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WOMEN'S OPINIONS ABOUT FERTILITY,
INFANT AND CHILD MORTALITY IN
NSUKKA, NIGERIA

MARIA ONYEUWALU AHUNANYA

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**WOMEN'S OPINIONS ABOUT FERTILITY, INFANT
AND CHILD MORTALITY IN NSUKKA, NIGERIA**

by

Maria Onyeuwalu Ahunanya

A PROBLEM STUDY

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PREFACE

This study deals with the problems of fertility and child mortality. It is hoped that the study will enable homemakers to realize the implications of large families, the importance of health and sanitation in homemaking and child upbringing. Directly related to these are the implications fertility and mortality rates have for other agencies of improvement. The data gathered for Home Economics purposes would be disseminated and made available to other relevant groups to help solve the problems of home makers.

This study was interdepartmental and developed by the Sociology and Home Economics departments of the University of Nigeria. It was a non-random study with a total of 96 subjects. The questionnaire was comprehensive and contained open-ended and direct questions. Coding was not done by the researcher. Analysis of the data was done in simple proportion and percentages.

The result and recommendations are embodied in the entire report.

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To the 96 homemakers who gave their time and shared their homes with her. To those local school teachers who accompanied the researcher to the various homes.

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PART I

INTRODUCTION

It may seem peculiar for a home economist to undertake a study of such topics like fertility and mortality. However, there is a relationship between the two and many other factors of direct concern to the home economist. Many United Nations Reports have shown that where infant and child mortality rates are high, the general living conditions for the people are low. The researcher, in working with the women in the Nigersity communities, received reports from many anxious mothers who stated that their main interest in attending these classes was to learn how to keep their children healthy. These women told pathetic stories of the many children they had lost. Others enumerated financial hardships and other inconveniences caused by the ill-health of their children. Infant and child mortality in this developing area of Nigeria is a very real experience of many women and can serve as an incentive for general education of the adults. For example, a woman who is prepared to do anything to save her child's life will be willing to learn new methods of feeding, dressing and housing the child, if she understands that the survival of the child depends on these factors.

Information on fertility is crucial to a home economist as it is helpful in approaching the economic problems of the family. For practical purposes, it is easier for a family to better care for a small number of children than a large number. If the Nigerian families realize the implications of having many children, they will be better able to adhere to the teachings of family planning, both

for the sake of the mother's health and the economic conditions of the family.

Also, a woman who is the economic backbone of her family is less productive economically when she is pregnant or lactating. Therefore, frequent pregnancy will not only worsen the economic conditions of her family but also endanger the life of the woman and the children she already has.

Home Economics considers the home as the "incubator of human personality, the generator of human values, and the progenitor of community attitudes."¹ Home Economics recognizes the family as the primary biological and social unit in any culture, and the one which greatly influences and in part determines the social, physical and moral development of the individual. The survival of any family depends on such basic needs as adequate and satisfying food, clothing, housing and human relationships. These all have economic and social implications and therefore are the concern of home economists all over the world.² Home Economics, as a field of study, has the task of creating a better understanding in the family and promoting the health and well-being of the individuals in the family, by using the existing resources to raise levels of living.

From the preceding definition of home economics education, it becomes clear that fertility and mortality studies have some implications for the home economics extension worker. She is concerned with

¹Carmichael, Olive C. Universities: Commonwealth and America. New York. Harper and Brothers, 1959, p. 157.

²Baldwin, Alfred L. (ed.) Report of Institute on International Education in Home Economics, Cornell University. 1958 (mimeo.) p. 1.

the families' health, social and economic levels of living and the management of available resources to meet the basic physical needs of food, housing and clothing of the individuals in the family.

Studying fertility and mortality for the direct implications these have on the extension worker's job are not the only objectives of this study. In many cases, the extension worker mediates between the people and the various institutions or organizations which are concerned with the solutions for community problems. These data gathered for home economic purposes can be disseminated to and made available to other relevant groups to help them in their decision-making.

From the middle to late fifties of this century, the University of Nigeria was only a dream of Dr. Nnamdi Azikiwe, then the Premier of the Eastern Region of Nigeria. In 1958, Dr. Azikiwe's government recommended the development of the University of Nigeria, dedicated to the concept of service to the problems and needs of Nigeria.¹ This university became a reality in October 7th, 1960. According to Sir Eric Ashby, most universities in West Africa are importations of the British and French, whose traditions dominate them, with minor modifications.² But this is not so with the University of Nigeria which is the first of its kind in the nation "committed to play a dynamic and vital role in the significant task which faces the

¹1963-64 Calendar, The University of Nigeria, Vol. 1, No. 3, p. 9.

²Sir Eric Ashby. "Wind of Change in African Higher Education," Freetown, Sierra Leone, Dec. 1961, (Address, mimeo), p. 2.

country of which it is a part - that of building a great new nation."¹

The University's philosophy is summed up in the passage below:

"The community of scholars--teachers, students and researchers--who have gathered themselves on the plains of Nsukka have launched a venture in higher education that is somewhat different for this part of the world. They are attempting to sift out the most appropriate aspects of traditional universities, and by blending them into the Nigerian scene, to evolve a program specifically suited to the needs and interests of the people of Nigeria, as they take their rightful place in the world community of nations.

The objectives of the University of Nigeria have their roots in a spirit and philosophy as old as man's search for his own fulfillment and the ancient universities of Bologna and Paris, and as new as Nigerian Independence and The Land-Grant Universities of America.

The spirit stems from such expressions as that of one of the University's founders, Dr. Nnamdi Azikwe, when he wrote, nearly a quarter of a century ago, 'Universities have been responsible for shaping the destinies of race and nations and individuals. They are mirrors which reflect their particular societal idiosyncrasies....' He suggested that if Africa has its own university, there is no reason why the best libraries, laboratories, professors cannot be produced right here, and this continent become, overnight, 'a continent of Light'.⁴

Nsukka was a small township until October 1960, when the University started there. The University has brought fast socio-economic, political and technical changes to the University site. As thousands of students and employees from various parts of Nigeria and the world arrive on the Nsukka campus each year, the indigenous population surrounding the University is being catapulted

¹The Prospectus Committee, 1963-64 Calendar, The University of Nigeria, Vol. 1, No. 3, pp. 13, 14.

²Ibid., p. 14.

into the "boom town" of Nigersity.*

Purpose of Study

This study is part of the Nigersity study...a multipurpose study of the Nsukka area, in sociology, agriculture, home economics and other related fields. A part of the Nigersity study which dealt with homemaking activities in the Nsukka area was completed last year by Nancy Axinn (M.A. thesis M.S.U. 1963). Axinn's study contains information on patterns of activities of homemakers in the Nsukka area, resources available to the homemakers, and aspirations of homemakers for their children's education.

The researcher had the opportunity of working as an extension agent in twelve villages in the Nsukka area. The homemakers who attended the extension classes indicated that their major reason for coming to the classes was to learn how to care for their babies, especially during the weaning period when many of the babies die. The daily complaints and the anxiety shown on the faces of these women when expecting or nursing babies aroused my sympathy and my interest in exploring the circumstances surrounding their child-bearing and rearing practices.

It is hoped that this study will provide a base for a later historical record of how these people shall have made their transition from rural to urban life. This study is designed to furnish more information on homemakers' child-bearing and rearing practices, and

*"Nigersity" is the name given to the areas around the University of Nigeria covered by this study.

their opinions toward pregnancy and children. The study also sought information concerning fertility among the women and mortality among their children.

The main objectives in this segment of the Nigersity study were:

1. To gather data about the Nigersity communities' infant death rate. Many agencies--United Nations, World Health Organization, and others--have reported high infant and child mortality rates in many African countries, especially the Sub-Saharan tropical Africa. This varies from country to country. Even in the same country, the rates are different from area to area. T.H. Davey in one of his lecture series "Disease and Population Pressure in the Tropics" in the University College Ibadan in 1958, gave the following figures:

"The result of an investigation into the histories of children born to one hundred and fifty-four mothers in a Nigerian village corroborates this; the mortality rate for infants under one year of age was 210 per thousand as compared with 8 per thousand in England and Wales, while the total mortality in the five years of life reached a level of 473 per thousand as compared with 25.2 in England and Wales."¹

This high death rate, nearly fifty percent of children under five years of age, is perturbing and further stimulated my interest to know what the rate in the Nigersity communities is. Knowledge of this kind should be useful to the University in planning its extension education programs in the communities. Also, it can serve as a stimulating factor for further research into the causes and remedy for such

¹Davey, T.H. "Disease and Population Pressure in the Tropics" Ibadan University Press, 1958, p. 4.

situations by such departments as the College of Medicine, and government or voluntary agencies working for the people's health.

2. To explore the people's traditional child-bearing and rearing practices. This information will be very useful in planning Home Economics Education in general and more especially, the extension education which the University has already started for the Nigersity communities. The basis for this objective is already cited in the University's philosophy, which attempts to sift out the most appropriate aspects of traditional universities and to blend them in the Nigerian scene. It is through information from a study of this kind that a program specifically suited to the needs and interests of the people of Nigeria can evolve.

Scope of the Present Study

The study focused its attention mainly on the following:

- (a) Fertility among the women.
- (b) Mortality among the children.
- (c) Women's opinions about child-bearing and child-rearing.
- (d) Women's practices in child-bearing and rearing.

Limitations to the Total Research Program

Most social research of this nature is never neatly linear in process. Rather, it follows the razzle-dazzle of social events like those of mountain trails which spiral downward at times in order to advance later. This analogy applies to this study as it followed the course of events in Nsukka communities during the second year of the University's existence in the area. Some of the important limitations which many of the Nigersity study researchers had to face were:

1. The overriding objective that the initial phase of the project should have practical and immediate relevance.
2. It is rather difficult to collect data in one culture and report it in another.
3. The lack of detailed and accurate maps from which one could construct base maps for basic guides.
4. The scattered and inaccurate nature of demographic and census type data for examining and projecting social trends in the Nsukka district.
5. The unevenness and lack of comparability of most available data, especially the "one-shot" studies by individuals and agencies.
6. The absence of descriptive ethnographic studies of the Nsukka area.
7. The fact that the majority of the study population was illiterate and was highly suspicious of the interviewer, made it difficult for the researcher to get adequate cooperation of the people.
8. The limited experience of the interviewers at the time of the interviewing.

PART II

INVENTORY OF RELATED RESEARCH

Five major sources of information were used for review:

1. Onabamiro, S.D. Why Our Children Die. Methuen and Co. Ltd., London 1949.
2. Children in the British Colonies by the National Committee for the Defense of Children, Deane's Printer Ltd., London 1952.
3. United Nations and World Health Organization Annual Reports-- 1954-56 and 1956-60. New York.
4. Ardener, E. Divorce and Fertility: An African Study. Oxford University Press 1962.
5. Oyenuga, V.A. Our Needs and Resources in Food and Agriculture. Federal Nigerian Ministry of Information, 1959, Lagos, Nigeria.

