ATTITUDES OF MALES TOWARD FAMILY PLANNING IN A WESTERN INDIAN VILLAGE

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THIS paper[2] reports part of a study of family planning attitudes and practices among men in Badlapur Village, Bombay State, India, made during 1954.[3] An analysis is made of those factors which were found to be significantly associated statistically with the desire for additional offspring and attitude toward use of birth control on the part of the men of the village. The village of Badlapur has a population of approximately 3,200 persons who are members of forty-five endogamous caste groups and who represent the Hindu, Muslim, Christian and Jain religions. Since the village is forty-two miles from Bombay City, those men of the village who work in either the offices and factories of Bombay or in the nearer lesser urban aggregates commute daily to their places of work by railway from the station, one and one-half miles from the village itself. The village, as well as the region of which it is a part, is still predominantly agricultural, for almost two-thirds, 61.7 per cent, of the persons of the region are dependent upon agriculture for a livelihood.[4] A cultural disparity clearly exists

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[4] The region consists of two administrative districts of Thana and Kolaba. Data obtained from the district handbook series: THANA DISTRICT CENSUS HANDBOOK. Bombay, Government of Bombay Press, 1953; KOLABA DISTRICT CENSUS HANDBOOK. Bombay, Government of Bombay Press, 1952. These present the data gathered in the 1951 Census.

between urban and rural, between city and village, in India, even though the village may be situated near larger urban aggregates. Village India today is largely untouched by influences from urban India, although conditions in the villages are slowly changing. Badlapur is a village, representative of the more than five hundred thousand villages which constitute village India in which more than eighty per cent of the population of the nation still dwell.

The Male Sample

The male interviewers[5] were instructed to interview married men, for to have questioned single men about such subjects would have been misunderstood in the village. They were not to interview men who either were too old or who considered themselves to be too old to have more offspring or who were less than 15 years of age. The sample, 124 males, therefore, as well as the universe populations[6] of the study, 573 males, constitute a group of married males 15–54 years of age.

A detailed discussion of the representativeness of the sample, using the frequency distributions of the sample and the universe populations, is not made here because of limitations of space. The data which indicate the degree of correspondence of the sample and the universe populations with respect to the four variables of age, education, caste and occupation are presented in Table 1. The degree of correspondence between the sample and the universe distributions are shown by the values of P. With respect to occupation the P value is high and is moderate with respect to the other three variables. The moderate to high values of P here indicate that the sample does mirror the universe population, that it is representative.

[5] The author is indebted to Mr. Krishnanath Y. Karnik and Mr. Vasant P. Gokhale who obtained most of the interviews for this study. Both men worked with the author throughout the two years spent in the village. The replies were recorded by them in Marathi and were then translated into English by Mr. Hari C. Bhagwat and Mr. Manohar G. Orpe. Without their assistance the work would not have been possible.

[6] The universe population is based upon a census conducted by the author in the village in 1953. It represents a later enumeration than the April, 1951, Census of the Government of India.

Variable	Chi Square	Degrees of Freedom	P Value
Age	4.0641	2	13.5
Education	4.2897	2	11.9
Caste	4.2308	2	12.2
Occupation	4.6500	6	58.3

Table 1. Correspondence of the sample with the universe population in terms of several variables indicated by the chi-square test of goodness of fit.

Desire For Offspring

When asked the question, "If you want more children, how many more do you desire?", thirty-six men replied that they did not desire more offspring. Proportionately they constitute a surprisingly large group, 29.0 per cent of the total sample population of 124 males. The social and demographic characteristics of this group, *ie.*, those not desiring additional offspring, were very different from those of the group desiring more offspring. The relationship between desire for offspring and a number of variables is presented below. These variables do not exhaust the possibilities but they do represent some which proved statistically significant.

The data presented in Table 2 show that a direct relationship is involved between the number of living offspring and desire for additional offspring. The percentage of men with 0–2 living offspring who desired no additional children was almost nil, 6.8 per cent, while eight out of ten of those with 6–11 living children desired no additional. This was not com-

Table 2. The sample population by number of living children and by desire for additional offspring.

Number of Living Offspring	Desire More Offspring	Desire No More Offspring	Total	Per Cent Desire No More of Total
0–2	49	3	52	6.0
3–5	36	18	54	33.0
6–11	3	15	18	83.0
Total	88	36	124	29.0

Chi Square 39.8670 Chi Square Probability Nil

pletely expected, for it is often stated that the villager is desirous of an unlimited number of offspring. The data contradict this belief.[7] The three cases with 0–2 offspring who desired no additional children appear to be severely atypical of their group. Two of the three, with high school education, high caste status, and clerical employment, intimated that economic considerations were the overt basis for their statement. They felt that they could not both maintain their present level of living and sufficiently educate their present children if they had more progeny. The third case, a man of 33 years, a tenant farmer, of an agricultural caste, had eight offspring die before the present living male child was born to him. It is questionable, in the author's opinion, that he will remain satisfied with only one offspring, should this one male child live. He appears to be an exceptional case, more closely associated in value orientation with the other 94 per cent of the 0–2 offspring group. Here as in other aspects of Indian life, values are in conflict within the individual's frame of reference. Traditional values encouraging and venerating large families clash with the newly acquired non-traditional urban industrial society's emphasis upon standard of living and trends toward individuation.

