

# Early Marriage Among Women In Developing Countries

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*A study using data from 40 Demographic and Health Surveys shows that a substantial proportion of women in developing countries continue to marry as adolescents. Overall, 20–50% of women marry or enter a union by age 18, and 40–70% do so by their 20th birthday. Early marriage is most prevalent in Sub-Saharan Africa and in South Asia, and least common in North Africa, the Middle East and Southeast Asia. Women aged 20–24 are less likely to have married by age 20 than are women aged 40–44; the differential is at least 10 percentage points in most countries and reaches 30–40 percentage points in some countries. Education and age at first marriage are strongly associated both at the individual level and at the societal level: A woman who has attended secondary school is considerably less likely to marry during adolescence, and in countries with a higher proportion of women with a secondary education, the proportion of women who marry as adolescents is lower.*

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The timing of the first marriage or union is an important dimension of women's reproductive behavior with far-reaching consequences, particularly for their reproductive health and social status. In many developing countries, between one-half and three-quarters of all first births to married women occur less than two years after the women enter their first union.<sup>1</sup> Thus, early marriage typically coincides with childbearing at a young age. Early pregnancy poses great health risks for a young woman and, if she carries the pregnancy to term, for her infant; these risks are exacerbated by poverty and inadequate access to maternal and child health services.<sup>2</sup>

Moreover, women who marry at a young age are likely to find motherhood the sole focus of their lives, at the expense of development in other areas such as formal education and training for employment, work experience and personal growth. Even their marriage may be jeopardized: An early age at first marriage is associated in the long term with a higher probability of divorce and separation.<sup>3</sup> In turn, marriage dissolution creates social and economic challenges for women who, as single parents, often as-

sume full responsibility for dependent family members.<sup>4</sup>

Because of concern about these negative consequences of early marriage among women, much of the discussion about the "girl child" at the recent International Conference on Women in Beijing focused on the problem of girls marrying at very young ages, in some cases ages even younger than countries' legal minimums.<sup>5</sup> Many women's organizations regard early marriage as having detrimental consequences for women, and international organizations, advocacy groups and some national governments have responded with policy recommendations and programs to delay first marriage.<sup>6</sup>

Across the developing world, women's traditional patterns of early marriage are giving way to later ages at first marriage; nonetheless, the age at which women marry continues to vary widely both across and within countries. This article describes these differentials and trends over time and examines their association with socioeconomic development. Such information provides insight into past and future trends in women's age at marriage and assists policymakers and service providers in planning to meet the current and future educational, employment and health care needs of young women.\*

We begin by describing women's current patterns of marriage timing and changes in the age at marriage over time. How frequently do women in developing countries marry at relatively young ages?

How has their age at first marriage changed during the past 20 years? Throughout, we adopt a broad definition of marriage that encompasses formal or legal marriage as well as cohabitation; hence, we use the terms "marriage" and "union" interchangeably. Although our focus is on developing countries, we include when possible comparable data on marriage timing for women in three developed countries—France, Japan and the United States—to locate the experiences of women in developing countries within a broader, global context.

In seeking possible explanations for variations in marriage timing, we examine the links between socioeconomic development and early marriage. Socioeconomic development entails many changes in societies, ranging from industrialization, urbanization, economic growth, and structural change in the labor force to ideational change associated with the spread of formal schooling and developments in transportation and communication technologies. Yet, the literature singles out three factors that are especially relevant to women's age at first marriage—female labor force participation, women's acquisition of formal education, and urbanization.

Women's increased access to paid employment—a typical outcome of structural change in the labor market accompanying economic development—is thought to influence both women's and their parents' desires and ability to postpone marriage. According to existing theory, work experience, particularly in the formal sector, exposes women to new ideas and norms that discourage early marriage.<sup>7</sup> Moreover, employment may provide the

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\*In this article, we focus exclusively on women's experiences, in large part because few fertility surveys have collected marriage data for men. In addition, early marriage is much less common among men. The mean age at the first marriage for men in developing countries has typically been several years older than that of women: Census data for a large number of developing countries show that the mean age at marriage for men ranges between 24 and 28 years, even in countries where the mean age at marriage for women is as low as 17–19. The proportion married among men aged 15–19 is typically very low, in most cases less than 5% (see: United Nations, *Patterns of First Marriage: Timing and Prevalence*, New York, 1990, Tables A1, A2, and A3).

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economic resources to postpone marriage and an economic incentive for parents to encourage their daughters to remain single during this economically productive period of young adulthood.<sup>8</sup>

Education is another key variable in theoretical discussions of women's age at marriage. In most developing countries, access to formal schooling has increased enormously over the past 30 years. Yet, in spite of the demonstrated commitment of many governments and families to the concept of universal education, educational opportunities for girls vary widely across countries. This variation is thought to be systematically associated with variation in age at marriage, because an early marriage may involve forgoing the opportunity to obtain a secondary or higher education.

But perhaps more commonly, educational attainment works alone and in combination with labor force participation to delay marriage. By itself, formal education beyond the primary level may conflict directly with early marriage because married women are generally not enrolled in schools in developing countries.<sup>9</sup> Moreover, formal education narrows a woman's range of potential marriage partners, since women are generally expected to marry men at least as educated as themselves.<sup>10</sup>

Formal schooling also shapes ideas and values. Some argue that one effect of formal schooling, particularly at advanced levels, is increased exposure to Western values and behavior.<sup>11</sup> Moreover, education may indirectly delay marriage by increasing women's ability to regulate their fertility. Education is positively associated both with contraceptive knowledge and with greater decision-making power in areas related to contraceptive choice.<sup>12</sup> This indirect effect is likely to be the strongest in contexts where marriage is the socially encouraged response to unplanned pregnancy. Finally, educational attainment works in conjunction with labor force participation to offset the attractiveness of early marriage and to reduce the economic motivation for early marriage by raising wage rates and increasing access to better jobs.

Urbanization is the third component of socioeconomic development that appears to influence women's age at marriage in developing countries. Some have suggested that urban-rural differences in marriage are explained, not by place of residence per se, but by differences in the composition of the populations living in urban and rural areas (e.g., differences in

educational attainment and labor force participation, and differences in the sex ratio and marital-status distributions resulting from migration).<sup>13</sup>

Yet, there are reasons why place of residence might exert an independent effect on marriage timing. These explanations include urban women's greater exposure to modern values that favor marriage postponement, urban women's greater distance from community- and kinship-based forms of social control over their sexual behavior and their selection of partners, and their greater opportunities for nonmarital sexual relationships (including those with "sugar daddies" and married men).<sup>14</sup> Each of these attributes associated with urban residence is anticipated to lower the likelihood that women living in urban areas will marry at a young age.

