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# The Fertility of East Pakistani Married Women: A Study Based on 1961 Census.

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## A STUDY BASED ON 1961 CENSUS

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# THE FERTILITY OF EAST PAKISTANI MARRIED WOMEN
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Of the two systems generally known for recording the population changes i.e. the periodic Census and the registration, the later seems to be better in the sense that it records vital events as they occur (longitudinal study of population). This system however, is very defective in almost all the developing countries, with the result that the events are always under-registered. One has therefore to rely mostly on the data collected through the periodic Census. Fortunately Pakistan is one of the countries, having a reasonably good population Census. Therefore, every effort is being made to get whatever useful information one can possibly deduce from the data collected during the census. The present study, which has a similar aim, attempts to analyse some of the data on East Pakistan fertility, collected during 1961 census of population. The given data are in the form of a table,[1/] which shows, for rural and urban areas separately, the distribution of sample of married women by age, duration of marriage and total number of children ever born-alive (parity).

Sample Design:

The sample of women on which the given table is based, was selected in the following way:-

Out of the total of 1,21,334 census blocks in East Pakistan, 199 were chosen by using simple random sampling procedure, covering one block from each charge in case of urban areas and one block from each census district (with certain omissions) in case of rural areas. Thus 143 urban and 56 rural blocks were selected and slips of female population of these blocks were copied for the purpose of mechanical processing and tabulation.

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* The author is Research Demographer at the Pakistan Institute of Development Economics, He expresses his deep gratitude for the many useful comments made by Dr. Warren C. Robinson, Research Adviser in the Institute, on the earlier draft. The author however takes full responsibility for any error which still remains.

1/ Unpublished table No. 74 obtained from the Census Office, Ministry of Home and Kashmir Affairs (Home Affairs Division) Government of Pakistan.

The sample covered 24,341 urban and 11,866 rural females, which means that 2.2% of urban and 0.05% of rural female population of East Pakistan were covered in this sample.

The proportion of married women in the sampled urban and rural female populations are 12,320 (56%) and 6477 (54.5%) respectively. The details for analysis however, are only given for 12118 urban and 6362 rural married females as the rest did not either give their ages or durations of marriage.

Aims of the Study:

Looking at the given table and refering back to the census schedule, it is found that the table has been prepared on the basis of replies to the following questions. [1, ppVI: 8-26]

1) Age of the married women.
2) Duration of marriage.
3) Number of children ever-born-alive.

Thus in the census, the question of fertility, only dealt with the cumulative fertility in the total marriage duration and not the fertility by specific calendar years. With the above mentioned information in hand, it has been attempted in the present study to estimate, indirectly, the following measures about East Pakistan married women from the available sample.

1) Age specific fertility rates, total fertility rates and Gross-reproduction rates for rural and urban married women.
2) Mean age at marriage for rural and urban married women.

As stated earlier, the given table on which our study is based, shows the distribution of 12,320 urban and 6477 rural married women by age, duration of marriage and number of children ever born alive. Out of this data various other tables have been constructed with an aim to explain step by step the computation of the intended results.

TABLE - 1

NUMBER OF MARRIED WOMEN BY DURATION OF MARRIAGE, AGE, AND RURAL AND URBAN, EAST PAKISTAN, 1961

RURAL

| Age Group | Duration of Marriage | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 239 | 6 | | | | | | | 245 |
| 15-19 | 487 | 309 | | | | | | | 796 |
| 20-24 | 146 | 474 | 327 | | | | | | 947 |
| 25-29 | 34 | 157 | 468 | 256 | | | | | 915 |
| 30-34 | 8 | 35 | 134 | 346 | 213 | | | | 736 |
| 35-39 | 6 | 15 | 45 | 107 | 275 | 141 | | | 589 |
| 40-44 | 11 | 12 | 32 | 52 | 81 | 189 | 126 | | 503 |
| 45 & over | 24 | 44 | 48 | 89 | 170 | 211 | 408 | 637 | 1631 |
| Total | 955 | 1052 | 1054 | 850 | 739 | 541 | 534 | 637 | 6362 |

URBAN

| Age Group | Duration of Marriage | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 278 | 8 | | | | | | | 286 |
| 15-19 | 918 | 487 | | | | | | | 1405 |
| 20-24 | 332 | 1103 | 629 | | | | | | 2064 |
| 25-29 | 81 | 348 | 981 | 482 | | | | | 1892 |
| 30-34 | 26 | 94 | 351 | 756 | 374 | | | | 1601 |
| 35-39 | 17 | 41 | 94 | 240 | 547 | 233 | | | 1172 |
| 40-44 | 15 | 49 | 66 | 105 | 195 | 378 | 223 | | 1031 |
| 45 & over | 47 | 126 | 112 | 170 | 271 | 281 | 607 | 1053 | 2667 |
| Total | 1714 | 2256 | 2233 | 1753 | 1387 | 892 | 830 | 1053 | 12118 |

TABLE - 2

NUMBER OF MOTHERS BY DURATION OF MARRIAGE, AGE, AND RURAL AND URBAN, EAST PAKISTAN, 1961

RURAL

| Age Group | Duration of Marriage | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 8 | | | | | | | | 8 |
| 15-19 | 180 | 247 | | | | | | | 427 |
| 20-24 | 82 | 446 | 311 | | | | | | 839 |
| 25-29 | 15 | 148 | 458 | 251 | | | | | 872 |
| 30-34 | 2 | 29 | 130 | 334 | 208 | | | | 703 |
| 35-39 | 2 | 11 | 45 | 104 | 263 | 135 | | | 560 |
| 40-44 | 2 | 6 | 30 | 49 | 76 | 183 | 123 | | 469 |
| 45 & over | 5 | 21 | 46 | 87 | 165 | 202 | 399 | 624 | 1549 |
| Total | 296 | 908 | 1020 | 825 | 712 | 520 | 522 | 624 | 5427 |

URBAN

| Age Group | Duration of Marriage | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 22 | 2 | | | | | | | 24 |
| 15-19 | 408 | 385 | | | | | | | 793 |
| 20-24 | 201 | 1003 | 603 | | | | | | 1807 |
| 25-29 | 45 | 299 | 934 | 457 | | | | | 1735 |
| 30-34 | 11 | 65 | 321 | 724 | 355 | | | | 1476 |
| 35-39 | 4 | 20 | 86 | 220 | 521 | 224 | | | 1075 |
| 40-44 | 4 | 16 | 57 | 92 | 184 | 360 | 215 | | 932 |
| 45 & over | 10 | 48 | 92 | 162 | 257 | 257 | 575 | 1000 | 2401 |
| Total | 705 | 1838 | 2093 | 1655 | 1321 | 841 | 790 | 1000 | 10243 |

TABLE - 3

PERCENTAGE OF MARRIED WOMEN WHO ARE MOTHERS BY DURATION OF MARRIAGE, AGE, AND RURAL AND URBAN, EAST PAKISTAN, 1961.

