Adolescent childbearing in Bangladesh: levels, trends, and determinants of timing of first birth

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1. Background and Rationale

Bangladesh, a developing country by any standard, has experienced a rapid fertility decline over the last few decades. Because of its unique nature, Bangladesh's transition has attracted more theoretical interest than any other contemporary transition. Between 1975 and 1999, the country experienced a dramatic decline in fertility levels – from 6.3 children in 1975 to 3.0 children in 2001-2003. No country has achieved this level of fertility, with an infant mortality of 82 per 1,000 live births and a life expectancy at birth of 58 years, in the same time period. After the sharp decline in the fertility rate up to 1994, the fertility rate has remained stagnant, a phenomenon referred to as "plateauing of fertility," and has become a subject of interest to demographers.

While the pace of fertility decline was sharp between 1975 and the 1990s, most of the decrease was observed among women 20 years and older as compared to women in their teen years, keeping teenage fertility one of the highest among all developing nations. The proportion of all births contributed by teenage mothers has also been steadily rising; in 1996-1997, 20% of the total births were to teenagers, compared to 22% in 1999-2000.

Due to patterns of early marriage, low contraceptive use, and the social expectation of having children soon after marriage, childbearing begins early for Bangladeshi women. According to the 2004 Bangladesh Demographic and Health Survey (BDHS), 48% of women aged 15-19 are married, and 59% of married teenagers have begun childbearing. Moreover, the median birth interval is substantially shorter for teenage mothers (27 months) compared to other age groups (38 months for those 20-29, 46 months for those 30-39, and 52 months for those 40-49), leading to 14% of teenagers having two or more births before reaching the age of 20. As expected, teenage childbearing is more prevalent in rural areas compared to urban areas, among teenagers with little or no education compared to those with secondary or higher education, and in the northern and western parts of the country compared to other parts.

2. Objectives

The primary objective of this analysis is to examine levels, trends, and determinants of adolescent childbearing in Bangladesh. In particular, it focuses on regional variations in the levels and trends of adolescent childbearing and examines factors explaining these variations over time.

3. Data and Methods

The analysis will be based on four rounds of BDHS data collected during 1993-1994, 1996-1997, 1999-2000, and 2004. The BDHS surveys were not particularly designed to examine adolescent fertility; nevertheless, these surveys collected information through

nationally representative samples of about 10,000 ever-married women aged 10-49 years in each round, and a reasonable proportion of them belonged to the 15-to-19-year age group (3,337 in 2004; 3,149 in 1999-2000; 2,592 in 1996-1997; and 2,566 in 1993-1994).

The present analysis will utilize two measures of adolescent childbearing: (1) the age-specific fertility rate of women aged 15-19 years, and (2) the proportion of women who have had a child by a given adolescent age – for example, by age 15, 18, or 20 – based on responses from women aged 20-24 years who have completed their teenage years. While the first measure describes the current incidence of childbearing in three years' time prior to the survey for 15-to-19-year-old ever-married women, it does not present the complete fertility experience of this cohort, as they have not completed their adolescent years. On the other hand, the latter measure presents complete experience up to age 19, and has the advantage of describing more exactly the timing of childbearing. The levels and trends of adolescent childbearing will be examined using both of the measures described above. However, for the purpose of examining the determinants of childbearing, the 20-to-24-year age cohort will be used, as they have more complete information on their adolescent years than the former group.

Discrete-time multilevel hazard models will be used to analyze trends and determinants of adolescent childbearing. As the DHS samples are selected using a hierarchical two-stage cluster sampling design, there tends to be a certain correlation between observations within clusters, and individuals from the same cluster are expected to be more alike in terms of characteristics and behaviors than those selected from different clusters. Thus, multilevel analysis is more appropriate for this kind of analysis. The discrete-time hazard model will estimate the probability of a married adolescent's having a first birth.

A number of demographic, socioeconomic, and cultural variables will be included in the model so that the effect of a specific covariate can be estimated after controlling the effects of other variables in the model. Some of the independent variables that will be included are education, place of residence, geographic division, religion, occupation, household economic status (using wealth index), exposure to mass media, use of contraception, and discussion about family planning methods with husbands.

3. Policy Implications

As Bangladesh is currently experiencing a "youth bulge," and a quarter of the total female population is 10-19 years old, constituting the fertility-potential cohort, their fertility behavior must be understood if the national demographic goal of replacement-level fertility is to be achieved. The proposed analysis will help to identify cardinal factors affecting adolescent childbearing in Bangladesh and will assist in formulating policy recommendations to reduce adolescent childbearing in the country.