

cussed in my article. Most medical observers from Europe, the United States, and the World Health Organization seem to share these general impressions.

MILTON I. ROEMER, M.D.

• • •

## DIFFERENTIAL FERTILITY IN AN ARAB COUNTRY\*

OUR knowledge of the extent and nature of differential fertility in Arab countries has been greatly extended by the recently published book, *FERTILITY DIFFERENCES IN A MODERNIZING COUNTRY* by David Yaukey, as well as by a still unpublished and companion study, *FERTILITY PATTERNS IN SELECTED AREAS OF EGYPT* by Hanna Rizk<sup>1</sup>. Rizk's study, completed in early 1958, served both as an incentive and a model for Yaukey's analysis carried out in Lebanon during 1959. This is, perhaps, the first time that a detailed reproductive history and information on fertility control practices and attitudes were obtained for a fairly large sample of Moslem and Christian Arab women. The low refusal rate in both studies attests to the care with which Yaukey and Rizk trained and selected their interviewers and to their abilities in securing proper and adequate community support.

The basic assumption underlying the sample design of Yaukey's Lebanese study is that the measurement of the extent and timing of exposure to the urban environment is of strategic importance in the study of differential fertility in modernizing countries. Consequently Yaukey selected, at one extreme, two isolated villages presumably as far removed from urban influences as possible, and at the other extreme, an area near the center of Beirut, a large port and cosmopolitan metropolis of 500,000 population. Also, data were secured on rural-urban

\* Yaukey, David: *FERTILITY DIFFERENCES IN A MODERNIZING COUNTRY: A SURVEY OF LEBANESE COUPLES*, Princeton, Princeton University Press, 1961. 204 pp.

<sup>1</sup> Rizk, Hanna: *FERTILITY PATTERNS IN SELECTED AREAS OF EGYPT*. (Ph.D. Dissertation, Princeton University, 1959.) Ann Arbor, University Microfilms, Inc., Mic 60-5042.

residence during the five years prior to marriage and the first five years after marriage. Since religious membership is an important facet of Lebanese society and could be assumed to have an impact on fertility, one of the villages selected was all Christian and the other all Moslem, and the urban sample was about equally divided between Christians and Moslems.

The women eligible to be interviewed had the following characteristics: they were (1) Lebanese nationals, (2) married only once, and (3) married for more than five years. All eligible women in the two villages were selected for interviewing. The selection of the sample of eligible women in Beirut was in two stages: (1) "four of the forty-odd administrative districts in Beirut were selected, mapped, and divided into blocks," and (2) "each interviewer was assigned one block at a time, with specific orders to proceed from a given starting point and in a given direction." (p. 23) Altogether, 909 women were interviewed, 296 in the two villages and 613 in Beirut. The size of the Beirut sample suggests that either the districts selected were relatively small or that only a small sample of all the blocks was chosen. One would wish for a more explicit description of the sampling procedure, even though the design was purposeful rather than random. On what basis were the two villages selected? No *evidence* is presented for their "extreme isolation." How were the four Beirut districts selected? How many blocks were surveyed and included in the sample? Since some information is available from an earlier survey of Beirut by Churchill<sup>2</sup> in 1954, it is surprising that the author did not attempt to compare the characteristics of the areas selected with those of the city as a whole. A base map of Beirut showing the location of the four districts would have been helpful.

Two indexes of fertility are used by Yaukey. The fertility of the older generation (women married for over 30 years) is measured by the average number of children ever born alive per woman. The experience of the younger generation is summarized by an ingenious synthetic index of fertility. For each successive five-year period of marriage, duration-specific fertility rates are obtained by dividing the total number of live

<sup>2</sup> Churchill, Charles W.: *THE CITY OF BEIRUT: A SOCIO-ECONOMIC SURVEY*, Beirut, Dar El-Kitab, 1954.

births occurring in each of these periods by the total number of women who have completed each of these periods. These duration-specific rates are added together to yield a descriptive, though synthetic, average number of children ever born. As with the more conventional total fertility rates, this procedure assumes no generational trends in fertility. But even if there were no such trend, as the author suggests, this measure of fertility assumes a fairly accurate allocation of births to periods of marriage. Such an allocation may be hard to achieve for a sample of illiterate women. This reviewer wishes that Yaukey had included in his appendix a set of more conventional rates of children ever born standardized for duration of marriage to facilitate comparisons with other studies.

