

RESEARCH REPORT SERIES

No. 55

Demographic Implications of the First Six
Years of Family Planning in Karachi,
1958-64.

By



INSTITUTE
OF
DEVELOPMENT
STUDIES
LIBRARY

PAKISTAN INSTITUTE OF DEVELOPMENT ECONOMICS
OLD SIND ASSEMBLY BUILDING
BUNDER ROAD, KARACHI
PAKISTAN

No. 55

Demographic Implications of the First Six
Years of Family Planning in Karachi,
1958-64.

By

Lawrence W. Green and Karol J. Krotki

The Research Reports of the Pakistan Institute of Development Economics are circulated to inform interested persons with regard to research progress at the Institute. These reports may be freely circulated but they are not to be quoted without the permission of the author. Work on this manuscript is still in progress; comments are invited to improve the final version.

June 1966

PAKISTAN INSTITUTE OF DEVELOPMENT ECONOMICS
OLD SIND ASSEMBLY BUILDING
BUNDER ROAD, KARACHI-1.
(PAKISTAN)

Forward

Mr. Green, formerly Ford Foundation Project Associate at the East Pakistan Research and Evaluation Centre, Dacca, is now a graduate student at the School of Public Health, University of California, Berkeley. Dr. Krotki is Assistant Director, Census Division, Dominion Bureau of Statistics, Ottawa, and was formerly Research Adviser, Pakistan Institute of Development Economics, Karachi. The authors are deeply indebted to Mr. Julian Cole of Oxford, England, who supervised the coding and tabulation of the data at the Central Statistical Office in Karachi; and to Drs. Zarena Fazalbhoy and M.A. Hai of the Karachi Family Planning Association for their cooperation. Helpful suggestions were received at various stages of this project from Dr. Christopher Tietze, National Committee on Maternal Health, New York; Dr. Sultan S. Hashmi and Dr. Warren Robinson, Institute of Development Economics, Karachi; Dr. Samuel Wishik, Graduate School of Public Health, Pittsburgh University; Mrs. Jamila Akhter Naeem Medical Social Research Project, Lahore; Mr. James Kilker, Dr. Judith Blake Davis and Dr. Harold C. Gustafson, University of California; and Begum A. Inayatullah, Family Planning Association of Pakistan, Lahore .

I. Introduction

This paper continues the analysis began in Research Report No. 34 of the Pakistan Institute of Development Economics of 3,422 cases attending the Family Planning Association (FPA) Model Clinic in Karachi between 1958 and 1964.

Previous reports have dealt with clinic attendance, patterns and source of referred data. [23] and geographical distribution of clients [24]. This paper is concerned with the socio-economic and demographic data found in the Karachi FPA clinic records for the period June 1958 to May 1964.

This analysis is exploratory in the sense that many assumptions are necessary between the empirical data on couple procuring contraceptives from one of several sources of supply in Karachi, and inferences about their subsequent reproductive performance. The main assumption upon which this analysis is based is that the couples attending the FPA clinic are neither the sole family planners of Karachi nor totally effective in birth control themselves, but that they are representative of the Karachi couple adopting modern (mechanical or chemical rather than traditional) methods of birth control during this period. Thus, the percentage distribution of FPA clients on most social and demographic variables is probably similar to the distribution of all family planners using modern methods in Karachi. The number of FPA clients per 1000 Karachi women (age 15-49) in each income group, for example, if multiplied by some unknown constant, would approximate the total number of Karachi couples practicing family planning per 1000 couples in the respective income groups.

II. Socio-Economic Characteristics

A. Occupation

A widespread criticism not only of the "traditional Planned Parenthood approach" but of the clinic approach to family planning in general is that it covers only the middle and upper classes and a select few highly motivated lower class persons.

To test the extent to which this criticism applies to the Karachi FPA clients and to make the clinic data on income and occupation as comparable as possible with the best available base population data, categories from the 1959 People of Karachi Survey (27, 28, 29) have been used in coding the FPA clinic data. Education of women attending the clinic is compared with 1961 Census data on the Karachi female population (45).

The distribution of clients by the occupations of their husbands reveals, in Table I, a high concentration in the middle occupation groups and a somewhat even split among the remainder between high low classifications (omitting the ambiguous "service" occupational category). Clients per 1000 population in the various occupational categories, however, show that clients in the professional and technical category represent a larger proportion of the relevant population in that occupational groups than do the clients in any other occupational group.

Comparing the occupational structure of the Karachi FPA husbands with that of the married males at large in the Karachi population reveals further evidence of an upper class bias in the Karachi FPA clientele. Professionals and technicians make up only 2.4 per cent of the married males of Karachi but 10.1 per cent of the clinic couples. Middle income categories of clerical and sales workers account for 37.6 per cent of the clinic attenders but only 11.7 per cent of the married males in the People of Karachi sample. Urban labourers, skilled and unskilled, account for 33.7 per cent, roughly one out of three, of the married males of Karachi but only 11.5 per cent, about one out of ten, of the husbands of FPA clients (23, Table 20).

The over-representation of white collar occupations (except administrative, executive and managerial, to be discussed later) in the FPA clinic is not unexpected and should not be attributed entirely to the lack of a family planning field programme. Demographic transition theory holds that the beginning of an over-all decline in fertility is preceded by the emergence of significant fertility differences by socio-economic status in the largest urban centers of the society (16, 51, 52). Abu-Lughod discusses the recent emergence of fertility differentials by education and occupation in Cairo, Egypt, in these terms (1). Hashmi found significant differences in the 1958 fertility rates of different occupational groups in Karachi, but the differences do "not conform to a pattern of class position" (28, p.101). Before fertility differentials can emerge, contraception differentials must occur, and our data suggest that the latter has only recently begun in Karachi.

² Limitations of the occupational data are discussed in 23, p.78; 27, p. 20; and 28, p.100.

Table I presents the 1958 total fertility rates and the gross reproduction rates for the different occupational groups (husbands of married women, 15-49, with husbands present). Professionals and technicians are seen to have had the highest fertility rates in 1958 and the highest FPA clinic attendance rates since that year. Clerical and sales workers were also above average in 1958 fertility rates and well above average in clinic attendance rates from 1958-1964. It is not unreasonable to assume, therefore, that the fertility rates for these white collar groups are dropping at a more rapid pace than for other groups and that class related fertility differentials are now emerging in Karachi.

Although these white collar groups had high fertility rates, and although the signs of an emerging fertility differential are promising, they contribute relatively small proportions of the total births, as shown in Table I. However successful their contraception, they will have a minor impact on the over-all fertility rate. The Spearman rank-order correlation coefficient (r_s) between the FPA client distribution by occupation and the fertility rates by occupation and the fertility rates by occupation is +.273, but -.173 between client distribution and birth distribution by occupational group. Neither is a statistically significant correlation but they indicate that the FPA client distribution is less favourable in terms of affecting the larger numbers of births.

The task of family planning in the Third Five Year Plan is to hasten the diffusion of the small family ideal from the urban white collar classes to the other occupational groups and to the rural segment of the society. The subject of diffusion poses the question of why the administrative, executive and managerial group is exceptional in its lower client rate among the white collar occupations, and lower than the overall client rates of 42 per 1000 women (15-49, with husband present). It is likely that this group prefers, and is able financially, to go to private physicians for their contraceptives, but the question deserves further research to determine why they differ from professional and technical occupations.

B. Income

For a more convincing picture of how unrepresentative the economic circumstances of Karachi FPA clients are of those of the people of Karachi,

Table II contrasts their respective monthly incomes. Whereas nearly half of the married men of Karachi earn less than Rs. 100 per month, only 8.9 percent of the husbands of FPA clients are this poor. The proportion of FPA clients in every income group above Rs. 125 is greater than the proportion of all married males of Karachi in those income groups. This overrepresentation is greatest in the upper-middle and high-income groups above Rs. 200 per month.

The average FPA client from any given major geographical area of Karachi is at least 100 rupees per month richer than the average family in that area. The degree of economic superiority of the FPA client over his neighbours varies widely, however, from one area to another (24, Table III, p.9). The striking feature of the geographic distribution figures is that the mean income of FPA clients bears less relation to the mean income of their residential area than to the proximity of the area to the clinic. The areas closest to the clinic--the Commercial, Lower-Residential and Middle-Residential area, all contiguous to Garden Road--have not only the lowest income FPA clients but also the least difference between client incomes and average incomes of the area. Client incomes for the remaining areas vary directly with distance from the FPA clinic, i.e., the further the area of residence from the clinic the higher the average income of the clients and the more it differs from the average income of the population of the area (24, Table III, p.9).