Three of the group with 6–11 living offspring desired more children (Table 2). They are atypical of their group in this respect. Upon closer examination, one man, a tenant farmer, was found to be uneducated; the second, an owner of a tea and candy shop, had a 1st–4th grade education; while the third, a goldsmith, had a 5th–7th grade education.[8] Their mean age

[7] To check this finding, a chi square was also run on the association between total number of offspring, both living and dead, and the attitude under consideration. The result was 34.0955, with the probability of its having occurred by chance as nil. The change in attitude occurred at the 7–8 total offspring group, among whom 72.7 per cent desired no additional progeny. In contrast there were only 37.9 per cent of the 5–6 total offspring group who were of the same opinion. There is a possibility that many of these variables do measure the same thing. The author is now engaged in treating the data with multiple variable techniques to ascertain the validity of this hypothesis. However it is felt that the insights provided by the use of the present technique are enough to warrant their presentation at this time.

[8] The educational distribution of the universe male village population was as follows: 41.2 per cent uneducated, 24.4 per cent 1st–4th grade, 23.2 per cent 5th–7th grade, and 11.2 per cent secondary school and beyond.

was 42.0. They had 2.3 living male offspring, and they had been married an average of 18.7 years. All three indices are below the levels shown to be necessary for the opposite attitude to become operative. They articulated traditional values in overt economic terms as the first subject's reasons for desiring more children illustrate: children were valuable help in cultivation and other farm work, and his sons would support him in his old age. He desired as many sons as possible. The second male stated that he wanted more children, as many as fate should decide. It should be noted that his economic situation, from all appearances, was better than average. The third interviewee, the goldsmith, desired another daughter, after which he indicated he would have the vasectomy operation performed. Of these three subjects the first two mirror the traditional attitudes and value orientation, while the last in some respects is not traditionally oriented. He appears to be more closely associated with the majority of those with 6–11 living children who desire no additional offspring.

A direct association is observed between number of living male offspring and desire for additional progeny (Table 3). Most significantly, desire for no additional offspring is clearly associated with three or more living male progeny, for 70.4 per cent of the males in that group held this opinion, while those males with fewer than three living sons were desirous of additional offspring. When this table is compared with the preceding one, it is clear that male offspring is a crucial factor in

Table 3. The sample population by number of living male offspring and by desire for additional offspring.

Number of Living Male Offspring	Desire More Offspring	Desire No More Offspring	Total	Per Cent Desire No More of Total
0–1	63	6	69	8.7
2	17	11	28	39.3
3–7	8	19	27	70.4
Total	88	36	124	29.0

Chi Square 37.6360 Chi Square Probability Nil

determining desired size of family, for men with three living male offspring desired no more, yet if male children are not differentiated, six living progeny were necessary to make manifest the attitude. This reinforces the predominant emphasis within the village culture's traditional frame of reference of the necessity of male offspring.[9] Yet contrary to the often stated belief, the villager is not passive or fatalistic concerning the desired number of male children, but apparently is satisfied with three living male progeny or six total offspring. In the presence of extremely high morbidity and infant and child mortality conditions, the villager often hedges on the desired number, for he realizes implicitly if not explicitly that approximately four out of ten of his children will die before they reach the age of five.[10] The implications of these findings are clear, for some of the atypical cases which desire more offspring, yet whose characteristics would seemingly place them in the opposite category, possess male offspring in numbers below this critical level.

The group of six males with 0–1 living male offspring who desired no additional are atypical of their general group (Table 3). Their mean number of total living offspring was 2.7, much less than the level indicated in Table 2. They had been married an average of only 9.5 years, only one was married 20 years. Their mean age was 36.2 years, again less than the critical level shown to exist in Table 5. Education furnishes a partial key to their attitudes and value orientation, for three had high school educations, two were of the 1st–4th grade level and only one was illiterate. Clearly their value orientations were non-traditional, manifest in their desire for no additional male children, although many of their other characteristics, indicated by the figures above, would logically place them in the

[9] This point is fully developed in Pandhari-Nath Prabhu's HINDU SOCIAL ORGANIZATION. Bombay, Popular Book Depot, 1954, pp. 215–29.

[10] Chandrasekhar, S.: HUNGRY PEOPLE AND EMPTY LANDS. Baroda: M.S. University of Baroda, 1952, pp. 155–7; Davis, Kingsley: THE POPULATION OF INDIA AND PAKISTAN. Princeton, Princeton University Press, 1951, pp. 33–7; and STATISTICAL ATLAS OF BOMBAY STATE (PROVINCIAL PART) REVISED EDITION. Bombay, Bureau of Economics and Statistics, Secretariat, Bombay. P. 116 for infant mortality rates.

opposite category. The three men with high school education possessed levels of aspiration for their family and their children which could not be attained if more progeny were born. The articulation of this viewpoint in their replies was a clear statement of the non-traditional value orientation.

