

Title: **Differential effect of Wealth Quintile on Modern Contraceptive Use: Evidence from Malawi**

Background:

Modern contraceptives have been shown to be useful for limiting fertility and protection against STIs including HIV/AIDS. In sub-Saharan Africa, aside cultural influences, utilization of modern contraceptives has been adversely affected by lack of financial capacity of individuals to acquire them when in need. MC are not easily accessible in most of developing countries where high proportion of the people earns below 1\$/day, thus giving an edge to those who are financially buoyant, this has reflected in the country's age structure with the population of the richest aging while that of the poor remains young. One implication of this is that life-expectancy of the richest is high and that of the poor is low. Few studies in Malawi that have dwelt on contraceptive use have failed to address the gap in modern contraceptive use between women in the richest and poorest wealth quintile, hence this study.

Globally, a situation where a poor segment of the population is affected more than the rich usually attracts attention of Government and International Agencies. Malawi has a youthful population, but its poor are much younger and its wealthy are older. In Malawi, approximately 49 percent of the household population is under age 15. However, when the age structure of Malawi is examined by wealth quintile, the wealthy and the very poor have quite different age structures (PRB, 2012). Among the households in the wealthiest quintile, only 43 percent of the population is under age 15, reflecting a reduction in fertility in recent years (below 4 children per woman) (PRB, 2012). When examining the age structure of the poorest quintile, approximately 53 percent of the household population is under age 15, reflecting high levels of fertility (over 7 children per woman) (MDHS, 2010).

The objectives of this study are; to examine association between socio-demographic variables and modern contraceptive use (ever and current) with particular focus on wealth quintile (only poorest and richest) and also to know if wealth index is a predictor of modern contraceptive use (ever and current use). The ideas were conceived with the view to linking the differential in modern contraceptive use between women in the poorest and richest wealth quintile with high and low fertility among the poor and rich respectively.

Method:

Malawi Demographic Health Survey, 2010 was used. The study focused on 5085 and 2290 married women aged 15-49 who met the inclusion criteria set for ever and current use of modern contraceptive respectively. Only women who belong to either **poorest** or **richest** wealth quintile were included in the analysis while others were excluded. All women that do not provide information on contraceptive utilization status were regarded as missing values and those who have never had sexual intercourse were removed from the analysis. For current use of contraception, aside the above excluded set of women, those who are menopausal, currently pregnant, breast feeding in the last six months, not sexually active in the last four weeks before the survey were also excluded. The dependent variables of interest

were ever use and current use of modern contraceptive, whereas the independent variable of focus is wealth quintile (poorest and richest quintile). Other independent variables such as; age, region, religion, education, place of residence, total life time number of sexual partners, fertility intention e.t.c were also used as control. Descriptive, Chi-square and logistic regression were used for the analysis at 5.0% level of significant. The widely used indirect approach for estimating Total Fertility Rate (P/F ratio) was used to provide estimate of fertility for the women in the poorest and richest wealth quintiles. This is due to inconsistencies and errors in the estimates produced through direct method.

Results:

The mean CEB of the women in the poorest (3.94 ± 2.7) was higher than their counterparts in the richest (2.82 ± 2.3) wealth quintile ($p < 0.0001$). The adjusted Total Fertility Rate (TFR) was strikingly higher among the poor (TFR=6.9) than the rich (TFR=3.8). It is alarming that none of the women in poorest wealth quintile had higher education. Among all the women included in the analysis 75.5% ever used modern contraceptive, while 66.8% and 82.4% ever used modern contraceptive in the poorest and richest wealth quintile respectively ($p < 0.0001$). Among the religious group, 82.2% and 56.4% of women who belong to Catholic and Muslims ever used modern contraceptive. Ever use of modern contraceptive was significantly associated with; current age, education, age at first marriage, region, place of residence, children ever born and age at first birth ($p < 0.0001$).

The prevalence of current use of modern contraceptive was 53.8%. The percentage of women who were currently using contraceptive was significantly higher among richest (58.5%) than the poorest (45.9%). Differential in current use of modern contraceptive also existed between religious group ($p < 0.0001$), age at first marriage ($p = 0.0250$), total life time number of sexual partner ($p < 0.0001$), regions ($p < 0.0001$), place of residence ($p = 0.031$). As expected, current use of modern contraceptive was more prominent among married women who have given birth to at least 5 children (61.9%) than those who had no children (7.5%) and those who already gave birth to 1-2 children (48.6%) ($p < 0.0001$). Also significant variation existed in current use of modern contraceptive among subgroup of women with respect to fertility intension ($p < 0.0001$); age at first birth ($p = 0.045$), current age ($p = 0.001$), level of education ($p < 0.0001$), work status in the last 12 months ($p = 0.036$) and having STI in the last 12 months preceding the survey ($p = 0.016$).

Using multiple logistic regression on the data reveals that poorest married women were less likely (OR=0.423; C.I=0.371-0.482) to ever use modern contraceptive than their counterparts in the richest wealth quintile (model 1a). The odds of ever use of modern contraceptive increases (OR=0.544; C.I=0.455-0.649) when religion, levels of education, region and place of residence were used as control. However, slight reduction existed in the odd ratio (OR=0.519; C.I=0.424-0.635) when other variables such as current age, age at first birth, age at first marriage, and children ever born were added to the regression model.

Restricting the analysis to wealth quintile and current use of modern contraceptive, the logistic regression revealed that women in poorest wealth quintile were 0.601(C.I=0.507-

0.713) less likely to use modern contraceptive than those in richest (model1b). The odds of using modern contraceptive among poorest wealth quintile slightly varies (OR=0.623; C.I=0.496-0.781) when religion, levels of education, region and place of residence were used as control (model 2b). The odd ratio remains unchanged (OR=0.646; C.I=0.504-0.827) even when other variables such as age, age at first birth, age at first marriage, and children ever born were added to the regression model.

CONCLUSION:

There was a gap in fertility and modern contraceptive use between women in the richest and poorest wealth quintile in Malawi. The need for investing large amounts in education of the poor and making modern contraception affordable or free is urgent. This will reduce fertility among the poorest women and improve their life expectancy.