It is helpful to look at income not merely in terms of its distribution among clients ever attending the clinic, but also in terms of its effect on continuing attendance at the clinic. Table III presents the mean income of clients by their duration of attendance and the number of times they attended, revealing no consistent relation between income and pattern of clinic attendance. Clients who attended the FPA clinic most frequently for the longest period of time have about the same average income as those who attended only once or twice in less than one month. It is on the strength of this finding that we have justified our general assumption that the distribution of clients ever attending the clinic, rather than clients continuing to attend the FPA clinic, is representative of the incidence of family planning adoption in the general population. The distribution of clients continuing to attend this

particular clinic is probably less representative of the distribution of contraceptive practice in the population than is the distribution of all FPA clients because the higher income clients probably turn more to other sources of contraceptive supply after their introduction to family planning at the FPA clinic (cf. 24, pp. 43-62).

Fertility differentials and client rates by income of husbands are presented in Table IV. Nearly 66 per cent of all Karachi births are to women whose husbands earn less than Rs. 150 per month, while only 22.5 per cent of the Karachi FPA clients are from these lower income groups. Four out of every ten family planning clients are from the income groups over Rs. 300, but the women in these income categories have only one out of ten of the annual live births of Karachi. To achieve a maximum of fertility reduction from their efforts, the Third Five Year Plan programmes in Karachi should focus their recruitment specifically on couples in which the husband earns less than Rs. 100 per month. If even ten per cent of these couples alone effectively practiced family planning (who were not already practicing) for a year, as many as 3,000 births might be prevented and the gross fertility ratio for all of Karachi thereby reduced from 262 to 250 per 1000 women. This is a liberal estimate based on a gross assumption of maximum use-effectiveness, and assuming that the women of this low income group who would adopt family planning would be the ones otherwise contributing to the annual births of the group.

The effect of income on clinic attendance where there is no field programme is most dramatically illustrated in Figure 1. The simple correlation coefficient (r_{xy}) is +.986, which confirms a direct relationship at the .01 level of significance (from Table IV). that a marked class differentials in contraception have occurred since 1958 and therefore that differential fertility rates by class would now be found in Karachi.

C. Educational Status of Women Attending the Clinic

Most family planning research has underlined education as one of the most significant variables in family planning adoption and continuing use. Research in Pakistan has generally confirmed this finding (13, 22, 25, 31, 32, 49, 50, 58, 59) with the exception of three independent rural surveys in

East Pakistan which found no significant relationship between formal education and positive attitude toward family planning (7, 8, 31, 65).

The main limitation of the Karachi FPA data on education is that the question was not asked of clients during the first two years of clinic operation. When the latest edition of the record card was produced in 1960, a specific place for recording educational status of the client still was not included but the question was generally asked and the response recorded under "other information". As a consequence of this omission, a large proportion of our 3,422 cases analyzed, nearly one-half, have no information on education. The fact that most of the no-information cases were early attenders (1958-60) causes a potentially serious bias to be introduced in the pattern of attendance figures: the clients who first attended after 1960 have a shorter potential duration of attendance and, therefore, a lower average number of months between first and last attendance than the no-information (early adoption) cases. A tabulation of education by income status, however, reveals no serious socio-economic bias in the cases with no information on education of wife (See Table VII).

Another bothersome limitation of our educational data is the ambiguity of the "no education" category used by the clinic staff interchangeably with the term "illiterate". Three out of every four women above the age of 15 in the city of Karachi have no education, but only two out of three are really illiterate (45, Table 3, pp. 330-331). With more accurate distinctions at this critical level we might have been able to compare the FPA clientele with the women of Karachi along the elaborate continuum of the census; able to write; able to read only; able to read only the Holy Quran; illiterate (45, Table 1, pp. 140-141).

Table V presents the general comparison we are able to make with the Karachi women. Both Karachi City and Karachi District figures are included because about ten per cent of the FPA clients are from areas outside the "city" as defined by the census. More than half of the FPA clients recorded are given credit for a partial or full primary education (Classes I-V). Again, this may be partly an artifact of the crude recording on this item. Clinic staff might have tended to record literate clients with no formal education as having some

education, thus weighting the elementary school category. The preponderance of cases in this category underlines the need for a more detailed breakdown.

The Census of Pakistan includes single class categories, showing much larger proportions of women with Classes IV and V completed education than with only Class I or II (45, Table 3, pp. 330-331).

The limitations of the data notwithstanding, the women attending the FPA clinic are definitely more literate than the women over fifteen years of age in the Karachi population at large. At least eight out of every ten clients have had schooling, compare with only one out of four women in the city; and two of the eight educated FPA clients have matriculated. This weighting at the top of the educational spectrum also distinguishes the FPA clients from the general population, males included, and it confirms our earlier conclusions regarding the middle-and upper-class character of the FPA clientele.

Among adult women in Pakistan, frequency distributions of educational attainment vary most between women 15-19 years of age and those 25 and over, for these are the cohorts on either side of the education and emancipation reforms of the past decade. It is necessary, therefore, to separate or control these age groups in order to obtain a truer picture of the female education structure. In Table VI, the difference between the proportions of illiterates in the younger and older cohorts of FPA clients is much less than between the two cohorts of Karachi women at large. The fact that only 22.7 per cent of the older FPA clients are illiterate suggests that the early acceptors of family planning in Karachi were part of the vanguard of the movement for education of Muslim women in Pakistan. More specifically, it indicates that many of the women adopting family planning in Karachi are from rather modern or forward-looking families in which their parents placed a value on the educated female that was ahead of their time. This may say something, in crudely documented form, about the personality of women first to adopt family Planning, which has been a subject of much speculation in Pakistan. It is not merely their education per se which becomes important in this case, but their progressive family background as well, distinguishing them in many ways other than formal education from the general population. In the extremes of no education and

matriculation plus, the Karachi clinic has had nearly equal numbers. The college education of women is particularly significant in Karachi where the young and growing University could not exert the same influence upon the life of the community as the established universities of Lahore and Dacca. Higher education thus separates a Karachi woman more from the general population than would the same education in Lahore or Dacca.

It will be difficult to sort out which variable is really operating most between education and income, for the two are highly correlated, as shown in Table VII. The husbands of clients with no education have an average monthly income of Rs. 224, only 19.2 per cent having incomes over Rs. 300 per month; compared with an average income of Rs. 603 for those with matriculation or higher education, 78.5 per cent having incomes of Rs. 300 or more per month.

Concerning continued attendance at the FPA, however, Table VII shows no consistent pattern in relation to education. Conversely, women with higher education were just as likely never to return to the clinic after their first month of attendance as were women with little or no education. The only discernible pattern to be found here is that the likelihood of attending for more than two years increases slightly with education up to matriculation but then drops off for women beyond matriculation. The frequency of attendance or consistency of procuring supplies at one place does not covary with education when the woman has dropped out of the program within the first year. When she continues returning to the FPA clinic for more than a year, however, the lower her education the more consistent she is in obtaining contraceptive supplies from this source. This strongly suggests the presence of a class factor in embarrassment felt toward being seen repeatedly in the same clinic (cf. 24). It also relates to our finding with regard to income presented earlier (Table III). Whereas income revealed no relationship to frequency of attendance, education appears to have a slight inverse relationship.

D. Summary and Conclusions on Socio-economic Characteristics

We have made only a preliminary investigation here of demographic implications and of the "middle-class bias" criticism of the traditional Planned Parenthood approach as it applies to the first six years of the Karachi FPA programme. Our occupational and educational data have serious limitations but they revealed essentially the same pattern as the income data, which we regard as generally sound. The tendency for clients to overstate their income for prestige would be offset by the graduated fee system of the clinic. Reservations about women being able to report accurately the income of their husbands are assuaged in Pakistan by the custom of this part of the world for husbands to turn the pay envelope en toto over to their wives for administration of the family budget.

In both income and occupation of husband and in education of wife, the proportion of upper- and middle-class FPA clients is much larger than the corresponding proportions of upper- and middle-class income, occupation, and educational categories of all married adults of Karachi. The middle-class bias criticism is shown to be valid by all three criteria. For areas of the city farther removed from the clinic, it becomes a matter of a distinctly upper-class bias. The clients from outlying areas had a mean income of Rs.583, which was Rs.400 more than the average family in those areas. This contrasts strikingly with the mean income of Rs. 350 for clients living in the Commercial Area, and the Rs. 294 average income of clients in the Lower-Residential Area. These two areas closest to the clinic showed the least difference between mean incomes of FPA clients and the general populations of the respective areas.

