Marriage and childbearing among adolescents and young women: What do we know from household-based surveys and is it correct?

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Abstract [limit 150 words]

This study discusses reasons why household-based surveys might under-represent young unmarried and childless women and therefore not capture correctly the life experiences of young women. We examine the differences in marital status data between household-based surveys and censuses in several Asian countries. To determine the extent of over-estimation of fertility levels, we adjust age-specific fertility rates on the basis of marital status distribution in censuses. The implications for interpretations of the fertility trends are far-reaching. When analyzing fertility trends only from DHS, Bangladesh achieved in two decades a relatively small reduction in adolescent childbearing. Yet the story may, in fact, be different: the postponement of childbearing —concurrent with the postponement in marriage as seen in the census data—resulted in a decline of ABR to half the level from the early 1990s and played a key role in the rapid fertility decline in Bangladesh.

Introduction

In developing countries of South and South-Eastern Asia, growing numbers of young women (15-24 years old) are involved in textile industry work in manufacturing centers that are often far away from their homes. There is a distinct pattern of life transitions for these young women, including the transition to employment after the end of schooling. Marriage and childbearing are postponed to a later period in life compared to young women who are not employed (see Amin et al. 1998 for Bangladesh).

In these situations of social and economic change in young adulthood, household sample surveys will be more likely to disproportionately capture young women who are married. Household-based surveys would not include unmarried women living outside of the parental household in dormitories or other group quarters close to factories. When the proportion of young women in non-household living arrangements is increasing, the data gathered through household sample surveys will not capture correctly the life experiences of young women in the population.

The adolescent birth rate (ABR)—age-specific fertility rate of women aged 15 to 19—is monitored worldwide as a key indicator of the internationally-agreed goal of improving maternal health (MDG5) and household-based surveys are major source of data for monitoring of this indicator. In several countries, available data yield very different estimates of the level of adolescent fertility depending on the type of data source. In Bangladesh, the Demographic and Health Surveys (DHS) consistently report higher estimates of ABR compared to estimates from the sample registration system, while the differences between the two sources are small for other age groups. In Indonesia, Hull and Hartanto (2009) found much higher total fertility and adolescent birth rate based on DHS data compared to

censuses and large sample surveys. In 2007 the discrepancy in total fertility between the DHS and other sources was more than half a child on average. One of the major causes of the discrepancy was the difference between the DHS and other sources in estimates of the proportion never married among young women.

Such biases are not unique to developing countries household surveys. In countries with good vital statistics data, the assessment of whether survey data are able to provide reliable fertility indicators have been made in the past with conclusion that there tends to be a systematic 'family bias'. In survey data from the 24 participating countries in Fertility and Family Surveys (Festy and Prioux 2002), in particular, women with children tended to be over-sampled, because interviewers were better able to reach them as they are at home where they care for their children.

This study examines the differences in marital status data from household-based surveys and censuses. In the next step, age-specific fertility rates are recalculated with the assumption that marital status distribution of female population in censuses is more accurately describing marital status situation of young women. Thus, we are able determines the extent to which different marital status by age group distributions explains the difference. We focus on several Asian countries that have experienced increased labor force participation among young women (Bangladesh, Cambodia, Lao PDR and Mongolia) and draw on census data from the last two rounds (2000 and 2010) and multiple Demographic and Health Surveys.

Preliminary results

Bangladesh

The census and survey estimates of never-married women by age were similar in the early 1990s: the 1991 census reported 48.7% never-married women aged 15-19 compared with 50.5% in the 1992-93 DHS. Over the past two decades this difference has widened. While the proportion of never-married women aged 15-19 in DHS changed little reaching 52.8% in 2007, the proportion of never-married women aged 15-19 in the census increased to 62.6% in 2001 to 77.1% in 2010. Conclusions about recent trends in young women's transition into marriage are thus contradictory: the census indicates a postponement of marriage formation among young women while the DHS shows a flat trend over the past two decades.