Another aberrant group is composed of the eight males with three or more living male offspring who desire more progeny. They possessed an average of 4.3 living offspring, were married a mean of 10.2 years, were 36.5 mean years of age. These figures indicate that they should be expected to desire more children, since the levels associated with each factor are below the critical mark. However they were not too well educated since two were illiterate, three had a 1st–4th grade education, and three were of the 5th–7th grade level. Whatever the dynamics of the attitude formation, they exhibited a traditional value orientation in this matter, since all desired more offspring, indicating the high value they ascribed to a large family.

Number of years married also proved to be significantly associated with desire for additional progeny (Table 4). Whereas only 3 (7 per cent) of 44 married under ten years desired no additional offspring, 13 (two-thirds) of 20 males married twenty years or over did not desire more children. It is acknowledged that the population bases for these comparisons are small. It is also recognized that among the males married "under ten years" are some who are newly married and child-

Table 4. The sample population by number of years married and by desire for additional offspring.

Years Married	Desire More Offspring	Desire No More Offspring	Total	Per Cent Desire No More of Total
Under 10	41	3	44	7.0
10–14	27	9	36	25.0
15–19	13	11	24	46.0
20–24	4	8	12	67.0
25 and Over	3	5	8	63.0
Total	88	36	124	29.0

Chi Square 26.6750 Chi Square Probability .000024

less. Duration of marriage is undoubtedly highly related to number of offspring, yet because of the social and cultural factors involved in early marriage in village India, the two variables are not necessarily similar, and so have been treated independently here. These findings again indicate the incorrectness of the common assumption that the Indian villager has a fatalistic outlook on size of family.

Closer inspection of the three subjects, atypical of their general group, married less than ten years who did not desire more children, shows that all have an above-average education for each attended high school. One had three living offspring, two sons and a daughter; the second had two daughters; while the third had a son and a daughter. These men were of a superior socio-economic group, a group which desired both to maintain their present level of living and to give to their children suitable education. To do this they could not afford additional offspring.

The nine men, married 10–14 years, who desired no additional offspring, were a minority within their general group. They too were better educated than the sample; four were of the 1st–4th grade level, four were of the 5th–7th, and one was in the high school category. They represented the middle and lower status groups, for five were of the middle class castes, two were washermen, one was an agriculturalist, and one an untouchable shoemaker. They had a mean of 3.8 living children, the mean number of living male offspring was 2.3, and their average age was 35.8 years, all below the critical levels. This evidence indicates that the members of this group are non-traditional in value orientation, not positively valuing an unlimited number of offspring.

Two other atypical groupings remain in Table 4 to be analyzed in greater detail. They are the four cases of the 20–24 years married and the three cases of the 25 years and over married who desired more offspring, for in both of these groups the majority opinion was in favor of no additional offspring. Of the four married 20–24 years who desired additional progeny, one was uneducated, two were of the 1st–4th grade group,

while the fourth was in the 5th–7th grade level. Their mean age was 40.5 years. The mean number of living offspring of the group was 5, but they had an average of only 1.5 male living offspring. In contrast, the eight who desired no additional had an average of 4.8 living offspring and 3.0 living male offspring. These figures indicate critical differences between the two groups. These four were from lower status castes, for one was a high caste agriculturalist (now a teacher), one was a barber, another was a practicing agriculturalist, and the fourth was an artisan belonging to a South Indian caste. The barber and teacher indicated that they wanted only one more son, while the other two replied that children were valuable and they would take as many as came, not specifying the desired sex. One of the latter two, a tenant farmer, indicated that children were very valuable for a farmer, for they could do much farm work. This reflects the traditional farmer's value orientation. All four men, in stating that they desired more sons, were articulating the traditional cultural positive valuation of a large family.

Three of the eight who were married 25 years and over desired additional offspring. They had an average of 3.7 living children and 1.3 living male offspring, considerably less than the proportion shown to be adequate by the standards of the male villager. All three were illiterate, one was a tenant farmer, while the other two were landless laborers. Their mean age was 45.0 years. Each expressed a desire for one more male offspring but, significantly, all stated that they felt they or their wives were now too old for another conception. This group's attitude is representative of the orthodox positive valuation of additional male offspring. The men involved come from very low status castes and could be expected to place a high positive value upon large families. In contrast, among the five cases who desired no additional offspring, we find an average of 7.4 living offspring and 4.8 living male progeny. These men were much better educated, were of higher status castes, were much more secure economically, and were slightly

Age Group	Desire More Offspring	Desire No More Offspring	Total	Per Cent Desire No More of Total
15–34	57	9	66	14.0
35–44	24	18	42	43.0
45 and Over	7	9	16	56.0
Total	88	36	124	29.0

Chi Square 17.2175 Chi Square Probability .000187

Table 5. The sample population by age and by desire for additional offspring.

older, 48.0 mean age. These differentials tend to emphasize the superior socio-cultural status of the latter group of five who desired no additional offspring.

