Mote, Otupiri, Otupiri, & Hindin, 2010; Mote et al., 2010), the above review of the empirical literature shows that very few of the studies have investigated the trends in abortion rate over a period of time using a nationally population-based dataset of the Ghana Demographic and Health Survey (GDHS). The present study therefore aims to fill this gap by using the GDHS to examine changes in the rate of abortion among women ages 15-49 years across four of the demographic and health surveys 1998, 2003, 2008 and 2014.

Data and Methods

The data source for this study was drawn from Ghana Demographic and Health Surveys (GDHS) from the individual files of women of reproductive ages, 15 to 49 years old

for the survey periods 1998, 2003, 2008 and 2014. The reason for restricting our analysis to four datasets instead of all the six datasets in Ghana is because the first two datasets did not have most of the sociodemographic variables of interest. The respective data contained data as follows; the 1998 data contained 4843 individuals and 6375 households; the 2003 data contained 5691 individuals and 6251 households; the 2008 data contained 4916 individuals and 11778 households and the 2014 data contained data of 9396 individuals and 11835 households.

The outcome variable for this study is abortion which is measured in GDHS by asking the women whether they have "ever terminated a pregnancy". Besides, this question, the surveys collect such background information of the respondents as educational, attainment, wealth index, religious affiliation, place of residence, employment status, and partner age difference. Finally these background characteristics of the respondents are used as explanatory variables in our quest to explain changes in the rate of abortion over time in Ghana. In the analysis, we used graphs to measure the trends in rates of abortion from 1998 to 2014. To assess the changes in trend of abortion among women in Ghana, a two-way cross tabulation of abortion and the socio-demographic variables used in the study is conducted on each survey dataset. Specifically, a two-way cross tabulation is conducted independently for 1998, 2003, 2008 and 2014 surveys. We also use graphs to explain the variations of abortion in the regions of Ghana.

Results

Socio-demographic characteristics of the respondent are presented in Table 1. The table showed that women who reside in Greater Accra constitute the largest proportion of the sample with 14.3%, 14.7%, and 14.1% in 1998, 2003 and 2008 respectively. However, women in the Ashanti and Northern regions are in the majority in the 2014 survey (14.1% respectively). As far as education is concern, the table shows overall improvement in education, although this increase is inconsistent over the years. For instance, secondary education among women decreased from 45.2% in 1998 to 44.3% in 2003, but increased to 50.7% and 51.7% in 2008 and 2014 respectively. Also, the proportion of women with tertiary education increased from 2.2% in 1998 to 5.5% in 2014.

Table 1 also shows that the proportion of women living in urban areas increased from 32.7% in 1998 to 49% in 2014. With respect to religion, majority of the respondents belong to "other Christian" group across the four surveys. In terms of employment status, table 1

shows that most women in Ghana participate in the labour force, while the table shows that women in the middle household wealth index constitute the lowest proportion in all the surveys except in 1998 where information on wealth index is not asked in the survey.

Table 1: S**ocio-demographic characteristics of women age 15-49 years surveyed in Ghana Demographic and Health Survey from 1998, 2003, 2008, and 2014**

