

## **EXTENDED ABSTRACT**

### **CONTRACEPTIVE USE AND METHOD MIX DYNAMICS IN SUB-SAHARAN AFRICA**

*Ayaga A. Bawah, Pearl Kyei and Charles Asabere*

#### ***Background***

This paper proposes to conduct extensive analysis of trends in contraceptive use and method mix dynamics in sub-Saharan Africa. Method mix refers to the distribution of contraceptive use among the sexually active population. Contraceptive use dynamics continues to be of priority in sub-Saharan Africa because of the high level of fertility in many countries of the region despite various interventions to reduce fertility. Following results from the World Fertility Surveys and subsequently, the Demographic Health Surveys, showing high levels of fertility in sub-Saharan Africa, family planning programs became widespread throughout the region with the aim of reducing fertility.

Rapid fertility reductions were subsequently recorded in many countries (Bongaarts 2008; Caldwell, Orubuloye, & Caldwell, 1992). However, subsequent decades have seen the uptake of contraceptive use slowing down in most countries. This slowdown accompanied by stalling fertility has raised concerns over lost interest in family planning. More specifically, the area of contraceptive method mix has become of specific importance because it provides perspectives on both the demand and supply side determinants of contraceptive prevalence. For instance, a method mix skewed towards one particular method can be indicative of limited access to other options or cultural preferences drawing women towards that method at the exclusion of others.

Understanding the factors that drive contraceptive choices represents an integral part of increasing contraceptive prevalence in this context. In this study, we propose to study contraceptive use dynamics with specific reference to method mix in sub-Saharan Africa over the past three decades. We will also examine the determinants of the changing method use dynamic over time. The study will focus on the relative prevalence of barrier methods versus non-barrier methods.

#### **REVIEW OF THE LITERATURE**

Research on contraceptive trends in developing countries has shown changes in the contraceptive method mix in these regions (Bertrand et al. 2014; Bongaarts & Johansson 2002; Seiber, Bertrand, & Sullivan 2007) – an increasing use of barrier methods (i.e. condoms) with certain non-barrier methods (such as the oral pill, and intrauterine devices) becoming less popular. Other non-barrier methods such as the injectable have increased in popularity as well. The increasing use of barrier methods suggests that contraceptive use is increasingly more related to protection against sexually transmitted infections (STIs) generally and HIV/AIDS in particular. Despite ample evidence for the changing trends, the literature has not adequately studied the reasons for the shifts.

An important predictor of contraceptive use and choice is female empowerment (Bogale et al. 2011; Corroon et al. 2014; Crissman, Adanu, & Harlow 2012). Do and Kurimoto (2012) find that female empowerment influences married women's contraceptive using DHS data from Namibia, Zambia, Ghana and Uganda. Their paper studies the relationship between different dimensions of empowerment and contraceptive use and finds a generally positive correlation between the two, consistent with research in this context. They go further to categorize methods into three - nonuse, female only and couple methods and find that different dimensions of empowerment for married women have a varying correlation with method type indicating that the complexities of the relationship between women's empowerment and contraceptive method mix is important and in need of further study.

#### **RESEARCH QUESTIONS**

Our study thus seeks to answer the following research questions:

1. How have contraceptive method mix dynamics changed over time?

We hypothesize that the HIV pandemic in the region is driving an increase in the use of barrier methods over the period as women increasingly seek protection against STIs/HIV, in addition to unwanted pregnancies.

2. Do these trends differ for married versus unmarried women? We will examine contraceptive use trends by marital status. We hypothesize that prevalence of barrier methods would be higher among unmarried women. The literature predominantly focuses on married women and as such, we aim to make an additional contribution by studying the trends for unmarried women as well.
3. What are the determinants of method choice and how have these changed over time? At the micro-level, we also seek to understand the factors that predict a woman's choice of a barrier versus non-barrier method. In particular, we focus on women's empowerment and partner characteristics. This is because barrier methods, unlike others, are contraceptive methods that require partner cooperation.

