Age at effective marriage and fertility: An analysis of data for North Kanara

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Introduction

From time to time, Indian demographers have advocated that the age at marriage of girls be raised so as to reduce the reproductive span of women, and thereby, bring down the birth rate. Some researchers [1-3] have estimated a 10-20 percent reduction in the birth rate if the age at marriage of girls is increased to 18-20 years while others [4-6] estimate it to be less than 10 percent. Despite variations in estimates, and depending on the assumptions made by the researchers, it may be concluded that delaying the marriage of girls would lead to some reduction in the birth rate.

A recent review of the literature [7] shows that scant attention has been paid by researchers to the question of whether an increase in the age at marriage of girls does in fact result in controlling fertility or whether it is merely one aspect of social change which, in addition, involves changes in the roles of women and economic structures and fertility reduction. Further, the review suggests that late marriage may not automatically lead to lower fertility.

Srinivas [8] and others [9-12] belong to the school of thought which considers increased age at marriage as one aspect of social change and plays no more than a supporting and secondary role in controlling fertility. This view is further strengthened by the findings of several other researchers [13-16]. According to Zachariah and Talwar, [15] only about 30 percent of the overall fertility decline in Kerala between 1965 and 1980 can be attributed to an increase in the age at which women married. Coale [16] attributes the decline in marital fertility in late-marrying populations to not only the longstanding social conditions that accounted for the tradition of late marriage in Western Europe, but the favourable attitude for early adoption of contraceptives.

A study conducted by Yang [17] in rural China revealed that women who married earlier had longer intervals between marriage and first birth, but after five years of marriage, most women achieved about the same mean number of children regardless of age at marriage. Thus, there may be some 'catching-up' effect soon after marriage for those marrying late. However, when completed
fertility was examined, there was a difference of about one child between those
who married at 16-18 years of age (5.61) and those who married at 20-24 years of
age (4.51).

This paper seeks to examine the effect of age at effective marriage (cohabitation)
on fertility in a project area under the India Population Project III in Karnataka.
Controlling for contraception, it analyses the influence of age at effective
marriage on the number of children ever born and number of living children of
women who had never used family planning and of those who had accepted
sterilisation. In the case of the latter, assuming that all the women wanted the
same family size, it was hypothesised that the number of living children would
be the same for early and late-marrying cohorts.

The Data

The data for the study were taken from the Endline Survey conducted in 1992 by
the Population Centre, Bangalore, under the India Population Project III. The
survey covered rural areas of all the six project districts, namely, Belgaum,
Bijapur, Dharwad, Bidar, Gulbarga and Raichur located in the northern part of
Karnataka state. A sample of 2,000 households from each district was taken
irrespective of the size of the population of the district. Data relating to current
age, age at effective marriage, children ever born (live births), number of living
children, mortality, family planning practice and so on from the selected
households were collected from currently married women, 15 to 49 years of age,
in these households by the personal interview method.

A distribution of the women by district and the use of spacing or a terminal
method is presented in Table 1.

Table 1: Distribution of women by district and contraceptive use FP

<table>
<thead>
<tr>
<th>District</th>
<th>Never users of contraception</th>
<th>Ever users of spacing methods</th>
<th>Users of terminal methods</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgaum</td>
<td>933</td>
<td>38</td>
<td>814</td>
<td>1,785</td>
</tr>
<tr>
<td>Bijapur</td>
<td>1,169</td>
<td>31</td>
<td>777</td>
<td>1,977</td>
</tr>
<tr>
<td>Dharwad</td>
<td>797</td>
<td>6</td>
<td>614</td>
<td>1,417</td>
</tr>
<tr>
<td>Bidar</td>
<td>1,107</td>
<td>37</td>
<td>649</td>
<td>1,793</td>
</tr>
<tr>
<td>Gulbarga</td>
<td>1,081</td>
<td>25</td>
<td>358</td>
<td>1,464</td>
</tr>
<tr>
<td>Raichur</td>
<td>1,277</td>
<td>38</td>
<td>666</td>
<td>1,981</td>
</tr>
<tr>
<td>Project area</td>
<td>6,364 (61.1)</td>
<td>175 (1.7)</td>
<td>3,878 (37.2)</td>
<td>10,417 (100.0)</td>
</tr>
</tbody>
</table>

The figures in brackets denote percentages.
Table 1 indicates that as many as 61 percent of the 10,417 women interviewed had never used contraception while 37 percent had accepted a terminal method (sterilisation) and less than two percent had ever used a spacing method. In view of their small numbers, ever users of spacing methods were excluded from the study. The categories of age (years) at effective marriage considered for the analysis were ≤15 years, 16-17 years, 18-19 years and 20-28 years.