RURAL

| Age | Duration of Marriage in years | | | | | | | | All |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 3.35 | - | | | | | | | 3.27 |
| 15-19 | 36.96 | 79.94 | | | | | | | 53.64 |
| 20-24 | 56.16 | 94.09 | 95.10 | | | | | | 88.60 |
| 25-29 | 44.12 | 94.27 | 97.86 | 98.05 | | | | | 95.30 |
| 30-34 | 25.00 | 82.86 | 97.01 | 96.53 | 97.65 | | | | 95.51 |
| 35-39 | 33.33 | 73.33 | 100.00 | 97.20 | 95.63 | 95.74 | | | 95.08 |
| 40-44 | 18.18 | 24.49 | 93.75 | 94.23 | 93.83 | 96.82 | 97.62 | | 93.24 |
| 45 & over | 20.83 | 16.67 | 95.83 | 97.75 | 97.06 | 95.73 | 80.64 | 97.96 | 94.97 |
| All | 30.99 | 86.31 | 96.77 | 97.06 | 96.3[illegible] | 96.12 | 97.75 | 97.96 | 85.30 |

URBAN

| Age | Duration of Marriage in years | | | | | | | | All |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 7.91 | 25.00 | | | | | | | 8.39 |
| 15-19 | 44.44 | 79.06 | | | | | | | 56.44 |
| 20-24 | 60.54 | 90.93 | 95.87 | | | | | | 87.55 |
| 25-29 | 55.55 | 85.92 | 95.21 | 94.81 | | | | | 91.91 |
| 30-34 | 42.31 | 69.12 | 91.45 | 95.77 | 94.91 | | | | 92.19 |
| 35-39 | 23.52 | 48.78 | 91.49 | 91.67 | 95.24 | 96.14 | | | 91.72 |
| 40-44 | 26.67 | 32.65 | 86.36 | 87.62 | 96.41 | 95.23 | 96.41 | | 90.39 |
| 45 & over | 21.27 | 38.09 | 82.14 | 95.29 | 94.83 | 91.46 | 94.73 | 94.97 | 90.02 |
| Total | 41.13 | 81.47 | 93.73 | 94.40 | 95.24 | 94.28 | 95.18 | 94.97 | 84.53 |

Married Women and Proportions who are Mothers:

Table 1 shows the number of married women in rural and urban areas by duration of marriage and age. Table 2 gives a similar distribution of married women who are mothers. Table 3, which gives percentage of mothers out of married women by age and duration of marriage has been prepared on the basis of table 1 and table 2.

In table 3 if we look at either rural or urban part, we observe that for marriage duration 'under 5' and '5-9', the percentage of mothers first rises and then drops. The rising tendency is upto age '20-24'. The possible reasons for relatively small percentages of mothers in the age groups 'under 15' and '15-19' are that many of the married women in them would be just entering the reproductive age because of early marriage or because for some of the women, the start of the reproductive age may be a little late.

The decline in the percentage of mothers beyond age 25, in these two duration groups, may be indicative of a decline in reproductive capacity as the age at marriage increases. For the higher duration groups also the declining tendency exists but is very small. This may be so becuase in them the proportion of those married at relatively lower ages is higher. Also, as the duration of marriage increases there is more and more chance of those married women getting pregnant, who were not permanently sterile and their first pregnancy was delayed either because of social customs of marriage or due to some biological reasons.

Comparing rural with urban areas, we observe that for all duration groups, except 'under 5', the percentage of mothers is higher in rural areas for almost all age groups. The exception in the case of 'under 5' duration group indicates that the urban married women become mothers earlier than their counter-parts in the rural areas. Looking on the whole however, the percentage of mothers is higher in the rural areas than in the urban areas.

To see how fecund East Pakistani married women are in comparison to some other countries, we can compare the percentages of those still childless at the end of their reproductive periods.

Table 4 shows the percentage of childless among the married women who were of the age 45 years and over or had marriage durations 20 years and over in many countries. We observe from this table that all the western countries and also Ceylon have much higher percentages than East Pakistan. These differences are obviously more due to such voluntary causes as increase in the number of late marriages and greater use of contraception in western countries. One proof of this is that the percentage of childless married women in the United States at the time of 1950 census was double than that existing at the time of 1910 census. Although in 1910, the percentage of childless in the United States was relatively less, still it was more than three times higher than for the 1961 East Pakistan percentage. This indicates that the use of voluntary measures to control pregnency was prevelent in the United States even before 1910.

We also observe from table 4 that the percentage of childless married women in Bengal (India), a close neighbour of East Pakistan, is nearly the same as of East Pakistan. Australia is the only country which has most of its population of western origin but still has its percentage of childless married women very close to East Pakistan. The small proportion of childless in Australia is attributed to the tendancy to have at least one child in the earliest years of marriage (4, p.113). Let us now take the case of the Hutterites, which is "a religions group in the United States, who believe that contraception is morally wrong. For the Hutterites it would seem that precept and performance are in closer conformity than for most people; moreover the communal structure of the Hutterities settlements removes any economic incentive to family limitation". (6, p.60).

TABLE - 4

Percentage of Childless in the Married Women of Completed Fertility

| Country | Census year | Age (years) | Duration of marriage (years) | Percentage of childless |
|---|---|---|---|---|
| East Pakistan | 1961 | 45 and over | - | 5.0 |
| (Pakistan) | | - | 20 and over | 3.0 |
| United States a/ | 1950 | 45 and over | - | i) 18.1 |
| (white Population) | 1910 | - | 20 and over | ii) 9.6 |
| Great Britain b/ | 1946 | - | 20 and over | 13.2 |
| Germany b/ | 1950 | - | 20 and over | 17.2 |
| France b/ | 1946 | - | 20 and over | 13.2 |
| Ireland b/ | 1946 | - | 20 and over | 14.0 |
| Australia b/ | 1947 | - | 20 and over | 3.2 |
| Ceylon c/ | 1946 | 45 and over | - | 12.0 |
| Bengal (India) d/ | - | 40 and over | - | 6.7 |
| Hutterites group (United States) e/ | 1950 | 45 and over | - | 2.9 |

Source:- a/ [3, p.46]
b/ [4, p.62]
c/ [5, pp.110-111]
d/ [6, p.31]
e/ [7, p.60]

The percentage of childless married women in the Hutterites can be considered to be a close representation of infecundity. We observe from table 4 that this percentage is the smallest when compared to all others, but is very near to that of East Pakistan. The small difference between the two seems negligible when we keep in view the facts that 1) the population of East Pakistan is much bigger in comparison to the Hutterites population and 2) the women are married much earlier in East Pakistan. ( The average age at marriage is 15 against 22 for the Hutterites). Thus leads us to the conclusion that in East Pakistan the use of voluntary measures to control conception, was almost negligible before 1961. Thus in the case of East Pakistan the percentage of childless among the married women can be considered as a close index of infecundity.

Cumulative Marital Fertility:

As mentioned earlier, the given data provide the distribution of married women by age, duration of marriage and total number of children ever-born-alive (parity). As a first step to compute fertility measures, we need the number of children born to a women in each age duration of marriage group. For this purpose the number of women in each age-duration of marriage-parity group has been multiplied by the respective parity, thus getting the total number of live-born children to that group of women. For each age-duration of marriage group, the the total number live-born children are obtained by adding up the number of children for all parities in this group. Table 5 shows the distribution of cumulative live-born children by age and duration of marriage of the mothers, as computed by the method described above.

Table 6 shows cumulative live-born children per married woman in each age-duration of marriage group. In other words, this table gives cumulative fertility rates for each age-duration of marriage group. These have been obtained by dividing the cumulative live-born children in each group, as given in table 5, by the number of married women in the same group (From table 1).

TABLE - 5

CUMULATIVE NUMBER OF LIVE-BORN CHILDREN BY DURATION OF MARRIAGE, AGE OF MOTHER, AND RURAL AND URBAN, EAST PAKISTAN, 1961

RURAL

| Age Group | Duration of Marriage | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 9 | | | | | | | | 9 |
| 15-19 | 198 | 411 | | | | | | | 609 |
| 20-24 | 100 | 1012 | 996 | | | | | | 2108 |
| 25-29 | 23 | 347 | 1622 | 1902 | | | | | 3194 |
| 30-34 | 2 | 69 | 504 | 1598 | 1244 | | | | 3417 |
| 35-39 | 2 | 20 | 182 | 510 | 1506 | 869 | | | 3089 |
| 40-44 | 3 | 14 | 116 | 201 | 393 | 1195 | 849 | | 2771 |
| 45 & over | 8 | 40 | 152 | 400 | 849 | 1181 | 2627 | 4157 | 9414 |
| Total | 345 | 1913 | 3572 | 3911 | 3992 | 3245 | 3476 | 4157 | 24611 |

