The Contribution of the Proximate Determinants to Fertility Transition in Ghana

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ABSTRACT

Ghana is among the few African countries that began to experience fertility decline in the late 1980's. The fertility decline was drastic between 1988 and 1998 when the TFR dropped from 6.4 to 4.6. The rate of fertility decline however slowed down since then, the TFR having dropped from 4.6 in 1998 to 4.4 in 2003 and then to 4.0 in 2008. The study examines trends in the proximate determinants of fertility (sexual activity, contraception, and postpartum infecundability) in Ghana over a decade (from 1998 to 2008), with a view to finding out their contributions to fertility decline.

The study was mainly based on data collected from the Ghana Demographic and Health Surveys carried out in 1998, 2003 and 2008. A total of 4843 female respondent were interviewed in 1998, 5691 in 2003 and 4916 in 2008. The study used the Stover's reformulation of Bongaarts' model of proximate determinants of fertility for the data analysis. The findings show that the suppressing effects of sexual activity are more important than the effects of postpartum infecundability, contraception, and marriage patterns in explaining fertility levels and trends in Ghana. The study further shows that the effect of abortion contributed significantly in the fertility transition. It is recommended that the existing family planning programme should be strengthened and expanded through the provision of family planning clinics to areas with no such facilities. Campaigns for contraceptive use should be sustained.

KEYWORDS: sexual activity, contraception, post-partum infecundability, fertility decline, proximate determinants, Ghana

INTRODUCTION

Results from the 2008 Ghana Demographic and Health Survey (GDHS), relative to the earlier four surveys, indicate that the total fertility rate (TFR) of Ghana has declined dramatically over the past 20 years from 6.4 children per woman in 1988 to 4.6 children per woman in 1998. It stabilized at that level until 2003 and then declined again to 4.0 in 2008 (Ghana Statistical Service [GSS], 2009). The decline in fertility was especially rapid during the period between 1988 and mid-1998. With a TFR of 4.0 in 2008, Ghana is seen as having achieved its fertility target of 4.0 children per woman two years before the target year (2010). This TFR is also considered as one of the lowest in sub-Saharan Africa. A study on the factors associated with the fertility transition must be important.

Stover argued that the index of sexual activity is the proportion sexually active in the last month plus women who are not now sexually active but are currently pregnant or abstaining postpartum (since they have recently been exposed to the risk of pregnancy) should be used in place of proportion of married women aged 15-49 used in the Bongaarts model. He also modified the components used in the calculation of the index of abortion and that of contraception. Considering that non-marital sexual activity and births outside marriage are high in contemporary Ghana, the Stovers (1998) must be preferred to Bongaarts (1984) for a study on Ghana's fertility transition.

METHODOLOGY

Stover's (1998) formulations were used to estimate the proximate determinants indices to assess their inhibiting effect on fertility as stated below:

$$TFR = C_x \times C_u \times C_a \times C_i \times C_f \times PF$$

$$C_x = s$$

$$C_i = \frac{20}{18.5 + i}$$

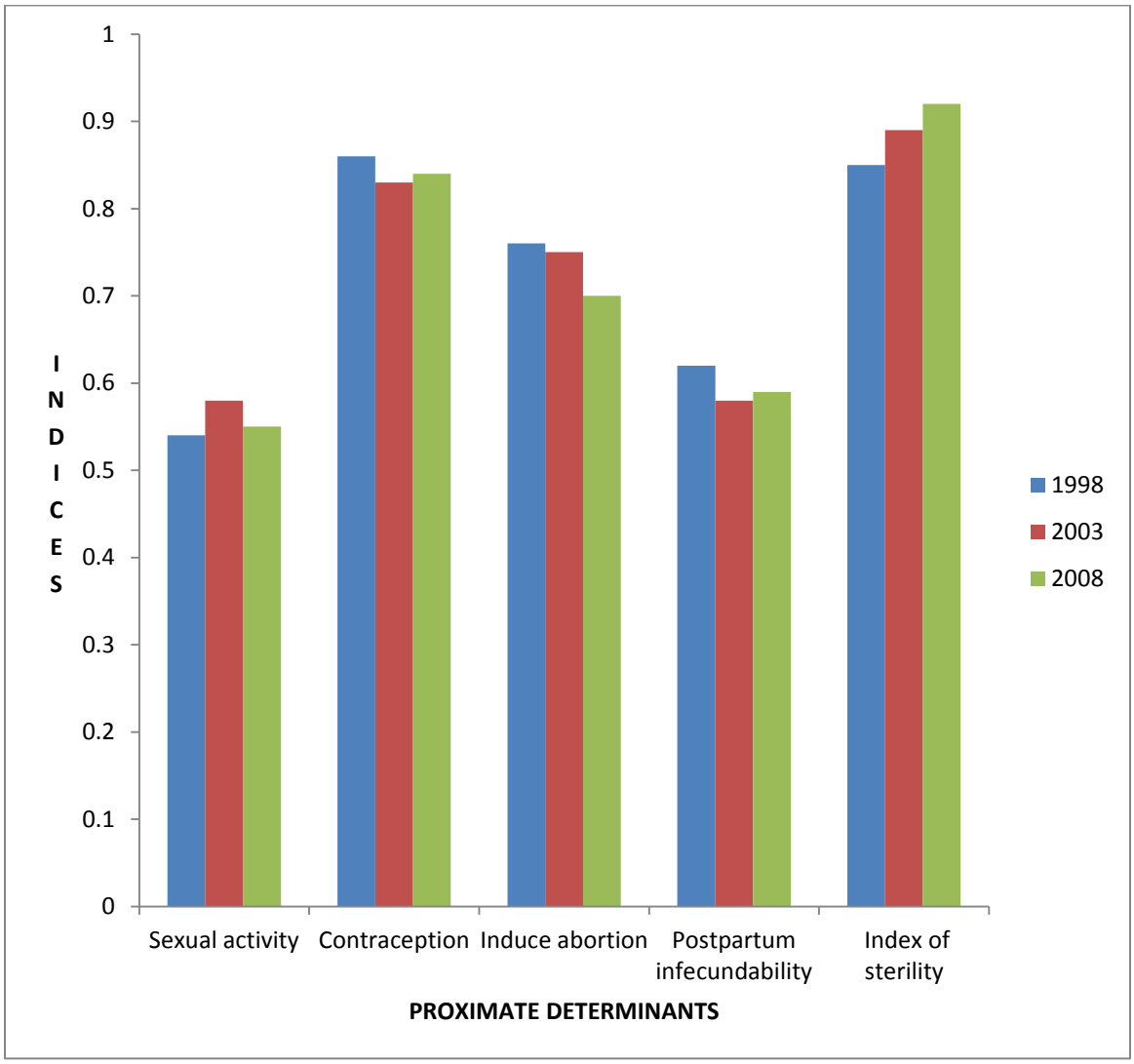
$$C_a = \frac{TFR}{TFR + 0.4 \times (1 + u \times e) \times TAR}$$