1. Onabamiro, S.D. "Why Our Children Die"

Onabamiro's book--Why Our Children Die, first published in 1949, stirred the minds of Africans or others, concerning the appalling conditions under which pregnant and nursing mothers and their children live in West Africa. The fact that the majority of mothers in West Africa neither have their babies in the hospital nor take their children to the hospital when they are ill makes it difficult to obtain reliable statistical figures. Dr. Onabamiro got most of his from the hospitals of major cities in West Africa. It should be borne in mind that such figures are good enough for the insights

they have given to our problems but should not be regarded as representative samples of what the conditions are in West Africa. Here are the vital statistics for Lagos - Nigeria in 1946.

Table I.¹ Vital Statistics for Lagos--Nigeria 1946

Estimated Population	176,500
Births (live)	8,060
Deaths within first year of life	884
Infant mortality (per 1,000)	109.7
Still-births	285
Rate of Still-births (per 1,000 births)	35
Deaths from Diseases of Pregnancy and childbirths	93
Maternal Mortality (per 1,000 live births)	11.53

The above figures reveal the high mortality of infants. In 1946, 109.7 children out of every 1,000 births died in their infancy in Lagos, and 11.53 mothers died per 1,000 live births recorded. Compare this latter figure with Britain where the rate is less than 1 per 1,000 live births.

Of greater interest still is the next table (Table 2) which gives us infant and maternal mortality, and still-birth rates for a decade--1937 to 1946.

¹Onabamiro, S.D. Why Our Children Die: Methuen & Co. Ltd., London, 1949, p. 2.

Table 2.¹ Infant, Maternal Mortality and Still-birth Rate in Lagos, Nigeria

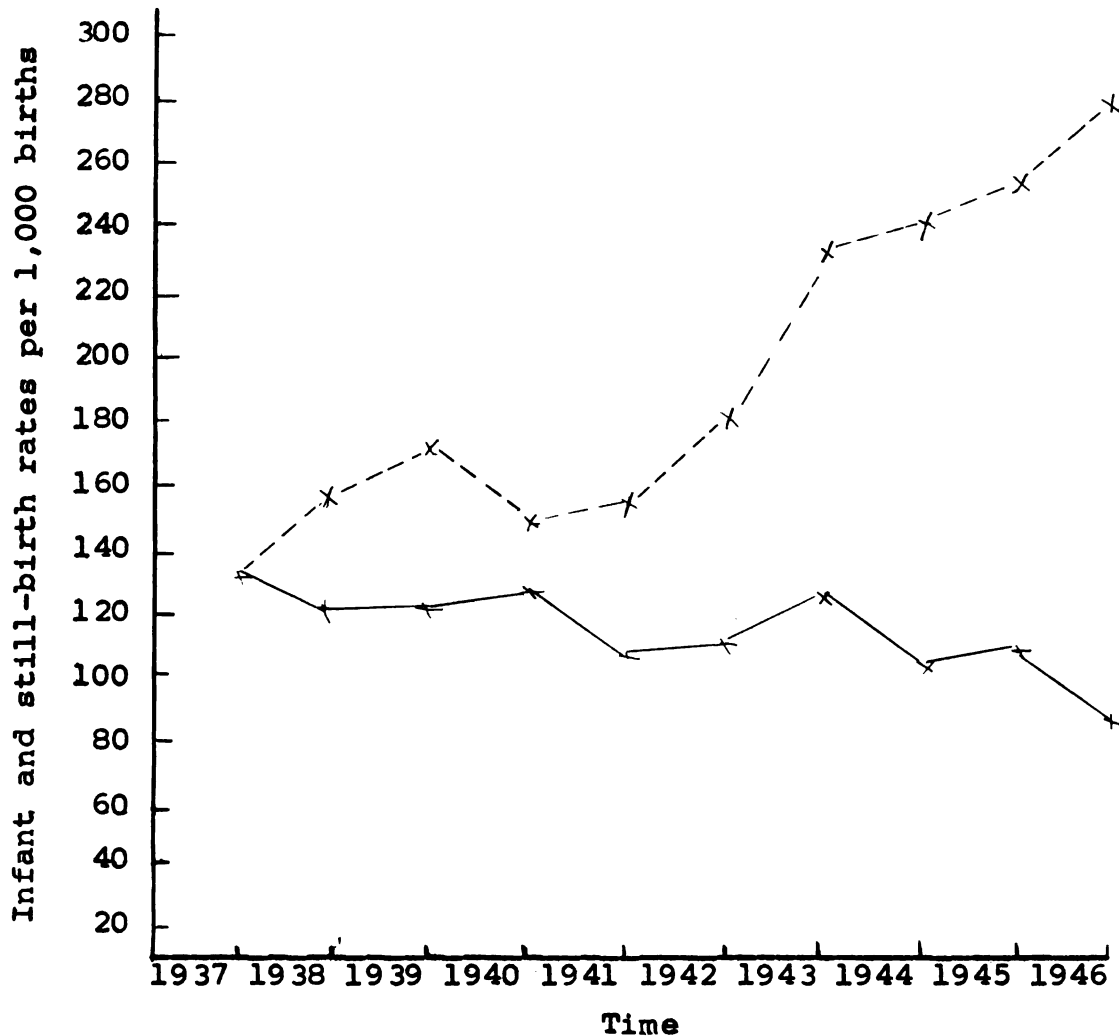
Years	Infant Mortality Rate per 1,000	Still-birth Rate per 1,000	Maternal Mortality Rate per 1,000
1937	135.0	135	11.6
1938	127.0	157	7.9
1939	127.0	167	8.4
1940	132.2	154	8.4
1941	113.9	164	8.5
1942	123.8	194	12.5
1943	140.3	236	9.8
1944	116.0	252	10.5
1945	128.0	259	9.8
1946	109.7	285	11.53

In the above table it is interesting to note the increasing and decreasing order of columns one and two, i.e. infant mortality and number of still-births. It could be inferred from the above table that as infant mortality decreases, still-births increase. This is shown graphically in Figure I.

While over the 10-year period still-birth shows a steady increase to more than double, the infant mortality, though fluctuating, decreased considerably. The author, however, emphasizes in his analysis of the data that the figures are of limited applicability since they do not represent every part of the country.

¹ Ibid.

Figure I. Changes in Still-births and Infant Mortality Lagos, Nigeria 1937-46.



Key --- = Still-birth
 — = Infant mortality

"Out of the estimated number of 90,000-odd children born in Nigeria in 1946, only 20,000 were born in hospitals or maternity centres or under the care of qualified midwives. That number includes children born in Mission medical institutions.... Thus over 70,000 confinements or 7/9ths of the total confinements for the whole country in the year 1946 were conducted by the native medicine men."¹

¹Ibid., pp. 4 and 5.

The author is of the opinion that the high infant and maternal mortality in Nigeria is due to the fact that most pregnancies and children's illnesses are handled by native medicine men and women. He further stated that a report by the Methodist Mission in 1942 seems to give a nearly true picture of infant mortality in Nigeria.

"In 1942 the Methodist Mission, Western Nigeria District, published a report in commemoration of the centenary of the landing of the early missionaries in Badagry, Southern Nigeria. In this report it was stated that the death rate of infants during the first year of life in the up-country, i.e. outside Lagos and colony area, was estimated to be 42 percent. Now that figure was given to represent the state of things in such places as Sagamu, Ijebu-Ode, Ago Iwoye, Ibadan, Ilesha, Oyo, Ilorin, etc. It is clear then, if such was the case in these towns, that the percentage death rate of infants in remote and secluded bush villages would be much higher still. The trouble, as has been stated before, is that it is not possible to obtain direct figures from these areas because of the ignorance and superstition of the illiterate people and their reluctance to cooperate in 'the counting of Heads' dead or alive. There are no grounds for accusing the Methodist Mission's report of exaggeration; there are, in fact many reasons leading to the belief that the figures given represented a conservative estimate at the time.

Again, there are no reasons to believe that a radical change has taken place in Nigeria, concerning this problem, in the last five years; we shall therefore in this book take 42 percent as the estimated rate of Infant Mortality in Nigeria."¹

Assuming as Onabamiro did, that 42 percent was the infant mortality rate in Nigeria in 1942 or 1946, let us compare this figure with the vital statistics from other countries in West Africa during the same period. Like Nigeria, the figures given in Table 3 are from the hospital records of Accra, the capital city of Ghana, the then Gold Coast government, and Freetown, the capital of Sierra Leone and Bathurst the capital of Gambia.

¹Ibid., pp. 5 and 6.

Table 3. Infant and Maternal Mortality, Stillbirth in Nigeria, Ghana, Sierra Leone and Gambia, 1937-1946.

Year	Nigeria			Ghana			Sierra Leone			Gambia		
	Infant- ile Mor- tality	Still- Birth Rate %	Mat- ernal Mor- tality	Infant- ile Mor- tality	Still- Birth Rate %	Mat- ernal Mor- tality	Infant- ile Mor- tality	Still- Birth Rate %	Mat- ernal Mor- tality	Infant- ile Mor- tality	Still- Birth Rate %	Mat- ernal Mor- tality
1935	-	-	-	-	-	-	-	-	-	310.8	11.39	-
1936	-	-	-	108	-	17.0	210	-	9.7	369.7	14.01	-
1937	135.0	$\frac{135}{157}$ no.rate%	11.6	117	5.0	16.6	243	-	10.4	254.1	11.35	-
1938	127.0	$\frac{167}{167}$ no.rate%	7.9	114	4.7	14.0	192	-	12.3	184.1	12.12	-
1939	127.0	$\frac{154}{164}$ no.rate%	8.4	110	4.5	11.8	190	-	-	-	-	-
1940	132.2	$\frac{194}{236}$ 2.9%	8.4	110	4.8	11.1	180	-	-	158.7	13.13	-
1941	113.9	$\frac{252}{259}$ 3%	8.5	110	5.4	16.4	207	-	-	-	-	-
1942	123.8	$\frac{285}{3.5\%}$ 3%	12.5	118	5.6	15.1	193	-	-	157.14	13.469	-
1943	140.3	$\frac{252}{259}$ 3.5%	9.8	129	6.8	16.0	167	-	-	176.25	11.49	-
1944	116.0	$\frac{259}{285}$ 3.4%	10.5	125	6.7	16.0	147	-	-	130.06	12.33	-
1945	128.0	$\frac{285}{3.5\%}$ 3.3%	9.8	119	7.0	18.0	160	-	-	153.84	13.75	-
1946	109.7	$\frac{285}{3.5\%}$ 3.5%	11.53	110	6.8	17.0	208	-	-	-	-	-

(The above table is from pages 3,7,9 and 12 of Onabamiro's book---"Why Our Children Die").

A glance at Table 3 shows that the rates of infant mortality, still-birth and maternal mortality are no better in any of these three West African countries than in Nigeria. The infant mortality rate in West Africa was about three times as high as it was in Britain in the thirties. The table below shows the rate in England and Wales combined between 1930 and 1937.

Table 4. Infant and Maternal Mortality in England and Wales in 1930 and 1937.