Findings

Table 2 presents a distribution of the women by the mean number of live births (Panel A) and mean number of living children of (Panel B) of never users of contraception by their current age and age at effective marriage. The findings in Panel A indicate a consistent decline in fertility as the age at effective marriage increases. This pattern was observed for almost all the age groups.

Table 2: Mean number of live births and mean number of living children of never users of contraception by current age and age at effective marriage (in years)

<table>
<thead>
<tr>
<th>Current age (years)</th>
<th>A. Mean number of live births</th>
<th></th>
<th></th>
<th></th>
<th>B. Mean number of living children</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age at effective marriage</td>
<td>≤15</td>
<td>16-17</td>
<td>18-19</td>
<td>20-28</td>
<td>Total</td>
<td>≤15</td>
<td>16-17</td>
<td>18-19</td>
</tr>
<tr>
<td>≤15</td>
<td></td>
<td>0.10 (29)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>0.10 (29)</td>
<td>0.10 (29)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>15-19</td>
<td></td>
<td>0.88 (627)</td>
<td>0.42 (272)</td>
<td>0.14 (56)</td>
<td>--</td>
<td>0.71 (955)</td>
<td>0.79 (955)</td>
<td>0.38 (272)</td>
<td>0.13 (56)</td>
</tr>
<tr>
<td>20-24</td>
<td></td>
<td>2.22 (916)</td>
<td>1.62 (512)</td>
<td>1.06 (313)</td>
<td>0.70 (89)</td>
<td>1.78 (1830)</td>
<td>1.98 (1830)</td>
<td>1.48 (512)</td>
<td>0.79 (313)</td>
</tr>
<tr>
<td>25-29</td>
<td></td>
<td>3.45 (813)</td>
<td>3.00 (356)</td>
<td>2.40 (234)</td>
<td>1.51 (158)</td>
<td>2.99 (1561)</td>
<td>2.97 (1561)</td>
<td>2.65 (356)</td>
<td>1.98 (234)</td>
</tr>
<tr>
<td>30-34</td>
<td></td>
<td>4.55 (488)</td>
<td>4.41 (190)</td>
<td>3.71 (102)</td>
<td>2.68 (59)</td>
<td>4.28 (839)</td>
<td>3.85 (839)</td>
<td>3.72 (190)</td>
<td>2.69 (102)</td>
</tr>
<tr>
<td>35-39</td>
<td></td>
<td>5.43 (338)</td>
<td>4.73 (128)</td>
<td>4.36 (69)</td>
<td>4.57 (30)</td>
<td>5.09 (565)</td>
<td>4.53 (565)</td>
<td>4.13 (128)</td>
<td>3.99 (69)</td>
</tr>
<tr>
<td>40-49</td>
<td></td>
<td>5.93 (373)</td>
<td>5.08 (110)</td>
<td>5.03 (63)</td>
<td>4.77 (31)</td>
<td>5.60 (577)</td>
<td>4.76 (577)</td>
<td>4.22 (110)</td>
<td>4.14 (63)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>3.25 (3584)</td>
<td>2.56 (1568)</td>
<td>2.27 (837)</td>
<td>2.03 (367)</td>
<td>2.88 (6356)</td>
<td>2.76 (6356)</td>
<td>2.23 (1568)</td>
<td>2.02 (837)</td>
</tr>
</tbody>
</table>

The figure in brackets denote the number of women.

The table excludes eight women for whom data on mean number of live births were not available.
Further, as expected, with an increase in current age, the mean number of live births as well as of living children increased. This was true for any given age at effective marriage. There was an overall difference of 1.2 live births (Table 2, Panel A) between early (≤15 years) and late-marrying (20-28 years) cohorts in the age group of 40-49 years in which the women were almost at the end of their childbearing period. This may be construed as the effect of age at (effective) marriage. As regards the mean number of living children too, there was a difference between early and late-marrying cohorts, but it was smaller - 0.8 in the 40-49 age group, possibly due to mortality differentials between these cohorts.

Table 3 provides information about the mean number of live births (Panel A) and mean number of living children (Panel B) of women who had accepted sterilisation by their current age and age at effective marriage.

