Achievement of replacement fertility among educated Ghanaian women: A conundrum

Kazuyo Machiyama and John Cleland

London School of Hygiene & Tropical Medicine (LSTHM)

ESRC Seminar Series
Post-Transitional Fertility in Developing Countries: Causes and Implications
16 July 2013, Oxford, UK
Introduction

• Historical Europe:
  Widespread use of withdrawal and postponement of marriage since the 18th century (Coale and Watkins 1986, McLauren 1990, Van de Walle and De Luca 2006)

• Fertility transition is usually led by wider use of modern method after the advent of modern contraception in the 1960s.
Role of traditional and short-term methods in fertility transition

- **Former Soviet Union and Turkey**: widespread use of withdrawal with abortion as back-up

- **Albania**: fertility transition driven by withdrawal without legal abortion (Falkingham and Gjonca 2001, Institute of Statistics et al. 2010).

- **Japan**: fertility transition is driven by induced abortion and condom use (Coleman 1983)

- **India**: higher use of sterilisation among the poor and higher use of traditional method among the educated (Basu 2005)

- **Iran**: Use of withdrawal was positively associated with level of education in Iran, but not Turkey (Erfani and Yüksel-Kaptanoğlu 2012)
Trends of TFR in Africa and Asia

Source: UN. World Population Prospect: The 2012 Revision
SSA: Trends of contraceptive prevalence (traditional & modern)

Source: UN World Contraceptive Use 2012

Among married or in-union women aged 15-49

Source: UN World Contraceptive Use 2012
Among married or in-union women aged 15-49

Source: DHS STAT Compiler
Ghana: TFR

Total Fertility Rates for the Three-Year Period Preceding the Survey, by Level of Education

- **No education**
  - 1988: 7.0
  - 1993: 6.0
  - 1998: 5.7
  - 2003: 6.0
  - 2008: 6.0

- **Primary**
  - 1988: 6.5
  - 1993: 5.8
  - 1998: 5.0
  - 2003: 5.3
  - 2008: 4.9

- **Middle/JSS**
  - 1988: 6.0
  - 1993: 4.7
  - 1998: 3.8
  - 2003: 3.5
  - 2008: 3.5

- **Secondary+**
  - 1988: 3.6
  - 1993: 2.8
  - 1998: 2.7
  - 2003: 2.5
  - 2008: 2.1

*Source: ICF Macro 2010*
Ghana: TFR

Source: Machiyama 2011

TFR among women aged 15-39
Ghana: fertility intention

Mean ideal family size among women aged 20-29

Source: GDHS
Ghana: fertility intention

% of currently married women who have 2 children want no more children by level of education

Source: GDHS
Ghana: CPR

Percentage of Currently Married Women 15-49 Currently Using a Contraceptive Method, by Level of Education

Source: ICF Macro 2010
% of married women currently using a contraceptive method, by level of education and method

Source: GDHS
Objectives

• Assess determinants of use of traditional methods in Ghana

• Investigate reasons for non-use of family planning
Methods


• Women in union who were exposed to risk of pregnancy
### Traditional methods

Adjusted odds ratios for currently using traditional or folkloric method vs non-users

<table>
<thead>
<tr>
<th></th>
<th>Adjusted OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residence (ref. urban)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>1.05</td>
<td>0.70</td>
</tr>
<tr>
<td><strong>Area (ref. Southern)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater Accra</td>
<td>1.63</td>
<td>0.94</td>
</tr>
<tr>
<td>Middle</td>
<td>1.31</td>
<td>0.82</td>
</tr>
<tr>
<td>Northern</td>
<td>0.09</td>
<td>0.03</td>
</tr>
<tr>
<td><strong>Education (ref. no education)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>2.22</td>
<td>1.16</td>
</tr>
<tr>
<td>Middle/JSS</td>
<td>1.80</td>
<td>0.97</td>
</tr>
<tr>
<td>Secondary/SSS+</td>
<td>2.45</td>
<td>1.14</td>
</tr>
<tr>
<td><strong>Religion (ref. Protestant)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>0.95</td>
<td>0.50</td>
</tr>
<tr>
<td>Other Christian</td>
<td>0.85</td>
<td>0.49</td>
</tr>
<tr>
<td>Moslem</td>
<td>0.69</td>
<td>0.33</td>
</tr>
<tr>
<td>Traditional/spiritualist</td>
<td>2.25</td>
<td>0.74</td>
</tr>
<tr>
<td>Other</td>
<td>1.15</td>
<td>0.38</td>
</tr>
</tbody>
</table>

N=1046
Reasons for non-use by level of education

- No education
- Primary
- Middle/JSS
- Secondary/S SS+
- Total

- Health concerns
- infrequent sex
- Respondent's opposition
- Breastfeeding
- Other's opposition
- Lack of knowledge or access/cost
**Infrequent sex:**

Recency of last sex by whether infrequent sex was given as a reason for non-use, 2008

<table>
<thead>
<tr>
<th>Recency of last sex</th>
<th>Reason for non-use:</th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Infrequent sex</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>in last 4 weeks</td>
<td></td>
<td>71.3</td>
<td>32.6</td>
<td>64.8</td>
</tr>
<tr>
<td>in last 3 months</td>
<td></td>
<td>19.8</td>
<td>28.9</td>
<td>21.3</td>
</tr>
<tr>
<td>4 or more months ago</td>
<td></td>
<td>6.2</td>
<td>34.0</td>
<td>10.8</td>
</tr>
<tr>
<td>before last birth</td>
<td></td>
<td>0.0</td>
<td>1.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Missing</td>
<td></td>
<td>2.7</td>
<td>2.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

N=479
Infrequent sex

Adjusted odds ratios for not having sex in the last 4 weeks versus having sex in the last 4 weeks, 2008

Adjusted for education, parity, postpartum status, age group, polygyny
An enduring resistance to hormonal methods may lead many Ghanaian women to use non-hormonal methods, i.e. male condom, periodic abstinence or reduced coital frequency as an alternative means of reducing pregnancy risk.

- The elite group use less effective method, but the TFR has continuously declined.

Is Ghanaian fertility transition powered by less effective methods with medical abortion as back-up? (Osei 2009)

“modern” women prefer natural methods to modern methods? (Basu 2005)
Implications

- Further research is needed to understand fertility regulation strategies and strong resistance to FP in Ghana, taking into account living arrangement.

- Re-visit role of traditional methods.
The **STEP UP (Strengthening Evidence for Programming on Unintended Pregnancy) Research Programme Consortium** generates policy-relevant research to promote an evidence-based approach for improving access to family planning and safe abortion. STEP UP focuses its activities in five countries: Bangladesh, Ghana, India, Kenya, and Senegal. STEP UP is funded by UK aid from the UK Government.

[www.stepup.popcouncil.org](http://www.stepup.popcouncil.org)
Thank you!

Contact: Kazuyo.machiyama@lshtm.ac.uk