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Determinants of Contraceptive use in Kerala :The Case of Son/Daughter Preference

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The preference of couples worldwide for a male or female child is an age-old phenomenon. In many developing countries, including India, the preference for sons is strong and has influenced fertility to a large extent. Again, there are also reports[1-3], which indicate that in countries where a strong son preference exists, it has only had a weak or, at most, a moderately strong effect on fertility and family planning practice. Nevertheless, son preference is prevalent in many less developed countries, particularly in the rural areas where sons are often priced as assets for working on the family farm, as providers of security in old age, and so on. Son preference thus, has affected the success of family planning programs by acting as a significant barrier to rapid fertility decline in these countries.

Couples also tend to continue to have children if they have not achieved the number of children of a preferred sex. That is, if the preference for sons were stronger than family size preference, couples would hesitate to accept contraception, and particularly a permanent method such as sterilization. Analyzing data from Kerala, Ramakumar[4] observed that son preference among couple though existent was not strong enough to influence family size limitation decisions, while Suchindren and others[5] observed that when there were proportionately more children of the same sex there was a strong tendency to accept sterilization. A study[2] based on world fertility data has shown that sex preference need not have a powerful influence on fertility as the average family size declines. That is, couples tend to accept contraception in order to reduce family size irrespective of the sex of the children they have. The recent fertility decline in Kerala is independent of any gender preference, particularly son preference among couples. The present paper intends to examine the preference for sons or daughters among couples in Kerala, which could have influenced their fertility.

Sample and Methodology

The data used in the study were drawn from a survey of teacher couples in Kerala, conducted in 1991. The sample comprised a randomly selected sample of

502 female, high school teachers from almost all the 14 districts of the State. A schedule was used to collect information about their demographic and socioeconomic characteristics.

Sex or gender preference was measured by an improved method of Ramakumar[6] based on that of Arnold, whereby an index was constructed to measure sex preference and family size preference separately in terms of the contraceptive acceptance rate. When calculated parity-wise, it measures the strength of family size preference among couples in the absence of son or daughter preference and their differences and their differences as gender preference (sex preference).

According to this method, the index of family size preference, ignoring the number of daughters the couples has, but considering only the number of sons, is given by $SP(F) = P_i S_i / P_i * 100$, where P_i is the proportion of women of ' i 'th parity and S_i is the proportion of women having ' i ' sons accepting contraception, irrespective of the number of daughters they have. Similarly, family size preference ignoring sons, but taking into consideration only daughters, irrespective of the number of sons is given by

$SP(M) = P_i D_i / P_i * 100$, Where D_i is the proportion of women P_i having ' i ' daughters, irrespective of number of sons they have.

The measure of sex (gender) preference or SP is given by

$SP(F) - SP(M)$. The preference for one child / children of one sex over the other will also be reflected by this measure.

Results and Discussion

Table 1 presents a distribution of the respondents by a distribution of the respondents by number of living children and the contraceptive method used. The contraceptive acceptance rate was 49.8 percent. A marginal 1.8 percent of the couples had resorted to MTP to prevent an unwanted pregnancy, and 48.4 percent reported that they were not using any method. The latter information may not be wholly reliable as the respondents may suppress such information. As expected, among family planning acceptors, contraceptive acceptance, and particularly sterilization, increased with the number of living children. As many as 62 percent of the users had accepted a permanent method indicating a strong motivation to limit the family size to two almost three fifths (59 percent) of all sterilization acceptors had two children, followed by 38 percent who had three children, the remaining 3 percent had one or four or more children. Among the

spacing methods, the condom was the most preferred-used by 69 percent of the spaces (Table1)

Table 1: Distribution of FP users and non-users by living children, FP use with reason and MTP

| Contraceptive Method Used | | | | | | Contraception Used For | | | | | |
|---------------------------|--------------|-----------------|----------------|----------------|------------------|------------------------|---------------|--------------|----------------|-----------------|-------------------|
| No. of living children | Non-Fp users | Condom | IUD | Oral pill | Sterilization | Total users | MTP | No responses | Spacing births | Limiting Births | Total Respondents |
| 0 | 7 | 4 | - | - | - | 4 | 2 | 1 | 3 | - | 13 |
| 1 | 45 | 9 | 6 | 5 | 2 | 22 | 2 | - | 15 | 7 | 69 |
| 2 | 138 | 40 | 5 | 13 | 92 | 150 | 5 | 3 | 14 | 133 | 293 |
| 3 | 43 | 7 | - | 1 | 59 | 67 | - | 3 | 5 | 59 | 110 |
| 4 | 8 | 1 | 1 | - | 2 | 4 | - | - | - | 4 | 12 |
| 5 | 2 | 2 | - | - | 1 | 3 | - | - | 1 | 2 | 5 |
| Total | 243 | 63(25.2) | 12(4.8) | 19(7.6) | 156(62.4) | 250(100.0) | 9(3.6) | 7 | 38 | 205 | 502 |

NOTE- [Average number of children: 2.16.