Demographic factors may also influence marriage timing. Theory emphasizes the availability of marriage partners: When one sex is in relative oversupply, members of that sex will be less likely to marry, and those who do will marry at older ages. However, empirical research on the association between sex ratios and marriage timing has uncovered relatively weak associations.<sup>15</sup> These findings may be attributed, in part, to the difficulty of identifying operative marriage markets, an especially daunting task in research that involves a large number of culturally and socioeconomically heterogeneous countries. Yet, even if researchers were able to successfully identify operative marriage markets, empirical research suggests that the payoff would be minimal: The sex-ratio effect is generally overwhelmed by other aspects of socioeconomic development that influence both sex ratios and marriage timing, and by the tendency of social groups to adapt by changing their preferred age at marriage.<sup>16</sup>

Cultural factors may also underlie some of the observed differences in marriage timing across countries. Unfortunately, existing data do not permit us to evaluate the direct effect of culture on women's age at marriage. Yet the data assembled here on variation in marriage timing by country and region may suggest hypotheses concerning the relationship between cultural factors and age at marriage that merit further research. Because of our inability to measure cultural influences, we restrict our investigation to the relationship between key factors of socioeconomic development involving women—their educational attainment, labor force participation and residence in urban areas—and the likelihood that they will marry at an early age.

## Data and Methods

### *Sources of Data*

Our principal sources of data on age at first marriage are the Demographic and Health Surveys (DHS). The 40 countries for which we have DHS data include 16 Sub-Saharan African countries, six countries in North Africa and the Middle East, seven countries in Asia and 11 countries in Latin America. Geographic coverage of Sub-Saharan Africa, North Africa and Latin America by the DHS surveys is quite extensive; coverage of Asia and the Middle East is much less so.

The DHS surveys in Sub-Saharan Africa, Latin America, Morocco and the Philippines sampled all women aged 15–49,\* whereas DHS surveys in the other North African, Middle Eastern and Asian countries sampled ever-married women in that age-group. For the latter group of countries, we supplement the data on ever-married women with data from the DHS household surveys—which gather basic demographic information on all household members—to calculate the proportion never-married, by age, place of residence and education.

We obtained most of the measures used in this article from the DHS data files but, in the cases of India and Bangladesh, we rely on data from published country reports because the data files for those countries were not available at the time we conducted our analyses. Because the surveys were carried out as early as 1985 and as recently as 1994, the data sets for the 40 developing countries in our analysis are not equally current; this fact should be kept in mind when comparing countries.

Data for the developed countries come from three independent fertility surveys. For France, the source of data is the 1994 Enquete sur les Situations Familiales et l'Emploi, a survey of all women aged 20–49 conducted by the Institut National d'Etudes Demographiques and the Institut National de la Statistique et des Etudes Economiques.<sup>17</sup> The data for Japan are mainly from the 1992 (Tenth) National Fertility Survey, a study of 8,844 couples in their first marriage, carried out by the Ministry of Health and supplemented by census data.<sup>18</sup> The data for the United States come primarily from the 1988 National Survey of Family Growth, a survey of 8,450 women of all marital statuses aged 15–44, carried out by the National Center for Health Statistics. We also draw on a number of statistical compilations of indicators for eco-

\*In Brazil and Guatemala, all women aged 15–44 were included in the survey.

conomic, social and educational conditions, published by the United Nations, the United Nations Educational, Scientific, and Cultural Organization and the World Bank.

### Measurement Issues

Because we are interested in the consequences of long-term, socially recognized unions for reproduction, women's health and women's status, we define marriage broadly to include both consensual or cohabiting unions and formal marriages. Age at first union is defined here as the age at which the respondent first started living with her husband or male partner. The measure is calculated from questions in every DHS survey asking women for the month and year when they first started living with their husband or partner and the age at which they did so.

Insofar as we are concerned with reproduction-related risks, defining union involvement as cohabitation is a refinement over traditional measures based on definitions of marriage as religiously or legally sanctioned marriages. For example, in a few Asian countries (especially Bangladesh and India), cohabitation often begins well after the formal marriage. In Latin America, as in France and the United States, consensual or cohabiting unions are socially recognized and a substantial proportion of couples are in such unions.<sup>19</sup> In Sub-Saharan Africa, cohabiting unions are also common, and the DHS question is likely to have captured these unions as well as formal marriages.

\*The sole exception is Trinidad and Tobago, where women were specifically asked about visiting unions, a recognized type of union in that country.

†We considered using a more detailed measure of educational attainment that distinguished between women with no education, those with an incomplete primary education, those with a complete primary education and those with some secondary schooling. However, in several of the Sub-Saharan African countries under investigation (e.g., Burundi and Niger), there are too few educated women to permit analysis within more detailed educational attainment categories (e.g., the proportion of women aged 20–24 with complete primary education who married before age 18). For most of the Latin American countries under investigation, we encounter the opposite situation; there are too few women at the low end of the distribution to use the four-category classification scheme.

‡Several countries deviated slightly from this standard format (see A. K. Blanc and N. Rutenberg, 1990, reference 23). Interviewers in the Dominican Republic, Ecuador, Indonesia, Peru and Thailand asked all ever-married women for both the date of the beginning of their first union and their age at the time. Inconsistencies were resolved via "subjective and largely unrecorded decisions...based on the survey staff's opinion about which was the more reliable piece of information" (p. 43). In Mexico, only the question on the date of first union was asked. This appears to have produced more complete information because interviewers had to probe more intensively to collect a complete date for the first union from each respondent.

At the same time, our measure of marriage timing has drawbacks, particularly its exclusion of entry into socially recognized, noncohabiting unions (visiting unions, for example).<sup>\*</sup> Moreover, defining the beginning of union involvement in terms of cohabitation may be too restrictive for some parts of Sub-Saharan Africa where marriage is a process rather than a discrete event.<sup>20</sup> For example, a visiting sexual relationship may precede the beginning of cohabitation and a first birth may occur before cohabitation or marriage. In this respect, our measure is likely to understate the true prevalence of early unions that influence reproduction and women's status. Yet, given the widely varying forms that socially recognized unions take in the countries and regions under investigation, we consider our measure the most suitable one available for this comparative research.

In our examination of population subgroups, our measure of urban residence refers to the woman's current place of residence. Our measure of exposure to formal schooling is a dichotomous variable that distinguishes women with some secondary education (i.e., seven or more years of formal schooling) from women with less education.<sup>†</sup> Regrettably, only the early DHS surveys collected information on labor force participation prior to marriage, limiting our ability to examine this factor.

At the country level, our measure of early marriage is the proportion of women married by age 20. Our measure of urbanization is the proportion of the population living in urban areas and our measure of women's education, the proportion of women aged 20–24 with at least some secondary schooling. We also include in the aggregate analysis a measure of women's relative access to education, the number of girls per 100 boys in secondary school. We examine the prevalence of early marriage in relation to two measures of female labor force participation—the proportion of women who are in the labor force<sup>21</sup> and the proportion of women aged 20–29 who reported in the DHS survey that they were currently working.

We also analyze the association between change in the proportion married by age 20 and two measures of socioeconomic change. The first is change in the proportion of women with some secondary schooling, based on the same age-groups for which change in marital timing is measured (women aged 20–24 and 40–44). The second is the change in the proportion of the population that is urban from 1965 to 1990, a period that approximates the in-

terval for which the change in age at marriage is described.<sup>22</sup>

### Quality of Data

The standard DHS survey asks each woman to provide the month and year she started living with her first husband or male partner. If a woman cannot provide at least the year of the first union, she is asked how old she was at the beginning of this union.<sup>23†</sup> When the proportions ever-married in the DHS surveys are compared with external data, either these sources agree or the DHS shows higher proportions married because of its more inclusive definition of marriage. Nonetheless, we find some evidence of missing data, rounding and heaping, and age misreporting.