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| Age Group | Duration of Marriage | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 27 | 3 | | | | | | | 30 |
| 15-19 | 499 | 746 | | | | | | | 1245 |
| 20-24 | 268 | 2489 | 2058 | | | | | | 4815 |
| 25-29 | 68 | 770 | 3649 | 2060 | | | | | 6547 |
| 30-34 | 15 | 172 | 1260 | 2638 | 2168 | | | | 7253 |
| 35-39 | 4 | 40 | 328 | 1107 | 3207 | 1428 | | | 6114 |
| 40-44 | 6 | 35 | 215 | 357 | 1024 | 2238 | 1455 | | 5330 |
| 45 & over | 10 | 104 | 295 | 698 | 1252 | 1406 | 3564 | 6367 | 13696 |
| Total | 897 | 4359 | 7805 | 7860 | 7651 | 5072 | 5019 | 6367 | 45030 |

TABLE - 6

CUMULATIVE LIVE-BORN CHILDREN PER MARRIED WOMAN BY DURATION OF MARRIAGE, AGE, AND RURAL AND URBAN, EAST PAKISTAN, 1961

RURAL

| Age Group | Duration of Marriage | | | | | | | | Un-weighted Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 0.04 | | | | | | | | 0.04 |
| 15-19 | 0.41 | 1.33 | | | | | | | 0.76 |
| 20-24 | 0.68 | 2.14 | 3.05 | | | | | | 2.23 |
| 25-29 | 0.68 | 2.21 | 3.47 | 4.70 | | | | | 3.49 |
| 30-34 | 0.25 | 1.97 | 3.76 | 4.62 | 5.84 | | | | 4.64 |
| 35-39 | 0.33 | 1.33 | 4.04 | 4.77 | 5.48 | 6.16 | | | 5.24 |
| 40-44 | 0.27 | 1.17 | 3.63 | 3.87 | 4.85 | 6.32 | 6.74 | | 5.51 |
| 45 & over | 0.33 | 0.91 | 3.17 | 4.49 | 4.99 | 5.60 | 6.43 | 6.52 | 5.77 |
| Unweighted* Total | 0.36 | 1.87 | 3.39 | 4.60 | 5.40 | 6.00 | 6.51 | 6.52 | 3.87 |

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| Age Group | Duration of Marriage | | | | | | | | Un-weighted Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 0.10 | 0.38 | | | | | | | 0.10 |
| 15-19 | 0.54 | 1.53 | | | | | | | 0.89 |
| 20-24 | 0.81 | 2.26 | 3.27 | | | | | | 2.33 |
| 25-29 | 0.84 | 2.21 | 3.72 | 4.27 | | | | | 3.99 |
| 30-34 | 0.58 | 1.82 | 3.59 | 4.81 | 5.80 | | | | 4.53 |
| 35-39 | 0.24 | 0.98 | 3.49 | 4.61 | 5.86 | 6.13 | | | 5.22 |
| 40-44 | 0.40 | 0.71 | 3.26 | 3.40 | 5.25 | 5.92 | 6.52 | | 5.17 |
| 45 & over | 0.21 | 0.82 | 2.63 | 4.10 | 4.62 | 5.00 | 5.87 | 6.05 | 5.14 |
| Unweighted* Total | 0.52 | 1.93 | 3.50 | 4.48 | 5.52 | 5.69 | 6.05 | 6.05 | 3.72 |

* Un-weighted total indicates that the total number of cumulative live children born to the women in each age or duration group is divided by the total number of married women in that group.

## TABLE - 7

CUMULATIVE LIVE-BORN CHILDREN PER MOTHER BY DURATION OF MARRIAGE, AGE, AND RURAL AND URBAN, EAST PAKISTAN, 1961.

RURAL

| Age Group | Duration of Marriage | | | | | | | | Unweighted Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 1.12 | | | | | | | | 1.13 |
| 15-19 | 1.10 | 1.66 | | | | | | | 1.43 |
| 20-24 | 1.21 | 2.27 | 3.20 | | | | | | 2.51 |
| 25-29 | 1.53 | 2.34 | 3.54 | 4.78 | | | | | 3.66 |
| 30-34 | 1.00 | 2.38 | 3.88 | 4.81 | 5.98 | | | | 4.88 |
| 35-39 | 1.00 | 1.82 | 4.04 | 4.90 | 5.73 | 6.44 | | | 5.52 |
| 40-44 | 1.00 | 2.33 | 3.87 | 4.10 | 5.17 | 6.53 | 6.90 | | 5.91 |
| 45 & over | 1.60 | 1.90 | 3.30 | 4.60 | 5.15 | 5.85 | 6.58 | 6.66 | 6.08 |
| Unweighted* Total | 1.17 | 2.11 | 3.50 | 4.75 | 5.61 | 6.24 | 6.66 | 6.66 | 4.54 |

URBAN

| Age Group | Duration of Marriage | | | | | | | | Un-weighted Total |
|---|---|---|---|---|---|---|---|---|---|
| | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | |
| Under 15 | 1.23 | 1.50 | | | | | | | 1.25 |
| 15-19 | 1.22 | 1.94 | | | | | | | 1.56 |
| 20-24 | 1.33 | 2.48 | 3.41 | | | | | | 2.66 |
| 25-29 | 1.51 | 2.58 | 3.91 | 4.51 | | | | | 3.76 |
| 30-34 | 1.36 | 2.64 | 3.93 | 5.02 | 6.11 | | | | 4.91 |
| 35-39 | 1.00 | 2.00 | 3.81 | 5.03 | 6.16 | 6.38 | | | 5.69 |
| 40-44 | 1.50 | 2.19 | 3.77 | 3.88 | 5.45 | 6.22 | 6.77 | | 5.72 |
| 45 & over | 1.00 | 2.17 | 3.21 | 4.31 | 4.87 | 5.47 | 6.20 | 6.37 | 5.70 |
| Unweighted* Total | 1.27 | 2.37 | 3.73 | 4.75 | 5.79 | 6.03 | 6.35 | 6.37 | 4.40 |

* Un-weighted total indicates that the total number of cumulative live children born to the mothers in each age or duration group is divided by the total number of married women in that group.

By dividing the cumulative live-born children for each age group or duration group (given as marginal totals in table 5), by the number of married in the same group (given as marginal totals in table 1) we get cumulative fertility rates by age groups and durations of marriage respectively.

In table 7 similar rates per mother have been computed.

Table 6 gives us the following:-

i) Reading accross for each age-group:-

The cumulative fertility rates for each duration of marriage sub-group within a given age cohort of married women; i.e. the cumulative fertility rates for the women who are of the same age but of different ages at marriage and duration of marriage groups.

ii) Reading column-wise:-

For each duration of marriage-group, the cumulative fertility rates for the married women of different age cohorts and different ages at marriage.

iii) Reading diagnolly:-

For the women married at the same age, the fertility rates for different age groups and different duration of marriage groups.

Table 7 gives the same information for all females who are married and also mothers. From table 5 we observe that the cumulative fertility rate of those women, having marriage durations 'under 5' and '5-9', first rises upto the age '25-29' and then declines. This observation tends to confirm the possible conclusion we drew from table 3 for the same two duration of marriage groups; that the fertility rate rises with the increases in the number of women entering their reproductive periods as the age rises. But it declines for the higher age groups because they married later.

Comparing rural and urban cumulative fertility we find that for rural areas the overall cumulative fertility rate is a little higher than for urban areas. But for those, having been married for less than 15 years i.e. for duration groups 'under 5', '5-9' and '10-14', the cumulative fertility rates are higher for urban

areas. For the remaining duration groups the rural cumulative fertility rates are higher than the urban. However, if we compare cumulative fertility rates for each age-duration of marriage group, we find that only for those married women, who are under age 30 and have durations of marriage less than 15 years, are the cumulative fertility rates higher for urban areas in comparison to rural areas. For the married women in the higher age groups, but with the same durations of marriage(less than 15 years) the cumulative fertility remains higher for rural areas as compared to urban areas. This indicates that younger people in the urban areas have higher fertility in comparison to rural areas. The following may be the possible reasons:-

1) As observed earlier from table 3, the married women in urban areas become mothers earlier than the rural areas. Thus they have relatively more children in the early years of marriage.

