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Predictors of Contraceptive Use in Ghana: Role of Religion, Region of Residence, Ethnicity and Education

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Abstract

Effective contraceptive use prevents most reproductive health challenges. The aim of this study is to identify the demographic predictors of contraceptive usage in Ghana. Using a logistic regression analysis, a sample size of 4916 women of the Ghana Demographic and Health Survey (GDHS) 2008 were selected. Results showed that religion is the most important predictor among the demographic factors. Ethnicity of the women, level of education and region of residence were also found to be statistically significantly. Contraceptive health promotion should be intensified as the best option for preventing unintended pregnancies in the respective variables.

Keywords: Contraceptive Use; Reproductive Health; Religion; Region of Residence; Ethnicity; Education; Logistic Regression; Ghana.

Introduction

Reproductive health issues have become pivotal in global development. Notwithstanding global efforts made over the years, about 19% of women in sub-Saharan Africa use modern methods of contraception, the lowest regional contraceptive prevalence rate in the world today (Population Reference Bureau, 2011). Family planning in the sub region has not yielded much result while Ghana's contraceptive usage rate had been observed as needing further expansion (Ahiadeke, 2005).

Ghana has not experienced much improvement in modern contraceptive usage in recent times. For example, about 13% of married women were using contraceptive method in 1988. This increased to 25% by 2003 and declined to 24% in 2008 (Ghana Statistical Services [GSS], 2008). Similarly, the use of modern methods has decreased in recent times after rising for a while. Undeniably, the use of modern methods nearly doubled for about a period of 15 years from 10% in 1993 to 19% in 2003. However, this declined in 2008 to 17% and has ever since remained so (GSS, 2008).

Unsafe abortion related death is 800 times higher than child delivery related death which is 460 per 100,000 births in Sub-Saharan Africa (World Health Organization, 2011). The need for effective contraceptive use has become increasingly necessary in recent times for ensuring maternal reproductive health, women empowerment and avoiding induced abortion as Ghana seeks to achieve the Millennium Development Goals. Unplanned pregnancy is the root cause of

abortion. It is estimated that more than 4 million unsafe abortions are performed in Africa each year (Brookman-Amisshah, & Mayo, 2004).

The need to boost the rate of contraceptive coverage as a way of enhancing reproductive health is much needed as 2015 approaches. This calls for an active study to identify key predictors to enhance policy and other social reforms. As observed in previous studies, some significant demographic characteristics associated with contraceptive use include education (Adjei, Sarfo, Asiedu, & Sarfo, 2014; Kasarda, Billy, & West, 1986; MacPhail, Pettifor, Pascoe, & Rees, 2007; Robey, Rutstein, Morris, & Blackburn, 1992), marital status (Adjei et al., 2014; Finer, & Henshaw, 2006), work status (Adjei et al., 2014; Tawiah, 1997), ethnicity/descent (Adjei et al., 2014; Buor, 1994; Caldwell & Caldwell, 1987) and religion (Adjei et al., 2014; Coale, 1986).

Ghana's Contraceptive Use and Millennium Development Goals Achievement

The desire to limit birth has increased from 23% in 1988 to 35% in 2008, 19% of married women want to give birth now. About 36% of currently married women would like to wait for 2 or more years for the next birth, and another 36% do not want to have another child or are sterilized (GSS, 2008). Again, it is not surprising to know that more than 37% of pregnancies in Ghana are either mistimed or unwanted (GSS, 2008). It may be right to attribute this situation to the low prevalence rate of contraceptive use in recent times. The simple conclusion one can draw from this is that women who are not using any method of contraception yet want to delay or limit the next birth and at the same time want to have sex are at a higher risk of having unintended or unwanted pregnancy. It is more likely that such women would not be able to achieve their reproductive health goals.

The need for effective contraceptive use has become increasingly necessary in recent times for ensuring maternal reproductive health and women empowerment as Ghana seeks to achieve the Millennium Development Goals. Countries with known cases of "population pressure" have been defined to have issues with development. These countries are not able to meet the high demand for socio-economic needs (Singh et al., 2004). There are some doubts that if the prevalence rate of contraceptive use remains unchanged, Ghana will be far from achieving the millennium development goals due to the increasing number of people in need of health and education, among other public goods. This effect will also create an impediment towards the realization of the reduction of child mortality, improvement of maternal health, achievement of universal primary education, environmental sustainability and combating HIV/AIDS, malaria and other diseases as part of the Millennium Development Goals [MDGs] (Cleland et al., 2006; Health Policy Initiative, 2007).

