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Maternal age, paternal age and effective fecundability in rural Bangladesh. EK Brunson, DJ Holman, and D Neill. University of Washington, Seattle, WA.

Effective fecundability is defined as the monthly probability for a conception that leads to a livebirth. One method of assessing effective fecundability is by examining lengths of first birth intervals. Using demographic records of marriage and birth, we examine the effects of maternal age, paternal age, mother's education, and religion on effective fecundability in a rural region of Bangladesh. Data came from a prospective demographic and health survey conducted in Matlab thana by the International Centre for Diarrhoeal Disease Research, Bangladesh. Marriage and birth records from 1975 to 1982 were used to generate first birth intervals. A parametric hazards model of fecundability was used to simultaneously estimate primary sterility, effective fecundability as well as effects of fixed and time varying covariates on effective fecundability. Marriage records were matched for 10,255 pairs of partners, including exact times to birth and observations right censored by death, divorce, migration, or the end of record-keeping. The age range at marriage for wives was 12 and 25 years. The prevalence of primary sterility was 5.1% (±2.6% SE). The estimate of effective fecundability was 0.053 (±0.002). The most parsimonious model showed reduced fecundability for women under 16 years and highest fecundability from 17 to 19 years, relative to the reference age group (20 to 25) years. Fecundability was significantly higher for father's age 25 to 29 years relative to other ages. Religion and mother's education were not associated with fecundability. The results suggest that Bangladeshi women have a higher prevalence of sterility and lower effective fecundability compared to other samples in developing settings.