*Year	Infant Mortality per 1,000	Maternal Mortality per 1,000
1930	60	4.4
1931	66	4.1
1932	65	4.2
1933	64	4.5
1934	59	4.6
1935	57	4.1
1936	58	3.2

Table 5 shows infant mortality in a few other countries of the British Commonwealth.

Onabamiro blamed this high infant and maternal mortality to a number of things--food, housing, insects' bites, tropical diseases, polygamy, techniques of native midwives, practices of rearing babies and a host of other things connected with living conditions in Africa.¹ The author also commented on the techniques of the native

¹Ibid., p.

Table 5. Infant Mortality in selected countries of the British Commonwealth¹

Country	Infant Mortalities per 1,000 births
Canada--Province of Alberta	63.0
Province of British Columbia	56.0
Province of Manitoba	64.0
Australia--New South Wales	40.68
Queensland	35.64
South Australia	33.05
Island of St. Helena	45.45
Virgin Island	3.6

In 1937, the vital statistics for great Britain were:

"Live Births	410,717
Still-births	12,418, that is 3.02 percent.
Deaths, excluding still-births up to one year	18,621, that is 45.34 per 1,000 births

(These figures are taken from page 770 of the Registrar-General's Weekly Return of Births and Deaths, 1947, No. 49).

"A comparison of the figures for West Africa and those of European and other countries given above will bring it home to us in West Africa how serious this problem is amongst us. Elaborate comments are unnecessary: the figures are self-explanatory. The official reports of the Government Health and Medical Services in West Africa and the reports of Research Workers and other observers all agree on one thing that these Infant and Maternal Mortality rates are abnormally high."²

¹Ibid., p. 16.

²Ibid., pp. 17 and 18.

medicine man and the practices of baby-rearing. It has been mentioned earlier that the majority of Nigerian women when pregnant are attended by a native doctor. An average Nigerian, even one with some education, prefers his wife to be looked after by his parents during confinement. And, generally, most parents prefer the native medicine man to the modern doctors. Instances are known in such civilized cities as Lagos, Accra, Freetown and Bathurst where teachers, clerks and technicians habitually sent their wives up-country to their parents to be cared for "in the native way" when they are pregnant.¹ Onabamiro has given a vivid account of the technique of native midwifery with its advantages and disadvantages.

Onabamiro claims that he has been an eye witness at about three occasions where native midwives worked with laboring women. Conditions are quite uniform in Nigeria, Ghana, Sierra Leone and Gambia, according to Onabamiro, and represent the experience of an average woman during pregnancy, confinement and labor in the hands of a native midwife. The same description applies to other rural women--like those covered in this Nsukka study who have had very little contact with western experience in this matter.

Onabamiro says that during the first 13 weeks of pregnancy, a fish or snail medicine dish is made. The woman eats it the last thing at night or the first thing in the morning. The same is repeated at 33 weeks. During such pregnant periods, the women usually live away

¹Ibid., p. 21.

from their husband and work in petty trading and some farming. - If it is a polygamous home, the husband lives with other wives. After birth, sexual relations aren't resumed until about after 2½ years. Onabamiro points out that the women's working while pregnant keeps their muscles in tone and generally in good condition to undergo rigors of birth contractions. He mentioned that in some instances, maternal mortality among idle "civilized" women has been reported higher than among these "primitive" women.

Onabamiro reports a typical case of a Yoruba woman at labour period. At such period, the house is cleared of dirt and younger people sent out. The woman is sent into an inner room for privacy. Such rooms are often short of oxygen. There is an atmosphere of complete reliance on the dread of 'Nature!' The native midwife then gives the rationale behind his practice by the following quotation:

"A ki igbebi ewure,
A ki igbebi agutam,
Bi ewuer ba loyun, a bi were,
Bi agutan ba loyun a bi were;
Iwo---, oyun ti o yun yi, were ni ko bi!----"

This in English rendering, reads as follows:

"Sheep have no midwives,
Goats have no midwives,
When a sheep is pregnant she is safely delivered,
When a goat is pregnant she is safely delivered;
You---, in this state of your pregnancy will be safely delivered!----"

Everyone, including the patient, would reply to the incantation with "So be it". Onabamiro calls this part of the description the "phase of spiritual concentration."

After this, the woman is bathed and is then allowed to wait for the rupture of the membrane--a period which could stretch to hours. During this waiting, the people in this room tell stories of interesting topics and ridicule women who are considered cowards at pregnancy. Both the patient and occupants of the room would laugh at

these stories. This is psychologically calculated to divert her attention from the pains of labor. This period could last anywhere from 12 to 24 hours.

When the membrane ruptures and the child comes out, the song is repeated and the reply of "so be it" is echoed. Tradition has it that the child would not be severed from the umbilical cord until the afterbirth comes out. This observance of non-interference with the "Course of Nature" may keep the baby in a sudden change of environment for anything up to 4 hours. The author maintains that pneumonia and bronchitis, which take the lives of some children at birth, result from this long exposure of the baby to the sudden change from body temperature to outside temperature at birth. This is most acute since many children are born in a weakened state and thus require immediate attention if they are to survive.

As the child comes, the atmosphere lightens. An old woman usually takes the child, says some rituals to welcome it into the world, cuts the umbilical cord, and throws the child about 2 feet up and catches it several times to acquaint it with the sensation of falling. Some medicine is given to the child. If it can't take it, the nostrils may be closed and in course of taking in breath through the mouth, it will take the liquid medicine.

The medicine man or native midwife will return to his home and the news will go far and wide about the new birth. Hot fomentations are applied to the mother to accelerate uterine contraction.

Onabamiro lists some of the advantages of native midwifery:

- (a) The astonishing psychological effect of the medicine man's incantation.
- (b) Continuous physical labor during pregnancy help keep the baby small for delivery.

- (c) Presence of friends at labor cheers the patient and puts her into a good psychological state.
- (d) Constant pain incurred during work during pregnancy makes labor pain less.
- (e) Minimum interference with the general "natural birth" system at labor prevents puerperal sepsis.

Disadvantages:

- (a) Danger of complicated pregnancies--face and brows presentation, interlocking twins, oblique presentation etc. which non-interference can hardly solve.
- (b) Extra-uterine pregnancy which a western medical doctor can work at.
- (c) Large headed fetuses presenting problems.
- (d) Danger of lack of fresh air in the congested inner rooms of labor.
- (e) Infection to umbilical cord during labor.
- (f) Long exposures of babies in changed temperature environment without immediate attention.
- (g) Danger of disease from many visitors handling the baby.¹

Although highly abridged, the above is a summary of what Onabamiro has to say on the native midwives of some West African countries.

The National Committee for the Defense of Children, after their meeting in Geneva in 1952, published a little pamphlet, "Children of the British Colonies." This booklet discussed at length the problems of children in the then British colonies, of which Nigeria was one. The report on Nigeria stated:

¹Ibid., pp. 23 to 42.

"The most terrible thing about the children of Nigeria can be put in a twelve-word sentence:

They are fortunate if they live beyond the age of five years.

Consider the following facts about children of the Nigeria Province:

- 21 in every 100 children die in their first year.
- 32 in every 100 are dead at the end of the second year
- 40 in every 100 are dead at the end of their third year.
- 51 in every 100 have finished their lives at the end of the fifth.

These are figures for only one province, but they reflect the state of affairs in others." ¹

Figure II shows the difference between mortality rates in France and two African countries. ²

The committee during their meeting, probed into the "whys" of such high infant and child mortality in Nigeria. To do this, the Committee examined the Nigerians' ways of life before they had contact with the Europeans. The following is a comparison of the Nigeria of the past and the present.

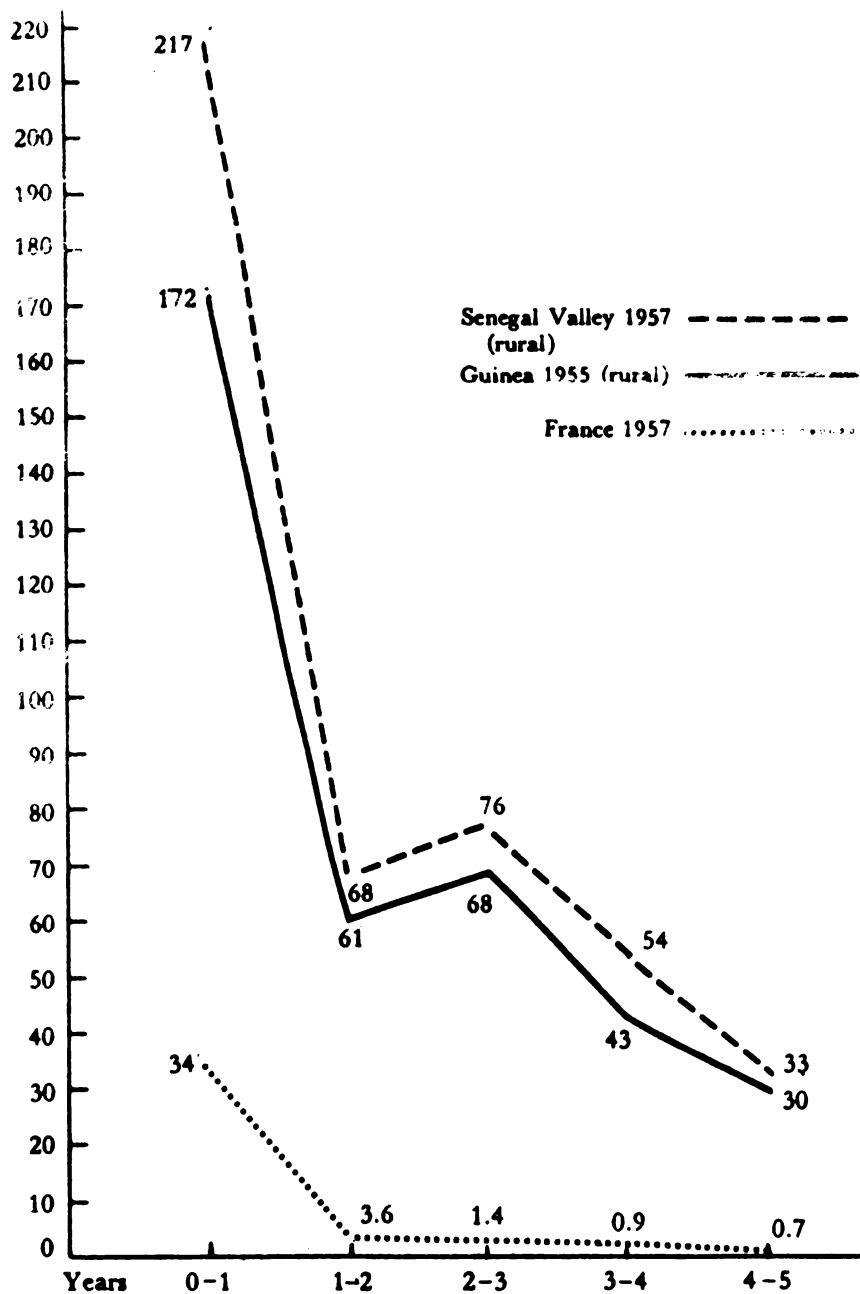
"Consider, for instance, this description of a Nigerian town in 1688 before the slave trade really got under way. It refers to the city of Great Benin, as it was called by the Dutch:

This town, including the Queen's Court, is about five or six miles in circumference.... The town has 30 quite straight streets. Each is about 120 feet broad, and into these come many broad, but somewhat smaller, cross streets. The houses stand along the streets in good order, close by one another, as in Europe, decorated with gables and steps and covered with palm or banana leaves. They are not high, but generally big, with long halls

¹National Committee for the Defense of Children, "Nigeria" Children of the British Colonies, Deaner Printers Ltd. (T.U.) London, (Undated) p. 4.

