

AGE AT MARRIAGE AND FERTILITY BEHAVIOUR

MADAN MOHAN PATNAIK

Age at marriage to a great extent is found to be an important demographic variable to influence the fertility behaviour of couples. The study tries to examine the hypothesis that the mean age at marriage changes with change in the socio-economic background of the couples. The study reveals further that, irrespective of the socio-economic characteristics of the couples, the increase in the mean age at marriage brings about a spectacular decline in the mean fertility of the couples.

Dr. Madan Mohan Patnaik is Research Officer (Statistics), at the Institute of Public Administration, Patna University, Patna.

Age at marriage is considered to have an important bearing on the fertility behaviour of couples. Since practically all births in India occur within marriage, total fertility is closely associated with the marriage pattern and age at marriage. Marriage, as an institution, is deeply entrenched in the Indian culture and it is considered to be the duty of every Indian to get married. Thus, marriage in India is not only universal but it has been found to take place even at early ages. Traditionally, Indian marriages are mostly arranged by the parents. Although this traditional practice has been changing slowly in recent years, arranged marriages are still very common in India. The Hindu scriptures urged the parents to give away their daughters in marriages "while she still goes naked" and warned them not to keep the maiden in their home after she had attained puberty (Kapadia, 1956). Society expected the girl to be married early because the correct ideal of chastity required that the maiden should not feel love for a man other than the one to whom she might eventually get married (Ketkar, 1909). An unmarried girl is expected to maintain her virginity till the time of her marriage, and "marriage must be desired before any scope for suspicion regarding the virginity of a girl presented itself (Samuel, 1965).

Because of these factors, the age at marriage in India has been very low. The mean age at marriage for females according to an unofficial figure was around 13 years during the decade 1901-1911. It increased

to 16.1 years by 1961, and to 17.2 years in 1972 (Goyal, 1965). But there are still many regions in the country, particularly in rural areas, where the age at marriage is very low. The slow increase in the age at marriage for females during the last 60 years permeated all sections of the population. There have been efforts in recent years and in the past to raise the age at marriage by legislation. The pertinent question often discussed is whether the rise in the age at marriage would produce a significant drop in the level of fertility.

Before debating this aspect it is pertinent to understand the meaning of the word "marriage" as used in the context of Indian Society. In many parts of India the performance of wedding is not invariably followed by the cohabitation of the couple and the consummation of the marriage ceremony. There is a formal marriage ceremony which is followed by nuptials called "Gauna" or "vida" and it is only after this ceremony that the newly married couple begins living together. However, when a girl is married several years after *menarche*, the two rites are usually performed together. The time of nuptial rites marks the consummation of the union, and represents the date of "effective marriage." Figures of age at effective marriage are not available for all India but it is fairly certain that the mean age is 17 years (Agarwala, 1965).

It is the age of "effective marriage" which has relevance for the demographic

effect of postponing the marriage age. A rise in the age at marriage does not necessarily mean a rise in the age of effective marriage, and, as the age at marriage rises, the interval between the date of marriage and effective marriage is shortened. Indeed, the rise in age at marriage in India during the last five decades has been accompanied by near elimination of the traditional time-lag between formal ceremonies of marriage and the start of cohabitation (Visaria and Jain, 1976). Scholars are sceptical of the likelihood of a significant reduction of fertility to be achieved by raising the age at marriage.

Most of the studies done in this area of investigation point out that the postponement of age at marriage of females to 18 or 19 years will not produce a significant decline either of completed family size or of the birth rate (Rele, 1967; Mazumdar and Das Gupta, 1969; Krishnan, 1971; Venkatacharya, 1970; Talwar, 1967).

The average age at marriage for females possibly varies according to various socio-economic characteristics of communities and as a consequence fertility behaviour may vary.

The objective of the present paper is, therefore, to study (1) the variations in the age at marriage with socio-economic characteristics of the couples under study, and then (2) the fertility is analysed in terms of their age at marriage and socio-economic characteristics.

Methodology

The present study is based on a sample of 800 couples. The technique of purposive sampling method is adopted here to select the couples keeping in view the idea of proportional representation of the couples by their socio-economic characteristics. The instrument used for data collection is a well devised questionnaire. For purpose of fill-

ing up the schedules the head of household is contacted only to provide the desired information. The selection of respondents is done in Patna town and in an adjacent village Nagarnaussa which is situated at a distance of 40 kilometres from Patna.