One of the salient findings of the Lebanese study pertains to fertility differentials by religion and residence. A high level of fertility, about seven children ever born per woman, was observed for both Christians and Moslems in the two villages. By contrast, Christian women who resided in a city within the first five years after marriage had a much lower fertility than Moslem women with a similar residential history. For the Christian younger generation, the fertility of women with an urban residential history was about half that of rural women. Among Moslems there was a small urban-rural fertility differential in the expected direction, but this difference was not statistically significant. Similar findings are reported by Rizk for his Egyptian sample, with the only discrepancy being that the urban-rural differentials among Christians is less marked in Egypt than in Lebanon.

The Christian-Moslem fertility differentials in urban areas in Lebanon and Egypt is not a new finding since it was documented for Egypt some years ago by Clyde V. Kiser.<sup>3</sup> What is new, however, in the material presented by Yaukey and Rizk is the specification of the nature of the complex interrelation between religion, residential history, and socio-economic status.

Additional data on literacy, rooms per capita after marriage, and occupation of husband after marriage reveal no fertility differentials by socio-economic status for either Moslems or

<sup>3</sup> The Demographic Transition in Egypt, in *DEMOGRAPHIC STUDIES OF SELECTED AREAS OF RAPID GROWTH*, New York, Milbank Memorial Fund, 1944.

Christians residing in the two Lebanese villages at the time of the interview. Fertility levels were high for all groups irrespective of their characteristics. Similar results were obtained by Rizk for his Egyptian villages. If, however, the analysis is made in terms of rural residence in first five years after marriage, some fertility differentials appear among Christians. The lower fertility of higher status Christian villagers may be attributed to the inclusion of those villagers who migrated to the city after their first five years of marriage. Migrants to the city were all literate and had a much lower fertility than non-migrants with the same socio-economic status. For Moslems, there appears to be no difference in fertility between migrants to the city and non-migrants.

Among Moslem women who resided in a city in the first five years after marriage, there was, for the younger generation, a statistically significant and negative relationship between fertility and socio-economic status. While this fertility differential among urban Moslems was not great, it was more marked than among urban Christians. Surprisingly, among urban Christians the slight negative relationship between fertility and status was not significant. This finding should have been interpreted with greater caution by the author since it may be attributed, in part, to the unusual nature of the sample of lower-status urban Christians. A number of clues seem to indicate this possibility. First, in Rizk's sample of Cairo and Alexandria, the mean age at marriage for Christians varied from 20.7 years in the highest class to 17.5 in the lowest class. By contrast, in Yaukey's urban sample the mean age at marriage for educated Christians was almost identical to the mean age at marriage for uneducated Christians (21.1 as compared to 21.2). Second, the distribution of occupation of husband by educational level suggests that illiterate couples were the only ones to have a markedly lower status (as measured by the per cent with "unskilled work or servant") than other couples among city Christians. But the fertility level of illiterate city Christians is based on a sample of only twelve women and can hardly be used as indicative of this group in Beirut. It may well be that if a larger and city-wide sample of Christians in Beirut had been selected, fertility differentials among

city Christians in Lebanon would have been as large as that reported by Rizk for his urban sample.

The comparison between urban and rural fertility for a given socio-economic status is complicated by the fact that, particularly for Moslems, there is only a very small number of higher-status women who had resided in rural areas during the first five years of marriage. Nevertheless, the available data suggest the existence of an urban-rural fertility differential among Christians which is independent of socio-economic status. Among Moslems, the small urban-rural differential becomes even smaller when socio-economic status is controlled. As might be expected, the Christian-Moslem fertility differentials among couples with an urban background is not reduced when socio-economic status is taken into account.