Interestingly, it has been concluded that widespread use of contraception does not only contribute to permanent decline in abortion rates but has also been found to be a major source of maternal and child health. It is the surest way of reducing unintended pregnancies. It is estimated that 90% of abortion related, 20% of pregnancy-related morbidity and mortality, and 32% of maternal deaths could be prevented by the use of contraception (Cleland et al., 2006). Contraceptive use should be recognized as an effective tool in meeting the millennium development goals at this critical moment. A study in Kenya by Moreland and Talbird (2006) shows a greater influence of family planning on the achievement of the MDG. Regardless of the unmet needs, the investigation showed that family planning needs in Kenya could prevent 14,040 maternal deaths and 434,306 child deaths by the MDG target date of 2015.

In view of these, this study aims at designing a demographic model for developing social marketing programmes for the promotion of contraceptive usage among women in developing countries who share similar socio-economic settings like Ghana.

Method

The data for this paper was derived from the 2008 Ghana demographic and health survey conducted by the Ghana Statistical Service as part of the world-wide Demographic and Health Survey programme of the Institute for Resource Development/Macro Systems. The 2008 GDHS survey was designed to allow for reliable estimation of key demographic and health indicators such as fertility, contraceptive prevalence and other demographic factors. The 2008 GDHS collected key information from all 4916 women age 15-49 in Ghana.

Administratively, Ghana is divided into 10 regions. Each administrative region is subdivided into districts and each district is divided into localities. During the 2000 Population Census, each locality was subdivided into convenient areas called census enumeration areas (EAs). The list of EAs includes census information on households and population information, all grouped by administrative unit. The 2000 Population Census was used as the sampling frame for the 2008 GDHS, and the stratification process for the 2008 GDHS sample used the census administrative subdivisions for data gathering.

Analysis is based on information on current contraceptive use provided by 4916 women. The independent variables selection procedure for the binary logistic regression was “enter” method. This procedure was selected because it yielded stronger significant levels for the independent variables. Indicator variable coding was used to select reference categories for independent variables. The coefficient for each of the remainder categories of an independent variable represented the effect of each category compared to a reference category. For example, No religion was chosen as the reference category for the independent variable for “Religion”.

Data Analysis

Analysis was generally based on binary logistic regression. The independent variable selection procedure was “enter” method. Indicator variable coding was used to select reference categories for independent variables. The coefficient for each of the remainder categories of an independent variable represented the effect of each category compared to a reference category. Only one model was used for this paper. In the model all variables including the control variables (selected socio-demographic characteristics) were included in the equation. The overall correct prediction of the model was 73%. The unit of analysis was pregnant women for the last five years (women who have had life births for the last five years).

Results

The table below shows a binary regression analysis of some socio-demographic variables as they predict current contraceptive usage. Interestingly, all the categories under religion in the Table 1 were all statistically significant with Catholics ($P= 0.001$) being more than 60 times as likely as women of ‘No religion’ to use contraception. This was followed by Muslim ($P= 0.004$) and then Other Christians ($P= 0.004$) who were both more than 30 times as likely as the reference category to use contraceptive method. It was observed that all the other categories such as Pentecostal ($P= 0.004$), Protestant ($P= 0.007$), Traditional/Spiritual ($P= 0.009$) and Other ($P= 0.036$) were strong predictors of current contraceptive use which were about 10 times as likely as ‘no religion’ to use contraceptive method.

The table also shows the significant effect of women’s ethnic background as an important variable to contraceptive usage. It was observed that among the various categories of ethnic groups in Ghana, Grussi ($P= 0.041$) was the only ethnic group which was statistically significant. People of that ethnic group were two times as likely as people of no ethnic group to use current contraceptive method. Surprisingly other ethnic groups have no significant effect on current contraceptive use.

Education has been identified by many researchers to have a strong significant relationship with current contraceptive usage (GSS, 2008). It is therefore not surprising to see that women with primary education were about twice as likely as the reference category to respond to contraceptive usage. It was observed that primary education ($P= 0.029$) was the only category with statistically significant relationship with contraceptive use.