In nearly all of the countries under investigation, the proportion of women who could give neither the year of their first union nor their age at first union was quite low—usually less than 1%.<sup>24</sup> Because the proportion imputed is in general very low, this should not affect the estimates presented here to any significant degree. However, there were a few exceptions. In Mali, 25% of women were unable to provide either the year of their first union or their age at first union, and 9% of women in Guatemala could not provide either piece of information. To impute the age at first union for these women, the DHS assumed that the first union occurred in a range between some minimum age (usually 12) and a point at least seven months prior to the birth of their first child. Since imputation depended on the age at first birth, the bias is toward an age at first marriage that is older than the actual age.

The data for women who provided the year of the first marriage suggest some heaping on rounded numbers (0 or 5), especially in Latin America. This propensity to round may be more common in Latin America because of the high prevalence of informal first unions. These unions tend to be temporary, and their beginnings may be more difficult to recall because they are not usually marked by any social or religious ceremony.<sup>25</sup>

Finally, there is also some indication that women in the oldest age-groups (those aged 40–44 in the current analysis) overstated their age at first union. Again, this pattern is most noticeable in areas where informal and consensual unions are common. Age misreporting is most likely to influence our analysis of change over time; specifically, older respondents' age misreporting is likely to lead us to understate the actual amount of change in the prevalence of early marriage.<sup>26</sup>

## Levels and Trends

### Prevalence

Marriage during the teenage years is common in developing countries. Nevertheless, the situation varies greatly by country and region. In Table 1, we present three age-specific indicators of marriage timing—the proportion of all women aged 20–24 who had married by ages 15, 18 and 20. Women are most likely to marry at a young age in Sub-Saharan Africa: In all but a few countries in that region, 60–92% of all women aged 20–24 had entered their first union by age 20. We also find a high prevalence of early marriage in a few countries in other regions: In Bangladesh, Guatemala, India and Yemen, 60–82% of all women aged 20–24 had married by age 20.

Although marriage during the teenage years is less common in Latin America, Asia, North Africa and the Middle East than in Sub-Saharan Africa, it is by no means rare. Typically, one-fifth to one-third of 20–24-year-olds in those regions had entered their first marriage by age 18, and one-third to one-half had married by age 20.

Even in France and the United States, 11% of all 20–24-year-olds had begun their first marriage or cohabiting union by age 18, and 32% had done so by age 20. Japan is exceptional in the rarity of marriage during adolescence: Only 2% of 20–24 year-olds had married by age 20.

In a few developing countries, marriage by age 18 is relatively uncommon. The proportions of women married by age 18 (10–14%) in Botswana, Namibia, the Philippines, Sri Lanka and Tunisia are similar to those in France and the United States, and the proportions married by age 20 (19–29%) are lower.

Beginning the first marriage before age 15 is common only in Bangladesh and Niger, where about half of women aged 20–24 had married by that age. Nevertheless, the incidence of very early marriage ranges from 10% to 27% in seven Sub-Saharan African countries (Cameroon, Liberia, Mali, Nigeria, Senegal, Togo and Uganda) and six countries in other regions (Guatemala, India, Indonesia, Pakistan, Sudan and Yemen).

Reflecting these differences, the median age at first marriage (the age at which 50% of all women have entered their first marriage or union) shows wide variation within and across most regions. In general, women in Sub-Saharan Africa marry early—11 of the 16 countries included from that region have a median age between 16 and 19 years. Yet, we find exceptions to this pattern in Mali and Niger, countries with a predominantly Muslim population,

where the median age at marriage is younger than 16, and in Botswana and Namibia, where the median age at marriage is about 24–25. Although entry into the first union is late in Botswana and Namibia, the proportion of women having an early first birth is high, falling within the range found in other Sub-Saharan African countries.<sup>27</sup> Widespread migration of men to obtain work is believed to be an important reason for the late age at marriage among both women and men in these countries.<sup>28</sup>

The median age at first marriage is 20 or older in four of the 13 Asian and North African countries in our study, although there are a few countries in these regions with relatively low medians (Bangladesh, India and Yemen). Across Latin America, the median age at first marriage is relatively homogeneous. It is between 19 and 21 in all but four countries (Brazil, Colombia, Guatemala and Peru).

### Trends in Timing

Table 2 (page 152) shows the proportion of women married by age 20 for three cohorts—those aged 20–24, 30–34 and 40–44 at the time of the survey. Women increasingly delay marriage—the proportion married by age 20 has decreased over the past two decades in all countries except Mali, El Salvador, Guatemala and Trinidad and Tobago, and the small increases shown there may be the result of inaccurate reporting by the oldest age-group.<sup>29</sup>

Although delays in marriage are found in most countries, the magnitude of the decline in the proportion married before age 20 varies substantially across regions. The table presents the total absolute difference in the proportion married by age 20 between the cohort aged 20–24 and the cohort

**Table 1. Percentage of women aged 20–24 who married as adolescents, by age at marriage; and median age at marriage among all women; according to country, 1985–1994**

Country and survey year	% of women 20–24 married by			Median age at first marriage
	Age 15	Age 18	Age 20	
<b>Sub-Saharan Africa</b>				
Botswana, 1988	3	10	19	23.9
Burundi, 1987	2	17	44	19.5
Cameroon, 1991	21	58	73	16.5
Ghana, 1988	9	41	63	18.1
Kenya, 1993	5	28	46	18.8
Liberia, 1986	17	32	64	17.2
Mali, 1987	27	78	92	15.7
Namibia, 1992	2	11	20	24.8
Niger, 1992	50	84	90	15.1
Nigeria, 1990	27	52	68	16.9
Senegal, 1986	15	59	70	16.4
Tanzania, 1991–1992	7	37	61	17.9
Togo, 1988	10	44	63	18.3
Uganda, 1988–1989	18	53	73	17.0
Zambia, 1992	9	43	64	17.4
Zimbabwe, 1988–1989	7	33	53	18.6
<b>North Africa and the Middle East</b>				
Egypt, 1992	7	27	41	18.5
Jordan, 1990	2	16	30	19.6
Morocco, 1992	3	18	31	19.7
Sudan, 1989–1990	12	27	37	17.8
Tunisia, 1988	1	10	21	21.1
Yemen, 1991–1992	20	49	63	15.8
<b>Asia</b>				
Bangladesh, 1993–1994	47	73	82	14.1
India, 1992–1993	18	51	70	16.1
Indonesia, 1991	10	34	51	17.7
Pakistan, 1990–1991	11	32	49	18.6
Philippines, 1993	2	14	29	21.4
Sri Lanka, 1987	1	14	28	22.4
Thailand, 1987	2	20	37	20.5
<b>Latin America</b>				
Bolivia, 1989	5	24	41	20.3
Brazil, 1986	4	22	40	21.2*
Colombia, 1990	3	22	37	21.2
Dominican Republic, 1991	9	30	47	19.0
Ecuador, 1987	6	26	44	20.1
El Salvador, 1985	6	38	59	19.0
Guatemala, 1987	12	41	60	18.6*
Mexico, 1987	6	28	44	19.9
Paraguay, 1990	2	24	40	20.9
Peru, 1991–1992	3	18	31	21.1
Trinidad & Tobago, 1987	6	34	54	19.6
<b>Developed countries</b>				
France, 1994	0	11	32	22.5
Japan, 1992	0	0	2	26.4
United States, 1988	1	11	32	22.0*

