

AN ANALYSIS OF INTER-GENERATION FERTILITY

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The present investigation aims to study the changes in the fertility rate in three generations and the extent to which such changes are influenced by the social and economic outlook. It also aims to discover whether the size of the family is affected by the changes in the age of the mother at marriage. The three generations covered are the respondents who are at the age of 50 years or above, the respondents' mothers and the respondents' married daughters.

The importance of an investigation of this type, especially in a country like ours, which is going ahead with its planning for future growth, can scarcely be exaggerated.

Another study of a similar type was conducted by Ruth O. Trux² which was suggested by a similar study made in 1920, which showed a decrease in the average number of children in three generations. Trux's study was intended to discover further trends after the lapse of 15 years. The respondents in his study were the college students from whom information regarding their mothers and grandmothers was collected. The shortcoming of that study was that the students could not give enough detailed information about their grandmothers as they did not remember all the facts. This difficulty has been overcome in the present study by collecting the informa-

tion from respondents who are at the age of 50 years or above and who are in a better position to give detailed and reliable information about their mothers and daughters.

In the present study respondents mothers refer to the first generation, respondents themselves to the second generation and their married daughters to the third generation. The respondents were asked to give information relating to the fertility pattern in respect of their own, their mothers and their married daughters.

Sample and Method.—The subjects of investigation are the women who are at the age of fifty or above but who might be living in the married, widowed or separated state but must have married daughters. A hundred women were selected from different sectors of Chandigarh by means of quota sampling.

It is not possible to work out precisely what percentage our sample forms to the female population of the appropriate age category in Chandigarh because the break-up of the population in terms of age, as given in the census report is different. The census classified the population into four age categories namely, 0-14, 15-30, 35-59, 60 and above. Since our sample consists of the women above the age of fifty, a rough idea of the

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²Ruth O. Trux, "The Size of Family in three Generations", *American Sociological Review*, Vol. I No. 4, 1936, p. 581.

ratio of our sample to the population, we have adopted the following method.³

Assuming that the population between the age of 35-59 is equally distributed in the five categories, namely, 35-39, 40-44, 45-49, 50-54, 55-59, the female population above the age of fifty years in Chandigarh in 1961 works out to be 3,005. On the basis of this method, our sample may form about 3.3 per cent of the total population above the age of fifty years.

Age at Marriage.—The data of the present study show that later generations are characterized by higher age at marriage and the earlier generations by the lower age at marriage. The average age at marriage in the first generation was 13.4 years, in the second it was 15.6 years while in the third generation it was 19.7 years. The following table shows the percentage distribution of females at different ages.

TABLE 1
WOMEN'S AGE AT MARRIAGE IN THREE GENERATIONS (PERCENTAGES)

Age	First generation %	Second generation %	Third generation %
5-9	5		
10-14	71	26	7
15-19	23	71	39
20-24		3	35
25-29			8
30-34			11
35 and above			
No response	1		
Total (%)	100	100	100

(100 respondents had 174 married daughters)

The table shows that the highest concentration in the first generation is between 10-14 years, in the second generation between 15-19 years and in the third generation between 15-24 years.

The interesting fact is that in the first generation 12 per cent of the women were married between the ages 9-10 years, in the second generation only 2 per cent were married at this age, whereas in the third generation not a single woman was married at such an early age. The age range varies from 9 to 30 years. Relating the age at

marriage to the educational standard acquired by these women we find that in the first generation where the average age at marriage is only 13.4 years, all women are absolutely illiterate, in the second generation one-fourth of them were absolutely illiterate and half of them were just literate. Only two of them had education above the B.A. level and their age at marriage was between 20-24 years. In the third generation, only 10 per cent were illiterate and nearly 60 per cent were matriculates or had education beyond the matriculation standard. This proves the fact that higher education and

³The above method is indeed very crude and is far from being reliable because the size of the population tends to decrease as the age keeps on increasing. For instance the female population between the age group 35-59 is 64% less than the previous age category and that of sixty and above is 81% less than those in the age group of 35-59. So the actual female population above the age of 50 years will be far less than 3,005. Secondly, we have included in our sample only married females with married daughters. The number of such females will be smaller. It we take these limitations into considerations, the ratio of our sample will be actually much higher than 3.3%. In other words, we may say that our sample works out to be not less than 3%, of the total females of the appropriate category in the total population of Chandigarh.

modern awakening has brought changes in the age of the women at marriage.