* N - 250 who were using a FP method (sterilization, IUD, pill or condom)]

Table1 also indicates whether the acceptors were using the family planning method for spacing or limiting births. While 2.8 percent or 7 of the 250 acceptors did not specify whether they were practicing family planning for spacing or limiting births, the majority of those who did respond (205 or 82 percent) stated to have been using a method to limit future births; only 15 percent were doing for birth spacing. Considering that 133(88 percent) of the 150 two-child acceptor couples were practicing family planning to limit birth, only 92 (61 percent) had accepted a terminal method. On the other hand, while only 14 couples (9 percent) stated that they were using a method to space birth as many as 58 (39 percent) were using a spacing method; the condom was used by about 25 percent of all users and 69 percent of the spacers. Interestingly the, the condom was apparently being used to a greater extent than the IDU or the pill to prevent future births. Two-child families were predominant in the sample among both users and non-users of family planning, followed by couples who had three children .Of the 243

couples who were not using any method, over half had two children while a fifth had three or more children. Conforming to this observation was their expressed desired family size: the average number of children desired by the respondents was 1.94 and the average ideal number of children was 2.02 children (Table 2). As against this, the average number of living children was slightly higher at 2.16

Table 2: Distribution of respondents by desired and ideal family size

| No.of living Children | Desired family size | Ideal family size |
|-----------------------|---------------------|-------------------|
| 1 | 7 | 7 |
| 2 | 148 | 117 |
| 3 | 56 | 31 |
| 4 | 16 | 10 |
| 5+ | 7 | 2 |
| Total | 234 | 167 |

NOTE: [No response was received on the desired and ideal family size for 268 and 335 women respectively. Desired family size (mean): 1.94 Ideal family size (mean):2.02]

This shows that the ideal and desired family size as expressed by the respondents were not very different (though over 50 per cent did not provide this information), and that the couples, by and large, were practicing family planning successfully to attain their desired as well as ideal family size goals.

Sex Combination of Children and Contraceptive Use

Table 3 gives a distribution of the respondents by the sex combination of children and contraceptive use. The findings show that among the 29 acceptor couples who had two daughters only, over half (18 or 62 percent) had accepted sterilization and the remaining 11 (38 percent) were, using a temporary method of contraception. When the total sample was considered, a third of all couples with two daughters and no sons were found to have opted for sterilization. The corresponding percentages for 'two sons-only' couples were 59 percent for permanent method acceptors and 41 percent for temporary method acceptors, almost the same as for 'two daughters-only' couples. Among the 84 acceptor couples, who had a one-son-one-daughter combination too, an almost equal proportion was using temporary and permanent methods.

TABLE 3: Distribution of respondents by sex combination of children and contraceptive use

| Sex combination | Permanent method | Temporary Method | Total | Non-Acceptors | MTP Cases | Total responses |
|---------------------------|-------------------------|-------------------------|--------------|----------------------|------------------|------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| No of Children | - | 4 (30.8) | 4 | 7 (53.8) | 2 (15.4) | 13 (100.0) |
| One Child | - | 7 (21.2) | 7 | 24 (72.2) | 2 (6.1) | 33 (100.0) |
| 1 daughter | | [100.0] | [100.0] | | | |
| 1 son | 2 (5.6) | 13 (36.1) | 15 | 21 (58.3) | - | 36 (100.0) |
| | [1.3] | [86.7] | [100.0] | | | |
| Two Children | 18 (34.6) | 11 (21.2) | 29 | 21 (40.4) | 2 (3.8) | 52 (100.0) |
| 2 daughters | [62.1] | [37.9] | [100.0] | | | |
| 1 daughter, 1 son | 52 (30.9) | 32 (19.1) | 84 | 82 (48.8) | 2 (1.2) | 168 (100.0) |
| | [61.9] | [38.1] | [100.0] | | | |
| 2 sons | 22 (30.1) | 15 (20.6) | 37 | 35 (48.0) | 1 (1.3) | 73 (100.0) |
| | [59.4] | [40.6] | [100.0] | | | |
| Three Children | 8 (100.0) | - | 8 | - | - | 8 (100.0) |
| 3 daughters | [100.0] | [100.0] | | | | |
| 2 daughter, 1 son | 27 (50.9) | 4 (7.6) | 31 | 22 (41.5) | - | 53 (100.0) |
| | [87.1] | [12.6] | [100.0] | | | |
| 1 daughter, 2 sons | 19 (50.0) | 3 (7.9) | 22 | 16 (42.1) | - | 38 (100.0) |
| | [86.3] | [13.7] | [100.0] | | | |
| 3 sons | 5 (45.4) | 1 (9.1) | 6 | 5 (45.5) | - | 11 (100.0) |
| | [83.3] | [16.7] | [100.0] | | | |