Characteristics	**1998 N=4840**	**2003 N=5691**	**2008 N=4916**	**2014 N=9394**
Region				
Western	519 (10.7)	524 (9.2)	438 (8.9)	(10.9)
Central	447 (9.2)	352 (6.2)	334 (6.8)	(10.1)
Greater Accra	692 (14.3)	835 (14.7)	692 (14.1)	(10.6)
Volta	439 (9.1)	442 (7.8)	433 (8.8)	(8.5)
Eastern	550 (11.4)	506 (8.9)	479 (9.7)	(9.7)
Ashanti	629 (13.0)	927 (16.3)	815 (16.6)	(11.1)
Brong Ahafo	309 (6.4)	638 (11.2)	403 (8.2)	(10.7)
Northern	355 (7.3)	610 (10.7)	497 (10.1)	(11.1)
Upper west	350 (7.2)	462 (8.1)	373 (7.6)	(9.7)
Upper east	553 (11.4)	395 (6.9)	452 (9.2)	(7.7)
Education				
No education	1737 (35.9)	1916 (33.7)	1239 (25.2)	2281 (24.3)
Primary	813 (16.8)	1112 (19.5)	999 (20.4)	1746 (18.6)
Secondary	2188 (45.2)	2518 (44.3)	2492 (50.7)	4853 (51.7)
Tertiary	105 (2.2)	144 (2.5)	180 (3.7)	514 (5.5)
Residence				
Urban	1585 (32.7)	2374 (41.7)	2160 (44.0)	4600 (49.0)
Rural	3258 (67.3)	3316 (58.3)	2750 (56.0)	4794 (51.0)
Religion				
No religion	340 (7.0)	302 (5.3)	178 (3.6)	273 (2.91)
Catholic	775 (16.0)	905 (15.9)	733 (14.9)	1341 (14.3)
Other Christian	2724 (56.2)	3259 (57.3)	2897 (59.0)	5828 (62.0)
Muslim	642 (13.3)	1013 (17.8)	832 (17.0)	1725 (18.4)
Traditional	362 (7.5)	211 (3.7)	270 (5.5)	227 (2.4)
Employment status				
No	1257 (26.0)	1358 (23.9)	1210 (24.8)	2625 (28.0)
Yes	3582 (74.0)	4327 (76.1)	3664 (75.2)	6760 (72.0)
Marital status				
Never married	1092 (22.6)	1509 (26.5)	1530 (31.4)	3039 (32.4)
Ever married	3751 (77.4)	4176 (73.5)	3344 (68.6)	6355 (67.6)
Wealth index				
Poor	NA	2334 (41.0)	1990 (40.8)	4094 (43.6)
Middle	NA	988 (17.4)	893 (18.3)	1902 (20.2)
Rich	NA	2363 (41.6)	1991 (40.9)	3398 (36.2)

Figure 1: Abortion rate among women aged 15-49 years in Ghana from 1998-2014

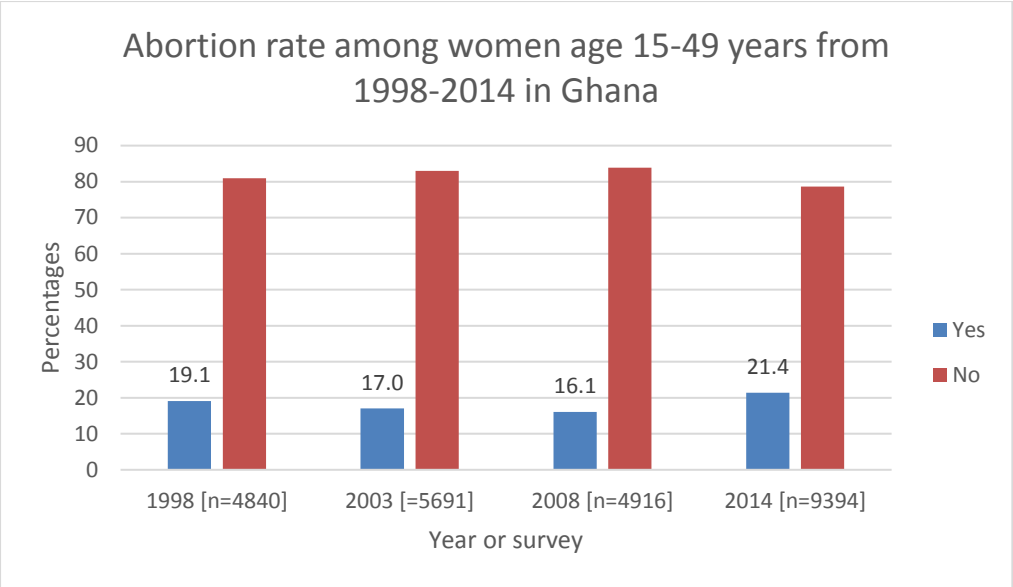
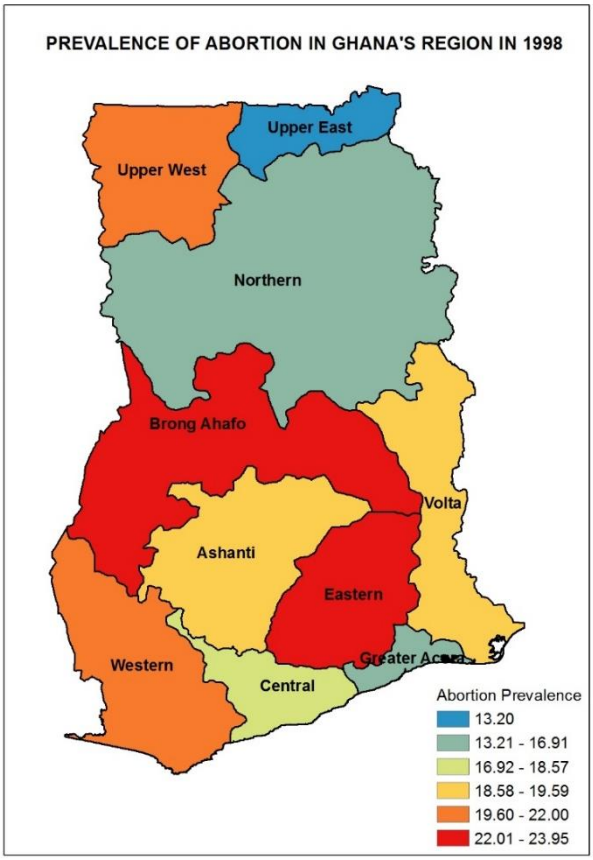


