**Appendix Table S1. Sample characteristics of ever-married women aged 20-24 years in Bangladesh, 1997, 2000, 2004, and 2007.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1997 | 2000 | 2004 | 2007 |
|  | N=1715 | N=1910 | N=2202 | N=2174 |
|  | Weighted percentage (95% CI) | Weighted percentage (95% CI) | Weighted percentage (95% CI) | Weighted percentage (95% CI) |
| Age at marriage |  |  |  |  |
| <14 | 42% (40%-45%) | 31% (28%-33%) | 29% (26%-31%) | 22% (19%-24%) |
| 14-15 | 25% (23%-28%) | 30% (28%-32%) | 30% (28%-32%) | 32% (29%-34%) |
| 16-17 | 15% (13%-17%) | 19% (18%-21%) | 22% (20%-24%) | 24% (22%-26%) |
| ≥18 | 17% (15%-19%) | 20% (18%-22%) | 19% (17%-21%) | 23% (21%-25%) |
| Age at Interview |  |  |  |  |
| 20 | 20% (18%-22%) | 21% (19%-23%) | 21% (19%-24%) | 22% (20%-24%) |
| 21 | 20% (18%-23%) | 20% (18%-22%) | 20% (17%-22%) | 20% (18%-22%) |
| 22 | 20% (18%-22%) | 21% (18%-23%) | 22% (20%-24%) | 21% (18%-23%) |
| 23 | 19% (18%-21%) | 20% (18%-22%) | 17% (16%-19%) | 20% (18%-22%) |
| 24 | 21% (19%-23%) | 18% (17%-20%) | 19% (17%-21%) | 18% (17%-20%) |
| Education level |  |  |  |  |
| None  | 50% (47%-52%) | 38% (35%-40%) | 27% (24%-29%) | 15% (13%-18%) |
| Any primary education | 27% (25%-29%) | 30% (27%-32%) | 29% (27%-31%) | 32% (29%-34%) |
| Any secondary education | 19% (17%-21%) | 27% (24%-29%) | 36% (34%-39%) | 46% (43%-48%) |
| Any higher education | 5% (4%-6%) | 6% (5%-8%) | 8% (7%-10%) | 8% (6%-9%) |
| Rural residence | 89% (88%-91%) | 81% (79%-83%) | 77% (75%-79%) | 77% (75%-79%) |
| Wealth quintile |  |  |  |  |
| Poorest | 19% (17%-22%) | 22% (20%-24%) | 21% (19%-23%) | 18% (16%-20%) |
| Poorer | 22% (20%-24%) | 20% (18%-22%) | 17% (15%-19%) | 19% (17%-21%) |
| Middle | 20% (18%-22%) | 19% (17%-22%) | 19% (17%-22%) | 21% (19%-23%) |
| Richer | 19% (17%-21%) | 19% (17%-21%) | 20% (18%-22%) | 22% (20%-25%) |
| Richest | 20% (17%-22%) | 20% (17%-22%) | 23% (20%-25%) | 20% (17%-22%) |
| Age gap† | 40% (37%-43%) | 43% (41%-46%) | 44% (42%-46%) | 41% (38%-43%) |
| Education gap *§* | -0.3 (-0.8-1.9) | -0.3 (-1.0-1.8) | -0.4 (-2.3-1.6) | -0.7 (-3.4-1.4) |