2) Those younger married women in urban areas who have migrated from rural areas for the sake of employment of their husbands, might be in a better, and more sanitary environment, with a result that they have relatively less foetal loss and thus have a relatively higher number of live births.

3) As the younger people in urban areas are better educated they may give a better reporting of their cumulative fertility in comparison to rural areas.

Table 7, which shows the cumulative fertility rates for the mothers rather than the married women also shows similar differentials.[2/]

Age Specific Marital Fertility Rates:

In this study different sets of age specific marital fertility rates are deduced from duration specific cumulative

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2/ The Indian National Sample Survey, conducted in 1951 and 1952, also showed that for those couples having a marriage duration less than 22 years there was a tendancy of urban fertility exceeding the rural fertility [7, p.2]

fertility rates for different age groups (as given in table 6). Two approaches are made to the computation of these rates. The first approach is based on the assumption that the actual fertility history of one sub-cohort in table 6 (one duration of marriage group of a given age cohort), was the same as of the previous sub-cohort in the same age-group, and that the age at marriage which was different for each sub-cohort, did not make any difference. The second approach is based on the assumption that the fertility history of one sub-cohort is different from the other sub-cohort if the ages at marriage of the two sub-cohorts are not the same.

The procedures adopted for computation of age specific rates on the basis of the two approaches mentioned above are given below.

First Approach:

Table 8 which has been prepared from table 6 gives for each age group the number of children live born per married woman (fertility rate per married woman) duration each 5 years duration of marriage-interval from the census year backwards. These rates were obtained by subtracting from the cumulative fertility rate of a particular duration of marriage-group, the cumulative fertility rate of the previous duration for marriage-group, in the same age group. For example let us take age cohort '25-29' in table 5. In this cohort some women have been married for less than 5 years, some 5 to 9 years, some 10 to 14 years, and so on. Now, the children ever-born per married woman in this age cohort for any duration of marriage is a cumulative figure. By the time a woman aged '25-29' has been married 10 to 14 years, she has produced a certain number of children-ever-born. Women in the same age cohort who have been married for 5 to 9 years, have produced a different number of children ever-born (less presumably). The difference between the two cumulative figures can be seen as the result of the extra five years of marriage for the woman who have been married for 10 to 14 years. Since the difference in durations is due to the difference in age at marriage, this difference in cumulative fertility can be seen

TABLE - 8

AGE SPECIFIC MARITAL FERTILITY RATES DURING FIRST FIVE YEARS AFTER MARRIAGE, BY RURAL AND URBAN, EAST PAKISTAN, 1961. (FIRST APPROACH)

RURAL

| Present Age Group | Age Groups at Marriage | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | 10-14 | 15-20 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45 & over | |
| Under 15 | 0.04 | | | | | | | | 0.04 |
| 15-19 | 0.92 | 0.41 | | | | | | | 1.33 |
| 20-24 | 0.91 | 1.46 | 0.68 | | | | | | 3.05 |
| 25-29 | 1.23 | 1.26 | 1.53 | 0.68 | | | | | 4.70 |
| 30-34 | 1.22 | 0.86 | 1.79 | 1.72 | 0.25 | | | | 5.84 |
| 35-39 | 0.68 | 0.71 | 0.73 | 2.71 | 1.00 | 0.33 | | | 6.16 |
| 40-44 | 0.42 | 1.47 | 0.98 | 0.24 | 2.46 | 0.90 | 0.27 | | 6.74 |
| 45 & over | 0.09 | 0.83 | 0.61 | 0.50 | 1.32 | 2.26 | 0.58 | 0.33 | 6.52 |
| Total | 5.51 | 7.00 | 6.32 | 5.85 | 5.03 | 3.49 | 0.85 | 0.33 | |
| Average Rate | 0.69 | 1.00 | 1.05 | 1.17 | 1.26 | 1.16 | 0.42 | 0.33 | 7.08 |

EAST PAKISTAN (URBAN)

| Present Age Group | Age Groups at Marriage | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45 & over | |
| Under 15 | 0.10 | | | | | | | | 0.10 |
| 15-19 | 0.99 | 0.54 | | | | | | | 1.53 |
| 20-24 | 1.01 | 1.45 | 0.81 | | | | | | 3.37 |
| 25-29 | 0.55 | 1.51 | 1.37 | 0.84 | | | | | 4.27 |
| 30-34 | 1.00 | 1.22 | 1.77 | 1.24 | 0.58 | | | | 5.81 |
| 35-39 | 0.27 | 1.25 | 1.12 | 2.51 | 0.74 | 0.24 | | | 6.13 |
| 40-44 | 0.60 | 0.67 | 1.85 | 0.14 | 2.51 | 0.31 | 0.40 | | 6.48 |
| 45 & over | 0.18 | 0.87 | 0.38 | 0.52 | 1.47 | 1.81 | 0.61 | 0.21 | 6.05 |
| Total | 4.70 | 7.51 | 7.30 | 5.25 | 5.30 | 2.36 | 1.01 | 0.21 | |
| Average Rate | 0.59 | 1.07 | 1.22 | 1.05 | 1.32 | 0.79 | 0.50 | 0.21 | 6.75 |

as the age specific fertility rate for the 5 years of age during which one group was married (and having children) and the other was not. In this case (age group 15-19) and so on for the other age-duration of marriage groups.

Table 8 therefore gives a set of age specific fertility rates for each present age-cohort (looking at each row). In other words, each diagonal (converted in this table into a column)gives the number of children born-alive per married woman for the first 5 years after marriage for the groups of woman who had the same age at marriage but were in different age groups at the time of census. Taking the average of the rates in each column we get a set of age specific fertility rates. Each rate computed in this manner has a little bit different meaning than the conventional age specific fertility rate. This is so because each column represents the fertility in the first 5 years of marriage for the persons married at a particular age although they were in different age groups at the time of census. Thus, the first column gives the age specific fertility rates for those married between 10 and 14. This column therefore gives age specific fertility rates for the age group '10-14'. Similarly the next column gives age specific fertility rates for the age group '15-19' and so on.

Second Approach

Table 9, which has also been prepared out of table 5, is based on the assumption that age at marriage does make a difference in the fertility history of sub-cohorts (duration of marriage-groups who were of the same age at the time of census). Thus the rates in this table were obtained by subtracting from the cumulative fertility rate of a particular duration of marriage-group, the cumulative fertility rate of the previous duration of marriage-group in the previous age group. This was done so because the two sub-groups had the same age at marriage although they were in different age groups. For example, take age cohort (20-24) in table 6. In this cohort some women have been married for less than 5 years, some

TABLE - 9

AGE SPECIFIC FERTILITY RATES BY AGE AT MARRIAGE, RURAL AND URBAN , EAST PAKISTAN, 1961. (SECOND APPROACH)

RURAL

| Age Group | Age at Marriage | | | | | | | | Total | Average Rate |
|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | | |
| Under 15 | 0.04 | | | | | | | | 0.04 | 0.04 |
| 15-19 | 1.29 | 0.41 | | | | | | | 1.70 | 0.85 |
| 20-24 | 1.72 | 1.73 | 0.68 | | | | | | 4.13 | 1.38 |
| 25-29 | 1.65 | 1.33 | 1.53 | 0.68 | | | | | 5.19 | 1.30 |
| 30-34 | 1.14 | 1.15 | 1.55 | 1.29 | 0.25 | | | | 5.38 | 1.08 |
| 35-39 | 0.32 | 0.86 | 1.01 | 2.07 | 1.08 | 0.33 | | | 5.67 | 0.94 |
| 40-44 | 0.58 | 0.84 | 0.08 | - | 2.30 | 0.84 | 0.27 | | 4.91 | 0.70 |
| 45 & over | - | 0.11 | 0.75 | 1.12 | 0.86 | 2.00 | 0.64 | 0.33 | 5.81 | 0.72 |
| Total Fertility Rate | 6.70 | 6.43 | 5.60 | 5.16 | 4.49 | 3.17 | 0.91 | 0.33 | | 6.97 |