Surprisingly, at the regional level Upper East and Upper West were the only regions that were statistically significant with current contraceptive use. The Table shows that while women in Upper West region were more than 20 times as likely as women in Western Region (RC) to use current contraceptive use women in Upper East Region were only about 7 times as likely as the reference category to use contraceptive.

Table 1: Binary Logistics Regression Background Characteristics and Contraceptive Usage

VARIABLES	B	S.E	SIG	EXP (B)
Religion No religion (RC)	0.000			1.000
Catholic	4.154	1.298	0.001*	63.708
Protestant	3.288	1.214	0.007*	26.796
Pentecostal	3.477	1.212	0.004*	32.372
Other Christian	3.440	1.208	0.004*	31.180
Moslem	3.502	1.218	0.004*	33.167
Traditional/Spiritual	3.167	1.219	0.009*	23.736
Other	2.582	1.234	0.036*	13.227
Ethnicity Akan (RC)	0.000			1.000
Ga/Dangme	0.011	0.335	0.973	1.011
Ewe	-0.193	0.373	0.604	0.824
Guan	-0.216	0.369	0.559	0.806
Mole-Dagbani	-0.178	0.492	0.718	0.837
Grussi	0.881	0.431	0.041*	2.412
Gruma	1.521	0.801	0.057	4.576
Mande	0.729	0.636	0.251	2.073
Other	15.287	1246.96	0.990	4356549.80
Education No Education (RC)	0.000			1.000
Primary	0.759	0.348	0.029*	2.135
Middle/JHS	0.020	0.297	0.947	1.020
Secondary/JHS	0.089	0.269	0.740	1.093
Higher	0.127	0.142	0.373	1.135
Region Western (RC)	0.000			1.000
Central	0.721	0.647	0.265	2.057
Greater Accra	0.448	0.642	0.486	1.565
Volta	-0.245	0.620	0.692	0.782
Eastern	0.443	0.652	0.497	1.557
Ashanti	0.424	0.633	0.503	1.528
Brong Ahafo	-0.255	0.612	0.677	0.775
Northern	0.147	0.630	0.816	1.158
Upper East	2.021	0.795	0.011*	7.543
Upper West	3.021	1.414	0.033*	20.517

Source: Computed from DHS 2008 dataset, Nagelkerke r Square=0.670 or 67.0%, RC = reference category, $P < 0.05$, Constant: -31.912, * = significance

Discussion

It is not surprising to see that all the other categories of religion were statistically significant to current contraceptive use. For example studies of the European fertility transition have revealed the importance of religious values on contraceptive use and the fertility transition (Coale, 1986; Lesthaeghe, 1980). In reviewing the results of the European Fertility Project, for instance, Coale (1986) argued that the church played an important role in influencing the speed and timing of the fertility transition in Europe. He argues that the moral acceptance of birth control was one of the necessary conditions for a major decline in marital fertility. Again, Caldwell & Caldwell (1987) have emphasized the importance of heritage and descent in indigenous African Religion on low contraceptive use among African societies. They argue that among the Traditional African religion, ancestors are honoured and their spirits appeased through the bearing of children as descendants. It was observed that within African Traditional Religion, high fertility is morally good and brings divine approval. Traditional African Religion tends to identify large family size with virtue (Caldwell, & Caldwell, 1987). Addai (1999) argued that the faith provides members support with upward wealth flow from younger to older generation.

Traditional religious women might have got enough reasons and better understanding of contraceptive use compared to other religious groups in recent times. They might have been greatly convinced about the necessity of contraceptive use to their reproductive health than any other religious body. It is quite intriguing, since traditional religion was not so much receptive to contraceptive use (Lesthaeghe, 1989). However, their perception might have changed overtime. It is generally known that certain beliefs and practices which enforce pronatalist attitudes such as “bragro” (a practice within the Akan traditional group to initiate the young woman into marriage) have changed overtime to be more receptive towards contraceptive use in recent times. As observed from the data analysis, it is quite surprising to find a high predicted value of Catholic women to use a contraceptive method. Previous studies have shown that the Catholic faith has a strict stand on artificial methods however flexible on natural methods (Coale, 1986; Blake, 1984; Fagley, 1967). This stand generally ties women of this faith to the use of natural methods (Lesthaeghe, 1989). However, in recent times, things might have changed. The current modern trends of education across various media might be able to explain some of this increasing need to limit births and high dependency burden in Ghana. The results indicate that women affiliated to the Muslim faith were also more likely to use contraceptive method compared to women of no religion. This is also interesting because the faith seems to admonish its followers to procreate and abound in number (Chamie, 1981; Caldwell, 1968; Fagley, 1967; Kirk, 1967). However, the Muslim faith does not prohibit family planning; in fact many Islamic scholars approve of family planning especially where the well-being of the family may be compromised (Kirk, 1967).