Similar changes are also to be found in the men's age at marriage. In the first generation the man's average at marriage

was 17.7 years, in the second generation it was 21.4 years and in the third generation it was 23.9 years. The following table shows the percentage distribution of the age at which the males in the three generations were married.

TABLE 2
MEN'S AGE AT MARRIAGE IN THREE GENERATIONS (PERCENTAGES)

Age	First generation	Second generation	Third generation
	%	%	%
10-14	9	2	
15-19	61	30	14
20-24	21	50	41
25-29	6	16	35
30-34	—	1	8
35 and above	1	1	1
No response	2	—	1
Total %	100	100	100

As in the case of women's age at marriage, here too, in the first generation the largest concentration, i.e. 61% is between 15-19 years, in the second generation only 30% were married at this stage, whereas in the third generation only 14% were married between 15-19 years.

Again, in the first generation 7 per cent were married above the age of 25 years but out of these seven, 4 per cent were married a second time and one per cent was married the fourth time. In the second generation, 18 per cent were married above the age of 25 years, whereas in the third generation, 44 per cent were married above the age of

25 years. Hence like women's age at marriage, men's later generations are also marked by the higher age at marriage.

Interval between Marriage and First Birth.—Early marriage is a universal phenomenon in India and our respondents are not an exception to it. But it was attempted to see how far early marriage is also accompanied by early motherhood. In other words, an attempt has been made to find out the interval between the age at marriage and the age at which the first child was born. The following table shows the interval between marriage and the first birth :—

TABLE 3
INTERVAL BETWEEN MARRIAGE AND THE FIRST BIRTH (PERCENTAGES)

No. of years	First generation	Second generation	Third generation
0-1	10	28	42
2-3	65	45	39
4-5	15	12	11
6-7	8	8	3
8-9	—	2	
10-11	—	4	
12-13	—	1	1
14-15	—		
No response	2		4
Total %	100	100	100

In our country the girls generally attain puberty at the age of 14 to 15 years. Even in the present survey nearly 75 per cent of the women in the first generation, 25 per cent in the second generation and 7 per cent in the third generation were married before the attainment of puberty. Hence the average age at marriage being 13.4 years, a minimum interval of two to three years is inevitable for those married at 13-14 years and an interval of 4 to 5 years for those married at 11-12 years and an interval of 6 to 7 for those married at 9-10 years.

In the first generation only 10 per cent had their first child within one year of their marriage because all of them were married at the age between 15 and 17 years. In the second generation only those who were married earlier had a bigger gap than those who were married slightly later. In the third generation where the average age at marriage has gone upto 19.7 years, 87 per cent had an interval of 9 months to 3 years and only 14 per cent had an interval of 4 to 7 years.

Number of Children Born in Three Generations.—The number of children born to a woman through the entire length of her married life can give an exact idea of fertility rates. Hence the first two generations

where the women have passed through the entire length of their married life and are now past menopause will give us a clear picture of the fertility rate. In the third generation there are very few cases of completed fertility, hence we cannot rely on them. The following table shows the average number of children born in three generations:—

TABLE 4

THE AVERAGE NUMBER OF CHILDREN BORN IN THREE GENERATIONS

No. of women in three generations	No. of children born	Average per mother
First —100	684	6.84
Second—100	678	6.78
Third —174	461	2.65

The number of children born to a woman generally depend upon the duration of married life and the mother's age at first birth. Hence it is attempted to establish a correlation between the duration of married life and the average number of children born in three generations. The following table shows the duration of married life and the average number of children born in three generations.

TABLE 5

DURATION OF MARRIED LIFE AND THE NUMBER OF CHILDREN BORN

Duration of married life in years	FIRST GENERATION		SECOND GENERATION		THIRD GENERATION	
	Percentage of women	Average No. per mother	Percentage of women	Average No. per mother	Percentage of women	Average No. per mother
0-4	7	1.7	—	—	19	1.4
5-9	12	3.3	3	4.8	33	2.4
10-14	6	5.0	2	3.0	27	3.5
15-19	4	8.7	3	5.0	11	4.5
20-24	13	7.4	23	6.5	3	5.8
25-29	58	8.6	69	6.8	7	5.3
30 and above	—	—	—	—	—	—
Total %	100	—	100	—	100	—

Here it must be noted that a majority of the women in the first generation, nearly one-fourth in the second generation and 7 per cent in the third generation were married before the attainment of puberty. Hence we have calculated the duration of married life from the age at effective marriage because the age at effective marriage is often higher than the age at ceremonial marriage. If the mothers were a widow or separated, then her age at the time of widowhood or separation minus the age at effective marriage has been taken for calculating the length of married life.