*†≥10 year age gap between husband and wife ± Median and IQR §Years of completed education of wife subtracted from years of completed education of husband; Median and IQR* **Appendix Table S2. Sample characteristics of ever-married women aged 20-24 years in India, 1993, 1999 and 2006.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1993 | 1999 | 2006 |
|  | N=17214 | N=15973 | N=14813 |
|  | Weighted percentage (95% CI) | Weighted percentage (95% CI) | Weighted percentage (95% CI) |
| Age at marriage |  |  |  |
| <14 | 12% (11%-12%) | 10% (10%-11) | 8% (8%-9%) |
| 14-15 | 24% (23%-25%) | 24% (23%-25%) | 22% (21%-23%) |
| 16-17 | 26% (25%-27%) | 25% (24%-26%) | 29% (28%-30%) |
| ≥18 | 38% (37%-39%) | 41% (40%-42%) | 41% (40%-42%) |
| Age at Interview |  |  |  |
| 20 | 23% (22%-23%) | 21% (20%-22%) | 20% (19%-21%) |
| 21 | 18% (17%-18%) | 18% (17%-19%) | 17% (17%-18%) |
| 22 | 21% (20%-21%) | 21% (20%-22%) | 21% (21%-22%) |
| 23 | 19% (18%-19%) | 20% (19%-21%) | 21% (20%-21%) |
| 24 | 20% (20%-21%) | 20% (19%-21%) | 20% (20%-21%) |
| Education level |  |  |  |
| None  | 58% (57%-59%) | 47% (46%-49%) | 39% (38%-41%) |
| Any primary education | 16% (15%-17%) | 16% (15%-17%) | 16% (15%-16%) |
| Any secondary education | 23% (22%-24%) | 27% (27%-28%) | 41% (39%-42%) |
| Any higher education | 3% (2%-3%) | 9% (8%-10%) | 5% (4%-5%) |
| Rural residence | 76% (75%-78%) | 77% (75%-79%) | 73% (72%-74%) |
| Wealth quintile |  |  |  |  |  |
| Poorest | 19% (18%-20%) | 20% (19%-21%) | 20% (19%-21%) |
| Poorer | 22% (21%-22%) | 21% (20%-22%) | 22% (21%-23%) |
| Middle | 22% (21%-23%) | 21% (20%-22%) | 22% (21%-23%) |
| Richer | 21% (20%-22%) | 21% (20%-22%) | 21% (20%-22%) |
| Richest | 17% (16%-18%) | 17% (16%-18%) | 15% (14%-16%) |
| Age gap† | 15% (14%-16%) | 17% (16%-17%) | 14% (13%-15%) |
| Education gap *§* | 0.6 (-0.6-4.8) | 1.0 (-0.7-4.7) | 0.5 (-0.8-4.4) |

*†≥10 year age gap between husband and wife ± Median and IQR §Years of completed education of wife subtracted from years of completed education of husband; Median and IQR* **Appendix Table S3. Sample characteristics of ever-married women aged 20-24 years in Nepal, 1996, 2001, 2006, and 2011.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1996 | 2001 | 2006 | 2011 |
|  | N=1629 | N=1651 | N=1679 | N=1715 |
|  | Weighted percentage (95% CI) | Weighted percentage (95% CI) | Weighted percentage (95% CI) | Weighted percentage (95% CI) |
| Age at marriage |  |  |  |  |
| <14 | 10% (8%-12%) | 4% (3%-5%) | 5% (3%-6%) | 5% (4%-6%) |
| 14-15 | 30% (27%-33%) | 30% (27%-32%) | 23% (20%-25%) | 20% (17%-23%) |
| 16-17 | 31% (28%-33%) | 34% (31%-36%) | 35% (31%-39%) | 28% (25%-31%) |
| ≥18 | 29% (27%-32%) | 32% (30%-35%) | 37% (33%-42%) | 47% (44%-51%) |
| Age at Interview |  |  |  |  |
| 20 | 20% (18%-22%) | 19% (17%-21%) | 16% (13%-18%) | 15% (13%-17%) |
| 21 | 17% (16%-19%) | 20% (18%-22%) | 19% (17%-22%) | 20% (18%-22%) |
| 22 | 22% (20%-24%) | 23% (21%-25%) | 23% (21%-26%) | 23% (21%-25%) |
| 23 | 18% (16%-20%) | 19% (17%-21%) | 18% (16%-21%) | 19% (17%-22%) |
| 24 | 23% (21%-25%) | 20% (18%-22%) | 23% (20%-25%) | 22% (20%-25%) |
| Education level |  |  |  |  |
| None  | 68% (65%-72%) | 59% (55%-63%) | 41% (38%-45%) | 28% (24%-33%) |
| Any primary education | 16% (14%-18%) | 18% (16%-20%) | 23% (21%-26%) | 22% (19%-25%) |
| Any secondary education | 14% (11%-17%) | 20% (17%-23%) | 31% (28%-34%) | 41% (37%-45%) |
| Any higher education | 2% (1%-3%) | 2% (2%-3%) | 4% (3%-5%) | 9% (7%-11%) |
| Rural residence | 92% (89%-95%) | 90% (88%-93%) | 85% (83%-87%) | 89% (88%-90%) |
| Wealth quintile |  |  |  |  |
| Poorest | 19% (16%-22%) | 20% (18%-23%) | 18% (15%-21%) | 16% (13%-19%) |
| Poorer | 20% (18%-22%) | 20% (18%-23%) | 20% (17%-23%) | 19% (16%-23%) |
| Middle | 21% (19%-23%) | 20% (17%-22%) | 20% (17%-23%) | 22% (19%-25%) |
| Richer | 21% (19%-24%) | 20% (18%-23%) | 21% (18%-25%) | 25% (21%-29%) |
| Richest | 18% (14%-21%) | 20% (16%-23%) | 20% (17%-24%) | 17% (14%-21%) |
| Age gap† | 9% (8%-11%) | 7% (6%-8%) | 9% (7%-11%) | 41% (38%-45%) |
| Education gap *§* | 1.9 (-0.4-5.4) | 2.0 (-0.4-5.1) | 1.5 (-0.4-4.5) | 0.4 (-0.8-3.1) |