URBAN

| Age Group | Age at Marriage | | | | | | | | Total | Average Rate |
|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | | |
| Under 15 | 0.10 | | | | | | | | 0.10 | 0.10 |
| 15-19 | 1.43 | 0.54 | | | | | | | 1.97 | 0.99 |
| 20-24 | 1.74 | 1.72 | 0.81 | | | | | | 4.37 | 1.46 |
| 25-29 | 1.00 | 1.46 | 1.40 | 0.84 | | | | | 4.70 | 1.18 |
| 30-34 | 1.53 | 1.09 | 1.38 | 0.98 | 0.58 | | | | 5.56 | 1.11 |
| 35-39 | 0.33 | 1.05 | 1.02 | 1.67 | 0.40 | 0.24 | | | 4.71 | 0.78 |
| 40-44 | 0.39 | 0.06 | 0.64 | - | 2.28 | 0.47 | 0.40 | | 4.24 | 0.60 |
| 45 & over | - | - | - | 1.22 | 0.84 | 1.92 | 0.42 | 0.21 | 4.61 | 0.57 |
| Total Fertility Rate | 6.42 | 5.92 | 5.26 | 4.71 | 4.10 | 2.63 | 0.82 | 0.21 | | 6.69 |

5-9 years, some 10-14 years. Now the children ever-born per married woman in this age cohort, for any duration of marriage, is a cumulative figure. By the time a woman aged "20-24" has been married for 10 to 14 years, she has produced a certain number of children ever-born. Women in the previous age group who had been married for 5-9 years; have produced a different number of children ever-born (less presumably). Since these two sub-cohorts had the same age at marriage (10 in this case) the difference between the two cumulative figures can be seen as due to 5 extra years of marriage of those who have been married for 10-14 years. This difference in cumulative fertility can be seen as age specific fertility for the age group "20-24" but for those who were married at age 10. As all the sub-groups in each diagonal have the same age at marriage,[3] we get a set of age specific fertility rates for those married at a particular age. In table 9, these diagonals have been converted into columns.

If we take the average of all the rates in each age group, we get a set of overall age specific fertility rates.

Comparison of the rates obtained through two approaches

The age specific marital fertility rates obtained through the first and the second approach are summarised in table 10. For comparison sake, the age specific fertility rates of East and West Pakistan for the year 1963, based on PGE[4] data and of India for the

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3/ It must be understood that by following a diagonal we are not tracing through the fertility history of one cohort but are instead assuming that only age at marriage is important and that the actual date of birth (or date of marriage) is not important.

4/ PGE (Population Growth Estimation) Project is an experiment which estimates the birth and death rates in Pakistan, on the basis of the data on vital events, collected from the chosen sample areas from all over Pakistan. (8,pp 37-65)

year 1957, are also given.

This table shows that the rates computed, by following the second approach are closer to the PGE rates, than those obtained by following the first approach. The PGE rates are for one year only (1963), while the rates computed in this study may be regarded as based on a fertility experiences of about 26 years before the 1961 census. However, if no major changes took place in the fertility pattern during this period , our computed rates should be at least close to the rates found by PGE for a particular year. In other words we should expect the cross-sectional and cumulative results to be close and so they seem to be.

To investigate why the second approach gives closer estimates than the first, we must reexamine what the two approaches exactly mean.

The first approach gives(through the mean in each column of table 8) the fertility experienced by the married women during the first five years of marriage. In other words the rates given in each column of table 8, presents for married women, who were in different age cohorts at the time of census and were married at one age, only the fertility history of the first five years of marriage. The second approach, on the other hand, keeps the age at marriage constant and then gives age specific fertility rates for those married at a particular age by present-age and duration of marriage groups. This approach seems theoretically the sounder of the two.

Looking at the total fertility rates and gross-reproduction rates given by the two approaches, we find that the rates computed on the basis of the second approach are quite close to those given by PGE. Thus we conclude that the second approach gives us reasonably good marital fertility rates. However, in terms of age specific rates, there are differences. If we look the graph which shows the age specific fertility rates by the second approach