\*Women aged 25–44. Sources: **Developing countries**—Percentage of women married by exact ages: Special analyses of DHS data (individual country reports used except for Egypt, Indonesia, Jordan, Pakistan, Sri Lanka, Sudan, Thailand, Tunisia and Yemen); median age at first marriage: C.F. Westoff, A.K. Blanc and L. Nyblade (see reference 1) and DHS country reports. **France**—Enquête sur les situations familiales et l'emploi, 1994. **Japan**—1992 (Tenth National Fertility Survey). **United States**—1988 National Survey of Family Growth.

aged 40–44. Declines are largest in North Africa and the Middle East (four countries of the six included here had declines of 32–41 percentage points in the proportion married by age 20), and are greater in Asia and Sub-Saharan Africa than in Latin America. The decline in the proportion married by age 20 varies between 10 and 21 percentage points in 11 of the 16 Sub-Saharan African countries represented here, and varies between 10 and 25 percentage points in six of the seven Asian countries

included. In Latin America, however, the proportion entering their first union by age 20 declined substantially only in the Dominican Republic and Peru (14–16 percentage points). Either small declines (less than seven percentage points) or small increases occurred in almost all of the other countries in Latin America.

To examine how recently the changes in the timing of marriage have occurred, we divide the total change in proportion married by age 20 into two parts—the proportion that occurred in the earlier period (between women aged 40–44 and those aged 30–34) and in the most recent period (between women aged 30–34 and those aged 20–24).<sup>\*</sup> On average, about 72% of the total change in the proportion married by age 20 occurred in the more recent period. In more than half of the countries studied (including France and the United States), 75% or more of the decline in early marriage occurred in the more recent period and, in 11 of these countries, all of the change occurred in that period. In North Africa and the Middle East, declines in early marriage began during the earlier period but continued during the more recent period; in three of the six countries in those regions, the proportion of change in each period was 42–58%. Sri Lanka and Brazil are exceptional in that almost all of the decline occurred during the earlier period.

### Socioeconomic Correlates

Next, we examine the empirical linkages between marriage timing and three dimensions of socioeconomic development—urbanization, women's educational attainment and women's labor force participation. In looking at individual countries, we pose the following questions: Are young women who have greater exposure to socioeconomic development and modernizing influences less likely to marry at an early age?

<sup>\*</sup>Change in the proportion marrying before age 20 between two age-groups that are 10 years apart actually occurs not at a point in time, but over a period that is somewhat broader than the decade before the survey. For example, adolescent marriages among women aged 20–24 in 1990 occurred during the period 1981–1990. For cohorts aged 30–34 and 40–44, adolescent marriages occurred during the periods 1971–1980 and 1961–1970, respectively.

<sup>†</sup>Although the differential in age at first marriage is not in the expected direction in Botswana, there is almost no difference between urban and rural women in the timing of the first birth (see AGI, 1995, reference 1, Appendix Table 5). In Burundi, the proportion of the total population that is urban is extremely low (4%), which may account for this unexpected, nonsignificant differential. In Trinidad and Tobago, the differential is influenced by the fact that the African ethnic group, which has a younger age at first union, is concentrated in urban areas, while the Indian ethnic group, with its higher age at first union, mainly lives in rural areas.

**Table 2. Percentage of women married before age 20, by age-group, absolute decrease in early marriage between the oldest and youngest women, and percentage distribution of the decrease, by country**

Country	Age-group			Decrease from oldest to youngest age-group	% change between age-groups	
	40–44	30–34	20–24		40–44 and 30–34	30–34 and 20–24
<b>Sub-Saharan Africa</b>						
Botswana	33	32	19	14	7	93
Burundi	58	58	44	14	0	100
Cameroon	85	79	73	12	50	50
Ghana	77	72	63	14	36	64
Kenya	67	63	46	21	19	81
Liberia	81	71	64	16	56	44
Mali	90	93	92	0*	na	na
Namibia	28	25	20	8	38	63
Niger	94	94	90	4	0	100
Nigeria	71	76	68	3	0	100
Senegal	86	79	70	16	44	56
Tanzania	76	70	61	15	40	60
Togo	69	71	63	6	0	100
Uganda	83	79	73	10	40	60
Zambia	81	78	64	17	18	82
Zimbabwe	69	70	53	16	0	100
<b>North Africa and the Middle East</b>						
Egypt	59	55	41	18	22	78
Jordan	62	52	30	32	31	69
Morocco	64	50	31	33	42	58
Sudan	78	60	37	41	44	56
Tunisia	54	36	21	33	55	45
Yemen	80	82	63	17	0	100
<b>Asia</b>						
Bangladesh	97	93	82	15	27	73
India	83	79	70	13	18	82
Indonesia	76	67	51	25	36	64
Pakistan	61	63	49	12	0	100
Philippines	38	37	29	9	11	89
Sri Lanka	41	29	28	13	92	8
Thailand	47	45	37	10	20	80
<b>Latin America</b>						
Bolivia	43	49	41	2	0	100
Brazil	44	35	39	5	100	0
Colombia	42	42	37	5	0	100
Dominican Republic	63	54	47	16	56	44
Ecuador	50	49	44	6	17	83
El Salvador	58	57	59	0*	na	na
Guatemala	56	63	60	0*	na	na
Mexico	53	53	44	9	0	100
Paraguay	44	43	40	4	25	75
Peru	45	40	31	14	36	64
Trinidad & Tobago	52	53	53	0*	na	na
<b>Developed countries</b>						
France	35	42	32	3	0	100
Japan	3	2	2	1	100	0
United States	41	39	32	9	22	78

\*Increases are shown as 0 because the percentage distribution is based on the overall decline. Note: na=not applicable. Sources: **Developing countries**—C.F. Westoff, A.K. Blanc and L. Nyblade (see reference 1), Table 6.1, p. 28, and special analyses of DHS data (country reports used for Bangladesh, Egypt, India and Yemen). **Developed countries**—See Table 1 sources.

How universal are these relationships at the national level? That is, do we find low national levels of early marriage only among the more socioeconomically developed countries? Are low levels of socioeconomic development always associated with a high prevalence of early marriage?