*†≥10 year age gap between husband and wife ± Median and IQR §Years of completed education of wife subtracted from years of completed education of husband; Median and IQR* **Appendix Table S4. Sample characteristics of ever-married women aged 20-24 years in Pakistan, 1991 and 2007.**

|  |  |  |
| --- | --- | --- |
|  | 1991 | 2007 |
|  | N=1064 | N=1560 |
|  | Weighted percentage (95% CI) | Weighted percentage (95% CI) |
| Age at marriage |  |  |
| <14 | 11% (8%-13%) | 5% (4%-6%) |
| 14-15 | 19% (16%-23%) | 18% (17%-20%) |
| 16-17 | 22% (19%-25%) | 26% (24%-29%) |
| ≥18 | 48% (44%-52%) | 50% (47%-52%) |
| Age at Interview |  |  |
| 20 | 30% (27%-34%) | 23% (20%-25%) |
| 21 | 10% (8%-13%) | 14% (12%-16%) |
| 22 | 26% (23%-29%) | 24% (22%-26%) |
| 23 | 19% (15%-22%) | 17% (15%-18%) |
| 24 | 15% (12%-18%) | 23% (20%-25%) |
| Education level |  |  |
| None  | 75% (72%-79%) | 58% (55%-61%) |
| Any primary education | 13% (10%-15%) | 18% (16%-20%) |
| Any secondary education | 11% (9%-13%) | 19% (17%-21%) |
| Any higher education | 1% (1%-2%) | 5% (4%-6%) |
| Rural residence | 71% (68%-74%) | 70% (68%-72%) |
| Wealth quintile |  |  |
| Poorest | 20% (15%-24%) | 20% (17%-22%) |
| Poorer | 20% (16%-23%) | 23% (21%-25%) |
| Middle | 22% (19%-26%) | 20% (18%-22%) |
| Richer | 21% (17%-25%) | 19% (17%-21%) |
| Richest | 17% (14%-20%) | 18% (16%-20%) |
| Age gap† | 21% (18%-25%) | 19% (17%-21%) |
| Education gap *§* | 0.0 (-0.6-5.3) | 2.0 (-0.5-6.3) |

*†≥10 year age gap between husband and wife ± Median and IQR §Years of completed education of wife subtracted from years of completed education of husband; Median and IQR*