The average age at marriage in the present paper is determined by using median which is one of the important measures of central tendency. The mean fertility is determined in terms of average number of children ever born. The technique of analysis of variance has also been used here to study the significant variation in the mean fertilities by age at marriage and socio-economic characteristics of couples.

FINDINGS

Age of marriage and Socio-economic variables

The age at marriage may vary from person to person depending upon their socio-economic characteristics. Variations in the median age at marriage are evident when couples are differentiated on the basis of place of residence, religion, caste, education, occupation, income and employment status of women. Variation in the median age at marriage with socio-economic characteristics of couples has statistically been found to be significant as evidenced by F. test. Rural female spouses have lower median age at marriage than urban female spouses. Similarly the rural male spouses are found to possess lower median age at marriage than urban male spouses. No such marked variation in the median age at marriage is observed among religious groups. However, the Hindu women are found to possess slightly higher median age at marriage than Muslim women. There is found a marked variation in the median age at marriage of couples when they are classified by their caste. The median age at marriage for male spouses are found to be

TABLE 1

MEDIAN AGE AT MARRIAGE OF COUPLES ACCORDING TO PLACE OF RESIDENCE, RELIGION AND CASTE

Socio-economic variables	Median Age at Marriage		
	Male Spouses	Female Spouses	
Place of residence	Urban	22.50	18.50
	Rural	18.69	15.31
Religion: Hindu		20.32	17.21
	Muslim	20.03	16.65
Caste: Upper		21.78	18.99
	Backward	19.53	16.56
	Schedule	16.16	13.10

21.78, 19.53 and 16.16 respectively for upper, backward and scheduled castes. The corresponding medians for female spouses are 18.99, 16.56 and 13.10 respectively.

A strong association has been indicated between median age at marriage and education. The age at marriage is found to decline with increase in the level of educational attainments of couples. When couples are classified by the educational level of female spouses, the medians range from 12.23 years for male spouses and 10.36 years for female spouses in the illiterate group to 23.00 years for male spouses and 21.53 for female spouses in the category of post-graduates. When couples are classified by the occupation of male spouses, it has been observed that median age at marriage ranges from 16.53 for male spouses and 12.56 for female spouses in the occupational category of peons, darwans etc., to 22.59 years for male spouses and 20.13 years for wives in the professional group consisting of doctors, engineers, lecturers, advocates and others.

TABLE 2

MEDIAN AGE AT MARRIAGE ACCORDING TO EDUCATIONAL LEVEL OF FEMALE SPOUSES AND OCCUPATIONAL LEVEL OF MALE SPOUSES

Socio-economic variables	Median Age at Marriage		
	Male Spouses	Female Spouses	
Educational level of female spouses:	Illiterate	12.23	10.36
	Literate up to middle	12.55	12.39
	Matriculate	18.93	16.55
	Inter-mediate	20.59	18.36
	Graduate	21.42	19.73
	Post-Graduate	23.00	21.53
Occupational level of Male Spouses:	Office worker	22.31	20.00
	Professionals	22.59	20.13
	Cultivators	17.56	15.00
	Shop-keepers	19.39	16.36
	Peons, darwans, etc.	16.53	12.56

Although a direct association between the median age at marriage and economic status of family has not been observed but there is a tendency for those in the higher income group to marry late. Female and

TABLE 3

MEDIAN AGE AT MARRIAGE ACCORDING TO ECONOMIC STATUS OF FAMILY

Income of family (in rupees)	Median Age at Marriage	
	Male Spouses	Female Spouses
Under 200	17.54	12.35
200-499	16.31	12.00
500-999	18.57	16.53
1000-1499	20.35	18.35
1500-1999	21.51	20.53
2000 & above	21.16	20.36

male spouses in the income groups of Rs. 1500-1999 have highest medians 20.53 years and 21.51 years respectively. As the income of family changes from the category of Rs. 200-499 to the category of 'Rs. 500-999', the increase in the median age at marriage for female spouses is found to be of the order of 38 percent. The median age at marriage for employed female spouses is found to be more than that for those who are not employed. The higher

TABLE 4

MEDIAN AGE AT MARRIAGE ACCORDING TO EMPLOYMENT STATUS OF FEMALE SPOUSES

Employment status of female spouses	Median age at marriage	
	Male Spouses	Female Spouses
Employed	21.12	20.68
Not-employed	19.83	15.36

median age at marriage among employed female spouses may again be attributed to the impact of education. Thus from the above discussions it can be concluded that age at marriage of couples changes with change in their socio-economic background.