The age factor is an important demographic variable associated with desire for additional children, with the relationship being an inverse one (Table 5). Although only slightly more than one in seven of the age group 15–34 years desired no additional children, a majority of those aged 45 or more were of that opinion. Due to the customs both of child marriage and the differentials in age normally found between bride and groom, years married, number of offspring, and age are not necessarily the same, and so have been treated separately here. A man may be relatively young, yet have been married for a great many years and may or may not have a large family. Further statistical treatment of these variables will most probably point up their areas of interrelatedness and independence.

Of these men 45 years and over in age, the numbers desiring and not desiring additional offspring were almost the same. (Table 5). The characteristics associated with each group are interesting. The seven who desired more offspring were below the sample average in education,[11] for five had no education and two had a 1st–4th grade education. In contrast, of those nine who desired no additional progeny, three had a 1st–4th grade education, five had attained the 5th–7th grade level, and

[11] The sample's education range was such that 57.3 per cent were in the nil to 4th grade level, 29.0 per cent were in the 5th–7th grade group, and the remainder, 13.7 per cent, were in the secondary and higher category.

one had a high school education. The mean number of living children for the former group was 4.0 and for the latter 7.1, while the former group had 1.6 living male progeny and the latter had 4.2, differences statistically significant in view of the marked preference of those males with six or more living progeny or three living male offspring to desire no additional children. Certainly the two groups do possess markedly different and significant characteristics.

Education would also seem to be related to a desire for progeny, in light of the detailed findings discussed previously. Of the five factors found to be significantly associated statistically, it proved to be the least so. But this is not to minimize the educational factor, for its level of significance indicates that it plays a very important role. Although there was no majority in any educational group which desired no additional offspring, the difference in the magnitude between the percentage which desired no more children in the "nil to 4th grade" group and the "5th to 7th grade" group is very great. Additional work is being done to determine the role of education in its interaction with the other variables, for it is our hypothesis that education may be more important than its chi square probability would lead us to believe.

Of the group with the highest educational attainment, ten of the seventeen in the group desired additional offspring. (Table 6.) Upon closer analysis of the cases in these two groupings, several differences appear. First, the average age of

Table 6. The sample population by education and by desire for additional offspring.

Educational Category	Desire More Offspring	Desire No More Offspring	Total	Per Cent Desire No More Offspring
Nil to 4th Grade	59	12	71	17.0
5th to 7th Grade	19	17	36	47.0
Beyond 7th Grade	10	7	17	41.0
Total	88	36	124	29.0

Chi Square 12.0765 Chi Square Probability .002401

the ten who desired more offspring was 31.5 years; it was 36.7 years for the seven who did not desire more. Actually seven of the ten in the former group were in the 30–34 age bracket, while only two of the seven of the latter group were in this range. This is significant for 35 years of age proved to be the critical age level in the desire for no additional offspring. (Table 5.) Of the ten who desired additional children, two were using contraceptives for spacing purposes and six of the others stated that they planned to have the vasectomy operation performed after the desired number of sons were born to them, indicative of their non-traditional value orientation. Incidentally, the additional number of sons desired by this group ranged from one to three. Of the six cases who planned to be sterilized after their families were completed, four had only daughters at the time of the interview, helping to explain their desire for sons. Of the two who had living male offspring, one had two sons and a daughter and the other had a son and a daughter. The other four men with no male offspring had an average of two daughters, which is a small sized family, much below the critical levels.

The group of seven who desired no additional progeny had an average of 4.4 living offspring, and a mean of 2.0 living male progeny, but the ten who desired more had an average of 2.2 living offspring and a mean of .7 living male progeny, averages which are considerably less than those of the group of seven who desired no additional offspring. When the average number of years married for each group are compared, a large differential, 8.7 years in contrast to 14 years, is found. Twenty years of marriage was found to be the critical level for change of attitude to a desire for no additional progeny (Table 4). The group, desiring no additional progeny, with a high school level of education, was married on an average of six years less than the critical level of twenty years. Thus education and the socio-cultural factors which it subsumes appears to function positively in bringing about a desire to limit and stop the procreation of offspring, for all associated indices are lower in the high school educational level group than those shown to be

Variable	Chi Square	Degrees of Freedom	P Value
Age at Marriage	.1940	3	Greater Than 80.0
Occupation	2.5705	5	76.0
Caste	3.3950	3	34.0

Table 7. Summary table for those variables found not to be significantly associated with the desire for additional offspring by the chi square test of goodness of fit.

minimum for the general group. Clearly the better educated possess a value orientation, which has modified to a marked degree the norms and values of the traditional village culture.

Three other variables proved not to be statistically significant in their association with the desire for children. They were age at marriage, occupation, and caste. Logically a strong case might be made for both occupation and caste as important indices. Apparently they are not, for as the data of Table 7 indicate, the level of probability associated with these indices is much higher than that customarily accepted as statistically significant.