Among the ethnic groups, Grussi ethnic group is shown to have low predicted contraceptive usage. Grussi ethnic group is predominantly found in the northern part of Ghana where contraceptive usage rate has been low for some time now (GSS, 2008). Cultural reasons could be a plausible explanation to how women of that ethnic group respond to contraceptive usage. For example, if the values of the cultural practices are positively associated with high birth, women are not likely to use contraceptive methods compared to those who do not cherish large families. It is not surprising to find that the Mole-Dagbani ethnic groups are not so much receptive to contraceptive use. They are mostly found in the Northern part of the country where Islamic religion is predominantly the main religion. Since the religion generally accepts large families, women within that religion are not likely to use contraceptive methods compared to those living in the southern part of the country because of the faith’s position on procreation (Chamie, 1981; Caldwell, 1968). This finding is consistent to the 2008 Ghana Demographic and health Survey report. Northern region where Mole-Dadganis mostly live was found to have the lowest contraceptive prevalence rate (GSS, 2008).

The findings also show education as an important variable for contraceptive usage. The finding is in agreement with other findings. Tawiah (1997) argued that certain educational threshold is needed to trigger appreciable use of contraceptive. According to the study, female education does not only improve women status but also important for achieving their reproductive health needs. Thus, women who had higher education were three times likely to be contraceptive users compared to their counterparts who have no education. Similarly, according to the 2008 Ghana Demographic and Health Survey report, women who have secondary education were found to be more than twice as likely to use contraceptive method as women with no education (GSS, 2008).

The study revealed low likelihood of Upper West and Upper East to respond to current contraceptive usage. Cultural factors could be accounted for this reason since both regions seems to hold similar cultural values. Research confirms the similarities of fertility preference that exist between similar cultural values with reference to birth control. It has been affirmed by research that, different cultural settings change fertility behaviour with respect to birth control and the decision surrounding contraceptive usage (Das, & Deka, 1982).

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Conflict of interest statement

The authors declare that they do not have any conflict of interest.

References

1. Addai, I. (1999). Does Religion Matter in Contraceptive Use among Ghanaian Women? *Review of Religious Research*, 40, (3) 259-277.
2. Adjei, D., Sarfo, J. O., Asiedu, M., & Sarfo, I. A. (2014). Psychosocial factors affecting contraceptive usage: a case of unmet needs in Ghana. *European Scientific Journal*, 10 (15), 84-9
3. Ahiadeke C. (2005). Induced abortion in the context of reproductive change in Ghana. In Agyei-Mensah S, Casterline J. B. and Agyeman D. K. (Eds). *Reproductive Change in Ghana: Recent Patterns and Future Prospects*, University of Ghana, Legon, 178-192
4. Blake, J. (1984). Catholicism and Fertility: On Attitudes of Young Americans. *Population and Development Review*, 10, 329-340.
5. Brookman-Amisshah, E., & Mayo, J.B. (2004). Abortion Law Reform in Sub-Saharan Africa: "No Turning Back. *Reform Health Matters* 12 (24), 227-34.
6. Buor, D. (1994), *Retrospective Decision Making within the Ghanaian Family*, FADEP Technical Services. Nos. 3, *Family and Development Programme*. Accra: University of Ghana
7. Caldwell, J. (1968). Routes to Low Mortality in Poor Countries. *Population and Development Review* 12, 171-220.
8. Caldwell, J. C., & Caldwell, P. (1987). The Cultural Context of High Fertility in Sub Saharan Africa. *Population and Development Review*, 13, 409-437