Figure 1 shows that abortion declined from 19.1% in 1998 to 17% in 2003. However, abortion rate increased from 16.1% in 2008 to 21.4 in 2014.

Prevalence and variation of abortion by region among women age 15-49 years surveyed in Ghana Demographic and Health Survey from 1998, 2003, 2008, and 2014

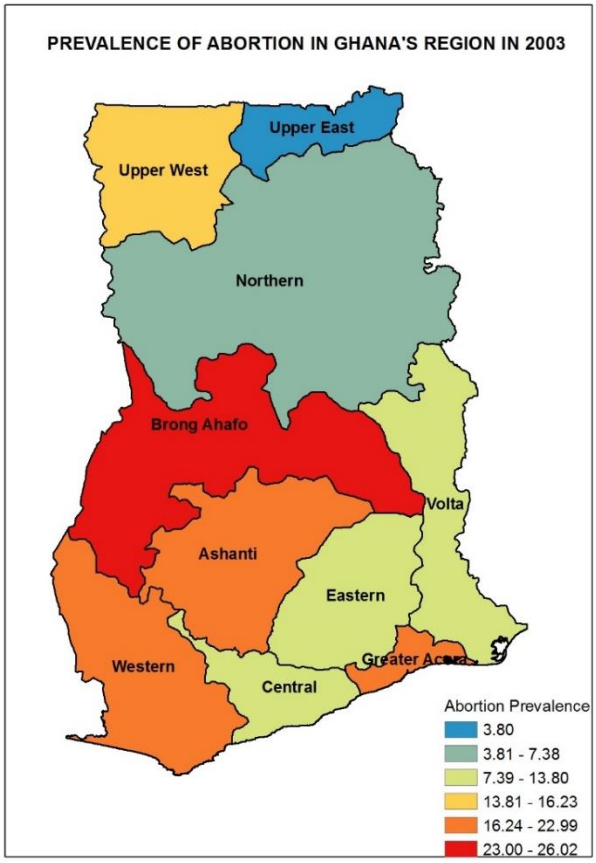
In 1998, the prevalence in abortion rates across Ghana's regions ranged between 13.2% and 24%. The Upper East region hs the lowest rate of abortion at 13.2 while Brong/Ahafo regions respectively and Eastern region has the highest at 24%. The Northern region and Greater Accra regions also have low prevalence rates (13.2% and 16.9% respectively). The Upper West and Western regions are on the fringe of high prevalence rates (19.6% to 22% respectively).