Thus, the middle-class bias of the Karachi FPA programme is partly a function of the limited geographical influence that a clinic-only programme can exert on low-income couples. It is possibly also a function of the willingness and ability and

possibly even the preference, of higher income wives to travel some distance to procure contraceptive supplies from a more reputable and perhaps a less conspicuous source (of. 24).

Despite the significance of income, occupational and educational class as factors in attendance at the FPA clinic and in distance travelled to attend the clinic, they are generally unrelated to continuing attendance. In the parlance of our earlier distinction, (24, pp.89-90), class is a significant factor in the incidence of FPA clinic attendance but not in the prevalence of use as measured by duration or frequency of attendance at this one clinic. The socio-economic balancing of return visits is probably a function both of a greater receptivity of the FPA clinic to lower class clients, and to a tendency for higher class clients to shift from one source of supply to another (probably from clinics to private physicians and pharmacists). We have argued, therefore, that the total distribution of clients ever attending the FPA clinic is a better measure of the prevalence distribution of contraception in the population than is the distribution of clients continuing to attend the FPA clinic.

On the strength of this argument, we have compared FPA client rates by social class with 1958 fertility rates and birth distributions by class. Hashmi found no consistent correlation between class position and fertility rates in the 1958 People of Karachi data, indicating that Pakistan had not yet entered the phase of the demographic transition characterized by emerging class fertility differentials in the main urban center of the society. Our data indicate that in the six years following 1958, striking differentials in contraception by class have occurred. These differentials have not favoured the largest concentrations of births, and therefore have not favoured an overall fertility decline. They have, however, signalled the emergence of differential fertility by class, which is perhaps more significant to those awaiting signs of a turn in the status of Pakistan according to demographic transition theory.

III. Demographic Characteristics

A. Age

Any assertions about differential fertility in a population must take into account differential age distributions. Age defines not only the absolute upper and lower limits of the potential reproductive (fecund) life of a woman, but also the peak period and the declining period of fecundity. Within the fecund life, between puberty and menopause, there are periods of differential fertility (actual reproduction) defined both by fecundity and by cultural and other immediate determinants such as age at marriage, differential foetal mortality by age, differential coital frequency by age, differential divorce, separation and widowhood, differential morbidity, and differential contraception. All of these immediate determinants of fertility are clearly subject to age (cf. Davis and Blake, 17).

In Pakistan society, where premarital fertility is minimal, the lower limit of fertility is better defined by age at marriage than by age at puberty. We shall consider age at marriage in the next section. The upper limit of fertility, however, is more directly related to the upper limit of fecundity, which is age at menopause. In a rural plains area of India (Ludhiana District) of the Punjab State, which borders West Pakistan, Wyon, Finner and Gordon found by a life-table technique a median age at menopause of 44.0 years (63, Table II and p.5). This is found to vary with age at first live birth, with number of live births and, most of all, with age at last live birth (63, p.6). We shall consider these variations under our discussion of the FPA parity data.

The age distribution of women attending the Karachi FPA clinic is presented in Table X, along with the corresponding distributions of married women in the Karachi population at large, as variously defined in the 1959 People of Karachi survey (27, Table 2.21, pp.68-69) and the 1961 Census (44, Table 1,

pp.278-279). The largest number of women attending the FPA clinic between 1958 and 1964 were between the ages of 25-29, and a nearly equal number between 20-24. These were also the age groups with the largest numbers of married women in 1959 and 1961. The mean age of FPA clients is almost two years less than that of married women 15-49 in the general population.

In very general terms, the younger the women adopting family planning, the greater the impact of contraception on fertility in the population. Thus, one measure of success of family planning programmes is the age of women accepting contraceptive supplies under the programme. What is remarkable about the mean age of family planning adopters in Pakistan and India, however, is the stability rather than the variability of this measure (See Appendix A, Table I, attached). With the exception of sterilization programmes the mean age of women has not been less than 26 or greater than 29 in reported data for programmes in either Pakistan or India. The standard deviation has been between 4 and 6 years in every case, by our calculations from grouped data.

By itself, age is not, therefore, a very sensitive measure of programme success. We have stated that age is primarily an intermediate variable in fertility, operating through a variety of immediate determinants. Comparing the distribution of clients by age, as in Table IX, is a more direct means of judging the impact of the programme on fertility. The rank order correlation coefficient (r_s) between number of FPA clients and number of births is +.964, and the only difference is caused mainly by relatively minor differences between clients and births in the 15-19 and 30-34 age groups. The mean age of women at first FPA clinic attendance is essentially the same as the mean age of women having births in Karachi in 1958. The rank correlation between the number of FPA clients and the age-specific birth ratio for 1958 is unity. Rank correlations between client rates per 1000 women and age-specific birth data for the population all are above +.85. Another way to see the importance of these data is to note that 59 per cent

of all FPA clients are between the ages of 20-29, which are the ages of Karachi women to whom 57 per cent all births occur. Nearly 89 per cent of all FPA clients are under age 35, and 75.5 per cent of all Karachi births occur to women under 35. Thus, the high fertility age groups are quite well represented in the Karachi FPA clinic. This partially negates the often heard criticism that the family planning programme is attracting primarily women for whom contraception is least necessary. We shall explore this criticism further under parity and previous birth control experience.

In terms of the upper limit of fertility, Wyon and his associates indicate that only 25 per cent of all women have not reached menopause by age 46.5 (63, Table I, p.6); and Hashmi found only 1.6 per cent of all Karachi births to occur to women in the 45-49 age range (28, Table V.3, p.91). Less than one per cent of the FPA clients are in this age group.

The only other data available on an age related immediate determinant of fertility in this part of the world is coital frequency data from an anthropological study of fertility in a rural area of West Bengal by Moni Nag (41, Table 22, pp.182-183). Nag's data for two classes of Muslims and for Hindus is presented also in Table XI, showing essentially the same rank pattern as the FPA and birth data by age. Kinsey reports a median coital frequency of 2.8 times per week for urban American married women 16 to 20 years old, and 1.5 times per week for the 36 to 40 year-olds (35), which match quite closely Nag's figures, suggesting that they are fairly generalizable to an urban Pakistani group.

In general, then, the FPA female age distribution is quite favourable to maximum fertility reduction in the population affected by the clinic. Coupled with the socio-economic data and our basic assumptions regarding the representation of contraception in the total Karachi population, these data support our earlier conclusion that class differentials in

in fertility must have emerged in Karachi since 1958. These conclusions will be tempered, however, by our data on parity.

The ages of husbands of FPA clients are somewhat less typical of the total married male population as shown in Table XII. There is also less agreement between the 1959 survey and the 1961 census on the age distribution of married men in Karachi. According to the 1959 People of Karachi survey, 47.3 per cent of the married men over age 19 were in the 20-29 age group, but only 23.8 per cent of the husbands of FPA clients were this young. Whereas the mean age of FPA women was two years less than that of the married women of Karachi, the mean age of their husbands was two years greater than that of married men in 1959 (but more than three years less than the population means in the 1961 census). These disparities are partly the result of having no ceiling on the ages of husbands (a midpoint of 65 was used for men age 60 and over in the mean calculations). They also point, however, to the possible relevance of the difference between husband and wife ages in the adoption of family planning by a couple.

We are uniquely fortunate in having 1959 Karachi population data on relative age of husband and wife for comparison with the FPA data, for this is seldom tabulated in census reports and is not yet available elsewhere in Asia to our knowledge. It is also a neglected consideration in family planning research and family sociology in general. For this reason, we present a summary of our relative age data here and reserve a more thorough study of the subject for another paper.

Table XIII presents FPA client rates by age of wife and relative age of husband. Looking first at the marginal rates, the last column indicates that, in general, the closer the husband is to his wife in age, the more likely the couple is to attend the FPA clinic. By deduction from these findings, we should expect that women age 20-34 whose husbands are

within a few years of their own age would have the highest clinic attendance rates of all couples. Looking now at the individual cells of Table XIII, this hypothesis is strongly confirmed for women age 30-34, somewhat less for women 25-29, but it is not confirmed for younger women. In general, it appears that the older the woman, the more important is proximity of husband's age in adoption of family planning; and the younger the woman, the more important it is that the husband be senior in age before the couple adopts family planning. This is most clearly made apparent by contrasting the extremes of women age 15-19 or 15-24 and women age 40-49.