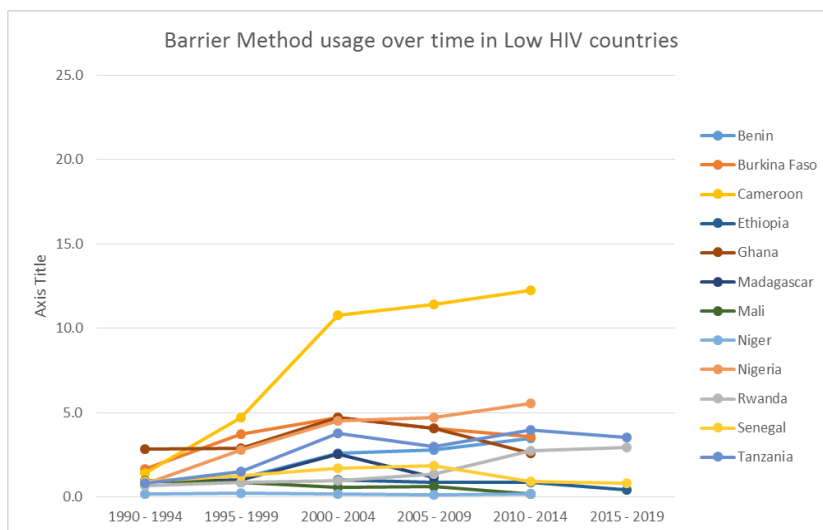
**SCOPE OF ANALYSIS**

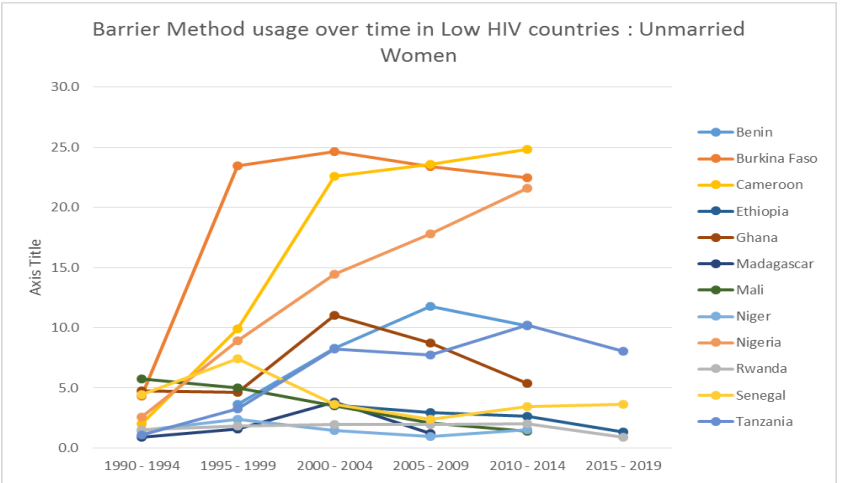
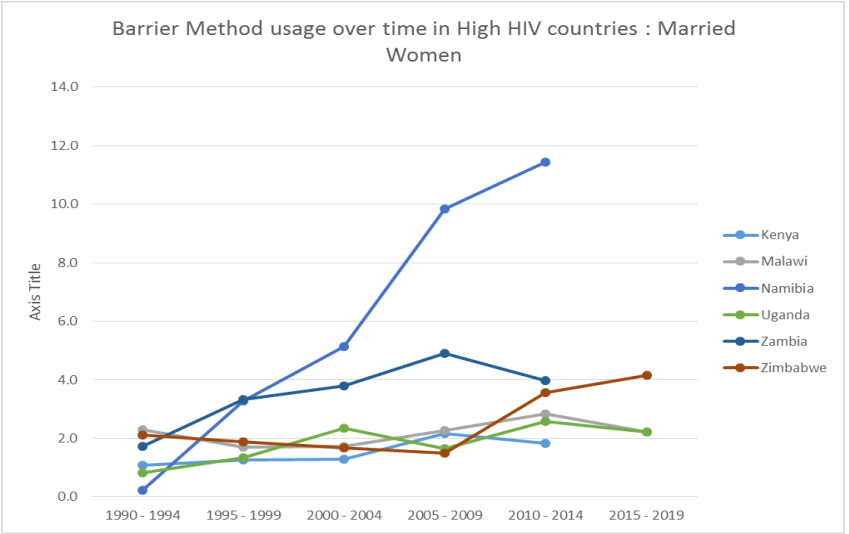
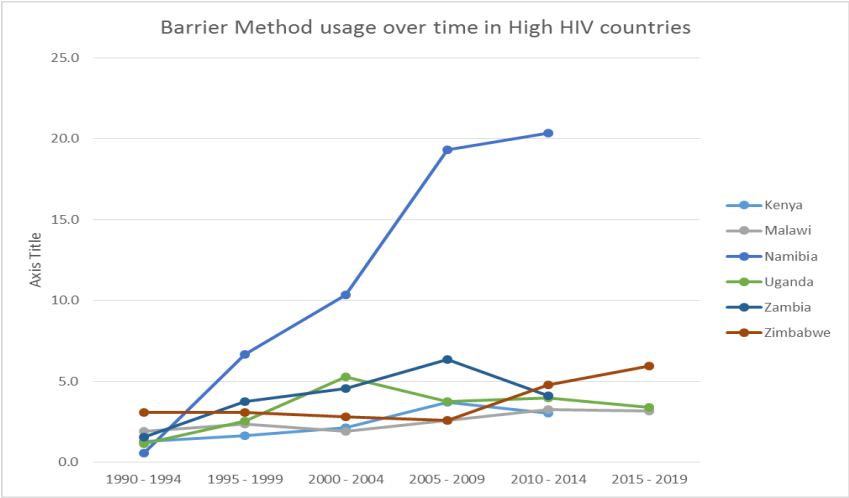
The analysis will use data from standard DHS surveys. We will use data from 18 countries – Benin, Burkina Faso, Cameroon, Cote d'Ivoire, Ghana, Guinea, Kenya, Madagascar, Malawi, Mali, Namibia, Niger, Nigeria, Rwanda, Senegal, Tanzania, Uganda, Zambia, and Zimbabwe – that have at least four standard DHS datasets available. The pooled data from this sample will span over two decades. We will use information on age to create birth cohorts that we will link together to form a pseudo panel.