Figure 2: Prevalence and variation of abortion by regions of Ghana in DHS 1998



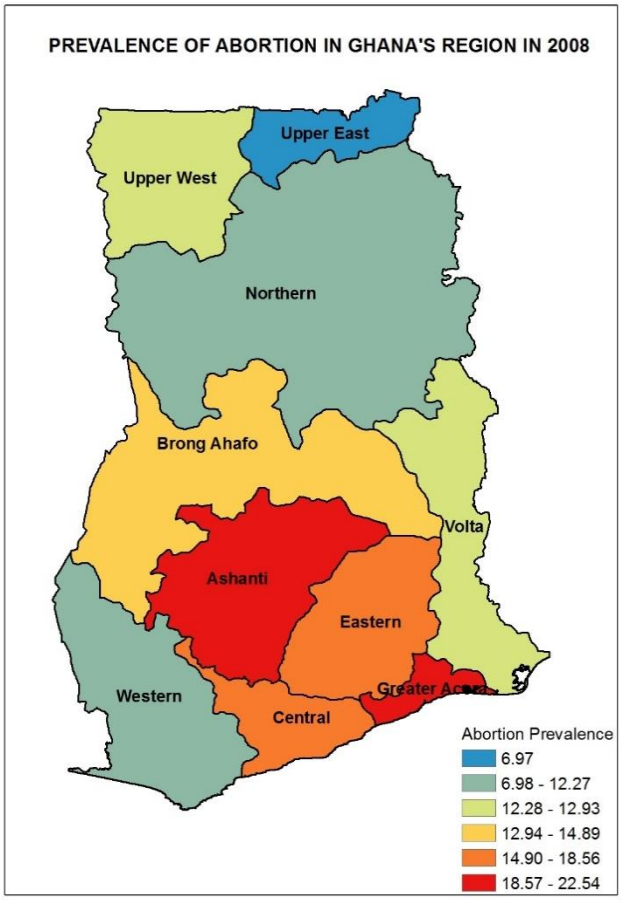
By 2003, the abortion prevalence across Ghana appeared to have improved as the rates now ranged between 3.8% and 26.02%. The Upper Eastern region still remained the region with the lowest prevalence with 3.8%, while the Brong Ahafo region had the highest abortion prevalence that ranged between 23% and 26%. The rates in Ghana as a whole decreased as evidenced by the fact that the Western and Upper West regions which were at the fringes of high prevalence rates in 1998 now had lower prevalence rates. The Upper West region had 13.81% and 16.23% respectively, while the Western region had prevalence rates between 16.24% and 22.99% respectively.