The real variable that is operating in the relative age factor probably is communication between husband and wife. It may be reasonably hypothesized that inter-spouse communication is higher among husbands and wives nearer to each other in age than those further separated by age. The decision to adopt family planning, as well as agreement on how and where to procure supplies, depends to a great extent on a rather intimate level of communication, and its concomitant, understanding, between spouses. It would be most useful in planning educational programmes for family planning to have better documentation of the patterns and problems of inter-spouse communication about family planning. How does communication first come about between husband and wife on the subject of family planning? What personal problems are felt by husbands and by wives in discussing family planning?

The relative ages of husband and wife is also related to fertility. Table XIV presents the proportions of births in 1958 to women in three broad age groups by relative age of husband, and the corresponding proportions of FPA clients. In general, the distribution of FPA clients has adequately followed the distribution of births.

The largest proportion of clients at the FPA clinic are in the 25-29 year age group, and the majority of these women are more than five years younger than their husbands. In the total population of Karachi women whose husbands are present, this is the age group with the highest age-specific fertility rates (Table XV). Women in the 25-29 year age group of the total Karachi married population who are within 5 years of their husband in age, however, have a slightly higher age-specific fertility rate than those more than five years younger than their husbands. It is somewhat reassuring to note that this highly fertile group is over-represented in the clinic but less so than women in higher fertile age groups. The implication of these findings is that couples with a minimum gap between husband and wife ages are more receptive to family planning (regardless of individual motivation in either husband or wife) than those with a wider gap, but an effort must be made through planned education to appeal to younger wives in order to affect the higher fertility groups. One of the first criteria for identifying the primary target groups in the urban phase of the Third Five Year Plan, then, should be women under 30 years of age who are within 5 years of their husbands in age. This would take advantage, on the one hand, of the higher probability of adoption by women closer in age to their husbands, while focusing the program, on the other hand, upon the age group most able to affect the birth rate by their adoption. Of family planning measures. For women under 25, an older husband appears to be the decision-maker, and therefore, men should also be educated.

One additional variable that should be considered in this connection is that of social class, which may be an important factor operating in our findings on relative age. Hashmi finds

in his Karachi data that

"...there is no significance relation between the personal incomes of husbands and the differences in the ages of spouses. However ...the differences between the ages of husbands and wives among the rich people tend to be narrower than the corresponding differences among the spouses who, according to the personal income of husbands, are placed in the lower income group."
(28,p.78)

The relationship is stronger than Hashmi suggests if rich and poor are contrasted, and it is in the expected direction if a middle income group is included, as in Table XVI.

Thus, social class and relative age are not mutually exclusive in their effect on family planning and both probably operate through an intermediate variable of inter-spouse communication. This suggests the need to control income and relative age of spouses in studying inter-spouse communication on family planning. The aim of such research would be to determine the factors enabling higher income couples and couples of low age disparity to discuss family planning more readily than other couples.

Table XVII presents the mean and median ages of FPA clients and their husbands. The differences summarize the foregoing data on relative age of husband and wife and the differentials by education of wife indicate that the difference is greater for the two lowest education classes than for women with matriculate or more education. The inexplicable deviation of the secondary education group from the expected pattern was observed also in the data on duration of attendance and socio-economic status.

The relationship between relative age of spouses and number of times wife attended the FPA clinic was in the expected direction but not statistically significant, as seen in Table

XVIII. The relationship is not consistent in finer breakdowns of relative age of spouses.

Additional data on age is discussed below in relation to other demographic variables.

B. Age at Marriage

The relative ages of husbands and wives are determined primarily (ignoring sex differential mortality) by their age differential at marriage. The demographic study of age at marriage in Pakistan has been the subject of only recent research (36, 42, 43, 55). The importance of the effect of age at marriage on the fertility of the individual and the society and its role in demographic transition is well recognized (e.g., 14, 54). Agarwala (2,3,6), Saxena (57) and others have studied age at marriage intensively in India but Pakistani scholars are not convinced of the generalizability from Hindu marriage data to Muslim marriages. Before the Muslim Family Ordinance Law (with Child Marriage Restraint Act) of 1961, there was no formal registration of marriages in Pakistan, so that Sadiq had to compute Pakistan ages at marriage by Hajnal's synthetic cohort technique (26) from five-year age grouped census data (55). Korson has taken advantage of the recent registration data in Karachi and provides useful baseline data on age at marriage by social class for the years 1961 to 1964 (36). Very few of the Karachi FPA clients were married during this period, however, so that we must turn to sample survey data from other cities for comparison with the total FPA clinic population.

A general comparison with the city of Lahore, using the inconvenient age groupings published by the Social Science Research Centre (58, Table IV, p.10), reveals that women attending the Karachi FPA are not significantly different in their age at marriage from the general urban population, if

Lahore can be taken as roughly representative of urban West Pakistan on this measure. The husbands of Karachi FPA clients, however, were married at significantly older ages than the men of Lahore. Sadiq reports that among the major cities of Pakistan Lahore has the highest mean age at marriage for females (21.4 in 1961) "perhaps because it is a cultural and educational centre" (55, p.247). For males, he finds Lahore (24.9) slightly below Karachi (25.5) in 1961 (55, Table VIII, p.246). These differences only partially explain the differential nuptial age distributions between the Karachi FPA and the Lahore sample.

Clearly, the mean age at marriage has increased over the years for both males and females. To control for the period in which FPA clients were married, we have separated them by duration of marriage data into three marriage cohorts roughly corresponding to the three census years for which Sadiq has computed mean ages at marriage. The comparisons of means are presented in Table XX, showing rather insignificant differences between the Karachi FPA clients and the women of Karachi, and between the husbands of FPA clients and all men of Karachi city.

Korson reports only slightly higher means for 1961-64. Table XXI compares the age at marriage distributions of the three samples studied by Korson with the 162 FPA clients who were married for less than two years at the time of their first clinic visit between 1958 and 1964. Except for the proportion of clients married under age 17, the FPA client distribution by age at marriage is most like that of recently married women in the upper residential area of Karachi. Both the mean and median ages at marriage for recently married FPA clients are between those of the middle and upper residential area marriages of Karachi between 1961 and 1964. Thus, the women adopting family planning shortly after marriage appear to be slightly older than the average women married during this period in Karachi.

One of the problems in age at marriage data from most sources in India and Pakistan is that many marriages are not consummated for some time after they are arranged, contracted or registered. We have no way of knowing whether FPA clients usually reported their age at marriage commitment or age at marriage consummation. Certainly the 120 women who reported their age at marriage to be less than 13 years were not reporting age at consummation of marriage, for it is against all custom in Pakistan to have nuptials before puberty.

Agarwala compared age at marriage as reported in the Delhi family planning clinics and age at consummation of marriage as reported by the same group (4, Table 3.7, p.15). He found a mean age at marriage of 16.98 and a mean age at consummation of marriage of 17.49, a difference between means of one-half year. If we increase the means of Karachi FPA women by this factor, they become:

Estimated Mean age of Women at Consummation of Marriage:

All FPA clients	17.6
Clients married 20 or more years	15.4
Clients married 10-19 years	16.6
Clients married less than 10 years	18.8
Clients married less than 2 years	21.0

The half-year difference is perhaps an overestimate for the more recently married because there is likely less delay in the consummation of marriages arranged at older ages. The marked differences remain, nevertheless, between marriage cohorts. The importance of duration of marriage will be further explored in the next section.

The effect of age at marriage on return visits to the FPA clinic is shown in Table XXII. The probability of returning to the clinic after the first visit increases significantly with age at marriage. This suggests that the more recently married couples (who are predominantly the more delayed marriages) are more intent on following through with their family limitation or spacing plans. This may help to allay the concern of those who argue that increases in age at marriage will only result in more reproductive effort to make up for lost years.

C. Duration of Marriage and Fertility

Pregnancy and birth data are so closely related to the number of years married that they are best discussed together. The main problem with which we are concerned here is what Krotki has termed the "misplaced emphasis on high parity in family planning campaigns" (38). In general, the larger the proportion of high parity couples represented in a family planning programme or in the clientele of a clinic, the less impact the programme can have on the fertility of the population. Couples of lower parity are not only younger and therefore more fertile, but they also constitute the largest contributors to the annual births because they are much greater in number in a society with a relatively flat age pyramid such as Pakistan's. But even when age is controlled, high parity couples are seen to contribute such a small proportion of the annual births that they are virtually irrelevant in terms of the total fertility of the population.

