

Vitamin E, because the tocopherols are clearly closely related. Vitamin E is known to be necessary to successful reproduction, and is also tied up with the proper functioning of the nervous system. (2) Vitamin F, about which little is said; and (3) Vitamins K₁ and K₂ which are known to have antihemorrhagic properties.

Chapter XXV, entitled: "The Nutritional Chemistry of Reproduction and Lactation," not only takes up the interrelationship between energy, protein, minerals, and vitamins under the special conditions created by reproduction and lactation, but also states the required amounts of these dietary essentials during periods of reproductive activity.

The wider, more far-reaching effect of the practical application of the newer knowledge of nutrition through successive generations is the subject of Chapters XXVII to XXX. These chapters will be very useful to those who are interested in the social significance of nutrition. Dietary standards in terms of types of foods provide the needed interpretation of food chemistry for its practical application. Optimal levels of food intake are defined for each nutritional factor. Several tables on food allowances and distribution of calories in diets to obtain well-balanced diets are included in Chapter XXVII. Simple food budgets are outlined for urban families, and it is shown that the amount of money required to maintain good nutrition depends largely on a knowledge of food values and willingness to put such knowledge into practice.

Chapter XXX is a discussion of "Nutritional Chemistry and Human Progress" as viewed by persons directing public welfare, health, and research organizations. Data are presented to illustrate that death rates can be decreased and better health attained by all age groups when modern knowledge of nutrition is put into practice.

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DIFFERENTIAL FERTILITY IN BUTLER COUNTY, OHIO

AN INTENSIVE study of differential fertility, "Average Number of Children Per Woman in Butler County, Ohio: 1930," has recently appeared in the form of a Census monograph prepared in cooperation with

the Scripps Foundation for Research in Population Problems.¹ For obvious reasons, the data available in the regular publications of the Census Bureau seldom satisfy all the desires of students working on specialized population problems. In this cooperative endeavor with a private organization, the Census Bureau went back to the original enumeration schedules of the 1930 Census for Butler County and transferred to a special tabulation sheet "all the information which it was thought could possibly be useful in studying the relations between the number of children under 5, and the social and demographic conditions of the women." For machine analyses, a special card was punched for every woman 15-49 years of age. Dr. Thompson of the Scripps Foundation assumed responsibility for the analysis of the data and for the accuracy of the calculations.

With respect to organization, an unusual feature of the report is the placing of the summary and conclusions at the front. This plan has much to recommend it, especially in the preparation of monographs. It perhaps attracts a wider reading at least of the main findings among individuals not interested in the technical details.

Although the study is restricted to one county, the findings are of general interest and in some instances they relate to matters heretofore explored but little. Two reasons were cited for choosing Butler County: it was believed to be fairly typical of many counties in Ohio, Indiana, and southern Michigan; and it is the county in which the Scripps Foundation is located.

The selection of a county in that general area also proved to be profitable for a reason not cited above, but doubtless in the minds of the planners from the outset. Located in the southwestern part of Ohio, Butler County, rural and urban, has received substantial numbers of migrants from Kentucky. This situation was utilized to the full in making basic classifications of the data. Throughout the monograph, the following four groups of "first marriage" women 15-49 (or 20-44) were maintained:

Group 1. Northborn residents of urban communities of Butler County.

Group 2. Northborn residents of rural areas of Butler County.

¹Warren S. Thompson (assisted by Nelle E. Jackson and Richard O. Lang): *Average Number of Children Per Woman in Butler County, Ohio: 1930*. Bureau of the Census, Washington, 1941, 81 pp. (Offset). A Census monograph prepared in cooperation with the Scripps Foundation for Research in Population Problems.

Group 3. Southborn residents of urban communities of Butler County.

Group 4. Southborn residents of rural areas of Butler County.

As expected, the average number of children under 5 was lowest in Group 1, and it increased in the order in which the groups are listed. Results of exceptional interest, however, were those which developed from the addition of birthplace of husband to the above classification to yield different types of marriage combinations. To state the findings briefly, the data appeared to suggest that birthplace of husband bore a more important relation to size of family than did the birthplace of the wife. On this point the report states that this result "came somewhat as a surprise for it has been quite commonly assumed that where voluntary control of the size of the family is widely practiced the attitude of the wife is predominant in determining the number of children." In this connection, however, it should be pointed out that when the data were further broken down by rent, the difference between northborn-southborn marriage combinations tended to disappear in the high rent classes. In the words of the author, "low economic status favored the retention of those social and cultural differences between the northborn and southborn people in this County which make for differences in fertility, while good economic status tended to reduce the fertility of all Groups, classes, and marriage combinations to a common level." Actually, therefore, although the data suggest the importance of patriarchal attitudes regarding family size among groups of low socio-economic status, they do not disprove the belief that the attitude of the wife is predominant within groups in which the "voluntary control of the size of the family" is presumably *most* widely practiced.

The data afforded some evidence that the difference in average numbers of children "seemed to be more closely associated with economic differences, as measured by rentals, than with occupational differences." This point was of interest to the reviewer for a somewhat similar situation was suggested from materials in the National Health Survey, which afforded cross classifications of fertility data by income and occupational status.

Among other relationships traced by the author are those between fertility and such factors as gainful employment of the wife, number of workers in the family, doubling up of families, and value of farm. A large amount of standardization was carried out in order to test the bearing of various factors on differences in fertility.

The chief limitations of the study appear to have been amply described in the report. There was a narrow territorial restriction. In addition, the sample proved to be inadequate at certain crucial points "since many cells in some of the most interesting tables contained too few cases to permit of any judgment of the meaning of the association." It is hoped that more adequate data from the 1940 Census will be utilized for intensive studies of this character.

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HEALTH INDICES FOR GREATER LONDON AND NEW YORK, 1931-1940

BECAUSE the total populations of the two cities are almost alike in size, Dr. Percy Stocks in an article, entitled "Health Indices for Greater London and New York, 1931-1940,"¹ presents for comparison their death rates from various causes.

Dr. Stocks used for his New York City material data from the February, 1941, issue of the *Quarterly Bulletin* of the Health Department of New York City. The death rates for the years 1931-1940 have not been corrected for inward and outward transfers as are the rates for London. That is, the New York figures do not include deaths of residents which occurred outside the city, nor do they exclude the deaths of nonresidents which occurred within the City. As Dr. Stocks states, "in the case of tuberculosis, from which cause a large proportion of deaths of town dwellers occur in institutions situated in the country," the rate for New York City would be about 10 per cent higher if corrected for residence.

The best way then to compare the trend in the death rates for these two cities is to study the changes in the ratio of the Greater London death rate to that of New York. "Changes since 1931 in the distribution of hospital cases in and around New York are unlikely to have seriously affected the ratio, and if the ratio has consistently increased, the conclusion must be drawn that progress in reducing mortality from the disease in question in Greater London has not kept pace with that in New York and vice versa."

¹ Stocks, Percy: Health Indices for Greater London and New York, 1931-1940. *British Medical Journal*, July 19, 1941, No. 4202, p. 96.