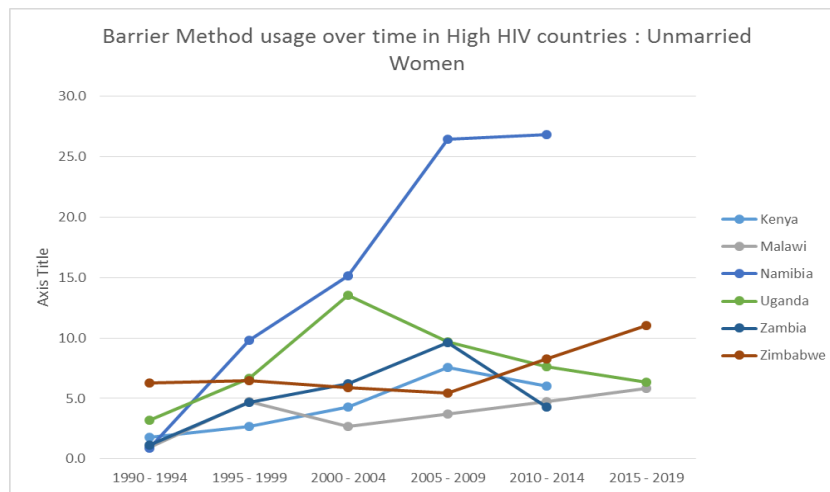
Bivariate analyses will track the proportion of women using barrier methods in each round of data versus the proportion using non-barrier methods and compare that with trends in HIV indicators in the data. Multivariate analyses will use logistic regression to predict barrier method use.

**PRELIMINARY FINDINGS**

The findings reveal that use of barrier methods for unmarried women rose significantly between the late 1980s and late 2000s in the region in tandem with trends in HIV prevalence. For married women, there was little to no change, except in high HIV prevalence countries. Use of barrier methods have been increasing over time in both high and low HIV settings but more so in high HIV countries particularly among unmarried women.







### POTENTIAL POLICY IMPLICATIONS

Given the concern about low contraceptive prevalence in this setting, this study is of great relevance to policy. The findings will contribute to an understanding of which women gravitate towards particular methods of contraception and why, knowledge that policy-makers can utilize for targeted programming.

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