This paradox has not been given due consideration in the family planning literature. Indeed, it has been largely ignored in programme guides (38, p.1). The Karachi FPI data can perhaps help to clarify the problem.

Consider first the distribution of all births in a given year in a given city, tabulated by the duration of marriage of the women having the births. The proportions of births in all categories total one, so that the tabulation constitutes a probability distribution and the proportion in each marriage duration category indicates the probability that a child born in the coming year will be born to a woman married that long. Such data is not available for the city of Karachi but has been recently published by Mehrotra from sample census data for 1960-61 in various States of India (40). We have selected data from the urban areas of Delhi

and three States containing large cities closest to West Pakistan for comparison with the Karachi FPA clinic.^{3/}

According to Table XXIII, the distribution of Karachi FPA clients is almost exactly the same as the probability distribution of births as estimated from the Indian data (40, p.32). The median duration of marriage of women attending the FPA clinic is not significantly different from the median duration of marriage of women giving births.

In terms of parity of the births, however, a completely different picture emerges. Table XXIV breaks down the duration of marriage birth distribution by birth order or parity.^{4/} In reading this table, consider the proportions shown in each cell for Gujarat and Maharashtra State urban areas to be estimates of the probability that a Karachi birth to women of that duration of marriage will be of that parity. Thus, 65 to 72 per cent of the annual births to Karachi women married less than five years are primiparous births (i.e., the probability that a birth to these women is primiparous is .65 to .72). Now consider the corresponding figure for Karachi FPA clients to be the proportion of family planning clients exposed to this "risk" of a birth in the coming year if they did not adopt family planning. Thus, only 9 per cent of the Karachi FPA clients married less than 5 years are subject to a primiparous birth because 91 per cent have already had their first live birth at the time of their first clinic visit. Continuing across this row of the table and adding cumulatively from column 3 onward, 58 per cent of the Karachi FPA clients married less than 5 years are attempting to prevent their third or higher order birth,

^{3/} The main cities represented in the sample are Bombay in Maharashtra State; Ahmedabad in Gujarat State; Ajmer, Jaipur and Jodhpur in Rajasthan State; and urban Delhi. The proximity of these areas to Karachi and their demographic similarity make generalizations to the Karachi population reasonable.

^{4/} In order to reduce the size and complexity of this table, only two urban samples of India are used for comparison with Karachi. We have selected Gujarat and Maharashtra from the four because they had the largest urban samples in Mehrotra's data (see 40, p.29).

but such high order births constitute only 2 per cent of all births to women married less than 5 years in the total population. Similarly, in the 5-9 year marriage cohort, which includes 30 per cent of all FPA clients, 50 per cent of the clients have come to the clinic to prevent a fifth or higher order birth, but such high order births probably account for only 3 to 5 per cent of all births in the total population of Karachi women in this marriage cohort.

Summarizing tables XXIII and XXIV, the FPA clinic in Karachi is attracting women at the right time in their married lives in terms of number of years married, but much too late in terms of number of children already born. Thus, the women attending FPA clinic constitute a highly fertile group who have fulfilled their family size ideals well ahead of the schedule outlined by the married population at large. Most of the couples attending the FPA clinic are trying to prevent their fifth or sixth birth while most of their marriage cohort contemporaries are having their second or third child. It is the second and third births, however, not the fifth and sixth, which contribute the bulk of procreation represented in the fertility rates, and therefore in the growth rates of the country. The majority of FPA clients are preventing births (if they are successful) which might be of significance to themselves as individual couples but which are essentially irrelevant in terms of the primary goal of the national family planning programme.

Parity progression data such as these from India are the most needed baseline data in Pakistan for testing the overrepresentation of high parity couples in family planning programmes. They serve to demonstrate most clearly the minimal impact that family planning by high parity couples can have on the total fertility of the population. Age, or duration of marriage, and parity thus become the most important items for inclusion in clinic records and other programme evaluation records, and the most important criteria for selection of target groups for family planning programmes.

TABLE I

FPA CLIENT RATES, 1958-1964, AND FERTILITY RATES, 1958, PER 1000
WOMEN AGE 15-49 WITH HUSBAND PRESENT, BY OCCUPATION OF HUSBAND,
KARACHI, PAKISTAN

Occupation of Husband	No. of FPA Clients	Married Women, ¹ 15-49	FPA Rate per 1000 women	Karachi Births 1958 ³	Fertility ² Rates 1958	
					TFR	GRR
Professional, Technical & Related	344	6,725	51.1	1,725	8,895	4,339
Administrative, Exec. & Managerial	279	32,225	8.7	8,000	7,915	3,861
Clerical Workers	500	9,925	50.4	3,225	7,455	3,637
Sales workers	776	24,175	32.1	6,175	7,990	3,898
Farmers, Fishermen & miners	35	16,525	2.1	2,525	6,930	3,380
Transportation & Communication workers.	119	17,350	6.9	4,325	7,155	3,490
Craftsmen, production & process workers.						
Skilled, craftsmen & production	194	46,700	4.2	13,200	8,250	4,024
Semiskilled and labourers	198	42,950	4.6	11,075	7,865	3,837
Service, sports & entertainment workers.	872	28,950	30.1	7,125	7,440	3,629
Workers not classified	35	54,500	0.6	15,800	8,125	3,963
Unemployed workers	66	4,725	14.0	825	7,015	3,422
Not in labour force	4	5,975	0.7	875	7,425	3,622
All Occupational groups	3,422	285,725	12.0		7,185	3,812

¹From Hashmi, Khan, and Krotki, 27, Table 2.22, p.70, Col. 6.

²From *ibid.*, 27, p.70, Cols. 3 and 4.

³From *ibid.*, 27, p.70, Col. 5.

Rank-order correlation coefficients for occupational groups (r_s):

FPA Client distribution vs. Distribution of husbands of married women (15-49)	+ .139
FPA Client Rate vs. Total Fertility rate	+ .196
FPA Client Rate vs. Gross Reproduction rate	+ .196

TABLE II

Monthly Incomes of Husbands of Karachi FPA Clients, 1958-64,
and of all Married Males in Karachi, 1959

Income of Husband	Karachi FPA Husbands ₁		All Married Males of Karachi ₂	
	No.	%	No.	%
No Income	62	1.8	19,500	5.3
Rs. 1-99	240	7.1	158,050	42.8
Rs. 100-124	271	8.0	69,625	18.8
125-149	198	5.8	20,650	5.6
150-199	471	13.9	39,600	10.7
200-299	698	20.5	29,075	7.9
300-499	621	18.3	19,675	5.3
500-999	506	14.9	8,475	2.3
1000+	331	9.7	4,850	1.3
All Cases Recorded	3,398	100.0	369,500	100.0
Income not recorded	24	-	3,425	-
Totals	3,422	-	372,925	-

¹ As reported by wives at time of first FPA clinic visit, 1958-64.

² From 27, Table 1.03, p.24.

TABLE III

Mean Incomes of Husbands by Attendance Pattern of FPA Wives :
Duration of Attendance and Number of Times Attended, Karachi,
1958-1964.

No. of Times Attended Clinic	Client Attended Clinic for the last time:					
	In the same mo- nth as First Atten- dance	1-6 Months	7-12 Months	13-18 Months	19-24 Months	More than 2 years after First Attendance
Once only	Rs.375	-	-	-	-	-
Twice	392	Rs.396	Rs.382	Rs.427	Rs.365	Rs.540
Thrice	396	388	382	342	379	400
4 times	700 ^a	362	555	343	421	450
5 times	750 ^a	302	347	352	433	376
6 times	-	455 ^b	376	394	343	330
7 or more	-	-	710	380	374	383
Not recorded	237	No income ^c	-	-	-	-
All cases	375	388	384	377	385	400
N	(1749)	(484)	(430)	(254)	(197)	(202)

^a Based on only two cases.

^b Six or more visits: 1 person attended 7 times and one attended 8 times

^c Only one case.