Age at Marriage and Fertility

It is now proposed to study the change in mean fertility of couples according to change in age at marriage of female spouses on the basis of their socio-economic characteristics. For the purpose of our analysis, the female spouses have been classified into four categories according to their age at marriage, i.e., "Below 15 years", "(15-19) years", "(20-24) years" and "25 years and above".

A strong positive correlation between fertility and age at marriage has been observed. The mean fertility tends to de-

cline sharply as the age at marriage of female spouses increases. The mean number

TABLE 5

MEAN FERTILITY ACCORDING TO AGE AT MARRIAGE OF FEMALE SPOUSES

Age at Marriage	Number	Mean fertility	Standard deviation
Under 15	186	5.06	2.25
15-19	356	4.45	2.20
20-24	217	3.31	1.15
25 & above	41	2.92	1.73

of children ever born is 5.06 for those spouses who are married before reaching 15 years of their age. 4.45 for those who are married in the age group of (15-19) years, 3.31 for those who are married in the age group of (20-24) years and 2.92 for those whose marriage took place at the age of 25 years and above.

From the analysis it is gathered that as the age at marriage of female spouses changes from the category of 'under 15 years' to the categories of '(15-19) years', '20-24) years' and '25 years and above', the reductions in the mean fertility levels are found to be of the order of 13 per cent, 35 per cent, and 42 per cent respectively. This shows that if the minimum age at marriage for female spouses is postponed beyond 20 years, there can be achieved a remarkable reduction in the future fertility in the state of Bihar.

The mean fertility is again found to be highly associated with age at marriage when the couples are differentiated by their caste. When the age at marriage of female spouses increased from 'under 15 years' to '20-24/ years, the mean fertility has been found to have declined by 27 per cent, 28 per cent and 30 per cent for upper caste backward caste and scheduled caste respectively. Thus, irrespective of caste affi-

TABLE 6(A)

MEAN FERTILITY ACCORDING TO CASTE AND AGE AT MARRIAGE OF FEMALE SPOUSES

Caste	Upper	Backward	Schedule
Age at marriage			
Under 15	4.36(94)	4.47(69)	5.62(23)
15-19	3.42(150)	4.22(158)	5.10(48)
20-24	3.20(90)	3.22(87)	3.95(40)
25 & above	2.73(34)	3.07(5)	3.50(2)

The figures in the parentheses represent the number of observations.

TABLE 6(B)

ANALYSIS OF VARIANCE TABLE

Sources of Variation	Sum of Squares	D.F.*	Mean sum of Squares	Snedecor's	Table value of F.
Age at Marriage	5.52	3	1.84	24.53	4.76
Caste	2.54	2	1.27	16.93	9.14
Error	0.45	6	0.075		
Total	8.51	11			

* Degrees of freedom.

liation of the couples, the fertility tends to decline sharply as the age at marriage for female spouses increases.

There seems to be a close connection between fertility and age at marriage when couples are differentiated by their place of residence. With the increase in the age at marriage of female spouses from 'under 15 years' to '(20-24) years', the mean fertility has been observed to have reduced by 27 per cent for urban couples and by 30 per cent for rural couples.

TABLE 7(A)

MEAN FERTILITY ACCORDING TO PLACE OR RESIDENCE AND AGE AT MARRIAGE

Place of residence	Urban	Rural
Age at marriage		
Under 15	4.36(149)	5.01(37)
15-19	3.87(253)	4.63(103)
20-24	3.18(157)	3.48(60)
25 & above	2.70(24)	2.93(17)

TABLE 7(B)

ANALYSIS OF VARIANCE TABLE

source of Variation	Sum of Squares	D. F.	Mean sum of Squares	Snedecor's	Table value of F
Age at marriage	4.35	3	1.45	48.33	9.28
Residence	0.47	1	0.47	15.66	10.13
Error	0.10	3	0.03		
Total	4.92	7			

Thus, if female spouses, irrespective of their place of residence, are motivated to marry in the age group of (20-24) years, there may be achieved a remarkable fall in the future fertility of the State.

