Analyzing the Association Between Conflict and Contraceptive Use In Mali, Zimbabwe, and Nigeria

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Background
- Past research in Columbia and other African nations suggests conflict reduces access to contraceptive use\(^1\)\(^2\)
- No current quantitative research conducted the countries chosen
- Goal of understanding how conflict impacts contraceptive use before, during, and after conflict in Mali, Zimbabwe, and Nigeria
- Contraceptive use is a key indicator of women’s access to family planning resources; filling this knowledge gap can improve interventions to aid women’s health in times of conflict\(^3\)

Question
How does conflict influence women’s contraceptive use in Mali, Zimbabwe, and Nigeria?

Hypothesis
Contraceptive use will decline due to diminished access to family planning facilities.

Data
- Demographic Health Surveys: contraceptive calendar and GPS coordinates during countries’ respective conflict years
- Uppsala Conflict Data Program (UCDP): organized violence and conflict spanning from 1989 to 2020
- Organization for Economic Cooperation and Development (OECD): annual donations to the three countries from 2002 to 2019

Methods
Linear regression model: \( \hat{y} = \alpha g + \beta t + \gamma g^* t + \delta' z' + \epsilon \)
- \( \hat{y} \): Outcomes variables (abortion, conception, contraception start, and discontinuation, and method switch rates)
- \( g \): Conflict geographic overlap (an observation 15 km from the conflict is considered to be in an exposed region)
- \( t \): Time in relation to conflict period (before, during, after)
- \( \delta' \): Controls (foreign aid, intensity, demographics)

Results
Near zero effects across all 3 countries, implying no difference in contraceptive uptake, discontinuation, switch rate, abortion, or pregnancy before, during, and after conflict.

Note: The thin blue line represents the 90% confidence interval, and the thick blue line represents the 95% confidence interval.

Conclusions
- Conflict in Mali, Nigeria, and Zimbabwe has not impacted abortion, conception, discontinuation, start, and switch rates
- May be due to minimal access to and use of contraceptive and family planning tools
- Intensity and nature of conflict do not affect family planning use and uptake by the local population

Limitations
- Data limitations arising from lack of overlapping conflict and contraceptive use data, which restricted the countries and time periods able to be studied
- Assumed area of exposure to be 15 km radius around conflict
- Did not consider cultural and political factors unique to each country
- Studies have shown significant recall bias in calendar data in Zimbabwe, Mali, and Nigeria\(^4\), bringing into question the validity of our estimates

Future Directions
- Replicating analysis for different countries to see if our conclusions remain accurate
- Expanding our current data sources to other data sets to eliminate potential dataset bias
- Redoing with a different radius of exposure
- Aggregating analysis of conflict into conflict sub-categories

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