Table IV

Percentage Distribution of Live Births in 1958 to Married Women, Age 15-49 with Husbands Present, by Monthly Income of their Husbands, and Corresponding Distribution of Karachi FPA Clients and Client Rates Per 1000 Women, 1958 - 1964

Monthly Income of Husbands	Births in 1958*	All FPA Clients	Client Rate (per 1000) b	1958 Fertility Rates		
				GFR	GRR	TFR
All Incomes	100.0	100.0	12.3	262	3,182	7,815
No Income	2.0	1.8	7.6	181	3,634	7,450
Rs. 1-99	39.0 ^a	7.0	2.1	255	3,875	7,943
Rs. 100-124	18.0	7.9	4.9	246	3,502	7,180
Rs. 125-149	6.7	5.8	11.9	301	4,263	8,740
Rs. 150-199	12.5	13.8	14.1	280	3,473	7,120
Rs. 200-299	10.9	20.4	28.3	332	4,985	10,220
Rs. 300-499	7.0	18.1	36.0	302	4,273	8,760
Rs. 500-999	2.2	14.8	66.8	218	3,551	7,280
Rs. 1000+	1.2	9.7	78.3	213	4,085	8,375
No Information	0.5	0.7	10.2	149	2,115	4,335
N	(74,875)	(3,422)				

* Calculated from 27, Table 2.21 (Column 5), p.68

a Combining Rs. 1-49, Rs. 50-74 and Rs. 75-99 in which there were 1.9%, 20.0% and 17.1%, respectively, of all births.

b FPA clients per 1000 women from 27, Table 2.21, Column 6, p.68.

Correlation coefficient (r_{xy}) between income and client rate = +.986

Correlation coefficient (r_{xy}) between income and GFR = +.682

Rank order correlation coefficient (r_s), Income X FPA rate = +.950

Table V

Educational Status of Women Attending the Karachi FPA Clinic,
1960-64,
and of all Women above age 15 in Karachi City and Karachi District,
1961^{1/}

Educational Status (Highest Grade Passed)	FPA Clients		All Women 15+ years of Age*			
			Karachi City		Karachi District	
	No.	%	No.	%	No.	%
No Formal Education	348	19.1	341,969	75.5	370,294	76.6
Illiterate	-	-	(301,911)	(66.7)	(329,564)	(68.1)
Literate ^{2/}	-	-	(40,058)	(8.8)	(40,730)	(8.4)
Primary (Class I-V)	919	50.5	37,098	8.2	38,366	7.9
Middle & Secondary (VI-IX)	165	9.1	49,057	10.8	49,958	10.3
Matric. & Grad. (X+)	1,388	121.3	24,809	5.5	25,042	5.2
All Cases Recorded	1,820	100.0	452,933	100.0	483,660	100.0
Education not Recorded	1,602	-	-	-	-	-
Total	3,422	-	452,933	-	483,660	-

1/ Karachi District includes Karachi City and "Karachi-rural areas" as defined by the Census of 1961.

2/ FPA clients were generally recorded by clinic staff as "illiterate" if they had no formal education.

* Source: 45, Table 3, pp.288-289 and 330-331.

$\chi^2 = 5571.0$; p .001 (between observed FPA distribution and expected distribution under null hypothesis of no difference between FPA clients and Karachi women by education).

Table VI

Percentage of FPA Clients and all Karachi City
Women of Specific Age Groups, by Educational
Status

Educational Status	Percent of Women in Educational Cohort					
	Age 15 - 19 (Recent Education)		Age 20-24		Age 25+ (Educ. 10 yrs ago)	
	FPA Clients 1958-64	Karachi City 1961 ^a	FPA Clients 1958-64	Karachi City, ^a 1961	FPA Clients 1958-64	Karachi City, a 1961
No Education	16.0	61.9	12.1	69.8	22.7	80.9
Primary (Class I-V)	50.4	11.5	52.2	9.1	49.7	7.0
Middle & Secondary	15.1	20.2	10.6	12.7	7.7	7.7
Matric. & Grad. (X+)	18.5	6.4	25.1	8.4	19.9	4.4
All Cases Recorded	100.0	100.0	100.0	100.0	100.0	100.0
N	(119)	(81,793)	(538)	(79,673)	(1,162)	(291,467)

^{a/} Source: 45, Table 3, pp.330-331.

Table VII

Percentages of FPA Clients in Four Educational Groups by
Monthly Income of their Husbands, Karachi, 1958 - 1964.

Income of Husband (per month)	Percentages					
	Educational Status of Women					All Clients 1958-64
	No Education	Elementary	Middle & Secondary	Matric. or Grad.	No Informa- tion on Ed.	
No Income	1.4	1.8	0.0	1.6	2.1	1.8
Rs. 1-99	19.9	3.2	1.9	0.5	8.7	7.1
Rs. 100-124	17.6	7.6	4.9	1.0	8.0	8.0
Rs. 125-149	7.8	8.2	4.3	1.8	5.2	5.8
Rs. 150-199	15.6	18.8	9.3	4.2	13.5	13.9
Rs. 200-299	18.4	22.5	21.6	12.5	21.7	20.5
Rs. 300-499	10.9	20.3	25.3	25.2	16.3	18.3
Rs. 500-999	6.9	12.1	24.0	29.1	13.9	14.9
Rs. 1000+	1.4	5.6	8.7	24.2	10.6	9.7
N	(347)	(917)	(162)	(385)	(1,586)	(3,397)
Mean Income	Rs.224	Rs.338	Rs.451	Rs.603	Rs.374	Rs. 378

Table VIII

Number and Percentage of Women in Four Educational Groups by
Duration of their Attendance at the FPA Clinic, Karachi, 1958-64

Duration of Attendance	Educational Status								Education not Recorded		All Clients	
	No Education		Elementary Only		High School		Metric. or Grad.		Number	Percent	Number	Percent
Never Returned	242	71.2	656	72.8	114	73.1	268	69.8	482	30.9	1,762	52.8
1-6 months	60	17.6	146	16.2	25	16.0	62	16.1	192	12.3	485	14.5
7-12 months	20	5.9	53	5.9	4	2.6	22	5.7	333	21.4	432	12.9
13-18 months	10	2.9	24	2.7	3	1.9	16	4.2	203	13.0	256	7.7
19-24 months	6	1.8	11	1.2	4	2.6	8	2.1	170	10.9	199	6.0
Over 2 years	2	0.6	11	1.2	6	3.8	8	2.1	178	11.4	205	6.1
Total Reported	340	100.0	901	100.0	156	100.0	384	100.0	1,558	99.9	3,339	100.0
Duration not recorded	8	-	18	-	9	-	5	-	43	-	83	-
All Clients	348	-	919	-	165	-	389	-	1,601	-	3,422	-
Mean Duration	(2.34 months)		(2.14 months)		(3.04 months)		(1.32 months)		(11.16 months)*		(6.58 months)	

* The greater duration for women in the no information category is due to educational status not being recorded for women first attending the clinic in 1958 or 1959, so that these women had a longer potential duration of attendance.

Table IX

Percent of Women in Educational Groupings Who
Attended the FPA Clinic more than twice by Duration
of Attendance

Percentage attending three or more times

Duration of Attendance	Education of Woman			
	None	Elem.	High School	Grad.
Never returned after first month	0.8	1.2	4.4	2.6
1-12 months	55.0	47.2	58.6	45.2
13-24 months	93.8	88.6	71.4	58.3
25-36 months	100.0	90.9	100.0	75.0

Table X

Age of Women at Time of First FPA Clinic Attendance, 1958-64,
Age of all Married Women age 15-49 in Metropolitan Karachi,
1959,¹ in Karachi District, 1961,² and in Karachi City, 1961³
and FPA Client Rates per 1000 Women in Each Base Population

Age of Woman	FPA Clients 1958-64		All Married Women, 1959 ^a		All Married Women, 1961				FPA Clients per 1000 Married Women		
	Number	PerC.	No. 1	%	Dist. Census No. 2	%	City Census No. 3	%	Kar. 1959	Dist. 1961	City 1961
5-19	215	6.3	32,650	11.4	42,446	13.2	39,961	13.3	6.6	5.1	5.4
20-24	992	29.0	64,550	22.6	71,391	22.2	67,063	22.3	15.5	13.9	14.8
25-29	1,037	30.3	67,050	23.5	68,279	21.3	64,183	21.4	15.6	15.1	16.1
30-34	754	22.1	47,250	16.5	54,771	17.0	51,238	17.1	16.1	13.8	14.7
35-39	312	9.1	33,975	11.9	38,392	12.0	35,551	11.8	9.3	8.1	8.8
40-44	89	2.6	24,850	8.7	27,666	8.6	25,623	8.5	3.6	3.2	3.5
45-49	20	0.6	15,400	5.4	18,403	5.7	16,932	5.6	1.3	1.1	1.2
Total	3,419	100.0	285,725	100.0	321,348	100.0	300,551	100.0	12.0	10.6	11.4
Mean	(27.44)		(29.13)		(29.05)		(29.00)		--	--	--
Median	(27.42)		(28.40)		(28.43)		(28.37)		--	--	--

¹ Hashmi, Khan and Krotki, 27, Table 2.21, pp.68-69.