**Table 3**: Mean number of live births and mean number of living children of sterilisation acceptors by current age and age at effective marriage (in years)

<table>
<thead>
<tr>
<th>Current age (years)</th>
<th>A. Mean number of live births</th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
<th>B. Mean number of living children</th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age at effective marriage</td>
<td>≤15</td>
<td>16-17</td>
<td>18-19</td>
<td>20-28</td>
<td>Total</td>
<td>≤15</td>
<td>16-17</td>
<td>18-19</td>
<td>20-28</td>
</tr>
<tr>
<td>&lt;15</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>15-19</td>
<td>2.45 (22)</td>
<td>2.18</td>
<td>0.00</td>
<td>0.00</td>
<td>--</td>
<td>2.18</td>
<td>2.45 (22)</td>
<td>2.18</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>20-24</td>
<td>3.12 (228)</td>
<td>2.93</td>
<td>2.48</td>
<td>2.53</td>
<td>1.50</td>
<td>2.80</td>
<td>3.12 (228)</td>
<td>2.93</td>
<td>2.48</td>
<td>2.53</td>
</tr>
<tr>
<td>25-29</td>
<td>3.77 (648)</td>
<td>3.48</td>
<td>3.18</td>
<td>2.75</td>
<td>2.76</td>
<td>3.32</td>
<td>3.77 (648)</td>
<td>3.48</td>
<td>3.18</td>
<td>2.75</td>
</tr>
<tr>
<td>30-34</td>
<td>4.34 (598)</td>
<td>3.88</td>
<td>3.58</td>
<td>3.71</td>
<td>3.45</td>
<td>3.77</td>
<td>4.34 (598)</td>
<td>3.88</td>
<td>3.58</td>
<td>3.71</td>
</tr>
<tr>
<td>40-49</td>
<td>5.52 (423)</td>
<td>4.56</td>
<td>4.25</td>
<td>4.06</td>
<td>4.40</td>
<td>4.42</td>
<td>5.52 (423)</td>
<td>4.56</td>
<td>4.25</td>
<td>4.06</td>
</tr>
<tr>
<td>Total</td>
<td>4.38 (2433)</td>
<td>3.86</td>
<td>3.66</td>
<td>3.48</td>
<td>3.46</td>
<td>3.76</td>
<td>4.38 (2433)</td>
<td>3.86</td>
<td>3.66</td>
<td>3.48</td>
</tr>
</tbody>
</table>

The figures in brackets denote the number of women.

The table excludes eight women for whom data on mean number of live births were not available.

As seen from Panel A of the table, fertility declined with an increase in the age at effective marriage for most age groups. However, the differences in fertility
between the early and the late-marrying cohorts were, in general, narrower than in the case of never users of contraception. For instance, in terms of living children, the early and late-marrying cohorts in the age groups 25-29, 30-34, 35-39 and 40-49 differed, on average, by 1.13 in the case of never users of contraception (Table 2, Panel A) and only by 0.55 in the case of sterilisation acceptors (Table 3, Panel A). This strengthens the hypothesis that, as family size norms for different groups converge and as contraception becomes widely prevalent, differentials by age at marriage, especially with regard to living children, become insignificant.

It was interesting to note that the fertility of sterilisation acceptors varied considerably by age; older women were observed to have higher fertility, in general. That younger women who had accepted sterilisation had fewer children as compared to older women suggests that desired family size had declined over time. This is a welcome change from the programme point of view.

A comparison of Table 2 with Table 3 revealed that the fertility of sterilisation acceptors was generally higher than that of never users of contraception, especially in the younger age groups. A similar observation that sterilised couples are more fertile than non-contraceptors has been reported by Rele and Kanitkar. [18]

**Summary and Policy Implications**

The effect of age at effective marriage on fertility has been examined in this paper, using data drawn from currently married rural women (15-49 years) in an Endline Survey of the India Population Project III in the northern districts of Karnataka state during 1992. Never users of contraception and sterilisation acceptors were studied.

An inverse relationship was observed between age at effective marriage and fertility. Among women who had never used contraception, those who had married early (< 15 years) had 5.95 live births whereas those who had married late (20-28 years) had 4.77 live births by the time they had nearly completed their reproductive span (40-49 years). This means that the early-marrying cohorts had 1.2 more live births than the late-marrying cohorts. In the case of sterilisation acceptors, the difference in fertility between the early and the late-marrying cohorts were smaller than in the case of never users of contraception thereby strengthening the hypothesis that, as social and economic development occurs, and contraception becomes widely prevalent, the family size norms of the different groups become smaller and converge, and the age at which a woman marries makes little difference in terms of the number of living children.
The implication of this study is that age at marriage can still play an important role in the reduction of fertility in some states in India such as Uttar Pradesh, Bihar and Rajasthan, where only about 30 percent of the couples are effectively protected by various family planning methods. Therefore, efforts should be made to effectively implement the existing law relating to the age at marriage (if it is not practical to raise it further), so that girls do not marry before completing 18 years of age.

Acknowledgements

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References