| | | | | | | |
|---|----------------------|---------------------|----------------|------------|---------|----------------|
| Four Children 3 daughters, 1 son | 2 (28.6) [66.7] | 1(14.3) [33.3] | 3 [100.0] | 4 (57.1) | - | 7 (100.0) |
| 1 daughter, 3 sons | - | 1 (33.3) [100.0] | 1 [100.0] | 2 (66.7) | - | 3 (100.0) |
| 2 daughters, 2 sons | - | - | - | 2 (100.0) | - | 2 (100.0) |
| Five or more children | 1 (20.0) [33.3] | 2 (40.0) [66.7] | 3 [100.0] | 2 (40.0) | - | 5 (100.0) |
| Total | 156 (31.1) [62.4] | 94 (18.7) [37.6] | 250 [100.0] | 243 (48.4) | 9 (1.8) | 502 (100.0) |

NOTE- [Figures in brackets [] Columns 2 and 3 indicate row-wise percentage of total acceptors in each sex combination category. Figures in brackets() indicate row-wise percentage of all respondents in each sex combination category.]

Further, among both two-child and three-child couples (there were very few couples with four or more children), irrespective of the sex combination, a significantly greater proportion of acceptor couples were likely to opt for a terminal method. The percentage of sterilization acceptors among acceptors increased with the number of children: 59-62 per cent among two-child couples and over 83 per cent among three-child couples had accepted sterilization. Even among acceptor couples with four or more children, though the sample size was small, a significant proportion had accepted sterilization. Thus, the decision to accept a permanent method was apparently influenced by a preference for family size than a preference for either male or female children.

This was true even in the case of couples who had three daughters only: eight out of ten had accepted sterilization, indicating a preference for family size over six of children.

Among single-child acceptor couples, as expected, acceptors of temporary methods predominated (91 percent). While all the 7 couples with only daughter were using a spacing method, 13 of the 15 couples who had one son were doing so (the remaining two had accepted sterilization). This was true even when all single-child couples were considered, that is among all the 69 single-child

couples, a higher percentage of couples with one son (39 percent) than couples with one daughter (21 percent) were spacing births to postpone the next pregnancy. Ramakumar, in a study in Kerala, also observed that acceptors of non-terminal methods were proportionately greater in number when the single-child was a son as compared to a daughter. That couples with an only son were more likely to contracept than those with an only daughter, though suggestive of son preference, was insignificant. Further, that couples who had an only female child had not undergone a sterilization (two of the 15 'only-son' couples had done so), does not indicate son preference in this small number of couples; rather it is a chance factor. As discussed earlier then, once the preferred family size of two children, whether male or female, is achieved, the couples tend to accept a permanent method. Also, as observed, when parity increases, family size seems to take precedence over gender preference in making contraceptive decisions.

Gender Preference and Contraceptive Use

Table 4 presents the gender preference values among users and non-users of contraceptives at each parity. The findings indicate that for those who had accepted a family planning method, the measure of size preference was 51.28 when sons were preferred and 51.84 when a daughter was preferred. The difference between the two values, that is -0.56, indicated a slight preference for daughters. Among adopters of a permanent method, the corresponding values were 31.27 and 32.06 respectively, the difference of -0.79 again indicating a slight edge over son preference.

