CONTRACEPTIVE USE: IMPLICATION FOR COMPLETED FERTILITY, PARITY PROGRESSION AND MATERNAL NUTRITIONAL STATUS IN NIGERIA
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ADDRESS:
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Background

- One of the themes of the MDGs is to reduce childhood mortality.
- Improve Maternal’s Health.
- In Nigeria, the DHS conducted across the country in 2003 and 2008 put the Under-five Mortality Rate at 201 and 157 per 1,000 live births respectively.
Nigeria: Most populous African country
Population pyramid: Broad base
Life Expectancy at Birth 47 years (PRB, 2010).
The population figures over years: 158.3 Million, 2010; projected 217.4 Million, 2025 (PRB, 2010).
Population growth rate (2.4)
Population doubling time (28.9 years)
• Major cause of increasing in population is high fertility. Births rate; 42 per 1,000 population.
• 10% of Married women aged 15-49 years are using contraception (modern method) (PRB, 2010)
• Total Fertility Rate in the last decade (NDHS, 2003: TFR=5.7; NDHS, 2008: TFR=5.7)
• Stagnancy in TFR
• Implication on population growth
• Implication on socioeconomic development
• Implication on Health particularly women and under-five children
• High TFR in Nigeria resulted from low level of contraceptive use.

• Unmet needs for contraception.

• Cost of family planning control and poverty.
The adverse consequences of not contracepting are numerous, among which are; Maternal depletion syndrome Competition for scarce resources e.t.c

Few studies have focused on; Interaction between completed fertility, parity progression and nutritional status.

These informed the choice of this study.
Studying the effects of contraceptive use on progression in parity, nutritional status and completed fertility is a bit cumbersome, because of numerous intervening processes through which these variables operate.
Research Questions

1. Does the contraceptive use influence parity progression probability?

2. To what extent does the contraceptive use influence the maternal nutritional status after childbearing has been completed?

3. Does contraceptive use influence completed fertility?
Method

- The study was retrospective cross-sectional in design and utilized NDHS, 2008 data.
- During the survey, women of child-bearing age (15-49) were interviewed.
- The current study focuses on women aged 45-49 years who ever had at least a child and ever married.
Method (contd.)

- Contraceptive use was used as dependent variable; while parity progression, completed fertility measured by children ever born and women nutritional status measured by Body Mass Index were the independent variables.

\[
S(t_{0-1}) = \prod_{i=1}^{j-1} P(T > t_{(i)} | T \geq t_{(i)})
\]

\[
\ln \left( \frac{p}{1-p} \right) = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \ldots + \beta_n X_n
\]
Findings

- The data show that the mean age of the respondents and children ever born (CEB) were 46.8 ± 1.5 years and 6.9 ± 3.1 respectively.
- The mean CEB for never and ever users of contraceptive were 7.1 ± 3.1 yrs and 6.3 ± 2.6 yrs respectively (p<0.001).
- About 26.0% of the respondents have ever used contraception (p<0.001).
- The percentage of women who ever used contraceptive was higher among urban residents (41.7%) than rural (18.9%) (p<0.001).
- The proportion who ever used contraception increases with increasing levels of education and wealth index.
Findings (Contd.)

- it increases from **10.4%** among women with no education to **62.6%** for those with higher levels of education \((p<0.001)\).

- while for wealth quantile, it increases from **7.8%** among women in poor to **57.6%** for those in richest wealth categories \((p<0.001)\).
Findings (Contd.)

- Southern women aged 45-49 ever used contraception (42.8%) than their counterparts from the North (11.4%) (p<0.001).
- Contraceptive use prevalent was more pronounced among Christian women (41.5%) than Muslim women (10.8%) (p<0.001).
- The use of contraception increases with increasing body mass index (p<0.05).
- From 11.6% among undernourished women through 45.8% among the obese.
- About 25.0% of women who had given birth to at least 5 children ever used contraception, while 31.4% was obtained for those who gave birth to less than 5 children. (p<0.001).
Findings (Contd.)