### Urban Residence and Urbanization

We focus initially on urban-rural differences in the prevalence of early marriage within countries. The first two columns of

Table 3 show the proportions of women aged 20–24 in urban and rural areas who had married by age 20, and the third column gives the ratio between the two figures. As we expected, urban women are less likely than rural women to marry during their teens in all but a few countries.<sup>†</sup>

The largest differences occur in the Asian and North African countries, where urban women are generally only two-thirds as likely as rural women to marry by age 20. Moreover, urban women in

Egypt and Indonesia are only about half as likely as rural women to marry by that age. In most of Latin America, urban women are about 75% as likely as rural women to marry before age 20, but in Peru urban women are only 41% as likely as rural women to marry that young. In Sub-Saharan Africa, urban-rural differences are smaller: Urban women in most countries are about 70–90% as likely as rural women to marry before age 20. Nonetheless, Nigeria, Senegal and Togo show larger than average differentials for this region, in that urban women are only 57–60% as likely as rural women to marry before age 20.

We now shift our focus to the cross-national analysis. Figure 1 (page 154) depicts the association between the level of urbanization and the prevalence of early marriage in the 40 developing countries in our study. In general, the higher the proportion of a country's population living in urban areas, the less likely it is that women in that country will marry before age 20 ( $r=-0.36$ ).<sup>\*</sup> Close examination of the figure reveals some intriguing patterns. First, among the highly urbanized countries (those with 70% or more of the population in urban areas), we find none in which more than 55% of women marry before age 20.

Second, we find countries clustering more tightly around the regression line at higher levels of urbanization. Conversely, we find considerable heterogeneity in the prevalence of early marriage at the lower end of the urbanization spectrum. For example, among the countries with less than 40% of the population living in urban areas, the proportion of women marrying before age 20 ranges from 19% in Botswana (which, as noted earlier, has an unusual combination of early age at first birth and late age at marriage) to 92% in Mali. In short, while the level of urbanization is associated with the timing of marriage, the relationship is not as strong as theory may lead us to expect.

An analysis of the association between changes in urbanization and changes in the prevalence of early marriage revealed no statistically significant relationship (not shown). The partial correlation between the absolute increase in the proportion of the population living in urban areas and the absolute decrease in the proportion of women who had married before age 20 (40–44-year-olds compared with 20–24-year-olds), when the initial levels of urbanization and early marriage are accounted for, is 0.04 ( $p=.788$ ). This result suggests that despite the significant cross-sectional association between the level of urbanization and the prevalence of early

**Table 3. Among women aged 20–24, percentage who married before age 20, by residence and education, according to country**

Country	Residence			Education		
	Urban	Rural	Urban as % of rural	With $\geq 7$ years of schooling	With $< 7$ years of schooling	More educated as % of less educated
<b>Sub-Saharan Africa</b>						
Botswana	22	17	128	15	26	58
Burundi*	51	44	116	25	45	56
Cameroon	66	80	82	49	90	54
Ghana	54	68	80	55	73	75
Kenya	34	50	69	36	70	51
Liberia	61	75	81	42	74	57
Mali*	87	94	93	79	93	85
Namibia	17	22	79	12	32	38
Niger*	70	95	74	28	92	30
Nigeria	46	76	60	33	83	40
Senegal	49	86	57	28	75	37
Tanzania	51	65	78	54	80	68
Togo	45	75	60	28	71	39
Uganda	55	76	73	55	79	70
Zambia	53	75	70	48	85	56
Zimbabwe	46	58	80	28	75	37
<b>North Africa and the Middle East</b>						
Egypt†	29	58	49	21	69	30
Jordan†	29	31	96	27	47	57
Morocco	23	41	56	11	38	29
Sudan†	26	45	58	17	52	33
Tunisia*,†	16	28	57	9	25	36
Yemen*,†	47	68	69	26	68	38
<b>Asia</b>						
Bangladesh	u	u	u	u	u	u
India	52	77	67	u	u	u
Indonesia†	32	63	52	23	70	33
Pakistan†	36	56	65	19	57	33
Philippines	23	38	62	23	50	46
Sri Lanka†	19	30	65	u	u	u
Thailand†	24	42	57	14	47	30
<b>Latin America</b>						
Bolivia	37	47	79	30	53	57
Brazil	36	49	73	24	53	45
Colombia	35	45	77	26	52	50
Dominican Republic	41	60	69	36	77	47
Ecuador	39	52	75	30	63	48
El Salvador	52	70	75	33	73	46
Guatemala	45	69	65	28	67	42
Mexico	38	62	61	26	66	39
Paraguay	34	49	71	24	53	45
Peru	24	58	41	21	64	33
Trinidad & Tobago	59	49	120	52	62	84
<b>Developed countries</b>						
France	u	u	u	28	52	54
Japan‡	u	u	u	2	27	7
United States‡	16	37	43	16	45	36

\*Percentage married by age 20 among women with seven or more years of schooling is based on 45–100 unweighted cases. †Women's survey included only ever-married women. Weights derived from the household survey were used to calculate the proportions married by age 20 among all women. ‡Education measured as 12 or more years and fewer than 12 years. Note: u=unavailable. Sources: **Developing countries**—special analyses of DHS data. **Developed countries**—See Table 1 sources.

marriage, many factors other than urbanization determine levels of early marriage.

### Women's Educational Attainment

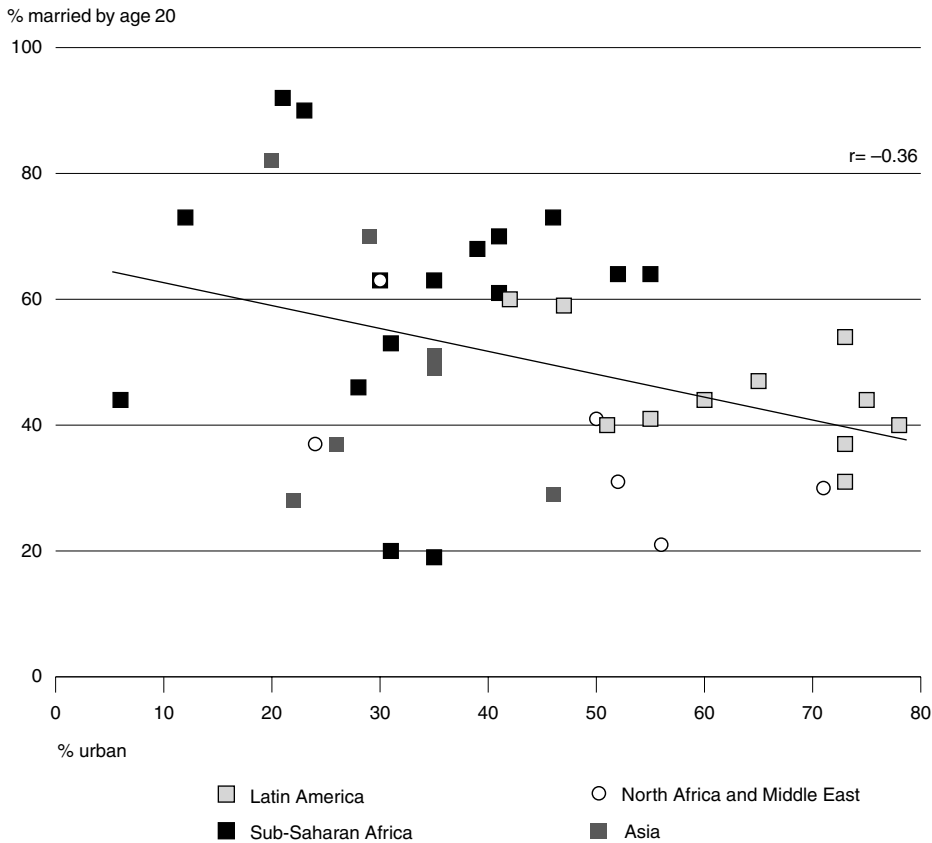
In examining the relationship between women's formal schooling and marriage timing, we first focus on differences in the prevalence of early marriage by educational subgroups within countries. The fourth and fifth columns of Table 3 show the proportion of women aged 20–24 with at least some secondary schooling who had married by age 20 and the proportion with

a primary education or less who had married by that age. The educational differential is more consistent than the residential differential—in every country, women with at least some secondary schooling are less likely to have married at a young age than are women with less education.