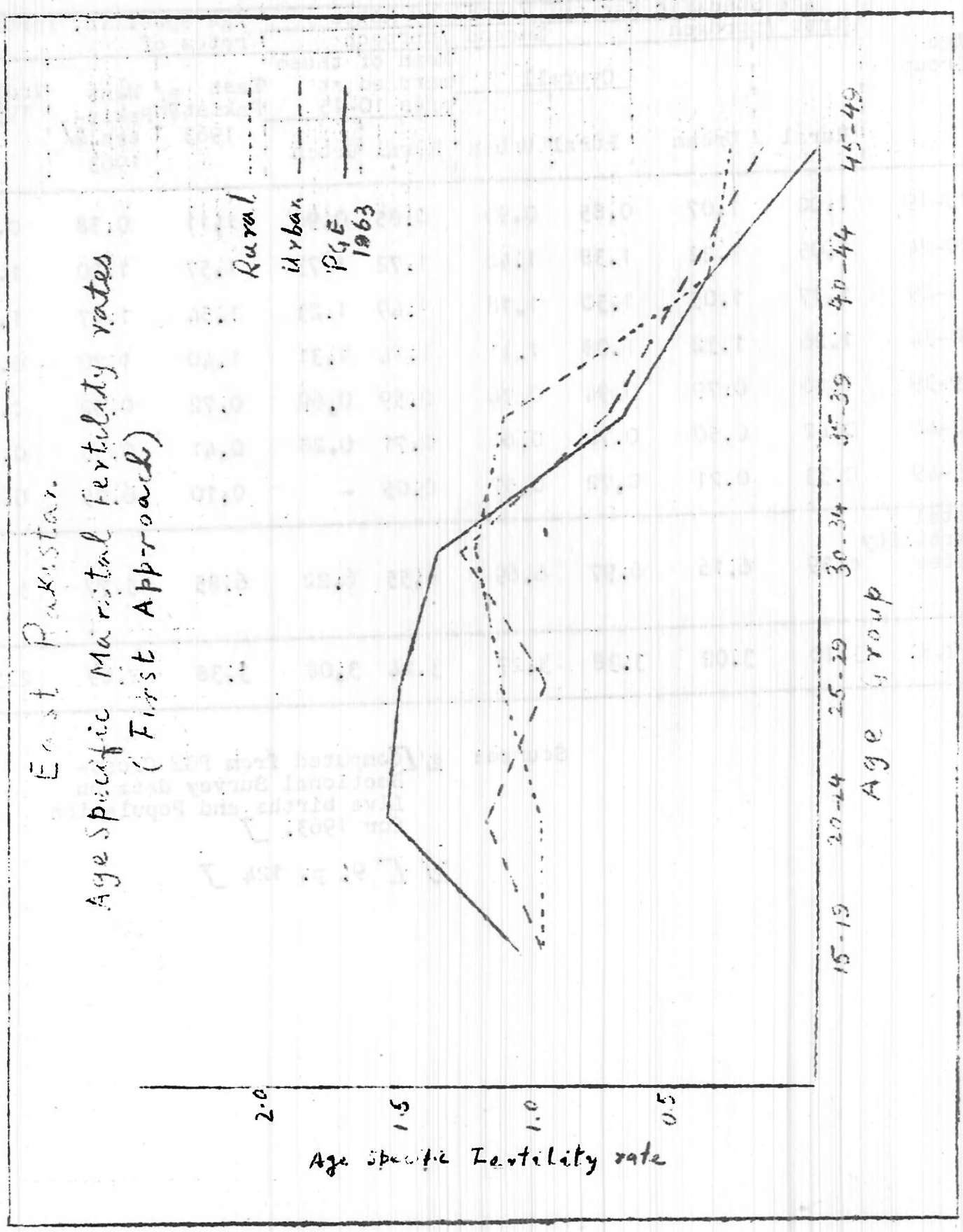
TABLE - 10

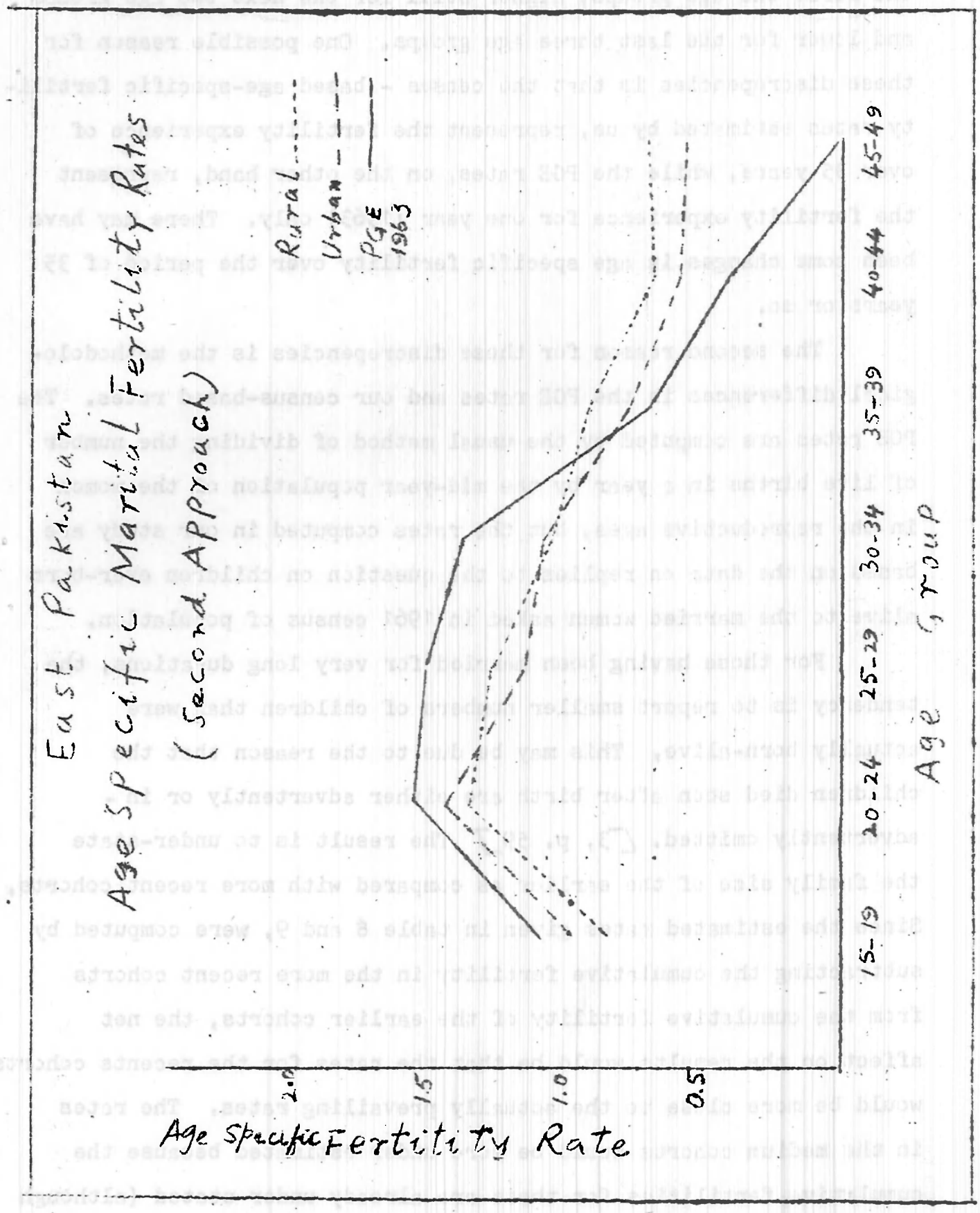
COMPARISON OF CENSUS-BASED AGE SPECIFIC MARITAL - FERTILITY RATES WITH PGE RATES FOR EAST AND WEST PAKISTAN AND WITH INDIAN RATES.

| Age Group | Age Specific Marital Fertility Rates: First Approach | | Second Approach: Overall | | Second Approach: Mean of those married at ages 10-15 | | Age Specific, fertility rates of: East Pakistan 1963 a/ | West Pakistan 1963 a/ | India 1957 b/ |
|---|---|---|---|---|---|---|---|---|---|
| | Rural | Urban | Rural | Urban | Rural | Urban | | | |
| 15-19 | 1.00 | 1.07 | 0.85 | 0.99 | 0.85 | 0.98 | 1.11 | 0.38 | 0.72 |
| 20-24 | 1.05 | 1.22 | 1.38 | 1.46 | 1.72 | 1.73 | 1.57 | 1.20 | 1.32 |
| 25-29 | 1.17 | 1.05 | 1.30 | 1.18 | 1.49 | 1.23 | 1.54 | 1.27 | 1.22 |
| 30-34 | 1.26 | 1.32 | 1.08 | 1.11 | 1.14 | 1.31 | 1.40 | 1.20 | 0.94 |
| 35-39 | 1.16 | 0.79 | 0.94 | 0.78 | 0.59 | 0.69 | 0.72 | 0.92 | 0.64 |
| 40-44 | 0.42 | 0.50 | 0.70 | 0.60 | 0.71 | 0.28 | 0.41 | 0.55 | 0.25 |
| 45-49 | 0.33 | 0.21 | 0.72 | 0.57 | 0.05 | - | 0.10 | 0.25 | 0.09 |
| Total Fertility Rates | 6.39 | 6.16 | 6.97 | 6.69 | 6.55 | 6.22 | 6.85 | 5.77 | 5.18 |
| G.R.R. | 3.10 | 3.02 | 3.38 | 3.27 | 3.24 | 3.08 | 3.38 | 2.69 | 2.53 |

Source: a/ [Computed from PGE Cross-Sectional Survey data on Live births and Population for 1963.]

b/ [9. p. 124]


East Pakistan
Age Specific Marital Fertility rates
(First Approach)
Rural
Urban
PAE 1963
15-19
20-24
25-29
30-34
35-39
40-44
45-49
Age Group
2.0
1.5
1.0
0.5
Age Specific Fertility rate


East Pakistan
Age Specific Marital Fertility Rates
(Second Approach)
Rural
Urban
PGE
1963
2.0
1.5
1.0
0.5
15-19
20-24
25-29
30-34
35-39
40-44
45-49
Age Group
Age Specific Fertility Rate

fertility rates by the second approach in comparison to PGE rates for 1963, we observe that the PGE rates are slightly higher for the first two age groups, higher still for the next two age groups and lower for the last three age groups. One possible reason for these discrepencies is that the census - based age-specific fertility rates estimated by us, represent the fertility experience of over 35 years, while the PGE rates, on the other hand, represent the fertility experience for one year (1963) only. There may have been some changes in age specific fertility over the period of 35 years or so.

The second reason for these discrepencies is the methodological differences in the PGE rates and our census-based rates. The PGE rates are computed by the usual method of dividing the number of live births in a year by the mid-year population of the women in the reproductive ages, but the rates computed in our study are based on the data on replies to the question on children ever-born alive to the married women asked in 1961 census of population.

For those having been married for very long durations, the tendency is to report smaller numbers of children than were actually born-alive. This may be due to the reason that the children died soon after birth are either advertently or inadvertently omitted. [3, p. 59] The result is to under-state the family size of the earlier as compared with more recent cohorts. Since the estimated rates given in table 8 and 9, were computed by subtracting the cumulative fertility in the more recent cohorts from the cumulative fertility of the earlier cohorts, the net affect on the results would be that the rates for the recents cohorts would be more close to the actually prevailing rates. The rates in the medium cohorts would be more under estimated because the cumulative fertilities for these are already under stated (although not relatively as much as in the more older age and duration groups). Thus relatively higher cumulative fertilities in the recent cohorts when subtracted from these cohorts would give us lower rates for the middle ages.