² Pakistan Census Bulletin No. 3, 44, Table 1, pp.278-279.

³ Ibid., subtracting rural areas from Karachi District.

^a The 1959 married women are those 15-49 with husband present, whereas the 1961 Census data include all married women 15-49

Rank-order correlation coefficients by age (r_s):

Between FPA client distribution and all married women, 15-49,
with husband present in 1959: +1.000

Between FPA Client distribution and married women, 15-49
Karachi District, census, 1961: + .929

Between FPA client distribution and married women, 15-49,
Karachi City, census, 1961: + .929

TABLE XI

FPA Client Distribution and 1958 Karachi Birth Distribution and Birth Ratio for all Women Age 15-49, a by Age of Women, and Coital Frequency Averages in Rural West Bengal, India, by Age.

Age of Women	FPA Clients 1958-1964		Births to all Women, 1958 ^a		Age-Spec. Birth Ratio (All Women) 1958 ^a	Coital Frequency (per week) ^b in Rural West Bengal		
	No.	%	No.	%		Shiekh Muslim	Non-Shiekh	Hindu
15 - 19	215	6.3	8,650	11.2	0.126	1.7	2.3	1.5
20 - 24	992	29.0	21,600	27.8	0.285	2.4	2.6	1.9
25 - 29	1,037	20.3	23,000	29.6	0.319	2.4	2.7	1.8
30 - 34	754	22.1	13,075	16.9	0.252	1.8	2.1	1.1
35 - 39	312	9.1	7,550	9.7	0.200	1.4	1.5	0.7
40 - 44	89	2.6	2,475	3.2	0.078	1.0	0.8	0.2
45 - 49	20	0.6	1,250	1.6	0.057	0.4	0.4	0.3
All Ages	3,419	100.0	77,600	100.0	0.216	1.8	2.0	1.4
Mean Age	(27.14)		(27.11)					

^a Hashmi, 28, Table V.3, p.91

^b Nag, 41, Table 22, pp. 182-183.

$\chi^2 = 156.7$; (No significant relation between FPA Distribution and expected distribution under null hypothesis of no difference between FPA and birth distribution).

Rank order correlation coefficients (r_s) by age:	Level of Signif.
FPA Client distribution x Birth Distribution of 1958	+0.964 .01
FPA Client distribution x Age-Spec. Birth Ratio, 1958	+1.000 .01
FPA Client rates per 1000 married women, 1961 x birth distribution of 1958	+0.964 .01
FPA Client rates per 1000 married women, 1961 x age-specific birth ratio	+1.000 .01
FPA Client rates per 1000 married women with husbands present, 1959 x birth distribution	+0.857 .05
FPA Client rates per 1000 married women with husbands present, 1959 x Shiekh Muslim coital frequency	+0.848 .05

Table XII

Age of Husbands of FPA Clients, 1958-1964, Age of Currently Married Men over 19 in Metropolitan Karachi, 1959,¹ in Karachi District, 1961,² and in Karachi City, 1961,³ and FPA Client Rates per 1000 Married Men.

Age of husband	Husbands of FPA Clients 1958-1964		All Married Men, 1959		All Married Men, 1961				FPA Clients per 1000 Married Men		
					Karachi Dist. Census		Karachi City Census		Kar. 1959	Dist. 1961	City 1961
	No.	%	No. ¹	%	No. ²	%	No. ³	%			
0-24	151*	4.4	68,900	23.3	47,715	11.3	45,258	11.5	2.2	3.2	3.3
5-29	662	19.4	71,000	24.0	69,881	16.6	65,433	16.6	9.3	9.5	10.0
0-34	1,016	29.7	50,475	17.1	74,566	17.7	69,935	17.7	20.1	13.6	14.6
5-39	781	22.9	36,100	12.2	61,709	14.6	57,732	14.6	21.6	12.7	13.6
0-44	523	15.3	26,925	9.1	50,249	11.9	46,949	11.9	19.5	10.4	11.2
5-49	162	4.7	16,900	5.7	35,304	8.4	32,918	8.4	9.6	4.6	5.1
0-54	94	2.8	13,300	4.5	31,352	7.4	29,044	7.4	7.0	3.0	3.2
5-59	12	0.4	5,075	1.7	15,729	3.7	14,690	3.7	2.3	0.8	0.8
60+ ⁵	13	0.4	6,925	2.4	35,023	8.3	32,189	8.2	1.9	0.4	0.4
Total	3,414	100.0	295,600	100.0	421,528	99.9	394,148	100.0	11.6⁴	8.1⁴	8.7⁴
Mean Age	(34.74)		(32.95)		(38.38)		(38.30)				
Median	(34.41)		(30.79)		(36.51)		(36.39)				

* Two husbands were age 19 at time of wife's first attendance at FPA clinic.

¹ Hashmi, Khan and Krotki, 27, Table _____, p.

² Pakistan Census Bulletin No.3, 44, Table 1, pp.278-279.

³ Ibid., Subtracting Rural Area from Karachi District.

⁴ Numerator is 3,422 (3,414+8 cases with no information on age of husband).

⁵ A midpoint of 65 was used for age 60 and over in the computation of means.

Table XIII

FPA Clinic Attendance Rates (FPA clients per thousand married women, 15-49 with husbands present) By Age of Woman, By Relative Age of Husband, Karachi, 1958 - 1964.

Difference between Age of husband and Age of Wife	Age of woman at time of 1st visit						All Ages	N (FPA)
	15-19	20-24	25-29	30-34	35-39	40-44		
Husb. 15 or more years older than wife	6.9	13.1	11.3	7.4	5.9	0.6	6.7	214
Husb. 10-14 years older	7.8	14.3	15.2	13.8	6.2	2.6	10.5	653
Husb. 5-9 years older	8.7	17.7	13.2	15.6	8.1	2.6	12.2	1634
Husb. 3-4 years older	4.4	14.0	25.1	35.1	20.7	7.4	16.6	550
Husb. 1-2 years older	1.3	11.4	22.2	29.5	25.7	6.7	14.8	276
Husb. Same age as wife	0.0	12.5	19.5	40.0	23.3	23.2	23.3	64
Husb. Younger than wife	- -	5.0	7.5	72.0	36.0	2.7	17.0	23
<hr/>								
All Couples: 1959 Metropolitan Karachi ¹	6.6	15.5	15.6	16.1	9.3	2.7	12.1	--
All Couples: 1961 Karachi Dist. Census ²	5.1	13.9	15.1	13.8	8.1	2.3	10.6	--

¹ The denominators in these calculations include all married women of Metropolitan Karachi whose husbands were present in the household in 1959, by age of woman and by relative age of husband; from 27, Hashmi, Khan, and Krotki, *Op.cit.*, Table 2.23, pp.72-73.

² Census denominators include urban and rural Karachi District married women regardless of husband's presence; from Census 44 Bulletin No. 3, Table 1, pp.278-279.

Table XIV

Probability Distribution of Birth in 1958 to Karachi Monogomously Married Women 15-49 with Husband Present, By Relative Age of Husband and Wife,¹ and Corresponding Distribution of Karachi FPA Clients, 1958-1964.

Difference between Ages of Husband and Wife	All ¹ 1958 Births	All FPA Client	Births to Women 15-24	FPA Client Age 15-24	Births to Women 25-34	FPA Client Age 25-34	Births to Women 35-49	FPA Client Age 35-49
	Husb. 15 + years older than wife	9.0	6.3	4.9	5.7	11.6	6.3	11.7
Husb. 10-14 years older	20.2	19.1	19.3	17.4	19.3	20.3	25.2	19.4
Husb. 5-9 years older	48.9	47.9	48.1	55.3	48.1	44.0	53.4	42.8
Husb. 3-4 years older	13.6	16.1	18.8	15.5	12.0	17.2	5.1	12.9
Husb. 1-2 years older	7.2	8.1	8.2	5.6	7.5	9.2	3.4	10.5
Husb. Same age as wife	0.8	1.9	0.5	0.4	1.1	2.3	1.2	4.3
Husb. Younger than wife	0.3	0.7	0.2	0.1	0.4	0.7	0.0	2.4
Total :	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N : (74,225) (3414)			(28800) (1205)		(34,525) (1791)		(10,900) (418)	

¹ Hashmi, Khan and Krotki, op.cit., 27 Table 2.23, pp. 27-73.