Attitude Concerning the Use of Contraceptives

In reply to the question: "Would you like to learn a method by which you and your wife can avoid pregnancy for at least two years?", thirty-two males answered in the affirmative.[12] They represent 25.8 per cent of the sample of 124 males. Since a willingness to utilize contraceptives to prevent further conceptions can be hypothesized to involve additional components of a non-traditional value orientation on the part of the male villager, it should not necessarily be expected that those variables found to be significantly associated with desire concerning additional offspring will be significant here.

The factor most significantly associated statistically with a positive attitude toward the use of contraceptives was education. A direct relationship exists between amount of education and expressed willingness to utilize contraceptives. The un-

[12] Included in this group were those who were willing to use contraceptives as well as those who expressed a desire to have the vasectomy performed, since both are types of birth control.

educated group were almost unanimous, 93.0 per cent, in their unwillingness to utilize them, while the members of the group having an eighth grade education or better had a majority, 53.0 per cent, in favor. The change in attitude from unfavorable to favorable begins to manifest itself in the fifth to seventh grade level, where approximately four out of ten of the members were favorably inclined. It may be concluded that increasing education and increasing willingness to utilize contraceptives are directly and significantly associated.

Upon closer scrutiny the two uneducated cases who were willing to use contraceptives appear to be exceptions for all of the quantitative indices associated with them would not differentiate them from those uneducated men who were not willing to use birth control. Both had three living children only; one had one son, the other had two. The former stated that he desired as many more children as fate should decide since children are valuable to a farmer. The latter desired no more. The former is a member of an agricultural caste, while the latter is from a tribal caste. The desirability of having a two-year spacing between births appealed to the former. Actually both cases possess more of the characteristics associated with the desire for additional offspring, and their general socio-economic status would tend to be in harmony with that view. It really is difficult to ascertain why these two men were willing to use birth control.

The number willing to use contraceptives in the 1st–4th grade educational level was a small minority too, whose characteristics demand more attention. Five of the six cases of this group desired no additional progeny, while the sixth desired another son. Four of the six said they were willing to have the vasectomy performed,[13] while the remaining two were

[13] As part of the service provided by The Family Planning Association of India's clinic which was established in the village as part of the study, the vasectomy operation was performed by surgeons of the Association in the Bombay Center. Only men who were of a certain age, with a specified number of healthy children were accepted for the operation. The policy of the clinic was to try to make contraceptives acceptable, and no concerted effort was made to popularize the vasectomy. All services of

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satisfied with contraceptives. They had an average of 4.3 living offspring, and had a mean of 2.5 living male offspring, which are below the critical levels however (Tables 9 and 10). Their caste status varied, for the first three, an agriculturalist, an outcaste, and a washerman, were of low to very low status, while the remaining three, a Muslim, and two shopkeepers, were middle class caste in status. Beyond the educational and caste factors, conceived as manifest indices of the non-traditional world orientation, as possible suggestions for their willingness to use birth control, here seen in terms of the vasectomy operation by a majority of the six, we have no additional clues concerning the causal factors in the determination of their attitude.

A comparison of the two groups within the high school educational category yields some insight concerning the factors which differentiate them. Of the nine favorable towards birth control, four had the vasectomy performed and three were husbands of women using birth control. Of the remaining two, one planned to be sterilized, while the other stated a preference for contraceptives. By contrast, in the group of eight who were not willing to use contraceptives, six said that they would undergo the vasectomy as soon as their desired number of additional sons were born to them. One of the two remaining individuals was following the traditional incorrect method,[14] while the other voiced the traditionally sanctioned attitude that he would accept as many sons as fate should decree. The number

the clinic were provided free to the villagers. Incidentally, this was the first family planning study made in rural India with which a clinic was established which provided the services of a trained midwife-nurse, medical examinations conducted by a medical doctor, free chemical and mechanical contraceptives, and surgical sterilization. The studies and the clinics operated in conjunction with them by the Government of India advocated only the rhythm method of birth control.

[14] The customary village practice is not to have intercourse from the onset of menstruation for fifteen days. Following this method, intercourse would begin at the time of ovulation, the most fertile period. Those who follow this custom in the hope of restricting conception are actually unknowingly doing their utmost to achieve it. Indeed, this traditional practice is not followed correctly either, as is proven when the Shastras are referred to. In THE LAWS OF MANU it is written:

"45. Let (the husband) approach his wife in due season, being constantly satisfied with her (alone); he may also, being intent on pleasing her, approach her with a desire for conjugal union (on any day) excepting the Parvans.

46. Sixteen (days and) nights (in each month), including four days which

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of living sons and offspring of the men in each group varied, the former having an average of 1.8 living sons or a total of 4.4 living offspring, and the latter group an average of only .8 living sons and 2.5 living offspring, the critical levels for the determination of this attitude were not reached by either group. Although the group which was willing to use contraceptives clearly had both more living male and female offspring than did the latter group, the numbers which they had were less than those shown to be critical in Tables 9 and 10. With educational attainment here held constant, the factor of male issue appears to be most important, even though the number of males needed to satisfy the level of aspiration of this group of high school educated males is less apparently than for the general sample. The males in this educational bracket are non-traditional in value orientation, for six of the eight now not willing to use contraceptives plan to undergo the sterilization operation after the desired sons have been born. Desire for male issue is apparently a crucial variable for the men of this educational level even though they manifest non-traditional values in respect to family size.