Estimates of ASFR and total fertility for five DHS surveys from 1992-2007 were adjusted for differences in the proportions of never-married women by age compared to census-based estimates (Table 1). While differences between reported and adjusted values were small for the 1992-93 DHS, the 2007 DHS reported an ABR of 126 and was adjusted to 77 births per 1000 women aged 15-19. Total fertility of 2.7 from the 2007 DHS was similarly adjusted to 2.3 children per woman. Another data source for Bangladesh, a sample vital registration system (Bangladesh Bureau of Statistics 2011), reported in 2006 an ABR of 54 births per 1000 women aged 15-19 and total fertility of 2.4 children per woman. Thus, after the adjustments of ASFR and total fertility, the values are closer to sample vital registration system.

The implications for interpretations of the fertility decline in Bangladesh are far-reaching. The country with one of the highest levels of adolescent fertility in 1990 has achieved in two decades a relatively small deduction adolescent childbearing, while most of the total fertility reduction has been concentrated in older ages. Yet the story may, in fact, be different: the postponement of childbearing in Bangladesh—concurrent with the postponement in marriage—reflected a decline in adolescent fertility to half the level from the early 1990s and played a key role in the rapid fertility decline in Bangladesh.

Table 1: Reported and adjusted ASFR and total fertility, 0-2 years before survey, Bangladesh

		Census 1991 marital status		Est. 1997 marital status		Census 2001 marital status		Est. 2004 marital status		Est. 2007 marital status
Age	DHS 1992-93	DHS 1992-93 adj	DHS 1996-97	DHS 1996-97 adj	DHS 1999-00	DHS 1999-00 adj	DHS 2004	DHS 2004 adj	DHS 2007	DHS 2007 adj
15-19	140	145	147	126	144	112	137	94	126	77
20-24	196	200	192	198	188	190	191	180	173	157
25-29	158	158	150	148	165	161	133	129	127	123
30-34	105	104	96	94	99	95	83	81	70	68
35-39	56	56	44	43	44	43	42	41	34	34
40-44	19	19	18	18	18	18	17	17	10	10
45-49	14	14	6	6	3	3	2	2	1	1
TF	3.4	3.4	3.2	3.1	3.3	3.1	3.0	2.7	2.7	2.3

Table 2: Reported and adjusted ASFR and total fertility, 0-2 years before survey, Mongolia

		Census 2000 marital status		Census 2000 marital status		Census 2010 marital status
Age	RHS 1998	RHS 1998 adj	RHS 2003	RHS 2003 adj	RHS 2008	RHS 2008 adj
15-19	54	41	53	50	57	32
20-24	216	173	173	142	189	133
25-29	169	150	140	130	181	162
30-34	105	99	82	79	119	112
35-39	50	49	43	41	69	66
40-44	18	17	7	7	16	16
45-49			1	1	1	1
TF	3.06	2.65	2.49	2.25	3.16	2.60

Mongolia

Census data and data from the Reproductive Health Survey (RHS) both show that only a small percentage of female adolescents (aged 15-19) have ever been married, around 5%. In contrast, for young women aged 20-24, the difference between these data sources is substantial. In the 2008 RHS, 40% of young women have never been married compared with 58% in the 2010 census. Differences are smaller among women in older age groups (though still larger for women aged 25-29 years).

Estimates of ASFR and total fertility for three RHS surveys from 1998 to 2008 were adjusted for differences in the proportions of never-married women by age compared to censuses in 2000 and 2010. Differences in values between reported and adjusted values were largest for age groups 20-24 and smaller for women aged 15-19 and 25-29 years. Total fertility was adjusted from 3.2 to 2.6 children per woman for the period three years before the 2008 RHS. Another available data source for Mongolia, the vital registration system, showed total fertility in 2007 of 2.6 children per woman. After the adjustments of ASFR and total fertility, the values are closer to vital registration system data.

Cambodia and Lao People's Democratic Republic are among other countries with growing numbers of young women (15-24 years old) involved in work in manufacturing centers, that have data available to investigate potential differences in marital status distribution in household-based surveys compared to censuses and its impact on fertility estimates.

Conclusions

Household-based surveys in the countries examined appear to consistently underestimate the extent of marital status changes among young women over time and, as a result, over-estimate fertility among young women, particularly adolescents. The broader perspective of understanding family formation patterns in these countries suggests that household-based surveys might be over-estimating the actual level of period fertility and under-estimating the fast changes in marital status among the younger generation due to marriage postponement, greater extent of employment among young women and prolongation of education.

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