²Sicault Georges "The Needs of Children," U.N. Publication, The Free Press of Glencoe, New York 1963, p. 31.

Figure II. Mortality Rate by Year (1-5 years). Two Areas of Africa versus Metropolitan France



Source: *Etude des besoins de l'enfance au Sénégal* (Needs of Children Country Report No 20 May 1961, p. 50).

inside, especially the houses of the nobles; also with many rooms whose walls, made with red earth, they wash and scrub in such wise and so smooth that they shine like a mirror. The upper stories are also made of the same clay.

In each house to be found a fresh water well! Indeed, they are beautifully built...."¹

Compare that with a 1947 description of Lagos, Nigeria's second largest town, in a report of the Medical Officer of Health:

"Of the 9,673 dwellings in Lagos Island a total of 5,765, or approximately 60 percent, are either unfit for human habitation or are constructed of prohibited materials, i.e., bamboo or galvanized iron.

In the poorer parts of the town narrow and torturous alleys wind through a labyrinth of crazy shacks with dark, cavernous rooms, each one of which may house several families; every inch of space is utilized and in some places noisome corridors are partitioned into living rooms by the simple expedient of hanging grass mats at intervals from the roof."²

Also, considered by the council was the Nigerian's standard of living.

"For one reason consider the parents, their lives and surroundings.

To bring up a healthy family you must have at least a living wage. Poor wages mean poor food, poor food means poor children.

The 1950-51 report of the Government Labour Department in Nigeria has some interesting details about wages. It shows that 64,446 labourers from various industries earned an average of £2.8s.10d a month, or 1s.10½d a day. What of the skilled men? Well 24,287 skilled workers and craftsmen earned £6.4s.7d a month, or 4s.9½d a day."³

A pound is \$2.80 American money.

Poor nutrition is the next important problem of the Nigerian children.

¹National Committee for the Defense of Children, op. cit., p. 5.

²Ibid., p. 5.

³Ibid., p. 6.

"The babies are at a nutritional disadvantage from birth onwards, remarked a medical officer in Nigeria. Or in less professional terms, Nigerian children do not get enough to eat from the day they are born--and they are born weak because their mothers were half starved before they were born."¹

Along with poor feeding goes poor housing... "insanitary alleys, the hovels unfit for habitation and terrible overcrowding of the towns. In the rural areas the African baby finds itself in an ill-ventilated smoky mudbrick or wattle hut."²

Another topic discussed by the National Committee was the health conditions of a child. The deadly diseases of malaria, tuberculosis, diarrhea, etc. are frequent and fatal enemies of the Nigerian children. In addition there are the horrors of skin diseases and the biting and burrowing insects of the tropics.³

"...from the time it is born it will be bitten daily innumerable times by the mosquitoes in the hut...when it is laid on the floor to crawl the minute larvae of the tumbu fly will enter its skin at any time, and at night the Congo floor maggot and ticks will puncture its skin to live on its blood.

When it is a little older and can walk about inside the house, jiggers will burrow under its toenails; outside the hut its feet will be penetrated by the larvae of the hookworm and other worms living in the contaminated soil.

When its mother takes it to the stream to wash it, the larvae of the bilharzia worms will go through its skin while it is in the water. As it sits beside the washing place before or after bathing it will be bitten by tsetse flies or horseflies and vicious black gnats and here, as before, the hookworm and other larvae will enter its skin."⁴

¹Ibid., p. 7

²Ibid., p. 8.

³Ibid., p. 9.

⁴Ibid., pp. 9, and 10.

The Nigerian children with all these terrible conditions have very limited health service. "The report for 1950 on Nigerian medical services says the Government medical service then had 233 doctors and there were another 180 mission and private doctors. Nurses numbered 1,553. This means roughly one doctor to 77,400 people and one nurse to 19,300."¹ There are many rural areas in Nigeria today where modern trained doctors have never been heard of.

The next set of literature reviewed for this study was the United Nations and World Health Organizations' publications on the issues related to mortality among children. These reports, though scanty and mostly approximations, give some indication of what happens to the children in the underdeveloped areas of the world. Mortality rates in the underdeveloped countries are generally high. The table below shows estimated average crude births, death, and natural increase rates for the world by regions, 1956-1960.² From Table 6 one can see that the death rate in tropical Africa is higher than in any other world region.

Other vital statistics for some selected countries in different areas of the world is shown in Table 7. Note on this table how the infant mortality rose along with the births in each year in Nigeria, in Mexico, and Bombay, while this fluctuated for the other countries.

The recent United Nation's publication, The Needs of Children³ edited by Georges Sicault, discussed some problems of children of less developed areas of the world:

¹Ibid., p. 11.

²1963 Report on the World Social Situation, U.N. (E/CN. 5/375 Rev. 1 ST/SOA/52) U.N. publications, 1963, p. 10.

³Sicault, G. The Needs of Children, The Free Press of Glencoe, New York, Macmillan, New York: London 1963.

Table 6. Estimated Average Crude Birth, Death and Natural Increase Rates *For the World, by Regions, 1956-1960

	Birth rate	Death rate	Rate of natural increase
World	36	18	18
Africa	47	25	22
Northern Africa	45	23	22
Tropical and Southern Africa	43	27	21
America	34	13	21
Northern America	25	9	16
Middle America	42	15	27
South America	42	19	23
Asia	41	22	19
South-West Asia	48	22	26
South-Central Asia	41	24	17
South-East Asia	41	21	20
East Asia	40	20	20
Europe	19	11	8
Northern and Western Europe	18	11	7
Central Europe	19	11	8
Southern Europe	21	10	11
Oceania	24	9	15
Union of Soviet Socialist Republic	25	8	17

Source: 1961 Demographic Yearbook, United Nations publication, Sales No. 62, XIII, table 2.

*Births, deaths or natural increase per year per 1,000 population.

Neonatal (0-1 month). The governments of the developing countries stress the problems of high neonatal mortality, which may reach 30 per thousand live births. The fact that few women receive care during pregnancy, especially in the rural areas, is an important contributing factor. For example, in Mexico, despite a considerable amount of progress in this respect, only 15 percent of expectant mothers receive medical care before delivery; in Thailand, only 20 percent.

In the cities, more and more women go to hospitals or maternity centers for their confinements, but the number of beds is entirely inadequate. In the rural areas, most deliveries are handled by untrained, traditional birth attendants. Hemorrhage, infection, and difficult labor, complicated by anemia, are responsible for many maternal and neonatal deaths.

Post-neonatal (1-12 months). Infants, like older children, are susceptible not only to childhood diseases, but to most of the infectious diseases that threaten adults. Malaria, while sometimes of secondary importance, may do great damage before the child acquires partial resistance to the disease. Infantile diarrheas, dysenteries, and other diseases related to unhygienic conditions are widespread and are a principal cause of infant mortality in all the less developed countries. (In Mexico, it is estimated that 15 out of every one thousand infants die of diarrheal disease in their first year.) Malnutrition and undernutrition in all their forms can be found in very young children (see page 40) and are often either the principal or a contributing cause of death. Acute tuberculosis appears to be most common in large cities, where overcrowding facilitates its spread. Syphilis is not only a factor in sterility, miscarriage, and still-birth, but a significant cause of infant mortality. Some diseases that have to all intents and purposes been wiped out in a good part of the world--smallpox, for example--still contributes significantly to infant mortality in certain regions.

Preschool (1-4 years). In countries where high health standards have been achieved, mortality among children of this age group has declined dramatically in the last fifty years. In the less developed countries, on the other hand, mortality is still relatively high among preschool children. In part, this is owing to the prevalence of communicable diseases of childhood and common intestinal and respiratory diseases--diseases whose incidence has been sharply cut in the developed countries by techniques of preventive medicine such as vaccination. Malnutrition also plays a considerable role in preschool mortality. In the underdeveloped (as in the developed) countries, it should be noted, children of this age are especially liable to accidents.

School age. From the age of five on, mortality rates for children in the less developed countries drop sharply. Sickness is still common, but better health rather than survival becomes the dominant health problem.¹

¹ Ibid., pp. 29 and 32.

4. Ardener¹ did research among the Bakweri women in Western Cameroon. The Bakweris live in Southwest Cameroon Republic. They live near the coast east of Nigeria and are about 300 miles away from Nsukka where this study is made. Ardener, in the fertility part of his study, looks into the various aspects of reproduction.

(a) He gave the following estimate about fertility rate among the Bakweris as a whole and fertility rate among the young generations as opposed to the older generation.

"The mean total fertility of women over fifty years, that is the number of live births per woman living through the child-bearing period (termed by Lorimer the Maternity Ratio), was 4.51, which may be compared with figures in the order of 5.50 or 6.00 computed for several African peoples. Lower figures than that for the Bakweri have been estimated, for example, for the Baganda and Bahaya of Uganda (between 3.00 and 4.00) which, however, constitute a recognized area of low fertility.²

(b) Ardener next looked into the rates of miscarriages and stillbirths among the Bakweri women.

"As a result of this semantic problem, out of 420 failed pregnancies only seven could be indisputably identified as stillbirths. The subject was clearly a painful one and it seemed humane not to insist on the distinction, despite, its scientific interest and importance. The data for all 'failed pregnancies' combined are therefore set out in Table 42. The combined miscarriage and stillbirth rates were: (a) 112.15 per 1,000 completed pregnancies, and (b) 455.5 per 1,000 women ever pregnant. Similar rates for Fortes's Ashanti sample would be (a) 74.76 per 1,000 completed pregnancies and (b) 344.55 per 1,000 women ever-pregnant. For the Bahaya (from small figures) the value for (a) would be only 62.79 per 1,000 completed pregnancies.³ Such evidence suggests that the Bakweri rates are quite high.

¹Ardener, E. Divorce and Fertility: An African Study, Oxford University Press, 1962.

²Ibid., pp. 48 and 49.

³Ibid., p. 51.

Table 7. Infant Mortality in Three Regions of the World

AFRICA				LATIN AMERICA				ASIA			
Nigeria Lagos		Kenya Nairobi		Mexico Mexico City		Brazil Rio de Janeiro		India Bombay		Jordan Amman	
Years	Natal- ity	Mort. Infant	Natal- ity	Mort. Infant	Natal- ity	Mort. Infant	Natal- ity	Mort. Infant	Natal- ity	Mort. Infant	Natal- ity
1956	14,989	1,170	2,935	383	123,079	6,734	63,053	7,472	87,074	8,728	7,571
1957	15,922	1,277	3,286	98.3%	108,677	8,006	67,637	7,069	87,138	9,571	9,229
1958	17,186	1,358	3,717	334	-	-	64,921	7,236	91,666	10,058	10,618
1959	19,794	1,508	-	-	139,204	10,633	71,953	6,795	110,270	10,188	-

(Table was compiled from the World Health Organization's Annual Epidemiological and Vital Statistics Reports of 1956 to 1959).