**Appendix Table S5. Odds of girl child marriage in Bangladesh, India, Nepal and Pakistan by expanded education level.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | <14 years | 14-15 years | 16-17 years |
|  | AOR (95% CI) | AOR (95% CI) | AOR (95% CI) |
| **BANGLADESH**  |  |  |  |
| **Education level** |  |  |  |
|  No education  | [REF] |  [REF] |  [REF] |
|  Any primary education | 0.68 (0.47,1.00) | 0.76 (0.51,1.12) | 1.03 (0.66,1.60) |
|  Secondary education |  |  |  |
|  0-1 completed years | 0.24 (0.12,0.50)\*\*\* | 0.47 (0.23,0.95) \* | 1.13 (0.55,2.31) |
|  2 completed years | 0.32 (0.14,0.70) \*\* | 0.64 (0.31,1.32) | 1.54 (0.73,3.27) |
|  3 completed years | 0.09 (0.04,0.18) \*\*\*\* | 0.20 (0.11,0.36) \*\*\*\* | 0.51 (0.28,0.93) \* |
|  4 completed years | 0.04 (0.02,0.08) \*\*\*\* | 0.20 (0.12,0.34) \*\*\*\* | 0.56 (0.34,0.94) \* |
|  ≥5 completed years | 0.01 (0.00,0.04) \*\*\*\* | 0.05 (0.02,0.11) \*\*\*\* | 0.30 (0.16,0.58) \*\*\* |
|  Any higher education† | 0.00 (0.00,0.03) \*\*\*\* | 0.02 (0.01,0.05) \*\*\*\* | 0.21 (0.11,0.37) \*\*\*\* |
| **Time (survey year)** | 0.97 (0.92,1.03) | 1.04 (0.99,1.10) | 1.04 (0.98,1.10) |
| **Education gap§**  | 0.97 (0.95,1.00) \* | 0.97 (0.94,0.99) \*\* | 0.99 (0.96,1.01) |
|  **INDIA** |  |  |  |
| **Education level** |  |  |  |
|  No education  | [REF] | [REF] | [REF] |
|  Any primary education | 0.33 (0.27,0.40) \*\*\*\* | 0.50 (0.44,0.57) \*\*\*\* | 0.69 (0.61,0.78) \*\*\*\* |
|  Secondary education |  |  |  |
|  0-1 completed years | 0.10 (0.07,0.15) \*\*\*\* | 0.33 (0.28,0.39) \*\*\*\* | 0.66 (0.56,0.77) \*\*\*\* |
|  2 completed years | 0.04 (0.03,0.08) \*\*\*\* | 0.19 (0.15,0.25) \*\*\*\* | 0.50 (0.40,0.62) \*\*\*\* |
|  3 completed years | 0.03 (0.02,0.06) \*\*\*\* | 0.15 (0.11,0.19) \*\*\*\* | 0.39 (0.32,0.48) \*\*\*\* |
|  4 completed years | 0.02 (0.01,0.07) \*\*\*\* | 0.08 (0.05,0.13) \*\*\*\* | 0.33 (0.25,0.44) \*\*\*\* |
|  ≥5 completed years | 0.01 (0.00,0.04) \*\*\*\* | 0.05 (0.03,0.08) \*\*\*\* | 0.26 (0.20,0.33) \*\*\*\* |
|  Any higher education† | 0.01 (0.00,0.06) \*\*\*\* | 0.02 (0.01,0.06) \*\*\*\* | 0.15 (0.11,0.20) \*\*\*\* |
| **Time (survey year)** | 0.99 (0.97,1.00) \*\* | 1.00 (0.99,1.01) | 1.01 (0.00,1.02) |
| **Education gap§** | 0.96 (0.95,0.97) \*\*\*\* | 0.98 (0.98,0.99) \*\*\*\* | 1.00 (0.99,1.01) |
|  **NEPAL** |  |  |  |
| **Education level** |  |  |  |
|  No education  | [REF] | [REF] | [REF] |
|  Any primary education | 0.41 (0.23,0.74) \*\* | 0.71 (0.51,0.99) \* | 0.96 (0.73,1.25) |
|  Secondary education |  |  |  |
|  0-1 completed years | 0.59 (0.15,2.30) | 0.65 (0.37,1.16) | 0.65 (0.37,1.15) |
|  2 completed years | 0.18 (0.06,0.52) \*\* | 0.43 (0.20,0.91) \* | 1.05 (0.55,2.02) |
|  3 completed years | 0.60 (0.20,1.83) | 0.33 (0.14,0.77) \* | 0.88 (0.45,1.70) |
|  4 completed years | 0.11 (0.03,0.43) \*\* | 0.08 (0.04,0.14) \*\*\*\* | 0.37 (0.22,0.61) \*\*\* |
|  ≥5 completed years | 0.00 (0.00,0.07) \*\*\* | 0.06 (0.03,0.13) \*\*\*\* | 0.28 (0.17,0.45) \*\*\*\* |
|  Any higher education† | 0.04 (0.00,0.53) \* | 0.02 (0.00,0.13) \*\*\*\* | 0.09 (0.04,0.21) \*\*\*\* |
| **Time (survey year)** | 0.94 (0.91,0.98) \*\* | 0.99 (0.97,1.01) | 1.01 (0.99,1.03) |
| **Education gap§**  | 0.98 (0.94,1.02) | 0.99 (0.97,1.02) | 0.98 (0.96,1.01) |
|  **PAKISTAN1** |  |  |  |
| **Education level** |  |  |  |
|  No education  | [REF] | [REF] | [REF] |
|  Any primary education | 0.67 (0.34,1.33) | 0.71 (0.38,1.34) | 0.95 (0.48,1.87) |
|  Secondary education |  |  |  |
|  0-1 completed years | 0.98 (0.12,8.05) | 0.59 (0.12,3.01) | 0.07 (0.01,0.67) \* |
|  2 completed years | 0.22 (0.02,1.96) | 0.45 (0.05,3.84) | 0.65 (0.19,2.26) |
|  3 completed years | 0.03 (0.00,0.22) \*\*\* | 0.10 (0.01,0.82) \* | 0.78 (0.30,2.03) |
|  4 completed years | 1.27 (0.15,10.71) | 0.60 (0.08,4.29) | 0.00 (0.00,0.00) \*\*\*\* |
|  ≥5 completed years | 0.02 (0.01,0.10) \*\*\*\* | 0.13 (0.03,0.62) \* | 0.62 (0.25,1.54) |
|  Any higher education† | 0.00 (0.00,0.00) \*\*\*\* | 0.00 (0.00,0.00) \*\*\*\* | 0.00 (0.00,0.00) \*\*\*\* |
| **Time (survey year)** | 0.96 (0.94,0.99) \*\* | 0.99 (0.97,1.01) | 1.02 (1.00,1.04) |
| **Education gap§**  | 0.97 (0.93,1.01) | 1.00 (0.97,1.03) | 1.00 (0.98,1.03) |