Figure 3: Prevalence and variation of abortion by regions of Ghana in DHS 2003



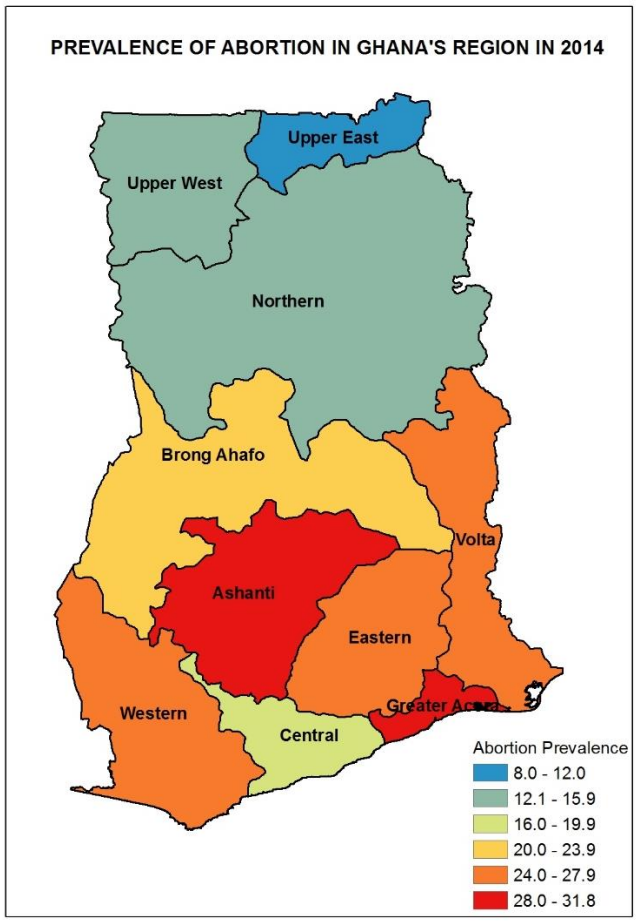
In 2008, abortion prevalence across Ghana had changed with lower prevalence distribution that ranged between 7% and 22.5%. The Upper eastern region still maintained the lowest with 7% and the Ashanti and greater acra region now has the highest rates with values ranging between 18.57% and 22.5%. It's quite interesting to note that region Brong Ahafo which had the highest prevalence rate in 1998 and 2003 respectively had reduced significantly and now had prevalence rates that ranged between 12.9% and 14.9%.

Figure 4: Prevalence and variation of abortion by regions of Ghana in DHS 2008



As at 2014, the Upper east region still maintained the least abortion prevalence rates which ranged between 8% and 12%. A bit of increase from 2008 while the greater Accra and Ashanti has the highest rates between 28% and 31.8% respectively. The trend through time has shown the consistency of the low prevalence rates in the upper eastern region and it is recommended that their anti-abortion practices should be replicated in the regions with consistently high prevalence rates such as Ashanti and greater accra. The practices of Brong Ahafo region could also be replicated as they expeienced a significant drop in abortion revalence rates in the years between 2003 and 2008.

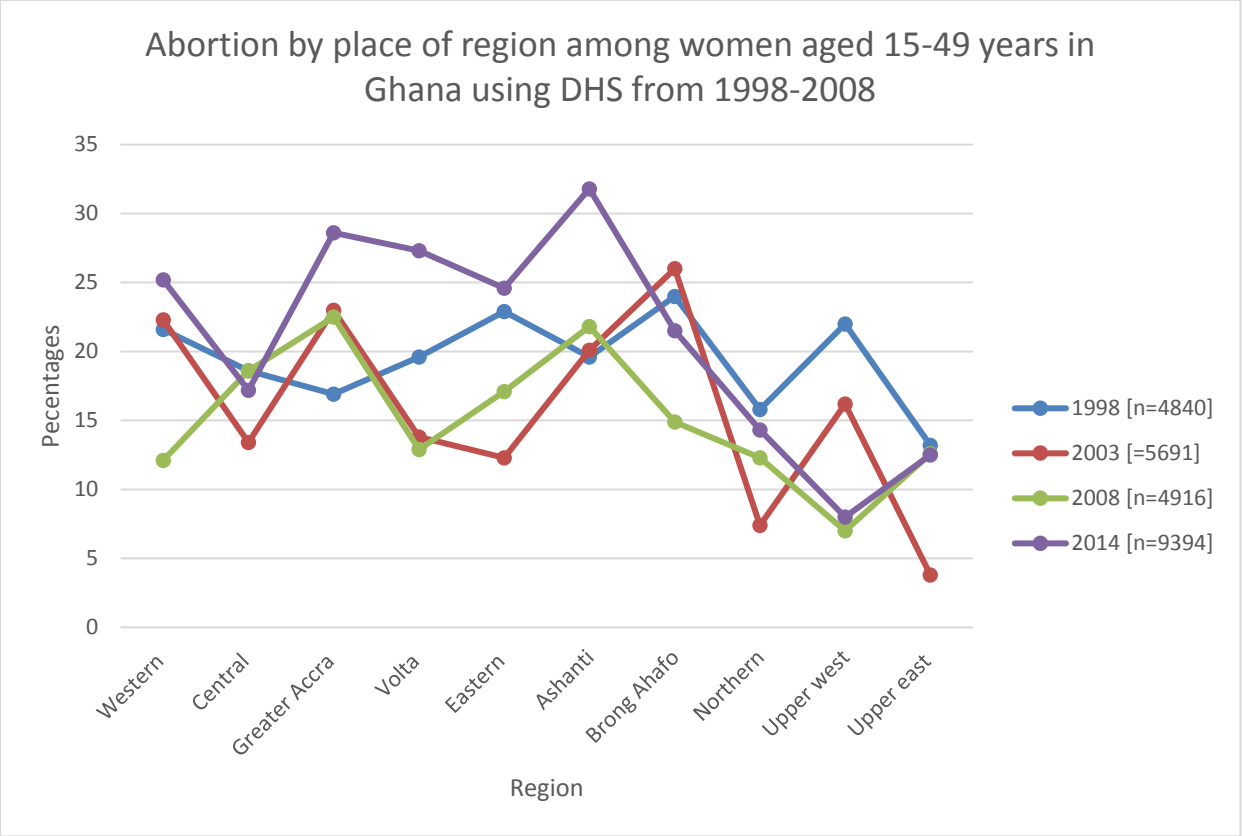
Figure 5: Prevalence and variation of abortion by regions of Ghana in DHS 2014