Table 5 on page 364 shows that there is a decline in the average size of the family for the same duration of married life in three generations. The decline may be attributed to the factors like higher age at marriage, education and women's employment. As already mentioned the age at marriage has gone up by 6.3 years from first to the third generation. Besides there is a trend towards

more and higher education for women from the first to the third generation. In the first generation all women were illiterate, in the second generation 28 per cent were illiterate, whereas half of them were just literate, but in the third generation only 10 per cent were illiterate. Besides this, in the first generation no women ever worked outside the house, in the second generation only 2 per cent worked for quite some time, whereas in the third generation nearly 20 per cent were engaged in gainful employment. Hence these factors could be responsible for a decline in the average size of the family for the same duration of married life in three generations.

Another factor with which the number of births may be correlated is the age of the mother at the time of the birth of the first child. The table below show the age of the mother at first birth and the number of children born.

TABLE 6

THE AGE OF THE MOTHER AT FIRST BIRTH AND THE NUMBER OF CHILDREN BORN IN THREE GENERATIONS

Age at first birth	FIRST GENERATION		SECOND GENERATION		THIRD GENERATION	
	Percent of women	Average per mother	Percent of women	Average per mother	Percent of women	Average per mother
14	—	—	—	—	—	—
15	13	6.6	8	9.4	2	5.7
16	40	6.8	14	9.3	7	4.7
17	29	7.4	16	8.1	8	4.8
18	6	6.1	13	6.8	7	4.1
19	1	0.9	19	7.1	11	3.6
20	2	8.5	8	7.9	8	2.6
21	—	—	9	6.9	11	3.8
22	—	—	9	6.3	13	2.4
23	—	—	5	3.8	11	2.0
24	—	—	2	7.5	4	2.2
25 or above	—	—	3	5.0	18	2.0
No response	9	1.3	—	—	—	—
Total (%)	100	—	100	—	100	—

The table shows that in the first generation 88 per cent of the women had their first child between 15 and 18 years, in the second generation only 51% had their first child during this period whereas in the third generation only 24 per cent had their first child during this period. The important fact is that in the first generation all the women had their first child before the age of 20 years, in the second generation nearly one-fourth of them had their first child after the age of 20 years and in the third generation 57% had their first child after the age of 20 years. - In the first generation no women had her first child birth after the age of 20 years. But in the second and the third generations the size of the family has decreased in the case of those who had their first child birth after the age of 20 years.

"In a number of studies positive correlations have been found between the number of children born to a family and the number of children with the husband's and or wife's family. In other words it would appear that family size has a tendency to run in families. This phenomenon has been interpreted by some authors as evidence of the inheritance of fecundity."* Here an attempt has been made to assess the contribution of inheritance to the total variation in individual families. It is to be noted that here only cases of completed fertility have been taken (cases where the fertility was terminated by the death of the either partner have been excluded).

There are 70 cases of completed fertility in two generations i.e. the first and the second generation. Out of these 21 per cent had the same number of children as their

mothers had, 41 per cent had a difference of one to two children. Out of these 41 per cent had a difference of one to two children in 24 per cent the first generation had one or two children less than the second generation and in 17 per cent the second generation had one or two children more than their mothers. Nearly one-fourth, i.e. 26 per cent had a difference of three to five children and only 12 per cent had a difference of more than five children. In some cases there are less in the first generation and more in the second and in some cases more in the first and less in the second.

Whatever the case of relationship observed, it appears that the family of the parents exerts some, although small, differentiating effect on fertility. Berent in "Relationship between family sizes of two successive generations (1953) has also come to the above conclusion."*

Conclusion.—A distinct downward trend in the average number of children per family for the same duration of married life in three generations is apparent. The average size of the family decreased from 6.84 per family in the first generation to 2.65 in the third generation.

This declining size is associated with several important sociological factors. The advancing age at marriage accompanies and in part explains the decreasing size of the family. The average age at marriage has gone up by 6.3 years from first generation to the third generation. Similar changes are also to be found in men's age at marriage. There is a trend towards higher education and gainful employment for women.

*Determinants and consequences of population growth, United Nations, 1953, p. 90.

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