High rates for the higher age groups may be because of the following two reasons.

The data in census refer only to the women who survived at the census and not all the women who originally belong to the given cohort. Thus, those women who are in the higher age groups, have survived through out their reproductive period. As many of those who belonged to these cohorts died during their reproductive period, their fertility (which would presumably be lower on the average) is not included in the rates for the higher age groups and the result is that the cumulative fertility in the higher age groups would be relatively higher. On the other hand since the middle cohorts still include such women who have born a lesser number of children, and may die before completing their reproductive period, their average cumulative rates would be relatively lower. Hence, the age-specific fertility rates for these cohorts would tend to be lower. Lower cumulative rates for middle age would tend to give us higher age specific fertility rates for the higher age groups and lower rates for the middle groups.

Mean Age at Marriage.

Our data also make it possible to arrive at estimates of mean age at marriage of East Pakistani women.

Tables 11-A and 11-B which have been derived from Table 1 (the details of women "under 5" years duration by single years are given in the original table, but are omitted in Table 1), show how these estimates have been made. The basic technique is first to find the total number of women-years lived by the women in a particular age-duration of marriage group and then dividing it by the number of women in the group. This gives the average number of years lived by a married women before marriage. In other words this will be the mean age at marriage for this group of women. More formally:

TABLE 11-A

ESTIMATION OF MEAN AGE AT MARRIAGE RURAL E/ST PAKISTAN, 1961

| Age Group ($y_j$) | Mean age ($\bar{y}_j$) | Duration of Marriage ($d_i$) in years: Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | Total Years lived before marriage by $n_i$ women $t_j = \sum n_{ij}(\bar{y}_j - \bar{d}_i)$ | Total Number of Married women ($n_j$) | Average age at marriage of $n_j$ women ($\frac{t_j}{n_j}$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean Duration of Marriage ($\bar{d}_i$): (2.5) | (7.5) | (12.5) | (17.5) | (22.5) | (27.5) | (32.5) | (37.5) | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | | Number of years lived before Marriage by $n_{ij}$ married women : $t_{ij} = n_{ij}(\bar{y}_j - \bar{d}_i)$ | | | | | | | | | | |
| Under 15 | (12.5) | 2457 | 30 | | | | | | | 2497 | 245 | 10.19 |
| 15-19 | (17.5) | 6988 a/ | 3090 | | | | | | | 10078 | 796 | 12.66 |
| 20-24 | (22.5) | 2774 | 1110 | 3270 | | | | | | 13154 | 947 | 13.89 |
| 25-29 | (27.5) | 850 | 3140 | 7020 | 2560 | | | | | 13570 | 915 | 14.83 |
| 30-34 | (32.5) | 240 | 875 | 2680 | 5190 | 2130 | | | | 11115 | 736 | 15.10 |
| 35-39 | (37.5) | 210 | 450 | 1125 | 2140 | 4125 | 1410 | | | 9460 | 589 | 16.04 |
| 40-44 | (42.5) | 440 | 420 | 960 | 1300 | 1620 | 2835 | 1260 | | 8835 | 503 | 17.56 |
| 45 & over | (47.5) | 1080 | 1760 | 1680 | 2460 | 4250 | 4220 | 6120 | 6370 | 27940 | 1631 | 17.13 |
| Total Years lived before marriage by $n_i$ married women: $(t_i) = \sum n_{ij}(\bar{y}_j - \bar{d}_i)$ | | 15049 | 16875 | 16735 | 13650 | 12125 | 8465 | 7380 | 6370 | 96649 | | |

(Cont'd...p/27)

Table 11-A (Cont'd)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Number of Married Woman ($n_i$) | | 955 | 1052 | 1054 | 850 | 739 | 541 | 534 | 637 | | 6362 | |
| Average age at marriage ($t_i / n_i$) | | 15.76 | 16.04 | 15.88 | 16.06 | 16.41 | 15.65 | 13.82 | 10.00 | Weighted[b] 119.62 | mean age at Marriage $\frac{119.62}{8}$ = | 14.95 |

Un-weighted Mean age at Marriage $\frac{96649}{6362} = 15.19$

a/ For durations under 5 years, the data were provided for single years in the case of the first three age group. These totals are therefore reached by adding up the estimates for 5 individual years.

b/ Weighted mean is the mean of the average ages at marriage for the women in each duration of marriage group.
Un-weighted mean has been computed by dividing, the total number of years lived before marriage by all the women, by the total number of women.

TABLE - 11-B

ESTIMATION OF MEAN AGE AT MARRIAGE, URBAN EAST PAKISTAN, 1961

| Age Group ($y_j$) | Mean Age ($\bar{y}_j$) | Duration of Marriage ($d_i$) in years | | | | | | | | Total years lived before Marriage by $n_i$ women $t_j = \sum n_{ij} (\bar{y}_j - \bar{d}_i)$ | Total Number of Married women ($n_j$) | Average age at Marriage of $n_j$ women $\left(\frac{t_j}{n_j}\right)$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Under 5 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35 & over | | | |
| | | Mean Duration of Marriage ($\bar{d}_i$) | | | | | | | | | | |
| | | (2.5) | (7.5) | (12.5) | (17.5) | (22.5) | (27.5) | (32.5) | (37.5) | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | | Number of years lived before Marriage by $n_{ij}$ married women $t_{ij} = n_{ij}(\bar{y}_j - \bar{d}_i)$ | | | | | | | | | | |
| Under 15 | (12.5) | 2919 | 40 | | | | | | | 2959 | 286 | 10.35 |
| 15-19 | (17.5) | 13492 | 4870 | | | | | | | 18362 | 1405 | 13.07 |
| 20-24 | (22.5) | 5379 | 16545 | 6290 | | | | | | 29214 | 2064 | 14.15 |
| 25-29 | (27.5) | 2025 | 6960 | 14715 | 4820 | | | | | 28520 | 1892 | 15.07 |
| 30-34 | (32.5) | 780 | 2350 | 7020 | 11340 | 3740 | | | | 25230 | 1601 | 15.76 |
| 35-39 | (37.5) | 595 | 1230 | 2350 | 4800 | 8205 | 2330 | | | 19510 | 1172 | 16.65 |
| 40-44 | (42.5) | 600 | 1715 | 1980 | 2625 | 3900 | 5670 | 2230 | | 18720 | 1031 | 18.16 |
| 45 & over | (47.5) | 2115 | 5040 | 3920 | 5100 | 6775 | 5620 | 9105 | 10530 | 48205 | 2667 | 18.07 |
| Total years lived before marriage by $n_i$ women: $t_i = \sum n_{ij}(\bar{y}_j - \bar{d}_i)$ | | 28905 | 38750 | 36275 | 28685 | 22620 | 13620 | 11335 | 10530 | 190720 | | |

( Count'd..... P/29)

TABLE 11-B (Cont'd)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Number of Married women ($n_i$) | | 1714 | 2256 | 2233 | 1753 | 1387 | 892 | 830 | 1053 | | 12118 | |
| Average Age at Marriage of $n_i$ Women ($t_i / n_i$) | | 10.90 | 17.18 | 16.24 | 16.36 | 16.31 | 15.27 | 13.66 | Weighted[b] mean age at marriage 10.00 | 121.88 | $\frac{121.88}{8}$ = | 15.24 |

a/ For durations under 5 years, the data were provided for single years in the case of the first three age group. These totals are therefore reached by adding up the estimates for 5 individual years.

b/ Weighted mean is the mean of the average ages at marriage for the women in each duration of marriage group.
Un-weighted mean has been computed by dividing, the total number years lived before marriage by all the women, by the total number of women.

Un-weighted Mean Age at Marriage = $\frac{190720}{12118}$ = 15.74

*Nusrat*

$\bar{d}_i$ = Mean duration of marriage for a group of women having a marriage duration $i$ at the time of the Census ($i$ varies from "less than 5 years" to "35 & over years").