Irrespective of the educational attainments of female spouses, the mean fertility bears a negative relation with age at marriage. Even for the illiterate group, the mean number of children ever born has declined from 5.60 for those whose marriage took place under 15 years to 4.02 for those whose marriage took place in the age group of (20-24) years. It is observed further that as the marriage age increases from 'under 15 years' to '(20-24) years', the mean fertility declines by 28 per cent, 29 per cent and 35 per cent respectively for illiterate,

TABLE 8(A)

MEAN FERTILITY ACCORDING TO EDUCATIONAL LEVEL AND AGE AT MARRIAGE OF FEMALE SPOUSES

Educational level	Illiterate	Literate upto matric	College
Age at marriage			
Under 15	5.60(48)	4.49(119)	3.42(19)
15-19	5.07(77)	4.04(166)	2.68(113)
20-24	4.02(12)	3.18(101)	2.21(104)
25 & above	3.66(12)	2.94(15)	2.11(14)

TABLE 8(B)

ANALYSIS OF VARIANCE TABLE

Sources of variation	Sum of Squares.	D. F.	Mean sum of squares	Snedecor's F.	Table value of F.
Age at marriage	6.89	3	2.296	23.92	4.76
Education of female spouses	6.01	2	3.005	31.30	5.14
Error	0.58	6	0.096		
Total	13.48	11			

literate upto matric and college attended female spouses.

Regardless of the occupational status of male spouses, the mean fertility tends to decline as the age at marriage of female spouses increases. The increase in the age

TABLE 9(B)

ANALYSIS OF VARIANCE TABLE

Source of Variation	Sum of Squares	D. F.	Mean sum of squares	Snedecor's F.	Table value of F.
Age at Marriage	4.69	3	1.56	12.38	3.71
Occupation of male spouses	14.10	4	3.52	27.94	3.48
Error	1.26	10	0.126		
Total	20.05	19			

at marriage also has caused a positive impact on the fertility performance in the lowest category of occupation consisting of peons, darwans, etc. As the age at marriage of female spouses is found to increase from 'under 15 years' to '(20-24) years,' the mean fertility tends to decline by 19 per cent, 6 per cent, 19 per cent, 21 per cent, 30 per cent, respectively for the categories of 'office workers', 'professionals', 'cultivators', 'shop-keepers' and 'peons', darwans, etc. From the analysis it may be concluded that if high fertility groups namely, 'Cultivators', 'shop-keepers' and 'peons', darwans, etc. are somehow motivated to adopt (20-24) years as the best marriage age group for female spouses, their fertility can be re-

TABLE 9(A)

MEAN FERTILITY ACCORDING TO OCCUPATIONAL STATUS OF MALE SPOUSES AND AGE AT MARRIAGE OF FEMALE SPOUSES

Occupation Age at marriage	Office workers	Professionals	Cultivators	Shop-keepers	Peons, darwans etc.
Under 15	3.96(48)	2.67(12)	5.23(50)	4.28(13)	5.73(63)
15-19	3.66(74)	2.62(31)	4.62(67)	4.06(35)	5.36(149)
20-24	3.19(60)	2.50(36)	4.22(36)	3.39(13)	3.98(71)
25 & above	2.45(18)	2.01(7)	3.74(7)	3.38(6)	3.33(3)

duced to a great extent in the near future which may have a significant impact on the check of population growth in the state of Bihar.

The mean fertility is again found to bear a negative correlation with the age at marriage when couples are characterised by their economic status measured in terms of their monthly family income. Even for the

spouses. As the age at marriage increases from under 15 years to '(20-24) years', the mean fertility declines by 18 per cent, 25 per cent, 28 per cent, 21 per cent, 27 per cent, 36 per cent respectively for the income groups 'under Rs. 200', '(Rs. 200-499)', '(Rs. 500-999)', '(Rs. 1000-1499)' (Rs. 1500-1999)' and 'Rs. 2000' and more.