Table 8. Average Fertility by Women's Ages at the Time of the Study.*

Present Ages of Women	Bakweri (a)	Fouta Djallon (b)	Ashanti (b)	Buganda (b)	Buhaya (b)
-20 years	(0.94)	0.48	0.50	0.31	0.45
20-24 years	1.79	1.92	1.58	0.90	1.19
25-29 "	2.25	3.22	2.36	1.74	2.11
30-34 "	2.62	4.43	3.58		
35-39 "	3.06	4.81	4.75		
40-44 "	3.31	5.67	5.46	2.38	2.23
45-49 "	4.06	5.05	5.96		
50 years and over	4.51	5.50	6.23		
45-59 years				2.92	3.31

*Adapted from Ardener's Study, pages 48-49.

(a) Inflated by omission of females without conjugal experience.

(b) Sources: Fouta Djallon: Blanc, p. 120.
 Ashanti: Lorimer, pp. 76, 309 and 312.
 Buganda and Buhaya: Lorimer, p. 309.

Table 9. Failed Pregnancies (Miscarriages and Stillbirths Combined) by Women's Present Ages*

Present Ages (years)	Failed Pregnancies	Women ever-Pregnant	Completed Pregnancies	Failed Pregnancies per 1,000 women ever-Pregnant	Failed Pregnancies per 1,000 Completed Pregnancies
15-19	16	70	99	229	162
20-25	40	107	251	374	159
25-29	67	109	342	615	196
30-34	61	105	407	581	150
35-39	64	91	394	703	162
40-44	24	74	319	324	75
45-49	39	85	433	459	90
50 and over	109	281	1499	388	73
TOTAL	420	922	3744	456	112

*Adapted from Ardener's Study, page 51.

On the other hand, if it were arbitrarily assumed that miscarriages were to still-births approximately in the ratio of two to one (as in Ashanti and Bahaya), a figure for (c) the number of still-births per 100 births of the order of 4.0 is obtained, which although high by European standards if assumed to equal miscarriages the figure would be 5.9, which may be taken for practical purposes as the upper limit of the rate derivable from these figures."

5. Also studied was V. A. Oyenuga's review of Dr. Nicol's research in infant mortality among children in the North of Nigeria.

"For when the survey was carried out in that province, 21 percent of the children born there died in the first year, 32 percent were dead at the end of the second year, 40 percent at the end of the third year, and fifty-one percent at the end of the fifth year.

The death rate and the viability of the young is a useful index for assessing health in any given community. The number of deaths in the first year of life per one-thousand live births is known in health science as the infant mortality rate. The infant mortality rate for six of the technically advanced countries of the world in 1949 are as follows:

Per 1,000		Per 1,000	
Holland	27	Canada	43
New Zealand	24	United States	
Australia	25	of America	31
		England and	
		Wales	32

Reliable figures are not available for Nigeria since compulsory registration of births and deaths is not in practice except in Lagos. Even here the figures available must be taken with much caution since widespread evasion of registration is practiced. The following figures from the Health Department of Lagos Town Council show the very high rate of infant mortality in Lagos for 1950.

Per 1,000	
Birth rate	55.9
Death rate	16.2
Infant mortality rate	85.7

In a number of villages and towns surveyed by Dr. Nicol in the Northern Region and by Professor Brown in the West, and following estimated figures of infant mortality rates are revealing.

North		West	
Bida	254	Illu	428
Kontagoro	357	Ibadan Town	277
Zuru	381	Ibadan Villages	294

These figures of high mortality rates show that the Nigerian infant has poor life expectancy. There is no doubt that with better food for the mothers and infants they would be better able to withstand the attacks of these high mortality rates. Even in cases in which the attack of these diseases are cured those so kept alive are still unfit and feeble because of malnutrition." ¹

Conclusion

The literature thus far cited has revealed, among other things, that maternal and infant mortality in the underdeveloped areas of the world are higher than in the developed ones. This is, however expected, because the well-being of a mother and her infant depend greatly on the mother's social and economic level as well as the level of medical care available to them. The above facilities are very limited for an average person in the underdeveloped countries of Africa, Asia and Latin America, hence the high mortality.

It is also evident from pregnancy histories and maternal records of different nations that the period of reproduction is one of risk for many women. This risk accrues from the extraordinarily heavy physiological demands of pregnancy, parturition and lactation which often are accompanied by complicated health hazards. In Nigeria the

¹V.A. Oyenuga, Our Needs and Resources in Food and Agriculture Published by the Federal Ministry of Information 1959, Lagos, Nigeria.

risks of reproduction are made worse by the population's various beliefs and customs; lack of education for the majority of the people, very limited amenities and most of all the poor sanitary conditions of most homes.

The rate of infant and maternal mortality is often used as a yard-stick for measuring the general standard of living of a population. It was evident from the foregoing literature review that as a nation improves its standard of living by mass education of its people and advancement in science and technology, the reproduction risks and many other complications of child-rearing decrease considerably. For example, maternal mortality in the United States of America dropped from 100 deaths per 1,000 live births in 1915 to less than 40 per 1,000 in 1946. That of infant mortality also dropped from about 90 (per 10,000) in 1915 to about 15 per 10,000 live births in 1946.¹ This drop has been consistent in the United States since then.

The reviewed literature gives some insight into the multiple causes of high infant and maternal mortality in the less developed countries. In these countries, the level of sanitation, public health, and nutrition is low and inadequate and therefore reduces body resistance of both the mother and child to diseases. Even without prematurity or other neonatal handicaps, the infant who does survive the difficult process of birth probably does not have, after the first month of birth, a chance of surviving equal to that of infants in the more favored countries. For the infants in these countries face the problems of infectious diseases such as ekiri, an acute form of

¹Toverud, Stearns and Macy. Maternal Nutrition and Child Health an Interpretative Review: National Research Council, National Academy of Science Bulletin No. 123, Washington, D.C., Nov. 1950, pp. 9 and 21.

diarrhea which causes a high number of infant deaths in Japan; infantile beriberi in the Far Eastern countries; pellogra and rickets, amoebiasis, tuberculosis, typhus, malaria and Kwashiorkor (protein deficiency) in Africa; and widespread incidence of dysentery diseases, acute respiratory infection, and tuberculosis in South America.

It is therefore hoped that as these countries improve their general standard of living, and educate the masses of their population, the infant and maternal mortality will decrease. The relative priority of these various areas of need, and the relative priority which can be accorded to this group of needs as a part of the much wider over-all needs of mothers and children in all fields, are questions to be answered by the governments and peoples of the countries concerned, with due regard to the welfare and well-being of their young generations.

With the purpose of the study as stated in chapter one, the literature review in the preceding chapter, and the study which is to be described in detail in the next chapter the author hopes that an explanatory study of this kind will make the people responsible for such improvements more conscious of the facts of these situations and their specific areas of existence.

PART III

PROCEDURE

Introduction

The basic philosophy of the University of Nigeria at Nsukka calls for expert planning to meet the University's commitment to improve the surrounding community and the rest of the Nation. This study, although initiated by the Sociology department, is being used by almost all Departments of the University. For example, with the study data and information, the medical department will be better able to plan its health programs; the engineering carry out work of construction of roads, public facilities and other projects like sewage disposal; improve family living i.e. housing, nutrition and child care programs; the agriculture department its food production; and so with other departments of the University. In addition to the above areas of participation which brought about this study, funds were also made available by a grant from the United Nations to study both infantile and maternal mortality.

Many people were involved in the study. The following is a list of those whose contribution was considerable: the area district officer who gave area maps; Dr. M. Hill, director of study and one of the formulators of the questionnaire; Mr. Blount of the U.S. Peace Corps who remapped the study area; Dr. M. Kirkland of the Home Economics department who assisted in formulation of the questionnaires;

the author and a number of assistants drawn from the staff of the local primary school staff.

This part of the study fits into the general scheme of the "Nigersity Study" in that it links the first carried out by Nancy Axinn in 1963, and the parts to follow. The first part dealt with patterns of activities among homemakers. The present part deals with infant and maternal mortality, child-bearing and rearing practices of the same people. The later parts may deal with demographic and social records which, in turn, will serve as basis of evaluating the University's impact on people in later research.

Development of Interview Schedule

The researcher gained some insight into the issue of infant mortality and other mishaps of pregnancy in Africa from various literature and health reports, some of which have already been cited in the literature review. This as well as the researcher's observations while working in Nsukka communities, form the basis upon which parts of the questionnaire were formulated. (See questionnaire at the end of study, Appendix I) Identification information, and a series of open-ended questions relating to pregnancy, child-birth and infant mortality were asked.

Refining the Interview Schedule

The researcher, though a Nigerian, and an Ibo too, had difficulties in understanding Nsukka Ibo. The women respondents also found it hard to understand the researcher's dialect. Therefore, several visits were made to many homes in the Nigersity communities with some elementary-school teachers and some students from the University of Nigeria who were indigenous of the area. These people helped a great deal to clarify some communication problems between the

researcher and the respondents. Also, a number of visits were made in company of WHO health and maternity nurses from WHO's Health Centre in Nsukka. Sister Leedham, who was in charge of training of these nurses including the student nurses, gave me some insight regarding the population's attitudes toward pregnancy and children. The contribution of these people helped in refining the schedule.

The researcher worked as an extension agent at the time the interview schedule was being refined. Quite a lot of information regarding pregnancy and children was gathered during the community classes among the women. Also, very helpful to the research was guidance from Dr. M. Kirkland, Head of the College of Home Economics and Dr. M. Hill of the Department of Sociology, both of whom I have already mentioned.

Testing the Instrument

Contact was made with a few women in the researcher's community classes. Social home visits were arranged during these. The researcher had the opportunity to both observe and converse at length on the issues raised in the questionnaire. Three visits were made, one to St. Teresa's Catholic hospital where the researcher interviewed a midwife who was a native of Nsukka. The other two visits were with two women who were members of researcher's community classes at Ibagwa and Obra villages, respectively. The discussions during the visits and some reactions of these women gave further insight as to how some of the questions should be framed.

Sampling

Originally, it was hoped that the sample would be drawn randomly from the base map developed for the purpose of the study. Owing to the difficulties which the researcher ran into during the collection

of data, however, the sample is non-random. These difficulties are explained in the data collection section. The respondents were from about twelve different villages around the University site. The distances between the University and these villages range from a few yards to twelve miles. Of the 96 subjects involved in the study, 24 came from Ofoko, 20 from Edem Ani, 13 each from Obra-Imilike and Onu Iyi, and 11 from Odenigbo. (See positions of villages on the map at the end of study) The other seven villages each had one or two representatives in the study. Most of the people involved in the study were members of the researcher's community classes. They came from various socio-economic levels. A few of them had received a little formal education, but most were illiterates. Because of great diversities in the culture of many African communities, it is not wise to consider this group as highly representative of Nsukka division, let alone Nigeria as a whole. Nevertheless, findings from this group can indicate some basis on which a more extensive survey could be made.