The educational differentials are also

\*The correlation between the proportion of women aged 40–44 who had married before age 20 and the level of urbanization was even stronger in 1965 than the cross-sectional association in the more recent period ( $-0.47$  for the earlier period versus  $-0.41$  for the more recent period).

**Figure 1. Association between percentage of women aged 20–24 married by age 20 and percentage of population that is urban, 40 developing countries, 1985–1994**



Sources: Percentage married by age 20—Special analyses of DHS data. Urban population—UN (see reference 22).

greater than the residential differentials (columns 3 and 6). As with the comparisons based on residence, Asia and North Africa exhibit the largest educational differentials: In most countries, women with at least some secondary education are only about one-third as likely as less-educated women to have married before age 20. In Latin America, the region with the next largest differentials, women with at least some secondary schooling are about 40–50% as likely as less-educated women to have married early. Sub-Saharan Africa has the smallest differentials: In 10 of the 16 countries studied, women with at least some secondary education are about 50–85% as likely as less-educated women to marry at a young age. However, in the remaining six Sub-Saharan African countries, the differentials are as large as those

\*Most women in the countries under investigation marry before age 30. In all but two Sub-Saharan African countries, 6% or fewer of women aged 30–34 had never married. In North Africa, the Middle East and Asia, the proportion is this low in half of the countries, while in the other half, about 10–15% of 30–34-year-olds had never married. In Latin America, the proportion never-married in this age-group was 10% or less in all but three countries, where the proportion varied between 10% and 16%.

found in Latin America.

Within countries, we also examine the simple correlations that summarize the strength of the individual-level association between age at first marriage and years of formal schooling. Because this correlation can be computed only for women who have been in a union, we base the calculation on ever-married women aged 30–34. We chose that age-group because most women are married by age 30, and the amount of bias that we inadvertently introduce by excluding the experience of never-married women from the calculations is therefore reduced. Moreover, choosing this age-group rather than an older group (for example, women aged 40–44 or 45–49) permits us to ex-

amine more recent behavior.\* We compute this correlation both for the country as a whole, and for urban and rural areas.

Table 4 displays the distribution of countries according to the strength of their correlation between age at first marriage and years of schooling. The results indicate that in most countries the relationship is strong and highly significant: The correlation coefficients range between 0.30 and 0.60 in the majority of countries in all the regions studied. The correlations by place of residence indicate that in the majority of countries, women’s educational attainment is more closely related to age at marriage in urban than in rural areas. The correlation coefficient is 0.30–0.60 in urban areas of 27 countries, but is that strong in rural areas of only 10 countries. The correlation between age at marriage and years of formal schooling is 0.47 among Peruvian women living in urban areas and 0.10 among those living in rural areas (not shown). We find similar, although less pronounced, patterns in other countries. In Thailand, for example, the correlation is 0.53 in urban areas and 0.24 in rural areas; in Zimbabwe, it is 0.40 in urban areas and 0.17 in rural areas.

These differences suggest that in most countries, the relationship between educational attainment and age at marriage is influenced by urban living conditions. Education may be more likely to lead to paid work experience in urban areas, thereby providing an alternative to early marriage. Another explanation is that although both urban and rural women who have more schooling may want to control

**Table 4. Numerical distribution of developing countries, by strength of association between age at first marriage and years of schooling among ever-married women aged 30–34, according to residence and region**

Residence and region	Total	Weak*	Moderate†	Strong‡
<b>All</b>				
Sub-Saharan Africa	16	3	3	10
Asia, North Africa and Middle East	11	0	3	8
Latin America	11	0	4	7
<b>Urban</b>				
Sub-Saharan Africa	16	3	3	10
Asia, North Africa and Middle East	11	0	1	10
Latin America	11	0	4	7
<b>Rural</b>				
Sub-Saharan Africa	16	7	4	5
Asia, North Africa and Middle East	11	2	6	3
Latin America	11	3	6	2

\* $r < 0.15$ ; includes a few countries where correlation is not significant at  $p < .05$ . † $r = 0.15$ –0.29; all correlations significant at  $p < .05$ . ‡ $r = 0.30$ –0.60; all correlations significant at  $p < .05$ . Note: Bangladesh and India, whose data files were not yet available, are omitted. Source: Special analyses of Demographic and Health Survey data.

the timing of family formation, urban women may have greater access to effective contraceptive methods that enable them to avoid premarital pregnancies, which may lead to early marriage. Also, educated women living in urban areas may experience less familial pressure to marry at a young age than their educated peers in rural areas, because their families are less likely to follow traditional norms.

Turning to the country level of analysis, we find additional evidence that more-educated populations of women are less likely to marry young. As Figure 2 shows, a moderately strong association exists between the percentage of women aged 20–24 with some secondary schooling and the percentage who had married before age 20; the country-level correlation is  $-0.51$ .<sup>\*</sup> The points on the scatterplot reveal a relationship similar to the cross-national association between urbanization and early marriage: None of the countries with high levels of female secondary schooling have a high prevalence of early marriage and, again, we find the widest variation in the prevalence of early marriage among countries where fewer than 40% of girls attend secondary school.

When we examine change between two cohorts of women—those aged 40–44 and those aged 20–24—the partial correlation between the decrease in the proportion marrying before age 20 and the increase in the proportion with at least some secondary schooling reveals a moderate and statistically significant association over time ( $r=-0.40$ ;  $p<.01$ ). Although we cannot conclude from this that education “causes” changes in marriage timing, since at least part of the effect may operate in the opposite direction, this finding does suggest that across the diverse group of countries under investigation, increases in educational attainment tend to be associated with decreases in the prevalence of early marriage.