TABLE 4: Contraceptive use rates by sex preference of children by FP users and non-users

| Number of sons/ Daughter | Permanent Method users Preference for | | Temporary method users Preference for | | Total users Preference for | | Non-users Preference for | | No. of cases |
|--------------------------|---------------------------------------|----------|---------------------------------------|----------|----------------------------|----------|--------------------------|----------|--------------|
| | Son | Daughter | Son | Daughter | Son | Daughter | Son | Daughter | |
| 1 | 5.56 | - | 36.11 | 29.03 | 41.67 | 29.03 | 58.33 | 70.97 | 69 |
| 2 | 31.09 | 32.41 | 20.58 | 22.22 | 51.68 | 54.62 | 48.32 | 46.75 | 293 |
| 3 | 50.00 | 53.47 | 7.84 | 6.93 | 57.84 | 60.40 | 42.15 | 39.60 | 110 |
| 4 | 16.67 | 16.67 | 16.67 | 16.67 | 33.33 | 33.33 | 66.67 | 66.67 | 12 |
| 5+ | 20.00 | 20.00 | 40.00 | 40.00 | 60.00 | 60.00 | 40.00 | 40.00 | 5 |
| Size preference | 31.27 | 32.06 | 20.01 | 19.79 | 51.28 | 51.84 | 48.71 | 50.98 | 489* |

| | | | | | | | | | |
|-------------------------------------|---|-------|---|------|---|-------|---|-------|---|
| value s | | | | | | | | | |
| Sex prefer ence value s | - | -0.79 | - | 0.22 | - | -0.56 | - | -2.27 | - |

* 13 respondents who had no children were excluded.

On the other hand, the difference in the case of acceptors of spacing methods was 1.47 (the values being 20.01 and 19.79 respectively), and suggested a slight son preference. However, the above differences did not show any clear-cut preference for sons but suggested that family size preference rather than gender preference was an important consideration for contraceptive use as reflected among couples having a marginal excess of daughters over sons. When all contraceptive users are considered, the margin of preference for sons over daughters is further reduced to a negligible value of 0.56.

The contraceptive use rates at each parity distributed by son and daughter preference were more or less equal among contraceptors with a slight preference for daughters, which does not reflect any perceptible sex preference. Among non-users, the family size preference values were 48.71 in the case of son preference and 50.98 for daughter preference. The difference of -2.27 was slightly in favor of daughters, but in significant.

Conclusion

Son preference as a determining factor in contraceptive acceptance and birth control is fast changing, especially in regions where fertility is on the decline. The educated and economically advanced sections of the society opt for small family irrespective of the number of sons or daughters they have. The present study indicates this manifestation in the practice of contraception and fertility in Kerala. Among educated couple's aged 35 and below, the tendency is to have small families of two children. In the present sample of 502 teacher-couples, over 90 per had only two children. The ideal and desired family size was close to two. Our findings suggest that family size preference is apparently more important than gender preference in determining contraceptive use - both, terminal and, spacing methods. The lack of sex preference also confirms an absence of son preference and the influence of family size preference on contraceptive use. This is perhaps inevitable because of improvement in the educational and economic conditions of different groups of people in the state over the years; modernization is also known to influence the use of contraception due to a

change from joint families to nuclear families. The characteristics of the sample population, that is, teacher-couples, are significant in this context. Further, with a decrease in the distribution of farmland among families, male children are probably no longer considered as asset. As a consequence, the fast decline, in the fertility of the state is apparently occurring without a consideration for the sex of the child. The wide use of contraception and the acceptance of terminal methods after two children by couples reflect this. Further, the average number of children per couple in our sample, is just above two, and sons are no longer a preferred asset as compared to daughters,

The majority of contraceptors had accepted sterilization. The study shows no preference for either sex among couples who practiced contraception. The contraceptive use rate was higher among low parity women, especially at parity two, indicating a sustained effort by couples to regulate family size. In general, the tendency of acceptor Couples was to use contraception not to space births in terms of preferred sex of the children, but to limit family size.

The conclusion that can be drawn from this study then is that gender preference does not determine contraceptive practice especially among the educated and socially advanced sections of society. Thus, fertility declines can set in among these sections first; therefore, a desirable level of socio-economic development is necessary for fertility decline. Since contraceptive use by primigravida indicates a desire, to postpone the next childbirth, it cannot be related to gender preference, but inevitably, to family size preference. This is also why the majority of acceptors (over 60 percent) had accepted a permanent method. Sex preference, otherwise derived from the present study is only due to a chance factor, and not based on any deliberate decision making Therefore, the contraceptive use rate based on the sex combination of children of children has not been a determinant of sex preference but of family size preference, which has led to a rapid decline in fertility in the state.

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