Number of living children proved to be the second most significantly associated variable.[15] A direct relationship exists be-

differ from the rest and are censured by the virtuous, (are called) the natural season of women.

47. But among these the first four, the eleventh, and the thirteenth are (declared to be) forbidden; the remaining nights are recommended.

128. A twice-born man who is a Snataka (householder) shall remain chaste on the new-moon day, on the eighth (lunar day of each half-month), on the full-moon day, and on the fourteenth, even (if they fall) in the period (proper for conjugal intercourse)."

Buhler, G.: translator THE LAWS OF MANU, Vol. 25, THE SACRED BOOKS OF THE EAST. Oxford, Clarendon Press, 1886, III, 45–47, pp. 85–6; IV, 128, p. 149.

Manu places two different sets of restrictions on intercourse. First: it may take place during the first sixteen days of the cycle, beginning with the onset of menstruation, but several days within this period are forbidden, the first, the fourth, the eleventh and the thirteenth. Secondly: certain days within the lunar month are also forbidden, even though they may fall within the period of the wife's cycle during which intercourse may take place. Today, those villagers who try to follow the traditional customs have reversed the first completely, and may or may not follow the second. If they were correctly followed, more effecive birth control could be achieved by these traditional methods.

[15] Number of total offspring (both living and dead) was tested for its level of

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Educational Status	Not Willing To Use	Willing To Use	Total	Per Cent Willing To Use of Total
Not Educated	25	2	27	7.0
1st–4th Grade	38	6	44	14.0
5th–7th Grade	21	15	36	42.0
8th and Higher	8	9	17	53.0
Total	92	32	124	26.0

Chi Square 19.7316 Chi Square Probability .000203

Table 8. The sample population by educational status and by attitude toward the use of contraceptives.

tween the number of living children and willingness to use contraceptives, for the group with 0–2 living children were almost unanimous in their desire not to use them, while a majority of the group with 6–11 living progeny were in favor of their use. A much larger proportion, 83.3 per cent, of the group with 6–11 living offspring desired no additional offspring (Table 2) than the proportion, 55.6 per cent, of the same group (Table 9), who were willing to use contraceptives. The cases which caused the decrease in the percentage were the five who desired no additional children but who did not desire to use contraceptives. The educational status of three of these five cases was the 1st–4th grade level. Men with this level of education were found to be preponderantly not in favor of birth control (Table 8). These three cases replied that they would exercise control in intercourse with their wives, the traditional incorrect method. The remaining two cases had a 5th–7th grade education. One felt that he was too old, 52 years, to procreate more children, and so did not see the necessity of birth control. The other, aged 43, advanced several reasons for his unwillingness to use contraceptives. He too stated that he could control conception by having intercourse with his wife only during the traditionally defined period. These overt reasons illustrate the importance both of the role of education and of the value ori-

association. It was found to be statistically significant in its association, being associated at the .04 level. The association was a direct one, and the critical level was reached in the 9–13 total offspring group, where 50.0 per cent were willing to utilize contraceptives.

entation of the individual in the determination of willingness to use contraception.

A direct relationship is involved between number of living male offspring and willingness to use contraceptives (Table 10). While less than one in ten with no living male child was willing to utilize them, six out of ten with four or more living male progeny were amenable to their use. The degree of association between the two variables is less than between those in Table 9, where total living offspring was considered, which indicates that willingness to use contraceptives is not as greatly determined by number of living male progeny as by total living offspring, if only these two factors are considered. The critical levels of the variables of number of living offspring and living male progeny where a change to a favorable attitude does occur are higher for the contraceptive associations than for the desire for additional offspring associations, again indicative of the lesser importance of the factor of size of family and of the greater importance of socio-cultural factors such as education, caste, and value orientation in the determination of an attitude of willingness to use contraceptives.

Caste as a variable proved to be associated significantly at the 5 per cent level. The largest proportion in favor of contraceptive usage was found in the middle class caste group, with approximately four out of ten so inclined. The three other multi-caste groupings had a much smaller proportion in favor. Of the eighteen middle class castemen in favor, all had a fourth grade education or better, with the exception of three whose

Table 9. The sample population by number of living offspring and by attitude toward the use of contraceptives.