Data Collection

Data were collected by the researcher herself between March and June, 1962. During that period, the researcher was a full-time employee of the University, teaching adult community classes in 12 different villages around the University of Nigeria and also assisting a few classes in the College of Home Economics. The researcher made appointments to interview the subjects in their homes. Most of these appointments were made after the community classes with the women. The evenings of non-market days and Sundays were preferred by the women. Some women in the researcher's classes preferred to come into the University for the interview. This was an exciting experience for many of them. Other interviews carried out around Nsukka town were

arranged individually with the women in their home at times convenient to them. The visits made in St. Teresa's Hospital in Nsukka were arranged with the Sister doctor in charge, and appointments were made to interview those patients who were willing to respond.

It was mentioned earlier that the researcher ran into some difficulties when collecting the data. These were in connection with the respondents' unfavorable attitude toward any stranger taking notes before them. This attitude stemmed from their experience during the early days of British administration when formal taxation was introduced. Government officers carried papers about counting people, livestock and peoples' property, after which people were asked to pay tax according to the number of adult males, livestock and property. These incidents which had since been repeated several times made many people suspicious of any stranger who carried paper around asking such questions as "How many children are there in your family? What is your job? How much do you earn in a year?" etc. These were some of the questions posed in the study. Similar questioning started the Aba women riot in 1929.¹ The Nsukka people are generally kind and warm to strangers, but not many of them welcome the idea of people probing into their private lives as the study tended to do. As a matter of fact, this characteristic is not only true of the Nsukka district, but true of nearly every district in Eastern Nigeria.

Because the researcher was met by these obstacles during the first few weeks of the interviewing when she was following the tract

¹Sylvia Leith Ross, African Women - A Study of the Ibos of Nigeria: Faber and Faber Ltd., London 1934, pp. 23-39.

map developed for the Nigersity study, she later dropped the use of the interview schedule with certain respondents. Despite this, many respondents were very suspicious of the researcher's queries and tended to be highly reserved.

Another circumstance that seemed to produce restraint and a suspicious attitude on the part of the respondents was the nature of the study itself. It is not common for the Ibos to openly discuss matters concerning pregnancy, childbirth and deaths in their family. Such matters are often discussed in private with the elderly members of the family, not in presence of youngsters or strangers. Besides, there is the general belief that counting the number of children one has either provoked the anger of the gods who send them to you and they take them back; or arouse the jealousy of neighboring enemies who may kill the children through witchcraft. This was disclosed to the researcher by some student-respondents in the researcher's community classes.

A few of the women who were also the researcher's community students accompanied the researcher when she was interviewing in their neighborhoods. In most cases, however, the researcher went round the villages with local primary school teachers. These teachers, who were natives of Nsukka, not only helped to convince the women to respond to the queries but also helped to clarify some language difficulties between the researcher and the respondents.

The above mentioned circumstances including the fact that the questionnaire was fairly long and took two to three hours or more to finish, made it difficult to complete more than the 96 forms. The researcher made more than one visit to some homes in order to complete their forms. Many people received her at second or third visits.

But there were places where she found deserted compounds or locked doors on the appointed dates. There were about 31 uncompleted forms which are not included in the data. (see an account of an incident between a researcher and a respondent on page Appendix II (a).

The researcher spent about four months in the Nsukka area before beginning the interviewing. Teaching the adult women community classes, and visiting many of the students homes gave her the opportunity to be familiar with many of Nsukka greetings and other formalities expected in various situations. So, on entering any compound, she usually went round greeting people, shaking hands and paying respects to the oldest members of the family, carrying and hugging the children that ran after her, and finally settling down with the woman she came to interview at the woman's work place. Sometimes children, husband and other neighbors stood by. The researcher often introduced her topic thusly: "Some of you who know me, know that I work in the University. This University which is on your land, and being supported by part of your husband's tax money, needs some contributions from you other than money and land. The people who are working in the University consider it necessary that this University should include in her teaching the customs of the land. Many of us who work here have either studied in European or American universities. Education in any of these countries is patterned after the cultures of the people of those countries. Therefore, for this University to be Nigerian we must incorporate the Nigerian cultures in our teachings. That is why I am here today asking these questions."

The above sermon-like speech was the researcher's most powerful weapon for the interview. For those respondents who could understand what this meant, one could see the glow on their faces as they

responded to the questions enthusiastically.

The part of pregnancy history of the questionnaire seemed to be most embarrassing to the respondents. Quite often, when the researcher got to that section of the interview, she requested politely the absence of men and children in the room. And the respondents often felt freer when they were gone.

In the light of the situations enumerated above, it is hoped that anyone interpreting the results of the interview will be limited in his or her conclusions rather than over-generalize some issues raised in the study as being typical of Nigeria or the rest of Africa.

PART IV

ANALYSIS OF DATA

The analysis of the data has been done in simple descriptive form supported, occasionally, by findings of earlier research in the field. Some interesting remarks of the respondents have been discussed in order to clarify and reinforce the data. Where possible, some of the results are given as percentages of total sample population.

Section I: Description of Respondents

The description of the respondents was made under the headings of (a) ages, (b) mobility pattern, (c) religion, (d) language and education.

Ages:

Most respondents did not know their ages since no birth records were kept. Consequently, many of the ages given were estimates. Table 10 gives the age range of respondents' estimates.

Table 10. Estimated Age Range of Respondents

<u>Age Ranges</u>	<u>No. of Respondents</u>
15-44 years	72
45 years and over	24

From Table 10 it can be seen that the lumping of respondents in the age bracket of 15-44 years is not too explanatory. It would have been clearer if the range had been broken down into ten-year

intervals. But the questionnaire was framed in the two categories given in Table 10. Therefore, further conclusions, though desirable, could not be made. The author is of the opinion that this block of 15 to 44 years was chosen because this was considered to be the more reproductive years of women.

Mobility Patterns:

Most subjects in the study had never lived outside the Nsukka district: i.e. 72 out of 96 (about 62%) of the total population of the study. Twenty-one out of 96 (about 23%) came from elsewhere in Eastern Region of Nigeria, while the remaining two came from Western Nigeria. Ten out of the 24 subjects who were not born in Nsukka district had been there only 6 months to 2 years. This probably indicates that some of these ten must have migrated to Nsukka to seek employment since the establishment of the University.

Religion:

Although more of the subjects in the study belonged to the Christian religion, there were some of other faiths. Table 11 gives this religious breakdown.

Table 11. Respondents According to Religions

Christian			Unclassified Christians	Traditional*	Others
Catholics	Anglican	Other Protestants			
33	12	6	2	38	5

*Traditional religion is defined here as any deity of the people; e.g. the gods, spirits and ancestors which the people worship.

Looking at Table 11 one sees that Catholics (33) make up a majority of Christians in the study. It is also noteworthy that traditional religion still features prominently among the Nsukka people.

Language and Education

Everyone in the study except 7 (who are not recorded) spoke Ibo dialect of one kind or another. Forty-one subjects spoke Ibo without designation, 24 spoke Nsukka dialect, while the other 24 spoke both Nsukka Ibo and others. Six subjects could not read or write any language. Twenty-one subjects both spoke and wrote native language, another non-African language and English. Five of the subjects were unaccounted for. Of the 96 subjects in the study, 63 of them never attended school--65% of the sample. Thirty-three subjects had formal education ranging from primary I (1st grade in American classification) to class V secondary school, (12th grade in American equivalent). Of the 33 subjects who had formal education, only one got to the secondary level. The rest stopped between I and VI. The number of illiterates (illiterates here means those who said they could not read or write any language) in the sample was expected and it is even interesting to find 32 percent literate in this group, which is relatively high, compared with 25 percent as given by the Federal Ministry of Information for Eastern Nigeria.¹

It is interesting to note from the data that there was only one woman out of the 96 who was separated from her husband. No divorce was recorded at all. Another interesting thing is that 84 of the 96 women (72.4%) were in monogamous marriages. There were 8 households with 3 wives. This distribution is far from what the researcher expected. The general consensus is that many homes in Africa are polygamous. The present data leads us to want to examine the consensus more systematically.

To summarize, the sample comprised of 96 women from different villages around the University of Nigeria, Nsukka. Ages ranged from

¹Federal Ministry of Information. "Facts About Nigeria," Lagos, Nigeria 1960.

19 to 45 years and over. Everyone in the sample was a full-time housewife. The majority (72%) of the 96 women came from monogamous households. Sixty-two percent of the sample had never lived outside Nsukka. Most people involved in the study, except seven, were Ibos. About one-third of the study population could read and write. Slightly more than half (54) of the subjects were Christians, and over a third (38) belonged to the traditional religion.

Section II: Subjects' Opinions on Best Number of Children

The attitudes of the women toward children was one of the things the study sought. The subjects' responses to the best number of children a family should have were as given in Table 12.

Table 12. Preferred Number of Children

<u>No. of Children</u>	<u>No. of Respondents</u>
2 to 4 children	1 person
5 to 7 children	29 persons
8 to 10 "	20 "
11 to 15 "	10 "
16 to 20 "	5 "
Unlimited children	31 "
	<u>96 Total</u>

Table 12 shows that the popular numbers of children wished by the respondents are from five to ten; 49 out of the total of 96, i.e. about 51 percent fall within this range. Fifteen subjects wished anything from 11 to 20, while the rest of the subjects except 1 person who wished 2 to 4 children gave general answers like "unlimited, as many as God gives."

Respondents wishing more or fewer children than they already had, were asked the reasons for their respective wishes. Table 13 shows the distribution for these responses.

Table 13. Reasons for Choosing Number of Children

Number Wishing Fewer Children	Reasons	Number Wishing More Children	Reasons
6	No money and food to maintain them	12	Need plenty, some may die
		4	Personal security in old age
		5	Prestige and economic benefit in large family
5	No money to give them proper education	18	General positive answers, e.g. "Likes children, what is God's will."
*Totals 11		39	

*Note that in this table only 50 out of the 96 subjects gave the reasons for their choice.

One hesitates to draw a conclusion from this distribution, for a number of reasons. Already mentioned is the fact that this study is bilingual and also directed by a person from a Western culture. Let us consider the ambiguity of this question, "In your opinion what is the best number of children that a family should have?" "A family" as it is understood in the Western culture is a unit of husband and wife with their immediate children. This is different from an average Nigerian's notion of the word. To a Nigerian, a family consists of a husband, wife or wives, their children, father and mothers-in-law, brothers, sisters, etc. of the extended family unit. A Nigerian woman also regards the children of her husband's other wives as hers. So, it is likely that some respondents who answered ten to twenty children

or "Unlimited number" might have been operating under this frame. "Household" as used in this study is a unity with mother, father, children and other relations of either husband or wife.

