Determinants of Abortions in Rural Ghana

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Introduction
An abortion is the termination of pregnancy by the removal or expulsion from the uterus of a fetus or embryo prior to viability.[1] Abortion can occur spontaneously or can be induced. A spontaneous abortion is usually referred to as miscarriage. Hospital based studies conducted in most African countries have shown that abortion leads to about 50% of maternal deaths in Africa.[2] In addition, sub-Saharan Africa has the highest death rate from induced abortion [3] and unless concerted effort is made to reduce abortion many countries in sub-Saharan Africa can not achieve the Millennium Development Goal (MDG) 5 of reducing maternal mortality by half by the year 2015. Hence there is the need to investigate factors that determine abortion to inform appropriate intervention strategies.

The literature on abortion in Ghana is scanty because of its sensitive nature. Of all the four Ghana Demographic and Health Survey (GDHS) reports (1993, 1998, 2003 and 2008), it was only the1998 GDHS that reported abortion prevalence (9.7%).[4,5,6,7] In Ghana, eleven percent (11 %) of maternal deaths is due to unsafe induced abortion [8] and studies that have been conducted on abortion in rural areas of Ghana are limited. It is therefore imperative to conduct such a study in rural areas where limited access to health facilities may lead to unsafe induced abortion. This study was conducted in the coverage area of the Kintampo Health and Demographic Surveillance System (KHDSS) where studies of this nature are not on record to have ever been conducted. The KHDSS area is predominantly rural and the findings of this study will help program managers, municipal and district management teams in Ghana to adopt effective strategies in the management of abortion in rural areas.

Aim
The aim of the study is to explore the factors that are associated with abortion (induced or spontaneous) in the KHDSS area

Specific objectives

- To describe the distribution of abortion in the KHDSS area

- To examine the effect of socio-demographic factors (Marital status, socio-economic status, parity, educational level and age) on abortion.

- To assess non-demographic factors that influence induced abortion

Methods

Study Design and Sources of Data
This will be a cross-sectional study based on individuals randomly selected from the KHDSS area. The KHDSS which was established by Kintampo Health Research Centre (KHRC) covers almost the whole area of Kintampo North Municipality and Kintampo South District within the middle belt of Ghana. The population of the area stands at approximately 140,000 in the year 2011. The KHDSS continually records the core demographic events of births, deaths and migration. In addition, there are other health modules that are incorporated in the KHDSS.

KHRC conducted a Sexual and Reproductive Health (SRH) survey of females aged 10-49, their male partners (for those females in relationships) and a representative sample of other males not in relationships in the KHDSS area from July to November 2011. The survey was designed to capture data on reproductive health behaviour, contraception, fertility preferences, knowledge and prevalence of self-reported sexually transmitted infections within the communities of the KHDSS area. This study will use a total sample of 5,359 females aged 10–49 years who were interviewed during the survey.

Socio-demographic and household assets data of the selected sample will be obtained from the KHDSS database, whereas other factors will be extracted from the SRH database. The household asset data will be used to determine the household wealth quintile (i.e using the Principal Component Analysis) to serve as a proxy for socio-economic status.

Data Management
The survey questionnaires were double entered into the database using Visual fox pro software. Verification was applied to records to resolve discrepancies by referring to the original records in the questionnaire. The data were checked for inconsistencies and outliers.

Statistical Analysis
The statistical analysis involves two levels. The first level involves basic descriptive statistics where the means and percentages of individual characteristics will be computed and tabulated. The second level involves statistical methods that will be used to achieve the specific objectives of the study.

The first objective will be achieved by using chi-squared test to compare and contrast the percentages of abortion across socio-demographic groups. Similar method will be used to estimate the distribution of induced abortion across different methods used to end pregnancy.

With regards to the second objective, logistic regression will be used to examine the effect of socio-demographic factors on abortion. Abortion will be categorized into dichotomous (i.e abortion occurred or abortion did not occur) dependent variable while the socio-demographic variables will be the

independent variables in the logistic model. The odds ratios together with their 95% confidence intervals and p-values will be reported for both univariate and multivariate logistic regression. Using logistic regression, the effect of socio-demographic factors on induced abortion will also be explored.

Objective 3 will be solely descriptive and because of that percentages for underlying non-demographic factors (i.e No money to take care of baby, afraid of parents etc.) that influenced induced abortion will be computed and described.

All statistical tests will be two-tailed and p-values<0.05 will be considered statistically significant. The data will be analyzed using Stata software version 11.0 for windows.

Expected Findings

The expected findings of this study will be the factors that are associated with abortion in rural Ghana. One of the findings will be the commonest method which is used for induced abortion in the KHDSS area. Furthermore, the study will show whether socio-demographic factors have any effect on abortion. In addition, non-demographic factors that influence females of reproductive age to perform induced abortion in a rural setting like the KHDSS area will be ascertained.

Implications for Practice and Future Research
The findings of this study will inform strategies adopted by program managers, district and municipal health management teams in the promotion of abortion programs. In addition, the findings of the study will generate hypothesis for the scientific community to perform a well controlled study on abortion in similar rural settings of sub-Saharan Africa.

References

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