Number of Living Offspring	Not Willing To Use	Willing To Use	Total	Per Cent Willing To Use of Total
0–2	46	6	52	12.0
3–5	38	16	54	30.0
6–11	8	10	18	56.0
Total	92	32	124	26.0

Chi Square 14.4072 Chi Square Probability .000768

Number of Living Male Offspring	Not Willing To Use	Willing To Use	Total	Per Cent Willing To Use of Total
0	29	2	31	6.5
1	31	7	38	18.4
2	19	9	28	32.1
3	9	7	16	43.8
4	2	4	6	66.7
5–7	2	3	5	60.0
Total	92	32	124	25.8

Chi Square 15.7122 Chi Square Probability .007347

Table 10. The sample population by number of living male offspring and by attitude toward the use of contraceptives.

educations were in the 1st–4th grade range. Being middle class castes, they were by traditional caste definition non-agricultural in their occupation. However, two were landlords. Their ages ranged from 27 to 46, with a mean age of 38.9 years. Of the group, five were sterilized by The Family Planning Association's doctors shortly after the facilities were made available, since they desired no additional children. Educationally, they were superior, for three were of the high school level, and the other two were of the 5th–7th grade level. They had a mean of 6.2 living offspring and 2.3 living male progeny, and were an average of 41.6 years of age. Although they had less than the critical number of living male progeny, they did possess the critical number of total living offspring shown to be associated with this desire. Several of these men expressed the feeling that contraceptives were not absolutely effective, and so desired the operation. Of the remaining thirteen middle class caste men in this group, seven stated that they planned to have the vasectomy performed, for they had sufficient children and desired no additional. They were an average of 39.3 years of age, had a mean of 4.3 living offspring and 2.6 living male progeny, and were of the 5th–7th educational level. They differed only slightly from the group which immediately underwent the operation, perhaps most significantly in the number of total living offspring. Of the six to be accounted for, three had wives who were using the contraceptives provided by the clinic.

Multi-Caste Groupings	Not Willing To Use	Willing To Use	Total	Per Cent Willing To Use of Total
Middle Class Castes	28	18	46	39.0
Agricultural	43	9	52	17.0
Service and Artisan	9	3	12	25.0
Harijan and Tribal	12	2	14	14.0
Total	92	32	124	26.0

Chi Square 7.4124 Chi Square Probability .05

Table 11. The sample population by caste groupings and by attitude toward the use of contraceptives.

Their average age was 35 years, they had 4.3 living offspring and 1.7 male progeny. Two were of the high school educational level, the other was in the 1st–4th grade group. Number of male issue and age differentiates these men from the preceding groups. The remaining three males indicated their willingness to use them to achieve spacing. Their mean age was 34, two had only one offspring, a male, while the third man had eleven living offspring, seven males and four females. Two of these men were of the 5th–7th educational level, while the other was of the high school category. To summarize, nine of the eighteen 50.0 per cent took immediate advantage of the free services of the clinic to have vasectomies performed or to obtain contraceptives to use, while six of the remaining nine indicated their willingness to be operated upon. Since almost all of the indices were below the critical levels, it is clear that this group is non-traditional in value orientation, not ascribing as high a positive value to a large family as does the traditionally oriented villager. This middle class caste group was definitely action-oriented in the matter of birth control. (Table 11.)

When the nine agricultural castemen are considered, it is strikingly apparent that they were above average in education, for seven of the nine were in the 5th–7th grade educational level. Three of the group had the vasectomy performed and three others indicated their willingness to undergo it. The other three favored birth control for spacing purposes. Their

average age was 33 years. They had a mean of 5.7 living offspring and 3.3 living male children; two had a 5th–7th grade education and one had attended high school, very exceptional for their caste group. Two were employed as clerical help in nearby cities, while the third, the 32-year old landless laborer with eight living children, was in desperate economic troubles. The occupation of the six remaining men was that of tenant farmer, with the exception of one farm operator. Three of them said they would be sterilized after the desired number of children had been achieved, while the remaining three were willing to use birth control. These men clearly exhibit a non-traditional value orienation in respect to family size. The component elements in the development of this outlook cannot be localized, except to indicate the socio-cultural factors included in the term "education."

The three artisan and service castemen who favored contraception appear to be typical of their general caste groups. Their mean age was 32.2 years. They had an average of 4.3 living progeny and 3 living male offspring, which were not adequate according to the indicated critical levels. However their educational attainment was better than average, for two had attained the 5th–7th grade level. Two expressed their willingness to have vasectomies performed. Here too the traditional values are not adhered to by these men in their preferences for birth control.

Of the two cases in the Harijan-Tribal caste group, one wanted no more offspring while the other desired only one son more. They had a mean of 2.5 living offspring and 1.5 living males, greatly below the levels of adequacy. One was uneducated, the other was in the 1st–4th grade category. There was little to differentiate them from their group, except in their stated desire to limit their offspring.

Four other variables were tested but were found to be not significant in their association. They were age, occupation, years married, and age at marriage. Table 12 presents their P values, which are of a magnitude to make them not acceptable

Variable	Chi Square	Degree of Freedom	P Value
Age	3.9672	2	13.5
Occupation	5.7420	4	28.7
Years Married	6.8904	4	14.1
Age at Marriage	.8874	3	Greater Than 80.