Table XV

Number of FPA Clients and 1958 Age Specific Fertility Rates²
For Karachi Monogomously Married Women with Husband Present,
By Difference Between Ages of Husband and Wife.

	Age of husband in relation to wife							N
	15+ yrs Wife	10-14 yrs.	5-9 yrs.	3-4 yrs.	1-2 years	Husb. Wife	Husb. Wife	
All Ages 15-49:								
No. FPA Clients	214	653	1,634	550	276	64	23	3,414
TFR= ASFR x 5 ^a	7.020	7.705	8.215	8.560	7.835	7.665	3.305	
Women 15-19:								
No. FPA Clients	9	43	126	32	5	0	0	215
ASFR ^a	0.212	0.311	0.249	0.248	0.172	0.333	--	
Women 20-24:								
No. FPA Clients	60	166	540	155	63	5	11	990
ASFR ^a	0.246	0.329	0.335	0.324	0.312	0.313	0.286	
Women 25-29:								
No. FPA Clients	60	192	451	208	105	18	3	1,037
ASFR ^a	0.380	0.314	0.309	0.383	0.413	0.216	0.375	
Women 30-34:								
No. FPA Clients	53	171	338	101	59	23	9	754
ASFR ^a	0.279	0.216	0.280	0.339	0.313	0.304	--	
Women 35-39:								
No. FPA Clients	27	51	136	45	36	7	9	311
ASFR ^a	0.175	0.217	0.231	0.207	0.232	0.167	--	
Women 40-49:								
No. FPA Clients	5	30	43	9	8	11	1	107
ASFR ^b	0.054	0.084	0.120	0.081	0.042	--	--	

^aFrom Hashmi, Khan and Krotki, 27, Table 2.23, pp. 72-73.

^bIndependent ASFR Calculations from ibid, 27, combining groups

Table XVI

Karachi Couples: Personal Income of Husband by Difference Between Ages of Husband of Wife, Percentages, 1959.

Difference in Ages:	Low Income Rs. 50	Mid. Income Rs. 200-299	High Inc. Rs. 1000+
Husband 15 years or more older	25.54	10.83	8.15
Husband 10-14 years older than wife	28.23	25.77	21.74
Husband 5-9 years older than wife	33.40	46.22	46.19
Husband 3-4 years older than wife	6.52	8.50	10.33
Husband 1-2 years older than wife	4.66	6.82	9.78
Husband same age as wife	1.34	1.03	2.72
Husband younger than wife	0.31	0.83	1.09
All Couples	100.00	100.00	100.00

Source: 28, Table IV.9, p. 81.

QUTUB/6-6-1966.

Table XVII

Mean and Median Ages* of FPA Clients and Their Husbands, By Education of Wife (Client), Karachi, 1958-1964.

Education of Wife	Mean Age			Median Age			N
	Wife	Husb.	Diff.	Wife	Husb.	Diff.	
No formal education	26.9	37.2	7.6	30.1	37.0	6.9	348
Primary School	27.1	34.2	7.1	27.2	34.0	6.8	919
Secondary	25.6	33.0	7.4	25.8	33.3	7.5	165
Matriculation or more	26.0	32.7	6.7	26.2	32.7	6.5	388
No information on Educ.	27.7	35.2	7.5	27.7	34.6	6.9	1602
All FPA Clients	27.4	34.7	7.3	27.4	34.8	7.4	3422

*Calculated from 5-year grouped data.

Table XVIII

Number of Times Wife Attended the Karachi FPA Clinic, By Relative Age of Husband, Karachi, 1958-1964.

Relative Age of Husband:	Times attended FPA Clinic					
	Once only		Twice only		3 or more	
	No. of Women	%	No. of Women	%	No. of Women	%
Husband 5 or more years older	1,085	74.5	675	72.9	686	72.0
Husband less than 5 yrs older	371	25.5	251	27.1	267	28.0
Total Reported	1,456	100.0	926	100.0	953	100.0

$X^2=2.02$; $p .10$ (no significant relationship).

QUTUB/6-6-1966.

Table XIX

Age at Marriage of Karachi FPA Clients and Their Husbands, 1958-1964, And of a Sample of Ever-Married Females and Males in Lahore, Pakistan, 1959,¹ Percentages

Age at Marriage	Females		Males	
	FPA Client	Lahore Sample	FPA Husb.	Lahore Sample
3-12	3.5	6.2	0.2	0.5
13-17	57.4	60.1	4.9	11.7
18-22	32.1	28.3	36.6	49.4
23-27	6.0	4.6	37.5	27.3
28-32	0.8	0.3	15.3	9.6
33 and over	0.2	0.5	5.5	1.5
All ages:	100.0	100.0	100.0	100.0
N	(3398)	(1097)	(3393)	(989)
Mean Age at Marr.	17.1	17.2	24.1	22.5

¹ Source: 58, Table IV, p. 10.

Table XX

Mean Age at Marriage by Marriage Cohort of FPA Clients and Their Husbands and all Karachi Females and Males in 1931, 1951 and 1961.¹

Marriage Cohort (Census)	Females		Males		No. FPA	
	FPA Clients	Kar. City ¹	FPA Husb.	Kar. City ¹	Clients	Husb.
Married 20 or more years, (1931)	14.9	15.5	21.9	21.6	279	279
Married 10-19 years, (1951)	16.1	16.9	23.2	24.8	1367	1361*
Married less than 10 yrs, (1961)	18.3	18.2	25.0	25.5	1752	1750*

¹ Source 55, Table VIII, p. 246.

*Eight women could not report their husbands age at marriage.

Table XXI

Age at Marriage of FPA Clients Married Less than Two Years at Time of First Clinic Attendance, 1958-64, and Corresponding Ages of Women Whose Marriages Were Registered in Three Residential Areas of Karachi, 1961-1964.¹

Age of Woman at Marriage	FPA Client	Karachi, 1961-64: 3 Residential Areas			
		All	Upper	Mid.	Lower
16 or less	14.8	12.9	4.2	13.7	20.9
17-18	19.8	34.4	20.0	31.7	47.9
19-20	19.8	21.7	26.6	23.0	16.2
21-22	20.4	11.7	17.2	14.5	4.5
23 and over	25.2	19.4	32.0	17.1	10.5
All Ages:	100.0	100.0	100.0	100.0	100.0
N :	162	1,333	478	366	489
Mean Age*	20.5	20.2	21.7	19.9	18.8
Median Age*	19.2	18.4	19.9	18.4	17.3

*Computed from Single year (ungrouped) data.

¹From 36, Table I, p. 590.

Table XXII

Number of Times Attended Karachi FPA By Age of Woman at Marriage, Karachi, 1958-1964.

Age of women at Marriage	Once only		Twice only		3 or more	
	No.	%	No.	%	No.	%
Under 15	334	22.9	178	19.3	165	17.5
15-19	820	56.4	565	61.4	576	60.9
20 and over	301	20.7	178	19.3	204	21.6
All Clients	1455	100.0	921	100.0	945	100.0

$\chi^2 = 13.58; p .01$

Q.TUB/6-6-1966.

Table XXIII

Probability Distribution of Annual Births by Duration of Marriage in the Urban Areas of Four Nearby States of India¹ and Corresponding Distribution of FPA Clients, Karachi, 1958-1964.

Duration of Marriage	Proportion of urban births in:				Karachi	FPA
	Gujarat State	Maharashtra	Rajasthan	Delhi	N	P
0-4 years	.21	.18	.15	.25	741	.22
5-9 years	.30	.22	.29	.27	1011	.30
10-14 years	.26	.26	.22	.25	892	.26
15-19 years	.12	.16	.17	.15	475	.14
20-24 years	.08	.08	.10	.06	215	.06
25-29 years	.02	.03	.04	.02	54	.02
30 or more yrs.	.01	.01	.03	.01	10	.01
All Durations	1.00	1.00	1.00	1.00	3398 ^a	1.00
Median Duration ^b	(9.59)	(10.77)	(11.36)	(9.63)	(9.74)	

¹Source: Mehrotra, 40, p.38.

^aTwenty-four FPA Clients did not report their duration of marriage.

^bIndependent median calculations from grouped data.

This work is licensed under a
Creative Commons
Attribution – NonCommercial - NoDerivs 3.0 Licence.

To view a copy of the licence please see:
<http://creativecommons.org/licenses/by-nc-nd/3.0/>