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Changes in Prevalence of Girl Child Marriage in South Asia

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To the Editor

Girl child marriage (ie, <18 years of age) affects more than 10 million girls globally each year and is linked to maternal and infant morbidities (eg, delivery complications, low birth weight) and mortality.^{1,2} Half (46%) of child marriages occur in South Asia.^{1,2} This study assessed whether prevalence of girl child marriage has changed over the past 2 decades in 4 South Asian nations with a girl child marriage prevalence of 20% or greater.^{1–3}

Methods

All available population-based Demographic and Health Surveys (DHS) data from Bangladesh, India, Nepal, and Pakistan between 1991 and 2007 were analyzed. The DHS are nationally representative surveys that measure demographics, health, and nutrition with standard measures across nations and over time. Data collection and management procedures are described in detail elsewhere.³ Briefly, cluster randomized samples are selected.⁴ After stratification by rural or urban area and geographic or administrative regions, random clusters of approximately 25 households are selected from each area, and an eligible woman is identified from each household. All data were collected from women in or near households but not necessarily in a private setting.

The DHS procedures were approved by ICF Macro International institutional review board and the ethics review boards of each nation included in the study. Oral informed consent was obtained from all respondents. The University of California at San Diego institutional review board ruled this study to be exempt from full review due to use of secondary analysis of data with no identifiers.

The age at marriage variable was based on the difference between the date of start of first marriage or union and the respondent's date of birth (items provided via self-report). Analyses were restricted to women aged 20 to 24 years to allow for the inclusion of all women married or in union by age 18 years within the closest period for which data were available.

Prevalence estimates and 95% confidence intervals were calculated for girl child marriage and subgroups using DHS-calculated individual weights⁴ to take into account the multistage sampling design and provide results for all (not just ever married) women. Cochran-Armitage tests⁵ were used to test linear time-trend data by country; χ^2 tests were used for nonlinear trends with tests adjusted for complex survey design.⁶ Significance was set at $P < .05$ using 2-sided tests. Analyses were conducted in SAS version 9.2 (SAS Institute Inc) and Microsoft Excel.

Results

Sample sizes ranged from 1064 to 22 807 (Table 1). The prevalence of girl child marriage decreased in all countries from 1991–1994 to 2005–2007 (Table 2). Significant relative reductions occurred in marriage of girls prior to age 14 years across all 4 nations, ranging from –34.7% (95% CI, –40.6% to –28.1%) to –61.0% (95% CI, –71.3% to –46.9%). Little or no change over time was seen in marriage of 16- to 17-year-old adolescent girls for any nation except Bangladesh, where such marriages increased by 35.7% (95% CI, 18.5% to 55.3%).

Comment

Reductions in girl child marriage in South Asia have occurred but are largely attributable to success delaying marriage among younger but not older adolescent girls. Improvements in education of girls and increasing rural to urban migration may have supported these reductions,^{1,2} but many schools graduate students at the 10th standard (about 15–16 years), maintaining vulnerability to early marriage for 16- to 17-year-old girls. Laws against early marriage have existed for decades, setting the legal age for girls at marriage as 18 years in Bangladesh, India, and Nepal, and 16 years in Pakistan, but appear inadequate to affect this issue. Increased prevalence of marriage among 16- to 17-year-old girls in Bangladesh requires further study.

Study limitations include possible social desirability or recall bias and potential inaccuracies reporting age at marriage. Focus on young women reduces risk for recall bias. Differential survey time points allow greater time for change to be assessed for Pakistan and less time for Nepal. Analyses are restricted to time trends and lack consideration of variables (e.g., changes in education) to explain findings.

Acknowledgments

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Table 1

Sample Details and Response Rates by Survey Year

	Bangladesh			India			Nepal			Pakistan								
	Year	Age Range (y)	Response Rate (%)	Year	Age Range (y)	Response Rate (%)	Year	Age Range (y)	Response Rate (%)	Year	Age Range (y)	Response Rate (%)						
Sample age range, y	1994	10-49	97	1997	10-49	98	1999	13-49	96	2001	15-49	98	2006	15-49	98	2007	15-49	95
Response rate, %	1994	10-49	97	1997	10-49	98	1999	13-49	96	2001	15-49	98	2006	15-49	98	2007	15-49	95
Sample type	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM	AW	AW	EM	EM	EM	EM
Unweighted total No.	9493	8981	10373	11300	10996	89506	90303	124385	8429	8726	10793	6611	10023					
Study sample aged 20-24 y	2038	1716	1910	2202	2174	17218	15973	22807	1629	1651	2042	1064	1560					

Abbreviations: AW, all women; EM, ever married.

Prevalence of girl child marriage in Bangladesh, India, Nepal, and Pakistan from early 1990s to mid 2000s.

Table 2

Country	Age at Marriage	1991–1994	1995–1998	1999–2001	2002–2004	2005–2007	Relative change ¹
Bangladesh ²	<14	33.8%	35.0%	24.9%	24.4%	18.5%	-45.3%
	14–15	24.3%	21.0%	24.6%	25.5%	27.1%	11.5%
	16–17	15.2%	12.6%	15.8%	18.8%	20.6%	35.5%
	Total <18	73.3%	68.5%	65.3%	68.7%	66.2%	-9.7%
India ³	<14	9.6%	-	8.0%	-	6.3%	-34.4%
	14–15	19.5%	-	18.5%	-	16.3%	-16.4%
	16–17	21.0%	-	19.7%	-	21.9%	4.3%
	Total <18	50.2%	-	46.2%	-	44.5%	-11.4%
Nepal ⁴	<14	-	8.6%	3.6%	-	3.8%	-55.8%
	14–15	-	25.6%	24.5%	-	18.7%	-27.0%
	16–17	-	26.1%	27.9%	-	29.0%	11.1%
	Total <18	-	60.3%	56.1%	-	51.4%	-14.8%
Pakistan ⁵	<14	6.4%	-	-	-	2.5%	-60.9%
	14–15	11.8%	-	-	-	8.9%	-24.6%
	16–17	13.4%	-	-	-	12.7%	-5.2%
	Total <18	31.6%	-	-	-	24.0%	-24.1%

Note: empty cells represent time periods in which a DHS was not conducted.

¹ From Time 1 to Final time

² Bangladesh DHS survey years: 1993–1994, 1996–1997, 1999–2000, 2004, 2007

³ India DHS survey years: 1992–1993, 1998–1999, 2005–2006

⁴ Nepal DHS survey years: 1996, 2001, 2006

⁵ Pakistan DHS survey years: 1990–1991, 2006–2007