$\bar{y}_j$ = Mean age of married women in a particular age group $j$, at the time of census ($j$ varies from "under 15 years" to "45 and over")

$n_{ij}$ = Number of married women in a particular age group $j$ and having $i$ duration of marriage.

$\bar{y}_j - \bar{d}_i$ = Average number of years lived before marriage by group of women who were of the age $j$ and marriage duration $i$ .

$n_{ij}\ (\bar{y}_j - \bar{d}_i)$ = total number of years lived before marriage by $n_{ij}$ women who were of the age $\bar{y}_j$ and marriage duration $\bar{d}_i$ .

The total number of years lived before marriage by the women in all the age groups and of a particular marriage duration $d_i$ is given by

$$t_i = \sum_{\text{all } j} n_{ij}\ (\bar{y}_j - \bar{d}_i)$$

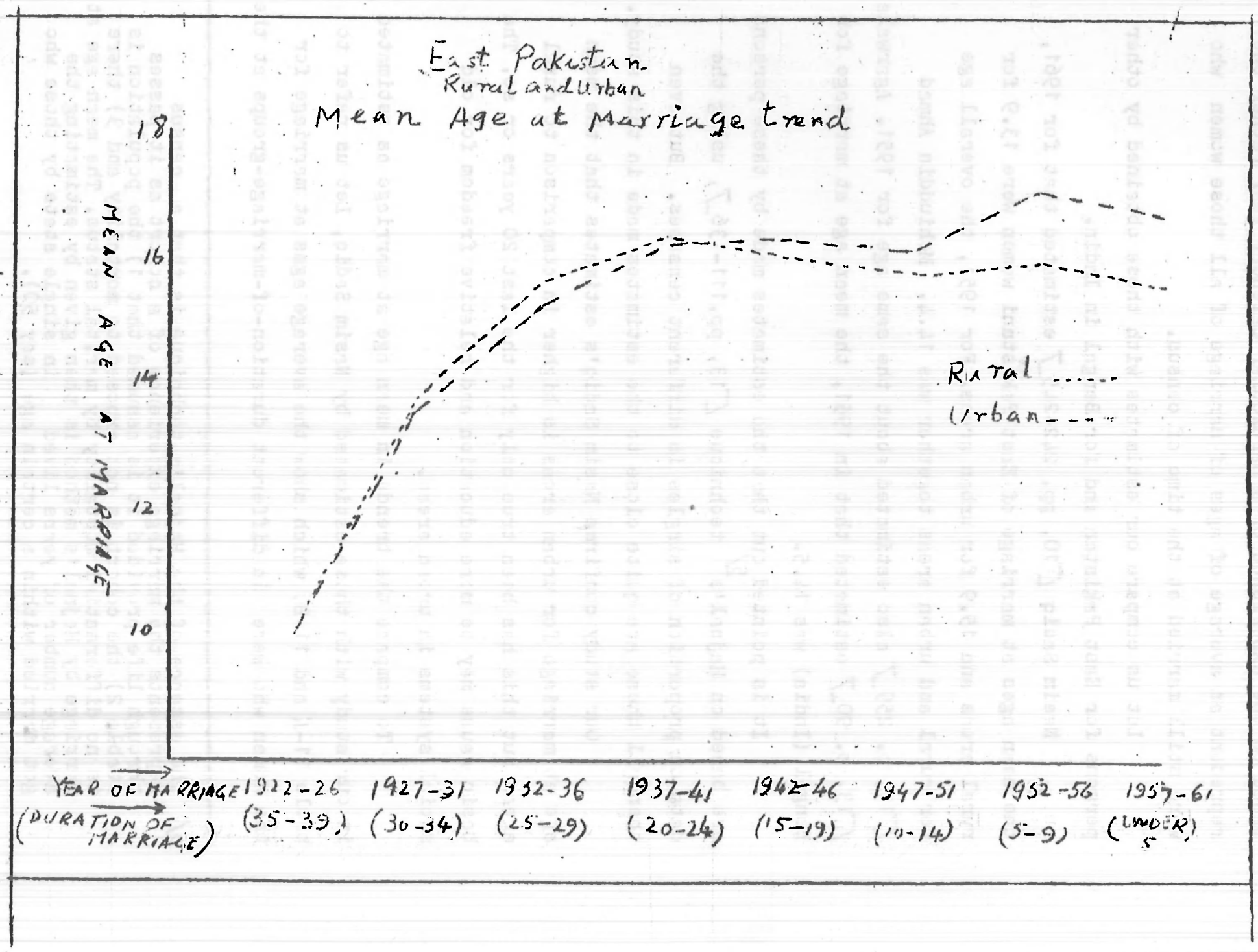
and the mean age at marriage for the women of this duration group is given by

$$m_i = \sum_{\text{all } j} \frac{t_i}{n_{ij}}$$

The mean age at marriage for all durations of marriage in all age groups is given by

$$M = \sum_{\text{all } i} \frac{m_i}{8}$$

East Pakistan
Rural and Urban
Mean Age at Marriage trend



From tables 11-A and 11-B, we observe that the overall weighted mean ages at marriage for rural and urban areas are 14.95 and 15.24 respectively. These ages, as we know, are not based on the experience of a particular calendar year rather they represent an average of ages of marriage of all those women who were still married at the time of census.

Let us compare our estimates with those obtained by other persons for East Pakistan and for Bengal in India.

Nasim Sadiq [10, pp. 242-245] estimated that for 1961, the mean ages at marriage of East Pakistani women were 13.9 for rural areas and 15.9 for urban areas. For 1951, the overall age for rural and urban areas together was 14.4. Mohiuddin Ahmad [11, p. 259] also estimated about the same age for 1951. Agarwala [13, p. 90] estimated that in 1961, the mean age at marriage for Bengal (India) was 14.5.

It is pointed out that the estimates made by these persons are based on Hajnal's[5/] technique [13, pp.111-136], using the data on proportion of singles in different censuses. But even then all these are quite close to the estimates made in this study.

Our study confirms Nasim Sadiq's estimates that the mean age at marriage for urban areas is higher in comparison to rural areas but this has been true only for the last 20 years or so. The basic cause may be more education and relative freedom for old social systems in urban areas.

To compare the trends in mean age at marriage as estimated in our study with those estimated by Nasim Sadiq, Let us refer to table 11-A and 11-B, which show the average ages at marriage for the women who were in different duration-of-marriage-groups at the

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5/ The essence of the Hajnal's technique is that a census represents the marriage experience of a cohort as it passes through life provided it is assumed that 1) the population is stable 2) the cohort is not exposed to mortality and 3) there is no differential mortality by marital status. The mean age at marriage by Hajnal's method is then given by estimating the average number of years lived in single state by those who got married within a certain age (say 50).

time of 1961 census. According to our study the mean age at marriage rose from 10 to 15.76 for the rural areas and from 10 to 16.86 in urban areas, in about 35 years or so before 1961. Nasim Sadiq estimated that the overall mean age at marriage (i.e. for rural and urban areas combined) rose from 12.3 to 14.4 in almost the same period. This means that both the studies confirm that the mean age at marriage is rising, our estimates are however a little higher than those obtained by Nasim Sadiq. One possible reason underlying this may be that in our study we have used only 1961 census data. Thus memory lapse might have affected the estimates for the women who had been married for longer durations. Since Nasim Sadiq uses the data from different censuses he might have partially over come this problem. In other words, under statement of duration of marriage (used in our study) in comparison to age only (used in both studies) might have resulted in some what higher estimates of mean ages at marriage in our study.

Summary and Conclusions:

This study presents estimates of total and age-specific fertility rates and mean age at marriage, based on census data and on techniques which are rather different from those followed by others. Keeping in view the fact that these are based on a sample drawn from the slips of only one census, we cannot be too sure of our results. Still the estimates are reasonably close to the estimates made by others and the results are entirely plausible. It would be even more interesting to use the same techniques with a more carefully drawn sample.

*Nusrat*

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