The researcher sought the opinion of the women concerning the effect of bearing another child on the respondent's health and the family's economic condition. Five women felt that bearing another child would affect their health; six felt it would affect their economic situation; 7 women gave the combination of health, economic and physical appearance as being affected; while the majority 78-- (81.2%) felt it would neither affect their health nor their economic situation.

Normally, one would expect that the physical and economic demands of pregnancy and rearing more children would make a difference in a family's decision for more children. But, the majority of the subjects responded to the contrary to the expectation.

The researcher's observation to this apparent contradiction is that many Nigerian women, due to their limited knowledge of pregnancy and lactation processes, and lack of a knowledge of adequate nutrition at such times, blame such troubles like anemia etc. on witches sucking their blood. Hence, to them bearing more children as such brings no economic or physical strain so long as the witches and gods keep their hands off.

The subjects' opinions of the best age for a woman to get married was asked. Some people in Nigeria still believe that a woman should get married early in life in order to produce many children. Also, it was necessary to know the situation concerning people's beliefs in the custom of child marriage which is supposed to be common among the Ibos. Opinion was also sought concerning the time a woman

should have her first child after marriage and the age she should have her last child. The last two questions were necessary to know whether the subjects realized the importance of age as a factor of successful reproduction. One of the reports of the United States National Research Council shows that between ages 10 to 14, and after 40 are most risky periods for reproduction.¹ Table 14 shows the breakdown of the subjects' opinions on the three questions--when a woman should get married, how soon should she have her first child after marriage, and when she should have her last child.

Table 14. Opinions on Best Marriage Times and Times of Having First and Last Children

A		B		C	
Best Marriage Age		Best Time of First Child After Marriage		Best Time of Last Child After Marriage	
Time	Respondents	Time	Respondents	Time	Respondents
(years)		(months)		(years)	
7 or less	2	6-10	7	40 or less	45
8-10	1	11-12	8	41-44	2
11-13	5	13-19	55	45-50	12
14-16	33	19-24	0	51-55	2
17-20	33	24-60	7	56-60	2
21 or more	6	60+	1	No opinion	31
General (when the husband comes	2	No opinion	17		
No opinions	13				
Totals	96		96		96

A glance at Table 14 shows four outstanding features. First, in section A of the table, one sees that ages 14-20 are most often

¹NRC. "Maternal Nutrition and Child Health," National Academy of Sciences: Washington, D.C., Bul. No. 123, 1950, p. 11.

(60) chosen by respondents as best ages for getting married. This shows that most people in the study are shifting from the old custom of child-marriage to a more modern one of marriage in the middle of late adolescence.

In section B of the same table, it can be seen that 13-19 months is chosen by many subjects (55) as the best time for having the first child after marriage. In section C, 40 years of age or less was preferred as the time a woman should have her last child. The number who expressed no opinions on these three questions should be noted. In sections A and B, the differences, though outstanding, are not as distinct as that of section C where 31 subjects gave no opinions. It has already been mentioned that most people in Nigeria hesitate to answer questions regarding age because no age records are usually kept. Therefore, the large number of no opinions in this question may have been due to this factor.

The next point considered along with subjects' attitudes towards age of marriage, time of having first and last children was that of time intervals between births. This is shown by the data of Table 15.

Table 15. Opinions on Intervals Between Births

Length of Time between	After 1st. Pregnancy	After 2nd. Pregnancy	After 3rd Pregnancy	4th Pregnancy
No opinion	4	13	16	18
Unknown	1	11	22	25
From 9 to 19 months	8	5	4	3
" 19 to 30 "	33	25	25	16
" 30 to 42 "	43	37	34	26
" 42 or more "	7	5	4	4
TOTAL	96	96	96	96

Table 15 shows most women clustering more in the periods between 19 to 42 months than in periods over 42 months. Another glance at the same table shows the highest opinions of the women to be between 30 months and 42 months. This result is not a surprise to the researcher. It rather strengthens her observations that most traditional Nigerian women have 2 to 3½ year periods between births.

Some of the women specifically answered with no opinion. Others were recorded as unknown. It is not possible to tell whether the respondents did not answer the question, or if they answered "it is unknown."

It is worth commenting on the large number of the sample who again responded no opinion or unknown. Earlier in the study, the researcher mentioned that many people in the sample resented any questions concerning pregnancy. Most felt that such questions were unreasonable because most matters concerning child-bearing were in God's hands and not within their own command. This probably accounted for the numbers of no responses which kept increasing as the question was repeated for the following pregnancies.

The subjects' opinions concerning approval or disapproval of women working while pregnant, showed that most of the sample population was in favor of having pregnant women work. With 5 women giving no opinion, there were 84 approvals and 7 non-approvals. It is difficult to base any conclusion on this result since work was not specified in the questionnaire.

Summary

1. One-third of the group indicated a preference for an unlimited number of children; while half of the women preferred limiting the number to a range of 5 to 10 children.

2. Not many homemakers in this group are in favor of fewer children than they already have.
3. The majority of the women who wished more children gave such reasons as fondness for children, prestige, security in old age, economic benefits, and likely loss of some of the children.
4. Most women were not satisfied with the number of children they had at the time of study and wished for more. Many felt that bearing another child would neither affect their health nor their economic situation.
5. There were wide differences in opinion among the group as to the age a woman should have her first child after marriage. However, 66 of the 96 women (roughly 68%) chose the ages between 14 to 20 years as the best for getting married, and 55 of the 96 (about 57%) chose 12 to 19 months after marriage as the best period to have the first child.
6. The popular opinion as to when a woman should have her last child was 40 years, which was chosen by 45 of the 96 women. There were 31 who offered no opinion on this question.
7. The most frequent opinion concerning the ideal periods between births was between $1\frac{1}{2}$ to $3\frac{1}{2}$ years. This confirms Onabamiro's¹ observations that women in West Africa resume sexual intercourse with their husbands about $2\frac{1}{2}$ years after bearing a child.

Section III: Fertility and Mortality

This part of the study was the most difficult for the researcher to get responses. Some reasons for this difficulty have already been mentioned. To some women, matters concerning births and deaths of children are too embarrassing or distressful to discuss with

¹Onabamiro, Op. cit., p. 24.

non-elderly members of their family. The little episode narrated in the third part of this study (data collection) illustrated what happened in many cases. Anyway, the researcher was still able to gather some information about fertility and mortality.

The household sizes as recorded from the 96 interview schedules, are shown on Table 16.

Table 16. Household Size

No. of Persons in Household	No. of Responses
1-3 persons	4
4-6 "	44
7-10 "	34
11-15 "	14

It is worth mentioning that these figures were classified for different uses. The original interview schedules were not available for the researcher to refer to the specifics. Therefore, I have used the averages of each of the ranges recorded above for further discussions on this issue. From these ranges, the average number of people in the 96 households is worked out thusly:

Table 17. Number of People in Household

Ranges	Responses	Average No. in each Range	
1-3	4	2	$2 \times 4 = 8$
4-6	44	5	$5 \times 44 = 220$
7-10	34	$8\frac{1}{2}$	$8\frac{1}{2} \times 34 = 289$
11-15	14	13	$13 \times 14 = 182$
	96	Total	= 699

The average of 699 people for the 96 households is 7.3 persons per household. This is relatively high, compared with 3.4 persons given by Tate and Glisson¹ as average family size in the United States of America in 1959.

Similar figures of household averages for an African country are from M.G. Smith's study of Hausa Communities of Zaria Northern Nigeria² and N.W. Axinn's study of "Homemaking Activities in Nsukka" Eastern Nigeria.³ In both studies the averages were worked out in terms of compounds, individual families and work units. Before going on with the averages given by these researchers, it is necessary to define compound, individual families and work unit. Mr. M.G. Smith defines compound as "...a walled or fenced rectangle with an entrance-hut, a forecourt in which a hut or two is usually found and one or more interior divided from the fore-court by fences of matting or walls."

He defines individual family to mean those families which are separate units of domestic economy. Also "work unit" as used by M.G. Smith means a separate unit of domestic economy with common production and consumption of food, a single head, a common pot, a common granary and a common farm.⁴

N.W. Axinn defines household as family group consisting of a man, his wife or wives, their children and other relatives or people

¹Tate, M.T. and Glisson, O. Family Clothing: John Wiley and Sons, Inc. New York, London, July 1961, p. 13.

²G.M. Smith. The Economy of Hausa Communities Zaria, H.M.S. Stationary Office, London, 1955.

³N.W. Axinn. Homemaking Activities in Selected Eastern Nigerian Household, M.A. Thesis, Michigan State University, East Lansing, 1963.

⁴Smith, M.G., op. cit., p. 19.

identifying with that family group.¹ Smith's averages for individual family was 5.17, that of work unit 6.83, and that of a compound was 13.4. The averages worked out from the totals of Table 1, page 41 of N.W. Axinn's study is 8.9. Axinn's definition of household and Smith's definition of work unit come closest to the working definition of household in this study. Therefore, it could be inferred that the 7.3 per household estimated average for this study, Smith's 6.83 of work unit and Axinn's 8.9 of household averages are within the same range.

The total number of children in each household was estimated as follows:

Table 18. Number of Children Living in the Same Household

No. of Children	No. of Responses	Totals
No children	4	-
1 child	11	11 x 1 = 11
2 children	11	11 x 2 = 22
3 children	18	18 x 3 = 54
4 children	16	16 x 4 = 64
5 children	12	12 x 5 = 60
6 children	14	14 x 6 = 84
*7 or more	10	10 x 7 = 70
		<u>Total = 365</u>

*The original interview schedules are not available at the Michigan State University where this analysis is being done. So the researcher cannot know the exact figures of the last responses--"7 or more children" and have therefore used the 7 for the 10 responses.

¹Axinn, N.W., op. cit., p. 5.

From the calculated total number of children living in the same house, the average children per household are 3.8. All children in the households do not necessarily belong to the women by birth. The total number of people estimated in the whole study, including children is 699. Of these 365 were children from 1 to about 14 years old. This means that children outnumbered adults by 31 persons.

The number of children under five years of age in each household ranged as shown on Table 19.

Table 19. Number of Children Under 5 years

Number of Children Under 5 Years Old	No. of Responses
0	30
1 or 2	54
3 or 4	12

Table 19 shows that 66 of the 96 subjects (68.75%) and children under five years of age at the time of the interview.

The number of children who were five to fourteen years old at the time of interview ranged as shown on Table 20.

Table 20. Number of Children 5 to 14 years

Number of Children From 5 to 14 Years Old	No. of Responses
0	10
1 or 2	54
3 or 4	23
5 or 6	7

The above table shows that over half the women in the study had at the time of interview 1 or 2 children in their households who are within the 5 to 14 years bracket; roughly 80% of the 96 women had children within this range.

The total number of children born to informants is worked out by using the range averages recorded in Table 21.