Similarly, irrespective of the employment

TABLE 10(A)

MEAN FERTILITY ACCORDING TO FAMILY INCOME AND AGE AT MARRIAGE

Monthly income of family (in rupees)-	Under 200	200-499	500-999	1000-1499	1500-1999	2000 & more
Age at marriage						
Under 15	5.05(40)	5.48(61)	4.12(46)	3.41(22)	3.78(9)	3.75(8)
15-19	4.47(34)	4.89(126)	3.73(126)	3.40(29)	3.48(31)	2.60(10)
20-24	4.15(25)	4.08(49)	2.95(74)	2.70(35)	2.75(16)	2.40(18)
25 & above	3.57(7)	4.00(11)	2.82(13)	2.67(3)	2.60(6)	2.00(1)

TABLE 10(B)

ANALYSIS OF VARIANCE TABLE

Source of Variation	Sum of Squares	D. F.	Mean sum of spouses	Snedecor's F.	Table value of F
Age at Marriage	4.93	3	1.64	126.15	3.29
Family income	8.88	5	1.78	136.92	2.90
Error	0.19	15	0.013		
Total	16.79	23			

lowest income group, i.e., families having monthly income of less than Rs. 200/-, the mean fertility tends to decline sharply with increase in the age at marriage of female

status of female spouses, the mean fertility bears a negative relation with age at marriage. As the marriage age of female

TABLE 11

MEAN FERTILITY ACCORDING TO EMPLOYMENT STATUS AND AGE AT MARRIAGE OF FEMALE SPOUSES

Employment Status of female spouses	Not employed	Employed
Age at marriage		
Under 15	5.21(159)	3.18(27)
15-19	4.63(322)	2.34(34)
20-24	3.62(170)	2.24(47)
25 & above	3.42(19)	2.12(22)

spouses is postponed from 'under 15 years'

to '(20-24) years', the mean number of children ever born has been found to have declined by 30.52 per cent and 29.50 per cent respectively for non-working and working women.

Conclusion

From the foregoing analysis, it can manifestly be inferred that postponment of marriage to a late age is one of the most important factors to effect a change in high fertility groups of the society. The findings further suggest that the age group (20-24) years can be adopted as the best marriage age group for all the cross sections of the society to achieve a remarkable fall in the fertility levels of all the sub-groups of the

population, particularly in the illiterate and low economic groups, and in the 'cultivators', 'shop-keepers' and 'peons, darwans, etc. groups which account for the prevalence of high fertility levels in the society. In this regard the finding of Dr. Charles, C. Westtoff of Princeton University (1975) is worth mentioning here. According to his finding the age at marriage is the best single prediction of fertility in the U.S.A., as well as in developing countries because it combines mutually reinforcing biological and sociological selective factors such as fecundability and education. In other words, high natural fertility and lack of higher education both of which are characteristic of girls who marry young, combine to produce large families.

REFERENCES

- Agarwala, S. N.
1969 "Mean Duration of Fertile Union in India from Census Data", Report of the proceedings of Sixth International Planned Parenthood Conference, Planned Parenthood Association, London: 89-93.
Draper World Population Fund (1975) Report No. 1, Washington, p. 14.
- Goyal, R. P.
1975 "Shifts in Age at Marriage in India Between 1961 and 1975", *Demography India*, 4(2), 336-344.
- Kapadia, K. M.
1956 *Marriage and Family in India*, London: Oxford University Press, (2nd edition).
- Ketkar, S. V.
1909 *The History of Caste in India*, Araoti, India.
- Krishnan, P.
1971 "A Note on Changes in Age at Marriage of Females and Their Effect on the Birth Rate in India", *Social Biology*, 18(2): 200:202.
- Mazumdar, M. and
Das Gupta, A.
1969 "Marriage Trends and Their Demographic Implications", *Sankhya Series B*, 31(3, 4): 491-500.
- Pravin Visaria and
Jain, A. K.
1976 *India: A Country Profile*, The Population Council, New York.
- Rele, J. R.
1962 "Some Aspects of Family and Fertility in India", *Population Studies* 15(3): 267-278.
- Samuel, T. J.
1965 "Social Factors Affecting Fertility in India", *The Eugenics Review*, 57(1): 5-15.
- Talwar, P. P.
1967 "A Note on Changes in Age at Marriage of Females and Their Effect on the Birth Rate in India", *Eugenics Quarterly* 14(4): 291-295.
- Venkatacharya, K.
1970 "Impact of Postponing Marrings on India's Birth Rate", *Artha Vijnana*, 13(3): 323-345.