Trends of abortions by region among women aged 15-49 years

Figure 6 shows that abortion rates in the regions have not been consistent over the years. For instance, the rate of abortion in Western region increased from 21.6% in 1998 to 22.3% in 2003. The inconsistency of the trend of abortion rate is showed from the Table/Graph when the rate of abortion reduced from 22.3% in 2003 to 12.1% in 2008; however, it increased to 25.2% in 2014

Figure 6: Trends of abortion in regions of Ghana regions from 1998-2008



Discussion

The aim of this study is to examine the trends and variations of abortion in Ghana. Thus, the findings from this study should be interpreted in the context of Ghana. However, the results provided in this study can give insight into the rate of abortion among women in African settings as a whole. Over the four surveys, we observed that the rate of abortions in Ghana were inconsistently high in Ghana. In fact, 2014 survey showed that the rate of abortion increased drastically to 21.4% compared to 16.1% in 2008 survey. Compared to other countries such as Ethiopia and Nigeria where the rate of abortion in 2.3% and 2.5% respectively (Lauro, 2011), our findings showed that much is needed to be done in order to reduce the rate of abortion in Ghana.

With regards to rate of abortion by regions of Ghana, we found that abortion varies in the regions of Ghana with some regions reporting high rate of abortion while some region reported low rate. A possible explanation for this could be that the population distribution of

women in the different regions may have impacted on the variation of abortion in the regions of Ghana. This is because the data in alignment with the result showed that, abortion rate is highest in regions where population of women are high. For instance, Western, Central, Greater Accra, and Ashanti regions have the highest population women in the surveys and at the same time have the highest rate of abortion. Our findings also showed that there are variations in abortion rates in the different regions of Ghana. This finding is similar to previous report on abortion variation in Ethiopia (Gessessew, 2010). A possible explanation for this could be that there are differences in the utilization of clinic facilities in the regions of Ghana.

While interpreting the results of this study, the following limitations should be considered. First, abortion was self-reported and therefore, we cannot ascertain if the abortion was legally or illegally done. Second, social desirability might have given rise to incorrect response to abortion questions from the respondents. Third, the result of this study is mere descriptive and therefore, associations and causations cannot be determined. Despite these limitations, this study will add to the body of knowledge on abortion and women reproductive health generally. Findings from can also help policies to tailor or strengthen interventions appropriately.

In conclusion, this study showed that abortion rate is still very high in Ghana and differs by regions. Prompt implementation and revision of abortion law may have a significant effect on the reduction of maternal mortality and morbidity. In addition, increasing the awareness of contraceptive use will reduce unwanted pregnancy that may lead to abortion.

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