After the analysis of fertility differentials, Yaukey turns to an assessment of the importance of various factors in accounting for the observed differences. For this aspect of his study, the author allocates 648 couples of his total sample into six "homogeneous social background types" in terms of residential background, education and religion. The rationale for this departure from the earlier mode of analysis is not explicitly stated, but it was presumably guided by the size of the sample and the need for a parsimonious classification that would facilitate the analysis of the determinants of fertility variation. Yaukey considers separately the effect on fertility of what he calls "involuntary" and "voluntary" factors; the former including age of woman at marriage, frequency of intercourse, prolonged separation from husband, and prolonged nursing of children, while the latter included induced abortions and conception control. The author assumes that there are no "appreciable" differences in fecundity between the various social types, and he presents some data in a technical note to support this assumption. The same note includes an evaluation of the number of reported abortions and a detailed analysis of coital frequency.

On the whole, the results obtained are somewhat disappointing mainly because of the difficulty of obtaining adequate data on such subjects as induced abortions, contraceptive practices, and coital frequency in an Arab population, particularly in

villages. Nevertheless, the data indicate that age of woman at marriage is the only "involuntary" factor that has any appreciable effect on fertility differences. With respect to the "voluntary" factors, the only clear-cut finding is the almost universal absence of induced abortions and contraceptive practices among villagers and the relatively high reported incidence of these practices among educated city Christians, the group with the lowest fertility. The effect of the same "voluntary" factors on the other fertility differences observed is more ambiguous.

While Yaukey included a number of attitudinal questions in his questionnaires, such as reasons for wanting to delay or not delay a pregnancy, he limits himself to a presentation of the results pertaining to size of family advised. His major finding is that the per cent of women who were willing to advise specific number of children to a "very close friend" was lowest among villagers and highest among city educated Moslems and Christians.

Yaukey is to be commended for devoting a large portion of his monograph to a detailed description of his survey procedure, to an evaluation of the data, and to a presentation of his interview schedule and instructions. This information will be helpful to other social scientists who might initiate fertility studies in Arab countries. It would have also been useful to have the proportion of women responding to each of the questions asked, and, wherever possible, a marginal tabulation of responses to a number of questions. The appendix on "Evaluation of Data" should have included more specific discussions of tests of reliability. For example, the author could have presented a cross-tabulation of his two separate questions on number of children living.

Considering the effort needed to carry out a detailed field study of fertility in a country such as Lebanon and the significance of Yaukey's findings, this reviewer is reluctantly led to express some reservations about the design of this study. In an introductory chapter, Yaukey sketches the possible effect on fertility of the two crucial variables of family structure and exposure to Western influence; but his data provide only an indirect test of this effect. Granted that one can infer, for

example, the extent of Western influence by considering the level of education, it is by far preferable to include additional and more specific questions on this dimension. In fact, Morroe Berger in his study of civil servants in Egypt constructed and administered a Guttman scale on "exposure to the West."<sup>4</sup> Also similar types of questions were included in an investigation of mass communication in Lebanon and other Middle Eastern countries.<sup>5</sup>

Of course, one must admit that Yaukey's questionnaire was already too lengthy and complex; but, with the advantage of hindsight, one can say that some of the questions which yielded results of dubious value could have been sacrificed in favor of additional items on family structure, exposure to Western influence, and even, perhaps, on social mobility.

Yaukey's study, in addition to providing valuable insights into the reproductive behavior of an Arab population, has cleared much of the underbrush for the benefit of future investigators. Any new field study of fertility in the Middle East will have to take into account both the successes and the failures of Yaukey's pioneering investigation.

One final and short note: the author missed adding an exotic touch to his monograph by not reproducing the Arabic version of his questionnaire.

GEORGES SABAGH

• • •

## BIRTH RATES OF THE WHITE POPULATION IN THE UNITED STATES, 1800-1860\*

SEVERAL students coming under the influence of Professor Simon Kuznets for purposes of Ph.D. dissertations, concerned themselves with the series of historical data for the

<sup>4</sup> BUREAUCRACY AND SOCIETY IN MODERN EGYPT, Princeton, Princeton University Press, 1957, pp. 221-223.

<sup>5</sup> Lerner, Daniel: THE PASSING OF TRADITIONAL SOCIETY: MODERNIZING THE MIDDLE EAST, Glencoe, Illinois, The Free Press, 1958.

\* Yasuba, Yasukichi: BIRTH RATES OF THE WHITE POPULATION IN THE UNITED STATES, 1800-1860: AN ECONOMIC STUDY, Baltimore, The Johns Hopkins Press, 1962, 198 pp.