- Controlling for confounding variables
- Ever use of contraceptive increases with increasing level of education. For instance, women who had higher, secondary and primary education were 2.4 ($p<0.01$), 3.2 ($p<0.01$) and 4.7 ($p<0.01$) respectively more likely to ever used contraception than their counterparts who had no education.
Findings (Contd.)

- Contraceptive usage increases with wealth index, with women in richest (AOR=3.06; C.I=1.94-4.84), richer (AOR=2.04; C.I=1.36-3.05), and middle (AOR=1.53; C.I=1.04-2.24) wealth index more likely to have ever used contraception during their childbearing period than women in poorest wealth category.

- Women in the South were 1.67 (p<0.05) more likely to have ever used contraceptive than their cohort in the North.

- Muslim women were 0.461 (p<0.01) less likely to have ever used contraception than those who were Christian.
Findings (Contd.)

- The data further show that women who never used contraceptive were approximately 3 times more likely to be under-nourished than the ever users ($p<0.001$).

- The ordinary linear regression of Body Mass Index (BMI) and Completed Fertility shows that Body Mass Index was negatively related to completed fertility ($p<0.001$).

- There was a significant difference in the mean BMI for those who ever and never used contraceptive ($p<0.01$).
Findings (Contd.)

- Parity progression probabilities from parity 0 to 4 were consistently higher among never-users than women who ever used contraception.
- The tempo changes for all parities above four as ever-users now progress at lower rate during these periods.
- Overall, parity progression rate was higher among never users of contraceptive than ever users.
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Parity Progression Probabilities and Contraceptive use

Parity Progression Probability

Never Used

Ever Used
Analysis of Births; Spacing and Frequency

- If age at first marriage is 15 years, then childbearing begins at age 15 years 9 months. If 2 years interval are left between births.
- The woman is likely to have 17 children at the age of 49 years (ceteris paribus).
- If she behaves the same way, but leaving an interval of 3 years, the number of children she bears at the end of reproductive years reduces to 11. (A gain of 17-11=6).
- To achieve the 6 requires strong adherence to contraceptive use.
Analysis of Births; Spacing and Frequency

Postponement

Further shift

Age/years

Postponement

Further shift

Adebowale, 2011
Implications of not Contracepting

- Short births interval.
- Children having children.
- Infants having junior sibling.
- Family income threatened.
- Family resources over-stretched.
- Care for the children and their education threatened.
- High morbidity and mortality among under-five children in the family.
- Mothers malnourished and health threatened.
- Fathers health and labour activities threatened.
- Poverty swells up.
Poverty circle

Childbearing Behaviour

Poverty圈

Poverty amplifies

Poverty stops

Diseases and infections

Mortality

Small Family size

Large Family size

NL: New Life

Adebowale, 2011
Conclusion

- The present study shows that strong positive association existed between completed fertility of women aged 45-49 years and their wealth index.
- Contraceptive use reduces the likelihood of having higher completed fertility and pace at which childbearing occurs.
- Non utilization of contraceptive inhibits undernourishment.
- Understanding the mechanisms that underline these relationships are crucial in designing effective public policies aimed at improving maternal’s health.
Recommendation

- Married women at early stage of childbearing should develop plans to control fertility by spacing births and halting childbearing when a desired number of children have been born.

- Framework to improve availability, affordability, acceptability, and utilization of family planning practices should be developed in Nigeria, particularly in the rural areas.
Limitations

- Use of secondary data.
- Some of the women might still be involved in childbearing, therefore, their completed fertility will be different from the reported number in this study.
- Childbearing is not the only factor that could influence Maternal Nutritional status. There are other factors.
- Failure of the respondents to give the correct number of total children ever born.
The authors are grateful to Macro-International U.S.A and National Population Commission for allowing us to use their data (NDHS, 2008) for this study.

Centre for Population and Reproductive Health, University of Ibadan.

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Thank you for listening