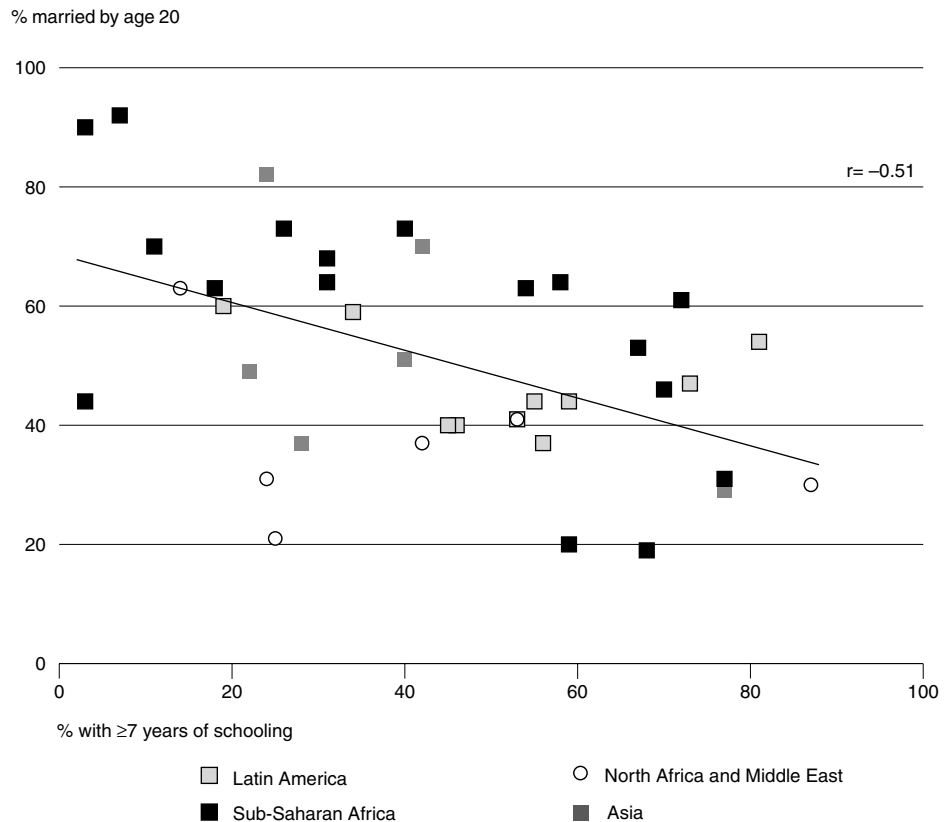
### Gender Equality in Education

In Figure 3 (page 156), we show the relationship between the number of girls per 100 boys enrolled in secondary school and the percentage of women married before age 20. The correlation coefficient is  $-0.68$ , indicating that greater equality between males and females—at least as it pertains to formal schooling—is strongly associated with a lower prevalence of early marriage among women.

### Women’s Labor Force Participation

We find no evidence of a statistically significant linear association between early marriage and women’s labor force par-

**Figure 2. Association between percentage of women aged 20–24 married by age 20 and percentage of women aged 20–24 with seven or more years of education**



Source: Special analyses of DHS data.

ticipation, defined either as the proportion of all women in the labor force or as the proportion of women aged 20–29 who reported in the DHS survey that they were currently working for pay. Nonetheless, data on female labor force participation are notorious for their poor quality and noncomparability across countries,<sup>30</sup> and we believe that deficiencies in the measurement of female labor force participation, rather than a weak underlying association, account for this finding.

Other studies with more appropriate measures of labor force experience have found a relationship with age at marriage. A United Nations analysis of data from the World Fertility Survey, which included measures of employment before marriage, suggests that women’s labor force participation and age at marriage are related. The analysis indicates that, in general, women who worked at all before marriage married somewhat later than women who did not. Moreover, women with experience working in a modern occupation before marriage had the highest mean age at marriage, net of the effect of education; on average, they married al-

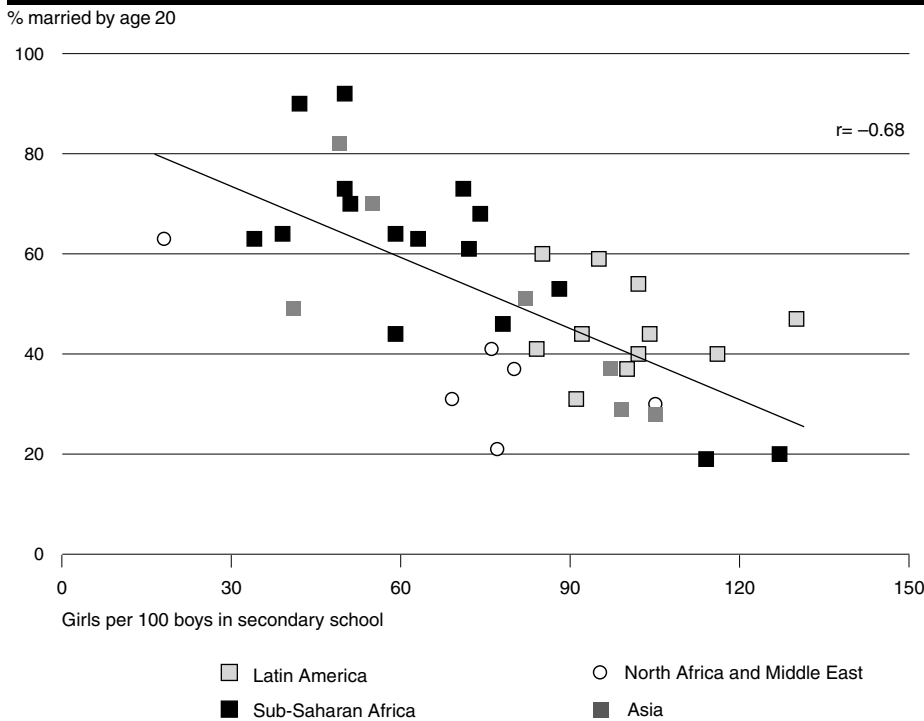
most 2.5 years later than women in traditional occupations.<sup>31</sup> An analysis of five Asian countries also found a relationship between women’s work before marriage and age at marriage, where higher-level occupations, work outside the home and work for cash were all related to increases in age at marriage.<sup>32</sup>

## Discussion

The concerns of policymakers and activists about the prevalence of early marriage and its impact on women’s status are current and important. A substantial proportion of women in developing countries still marry at a young age. In some countries, as many as 50% of women marry or enter a union by age 18, and up to 70% do so by age 20. In a few countries, substantial proportions marry before age 15. Even in low-prevalence regions such as North Africa, the Middle East and Southeast Asia, we find considerable cross-national variation.

<sup>\*</sup>This correlation is based on 39 countries. We omitted Sri Lanka because it lacks comparable data on educational attainment.



**Figure 3. Association between percentage of women aged 20–24 married by age 20 and number of girls per 100 boys enrolled in secondary school**

Sources: **Percentage married by age 20**—Special analyses of the Demographic and Health Surveys. **Girls per 100 boys in secondary school**—for Bolivia (1990), Brazil (1980), Dominican Republic (1985), Ecuador (1987), Guatemala (1980), Peru (1985), Uganda (1986): United Nations Educational, Scientific and Cultural Organization, *Statistical Yearbook*, 1993, Paris, 1993, Table 3.2; for all other countries: World Bank, *World Development Report 1994*, Oxford University Press, New York, 1994.

