

Title: Socioeconomic inequalities in high-risk fertility behaviors over time in Ethiopia

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Abstract: Introduction: High-risk fertility behaviors (HRFB), including short birth intervals, early or late childbearing age, and high parity, are associated with adverse pregnancy outcomes. Understanding the importance of socioeconomic disparity in HRFB and the factors influencing this disparity is essential to improve maternal and child survival. Accordingly, this study investigated socioeconomic inequalities in HRFB over time and its contributing factors.

Methods: We included a total weighted sample of 11,163 and 5,527 women aged 15 to 49 years from the 2005 and 2019 Ethiopia Demographic and Health Surveys, respectively. Erreygers Concentration index (ECI) and curve, along with Erreygers normalized decomposition analysis, were used to examine socioeconomic-related inequalities in HFRB and identify contributing factors to these inequalities.

Results: The study showed that the concentration curve for HFRB remained above the equality line over time, indicating a disproportionate concentration among socioeconomically disadvantaged individuals. In 2005, the pro-poor ECI was -0.0682; in 2019, it was -0.2634, indicating that pro-poor inequality has widened. Educational status (10% in 2005 and 28% in 2019), place of birth (7% in 2005 and 28% in 2019), religion (16% in 2005 and 4% in 2019), and region (9% in 2005 and 3% in 2019) contributed to the observed pro-poor inequality. In 2019, contraceptive use (12%) and wealth index (15%) emerged as additional factors explaining HRFB inequality.

Conclusion: Our findings revealed the disproportional concentration of HRFB among socioeconomically disadvantaged women in Ethiopia, with a widening disparity between 2005 and 2019. Future interventions to address the effect of socioeconomic disadvantage on HRFB should prioritize women with low or no formal education, those who give birth at home, and those who do not use contraceptives.

Keywords: High-risk fertility behavior (HRFB) Socioeconomic inequality Ethiopia Demographic and Health Survey (EDHS) Erreygers Concentration Index (ECI) Decomposition analysis Maternal and child health

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