Table 12. Variables found not to be significantly associated with attitude toward contraceptive usage as determined by the chi square test of goodness of fit.

under our hypothesis. Of course, when they are treated with multiple variable analysis techniques, they may prove to be of significance.

Summary

This paper has delineated some of the demographic and socio-cultural variables which are significantly associated statistically with affirmative and negative attitudes expressed toward family limitation and contraceptive usage by a sample male population drawn from Badlapur, a representative village of Western India. 28.2 per cent of the males in the sample expressed a desire for no further offspring, and 25.8 per cent of the same sample group stated that they would use contraceptives. The statistical treatment of the data when arrayed by affirmative and negative groups according to the variable under treatment showed some variables to be highly significant in their association.

Much of the data obtained from the schedules have not been treated in this paper. In considering two key questions, it was found that the number of living children, number of living male offspring, years married, age, and education were significantly associated with the desire for additional offspring and the four variables of education, number of living children, number of living male offspring, and caste were similarly associated with willingness to use contraceptives. Actually these variables may measure more than what they themselves indicate, for the interaction effects, the influence of all of the other factors upon the specific one being considered, are not dealt with here.

This problem is under consideration and will be presented in a future publication.

Clearly the socio-cultural milieu of the individual is an important factor in the formulation of the attitudes considered in this study. In this respect two main socio-cultural life orientations for the Indian villager may be established. They are the traditional and the non-traditional life orientation. To delineate all of the component elements which constitute the total configuration of the traditional and non-traditional attitude and value systems is not possible here. Indeed, to do this would necessitate the development of culture and personality profiles for the rural Indian villager, a problem beyond the scope of this paper. When the results of the psychological investigations carried out in Badlapur are available this problem can be approached. At that time their relevance to this problem will be discussed. Now it can be said that the traditional life orientation reflects both the lower socio-economic status of family and caste, the more circumscribed world view and value orientation of the rural villager, as well as a stricter adherence to the traditional religious and cultural values of Indian society. Those who are from a caste of a traditionally higher socio-economic status in the village, who have been exposed to more formal education in the school system which propagates values antithetical to the traditional socio-cultural orientation of Village India, who are aware of and affected either overtly or covertly by the almost alien cultural values of urban-industrial non-traditional India, possess to a higher degree the non-traditional life orientation, reflected here in the desire for no additional offspring and willingness to utilize contraceptives.

The socio-cultural factors analyzed in this study are component elements in these value orientations but do not exhaust all of their component factors. In each and every distribution discussed here, certain groups were shown to be significantly associated statistically with a desire for no additional offspring and with willingness to utilize birth control techniques. In all instances except two, that of the sample population distributed

by education and by desire for additional offspring and the sample population by caste groupings and by attitude toward the use of contraceptives, a majority of the population in the categories of the distributions which represented the most educated group, the largest number of living children, the largest number of living male offspring, the longest married group, the oldest group, and the middle class caste group were favorable to the question under consideration. These individuals possess the non-traditional value orientation. In addition, there were some cases with the same characteristics who were not favorable to the questions. Under analysis it was shown that these cases either possessed the traditional value orientation, positively valuing a larger family, or were men with small families who desired a limited additional number of male offspring, after which they would limit their families and would practice birth control. The latter type individual is non-traditional in value orientation, yet because the minimal number of male offspring had not been born to him, desired more male children. When these male children have been procreated, the apparently latent non-traditional value orientations of their parents will become manifest and limitation and birth control will be practiced. Three living male offspring appear to be the minimal number desired by all males, either traditional or non-traditional in value orientation. The non-traditionally oriented male is distinguished from the traditionally oriented male in that once he has the desired number of male children, he will in all probability limit the size of his family and practice birth control whereas the traditionally oriented male will not do so.

The basic values of the Indian culture and society exist overtly in the personality configurations and world orientations of all villagers today, whether traditional or non-traditional in value orientation, for the religious, social and cultural values associated with the family remain as basic factors in the life orientation of every individual. Neither can full status for the adult male be achieved nor can the duties of the married state be discharged without the procreation of male offspring.

Among traditionally oriented male villagers these ancient values are not tempered by antithetical values and attitudes engendered by urban-industrial Indian society. Among the non-traditionally oriented villagers, these values persist, but in modified form. Indeed, a man may possess all of the characteristics shown to be significantly associated statistically with these two questions, yet may or may not be willing to limit his family or practice birth control. A knowledge of the socio-cultural orientation as well as the number of progeny, particularly male, of the individual can considerably clarify and help to define the position of such individuals on these questions. The variables discussed here as well as the factors which influence the development of the non-traditional life orientation in the village male are increasingly fostered in their development in the village India of today, a rural India in transition. The demographic situation is one of hope, for although the proportional representation of the groups in this sample who either wished no further progeny or who were willing to use contraceptives were not of majority proportions, persons with these attitudes and values do exist in reality in the villages of India in surprisingly large numbers. The student of population and family planning can feel certain that the proportional representation of these groups on the village level will slowly increase as the processes of socio-cultural change are fostered by the nation and with this change the climate favorable to family planning should improve as well.