$$C_f = 1 - f$$

$$C_u = 1 - u \times e$$

where s = proportion of women aged 15-49 who are sexually active (where sexually active means active in the last month or pregnant or abstaining postpartum); i = the mean duration (in months) of postpartum insusceptibility; u = the proportion of sexually active, fecund women using contraceptives that does not overlap with that experiencing postpartum amenorrhea; e = the average effectiveness of contraception; TAR = the total abortion rate; f = the proportion of sexually active women who are infecund; and PF = the index of potential fertility.

RESULTS
Figure 1



In the total sample, the index of sexual activity has the most fertility inhibiting effect followed by indices of infecundability, abortion contraception and sterility. (see figure1)
As indicated in the figure 1, the index of contraception (Cu) did not follow a linear trend over the years. The indices decreased from 0.86 in 1998 to 0.83 in 2003 and increased slightly to 0.84 in 2008.This explains the rise in contraceptive use from 18.3 percent in 1998 to 20.7 percent and slight decline to 19.4 percent in 2008 . In the total sample of sexually active women, Cx increased from 0.54 in 1998 to 0.58 in 2003 and declined 0.55 by the year 2008. The index of infecundability (Ci) in the total sample of sexually active women decreased from 0.62 in 1998 to 0.58 in 2003 and then went up to 0.53 by 2008; an indication of increase in the fertility inhibition effect of postpartum infecundability from 1998 to 2008. It was the second highest inhibitor of fertility possibly due to customs such as mothers staying away from sexual partners after delivery and long duration of breastfeeding. The index of infecundability has been relatively

stable over the three survey years, probably explaining the relatively stable nature of fertility in Ghana. For the index of sterility, there was a small increase over time (0.85, 0.89 and 0.92 in 1990, 1999 and 2003 respectively).This implies sterility has been decreasing over the years. Potential fertility in the total sample declined from 24.8 in 1998 to 23.7 in 2003 and further declined to 22.9 by 2008.

The index of contraception has shown to be consistently weaker suppressor of fertility than abortion. In 1998, contraception inhibited fertility by 9.2 percent, in 2003 it inhibited fertility by 11.4 percent and 10.2 percent in 2008 whilst the fertility inhibition due to induced abortion rose from 15.9 in 1998 to 17.1 percent in 2003 and to 20.4 percent in 2008, possibly the promotion of contraceptive use has not yielded the desired result, probably those who may resort to contraceptive use have turn to abortion, hence the increase in the contribution of abortion a result the increase in abortion.

Figure1 further shows that the contribution of the index of sterility is the weakest inhibitor of fertility for all the years and its contribution to fertility has been decreasing from 9.7 percent in 1998 to 7.2 percent in 2003 and to 5.1 percent in 2008, possibly due to government interventions.

CONCLUSIONS

The findings show that the suppressing effects of sexual activity are more important than the effects of postpartum infecundability, contraception, and marriage patterns in explaining fertility levels and trends in Ghana. The study further shows that the effect of abortion contributed significantly in the fertility transition.

RECOMMENDATIONS

It is recommended that the existing family planning programme should be strengthened and expanded through the provision of family planning clinics to areas with no such facilities. Campaigns for contraceptive use should be sustained.

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