*Adjusted for urban/rural residence, wealth quintile, 10+ year age gap between husband and wife, state of residence and education level by survey year interaction. Interaction effects were p<.1 for Bangladesh and Nepal, and p<.001 for India and Pakistan. †Higher education estimates may be inaccurate due to small cell sizes. §Years of completed education of wife subtracted from years of completed education of husband 1Unstable estimates were seen in the Pakistan analysis suggesting sample size was inadequate to yield interpretable findings. \*p<0.05 \*\*p<0.01 \*\*\*p<0.001 \*\*\*\*P<0.0001*

**Appendix Table S6. Annual reductions in girl child marriages attributable to universal access to secondary education.** Based on 2012 probability estimates derived from married women aged 20-24 years for Bangladesh, India Nepal, and Pakistan.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Bangladesh | India | Nepal | Pakistan | Overall |
| Proportion reduction in marriage <18 | 7.6% (5.3 to 9.8) | 6.3% (5.2 to 7.3) | 6.9% (3.9 to 9.9) | 5.5% (-0.3 to 11.4) | 6.5% (4.7 to 8.2) |
| Number of girls expected to marry <18 | 1,209,830 | 4,921,250 | 168,444 | 613,031 | 6,912,555 |
| Number of girls married <18, annual estimate\* | 91,469 (64,145 to 118,793) | 309,473 (258,309 to 360,637) | 11,666 (6,609 to 16,723) | 33,960 (1,698 to 69,618) | 446,567 (327,364 to 565,771) |

\*Based on 2012 population estimates31