Enforcing the legal minimum age for marriage is one action that governments may adopt to increase women's age at marriage. In China, where the legal minimum age for women was increased to 20 in 1980 and has been enforced with some success, especially in urban areas, women's average age at marriage rose substantially, to about 22, by the late 1980s.<sup>33</sup> Other governments have introduced monetary incentives. In India, for example, the government of Haryana State is experimenting with a program whereby the state deposits 2,500 rupees (\$78) in the name of a newborn girl in a savings account, which will yield 25,000 rupees when the girl reaches 18, the legal age of marriage; the girl gets none of the money if she marries before that age. The program is restricted to families with low incomes (a maximum of 11,000 rupees, or \$343, a year) and no more than two children.<sup>34</sup> This particular pilot program appears promising, but direct attempts by governments to increase women's age at marriage have generally proven ineffective.

More typically, increases in the age at marriage have accompanied major social-structural changes such as increases in educational attainment, urbanization and the emergence of new roles for single women.<sup>35</sup> The findings in the present study show a

strong association between education and age at first marriage at both the individual level and the societal level. Although causation is probably not unidirectional, and much more research is needed to understand the mechanisms underlying such relationships, these strong associations suggest that increasing women's access to education is one of the more effective means that governments can use to increase age at marriage and simultaneously improve women's overall position.

Special efforts are needed in areas where schooling is available but other factors prevent young women from attending school or completing their education. For instance, girls in some cultures may not be allowed to attend school, and arranged marriages take place at a young age. In other settings, young women may lack the motivation to complete high school because they perceive a lack of job opportunities.<sup>36</sup> As these situations demonstrate, the link between education and marriage timing does not operate in isolation; rather, it is conditioned by the broader cultural and socioeconomic context.

Partly as a result of worldwide social and structural changes during the past 20–30 years, the proportion of women marrying as adolescents has declined in most of the

countries studied here. In some countries (mainly in Latin America and Sub-Saharan Africa), the declines are quite small and it is unclear whether they are part of long-term trends or short-term fluctuations.

This analysis shows that increases in the age at marriage are much larger and more widespread in North Africa, the Middle East and Asia than in Latin America and Sub-Saharan Africa. It is likely that these differences are at least partly due to the higher degree of familial control over a woman's choice of marriage partner and the timing of marriage, and by the strength of sanctions against premarital sex in North Africa, the Middle East and Asia.

An increase in the age at first marriage is in many respects a positive change, one that is likely to bring about improvements in women's status. However, an increase in age at marriage will result in improvements only if the longer period that women are single is spent in activities that are likely to improve their situation, for example, completing secondary or higher education and accruing work experience. While governments generally accept and are seeking to implement universal primary schooling, it will probably take more time, political will and resources to bring secondary schooling within the reach of all young women and to increase and diversify the job and training opportunities that are available to them.

In addition to improving women's status, a later age at marriage will probably bring new social, economic and health risks for women. These new and different risks create challenges for service providers who are trying to meet young women's needs in the areas of sex education, health care services in general, and reproductive health care services in particular. As the age at menarche decreases and the age at marriage rises, the period between menarche and the start of marriage lengthens,<sup>37</sup> increasing the likelihood of premarital pregnancies, births and unsafe abortion. Sexual activity in the absence of condom use—especially if a woman has multiple sexual partners—increases a woman's risk of exposure to sexually transmitted diseases, including AIDS.

In addition, a young woman who becomes a single parent faces a higher chance of being abandoned by her own family, of receiving no support or inadequate support from the father of the child, and of living in poverty than if she waits to have a child until she has entered a stable union. The proportion of women exposed to these risks will increase if there is a shift toward informal unions that are at high risk of dis-

solution, even if the age at first union remains the same. In Latin America, the proportion in informal unions has increased somewhat over the past three decades.<sup>38</sup> Researchers who study the timing of sexual activity and marriage in Sub-Saharan Africa have documented that noncohabiting, premarital sexual relationships are increasing there as well.<sup>39</sup>

A woman's age at first marriage continues to be a useful indicator of her status and of the start of childbearing. The formation of the first marriage or union brings important changes in a woman's family situation and in her future expectations and opportunities. When a woman marries at the age of 20 or older, she is more likely to have had the opportunity to develop independently of her parents and siblings, and she is more likely to form an identity separate from that of her partner or husband. In addition, the first birth still follows the start of the first union very closely: The majority of married women have their first child within 24 months of the start of the first union.<sup>40</sup> Still, the rising prevalence of sexual relationships and childbearing outside of marriage means that the implications of age at first marriage or union are changing.

In summary, information on changes in the prevalence of early marriage and on their implications for women can help policymakers and service providers recognize that action is needed, and can motivate them to formulate timely and adequate responses. Regulations, policies and programs must be adapted to ensure that young women have as much access as young men to formal education and to paid employment. This calls for rethinking how scarce resources are spent. At the same time, the social and health risks to young women that accompany traditional patterns of early union formation and early childbearing, and the different, but equally troubling risks that may accompany increases in the age at marriage, must be addressed and minimized.

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## Early Marriage...

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40. AGI, 1995, op. cit. (see reference 1), Table 5.

## Resumen

Un estudio que utilizó datos de 40 Encuestas Demográficas y de Salud indica que una proporción sustancial de mujeres de países en desarrollo todavía se casan durante la adolescencia. En general, el 20–50% de las mujeres se casan o inician una vida consensual a llegar a los 18 años, y el 40–70% lo hacen a llegar a los 20 años. La mayor prevalencia de matrimonios a temprana edad se presenta en el África Subsahariana y en el Sur de Asia, y la menor prevalencia en el África del Norte, el Oriente Medio y el Asia Sudoriental. Las mujeres de entre 20 y 24 años presentan una menor probabilidad de casarse antes de los 20 años que aquellas de entre 40 y 44 años; el diferencial es de por lo menos 10 puntos por-

centuales en la mayoría de los países y alcanza a 30–40 puntos porcentuales en algunos lugares. La educación y la edad de la mujer en el momento de su primer matrimonio son factores estrechamente vinculados tanto a nivel individual como a nivel de la sociedad: la mujer que ha asistido a estudios secundarios es considerablemente menos proclive a contraer matrimonio durante su adolescencia. Los países donde un mayor porcentaje de mujeres han completado la educación secundaria presentan una proporción más baja de casamientos durante la adolescencia.

## Résumé

Une étude fondée sur les données de 40 Enquêtes démographiques et de santé révèle une tendance continue au mariage précoce dans les pays en voie de développement. Dans l'ensemble, 20% à 50% des femmes se marient ou forment une union avant l'âge de 18 ans, et 40% à 70%, avant l'âge de 20 ans. Le mariage précoce est le plus fréquent en Afrique subsaharienne et en Asie du Sud; il est le moins commun en Afrique du Nord, au Moyen-Orient et en Asie du Sud-Est. Les femmes âgées de 20

à 24 ans sont moins susceptibles de s'être mariées avant l'âge de 20 ans que celles de 40 à 44 ans. La différence, d'au moins 10% dans la plupart des pays, atteint jusqu'à 30% et 40% dans certains. Le niveau d'éducation et l'âge au premier mariage présentent une association étroite, au niveau tant individuel que sociétal. Ainsi, les femmes instruites au niveau secondaire sont moins susceptibles de se marier pendant l'adolescence. Dans les pays où la proportion des femmes scolarisées au niveau secondaire est plus élevée, celle des femmes mariées avant l'âge de 20 ans est moindre.