Table 21. Total Number of Children Born to Respondents

No. of Children in Ranges	Respondents	Totals
No child	1	-
1 child	9	9 x 1 = 9
2 to 4 children	33	33 x 3 = 99
5 to 7 children	35	35 x 6 = 210
8 to 10 children	15	15 x 9 = 135
11 to 15 children	3	3 x 13 = 39
		<u>Total - 493</u>

The above rough estimate of the total number of children recorded works out to 5.15 children per woman for the whole sample of 96. This figure, of course, should be interpreted carefully because of discrepancies in obtaining the actual figures. It should also be noted that this figure does not include still-births and miscarriages recorded in the study. Nevertheless, let us compare this figure with what Edwin Ardener¹ estimated in his fertility study of the Bakweri* women and some comparisons he made with many other African countries.

¹Edwin Ardener. Divorce and Fertility: An African Study (Oxford University Press, 1962).

*The Bakweri people live in Western Cameroon in West Africa.

Ardener worked out his estimated 4.51 reproduction rate of the Bakweri women by dividing the "total number of daughters born to women who passed the menopause (say over 50 years) by the number of such women."¹

Considering that the estimated reproduction rate (5.15) for this study was the mean for total number of children born to all women in the different age groups, most of who were still less than 50 years old at the time of interview, the Nsukka women on this basis are more fertile than the Bakweri women. Both Ardener's and the procedure used in arriving at rates/^{given}for this study have their faults and therefore are only good for the information they give for the respective studies. Ardener compares his 4.51 reproduction rate for Bakweri women with the following African countries:

"The mean total fertility of women over fifty years, that is the number of live births per woman living through the child-bearing period (termed by Lorimer (Ghana) the maternity ratio), was 4.51 which may be compared with figures in the order of 5.50 or 6.00 computed for several African peoples. Lower figures than that for the Bakweri have been estimated, for the Baganda and Bahaya of Uganda (between 3.00 and 4.00) which, however, constitute a recognized area of low fertility"²

The 5.15 average children per woman involved in this study falls within the range of estimates made by other African researchers as the above passage reveals.

Another interesting figure concerning fertility rate of African women is that of the Hausas from Zaria province, Northern Nigeria given by Dr. M.G. Smith. For the two areas designated "Z" and "G" where he conducted the research, it was found that 3.01 and 4.00 were the respective fertility averages for women whose ages ranged from 20 to 50 years.³ For women over 50 years the fertility

¹Ibid., p. 52.

²Ibid., p. 52.

rate for "Z" area was 8 live births per woman, while "G" area was approximately 4 live births per woman.¹ Smith's averages for these two areas although less than that (5.15 arrived at in this study, are still within the range of other African countries already cited. However, his rate (8) for women over 50 in "Z" area is higher than Ardener's (5.14) ratio of the Bakweri study.

Mortality

Having considered the number of children who survived out of the total born to the respondents, it may be interesting to know also the number dead per number born. The total number of deaths recorded from total number of children born to respondents is shown on Table 22.

Table 22. Children's Deaths

Number of Children	Respondents	Total Deaths
Unknown	3	-
No deaths	39	-
1 death	25	25 x 1 = 25
2 deaths	12	12 x 2 = 24
3 deaths	12	12 x 3 = 36
*4 to 6 deaths	5	5 x 5 = 25
		<u>Total = 110</u>

*On the basis of this data, the death rate per 1000 births is 210.952. (21.1%) for children ages 0-14 years. Comparing with M.G. Smith's child mortality in the Zaria study which was 7.4% for children 9 years and over, it can be seen that the rate obtained by this study is about 3 times as high.

¹Ibid., p. 173.

Pregnancy History

The pregnancy histories of respondents in the study were recorded up to the 8th pregnancy. Table 23 shows the results.

Table 23. Pregnancy Histories of Respondents

	0	1st	2nd	3rd	4th	5th	6th	7th	8th	Totals
Never pregnant or unknown	10	-	-	-	-	-	-	-	-	-
Aborted or miscarried	-	5	5	2	1	5	1	2	3	24
Stillbirth	-	2	1	1	-	1	-	-	1	6
Live birth, child died less than 5 years old	-	19	9	5	9	8	5	3	2	60
Live birth died from 5 to less than 15 yrs. old	-	0	1	-	-	-	-	-	-	1
Live birth living less than 5 years old	-	10	13	18	8	8	9	13	7	86
Live birth from 5 years to less than 15 yrs. old	-	22	26	33	29	15	12	7	2	146
Live birth from 15 years or older	-	28	22	17	6	5	3	-	-	81
No answer to all the above but pregnancy noted.	-	-	1	1	-	-	-	-	-	2
TOTALS	-	86	77	78	53	42	30	25	15	406

Of the 96 subjects involved in this study, 10 had no pregnancy at all. For the 86 who had pregnancies, the average is 4.72 per woman. The records taken up to 8th pregnancy of the subjects show a total of 406 pregnancies.

Of these 86, 15 women had each had 8 pregnancies

10	"	"	"	"	7	"
5	"	"	"	"	6	"
12	"	"	"	"	5	"
11	"	"	"	"	4	"
25	"	"	"	"	3	"
8	"	had one pregnancy.				

It should be noted that the 406 pregnancies were not the only pregnancies recorded in the study. A few women had more than 8 pregnancies but, owing to the discrepancies involved in coding and handling the data, the rest of the pregnancies were not properly accounted for. Therefore, for further analysis, I will use the 406 as the basis for comparisons.

Table 23 shows that of the 406 total births, 24 were aborted or miscarried. This, if calculated for 1,000 births, will give a rate of 59.1 terminated pregnancies per 1,000 births. Six stillbirths out of 406 will be 14.775 per 1,000 births. Combined still-births and terminated pregnancies are 73.875 per 1,000 births. This rate is lower than Ardener's 112.15 combined miscarriage and stillbirth rate per 1,000 birth recorded for Bakweri women.¹

But 73.875 per 1,000 pregnancies worked out for this study is closer to the rates given for Fortes's Ashanti (Ghana) sample, which was 74.76 per 1,000 pregnancies, and 62.79 per 1,000 for Bahaya (Uganda)².

It was not possible to obtain separately the number of

¹Ardener, op. cit., p. 51.

²Ibid., p. 51.

children who died in infancy. Deaths of children were recorded from 0-5 years old. Sixty children died under five years of age, making the rate 147.778 per 1,000. This is lower than 473 per 1,000 of children in the same age range reported by Davey¹ in his Ibadan lecture in 1958 and also lower than the National Committee's figure (51 in every 100 have finished their lives at the end of the fifth year)² which works out to be 510 per thousand. It is realized that Davey's figures came from Western Nigeria and were gathered 4 years before this study was made in 1962. Both location and time could make a lot of difference in the mortality rates in Africa. The same thing could be said of the National Committee's figure which were ten years earlier, for much improvement has taken place in all aspects of life in Nigeria since then. Even though the figure obtained in this study is much lower than the two cited above, it is high when compared with the 25.2 range for England and Wales.³

From the pregnancy histories of some of the women, it was possible to get the actual ages of first and last pregnancy. Table 24 shows time of first and last pregnancies.

From data of Table 24 it could be seen that many women (71 out of 96) arrive at their non-productive periods between the ages of 40-45. But it is also realized that many subjects were not definite about their ages. Hence conclusions from

¹Davey, op. cit., p. 4.

²National Committee's Council Report, op. cit., p. 4.

³Davey, op. cit., p. 4.

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Table 24. Age of First and Last Pregnancies

Age of First Pregnancy			Age of Last Pregnancy		
Unknown	19		Answers not available (age informant unknown)	19	
Do not remember or questions cannot be answered	2		Questions not appli- cable; informant still childbearing	21	
From 8 to 10 years old	3		Up to 40 years	50	
From 11 to 13	"	3	41 to 45	"	3
" 14 to 16	"	15	51 to 55	"	1
" 17 to 20	"	26	55 to 60	"	2
21 years or older	28				

interpretation of this table can only be done with care. However, this age range seems to fall in line with M.G. Smith's finding of 40-50 years as menopause period.¹

Respondents' opinions on the length of time between pregnancies and the actual time got from pregnancy histories are recorded in Table 25.

A glance at Table 25 shows that most people in the study carried out in practice their feelings of the length of time that should lapse between pregnancies. The average period between pregnancies approved by this group is 2½ years.

¹Smith, G.M., op. cit., p. 173.

Table 25. Opinions and Actual Time Between Pregnancies

Length of Time Between Time	No. of Subjects, Opinion Pregnancies				No. of Subjects Actual Time Pregnancies			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Not applicable or no opinion	5	24	38	53	16	18	31	40
0-9 months	-	-	-	-	1	1	2	2
10-12 months	-	-	-	-	4	7	3	2
13-18 months	8	5	4	3	2	-	-	1
19-30 months	33	25	16	10	20	15	12	10
31-42 months	43	37	34	26	39	28	30	27
42 or more months	7	5	4	4	4	6	7	2
Cannot remember	-	-	-	-	10	11	11	12

Summary

1. The average number of people in the 96 households involved in the study is 7.3 persons.

2. Of the total number of 699 people recorded in the whole study, 365 are estimated to be children under 14 years of age.

3. The average number of children per household is estimated at 3.8. Not all children listed in the household necessarily were born to the woman of the household.

4. It was estimated that 59.1 is the rate for terminated pregnancies per 1,000 births; 14.775 is the stillbirth rate per 1,000 births. The death rate for children up to 5 years of age is estimated 147.778 per 1,000 live births.

5. Two and half years is the average length of time between the pregnancies of the women involved in the study.

PART V

DISCUSSION, IMPLICATIONS AND CONCLUSIONS

Discussion

It is evident from the analysis of the data that the women of the Nigersity area have an estimated fertility rate of 5.15 children per woman. This rate is $2\frac{1}{2}$ times as high as the 2.0 rate given by the World Social Report of the United Nations,¹ for the developed countries of the world. The World Social Reporters often associate fertility levels with various indices of the degree of social and economic development of a country. They assume that a rate higher than 2.0 indicates a lower level of urbanization, average per capita income, literacy rate of the population and mass media communication. On the basis of this, one could infer that the high fertility rate in this study indicates that:

- (a) Nigersity areas are largely rural.
- (b) Per capita income of Nigersity area is low.

Although (a) and (b) are not yet tested empirically, the researcher, through observation of the area and the people, believes these characteristics are true of the Nigersity communities.

- (c) Literacy rate is low, this was substantiated in this study where 65% of the sample population were illiterates.
- (d) Mass media communication is also low. This was indicated in the first Nigersity study carried out by N.W. Axinn.²

¹U.N. Report of the World Social Situation, Op. cit., p. 17.

²Axinn, N.W., op. cit., p. 67.

Some points of interest arise when the high fertility rate among the subjects is related to other significant findings in the study. It is evident that the household size (7.3 each) for the women involved in the study is relatively large. In spite of that, the majority of the subjects (81.2%) wished to have more children.

If we assume on the basis of the high fertility rate of this group that the economic level of the people in the study is low, the question then arises how these families will survive in fast-changing Nigeria. In a modern society, a family's large number of children no longer means more production and wealth, but now means more consumption and impoverishment of the parents when the children are young. The majority of Nigerians are still engaged in subsistence agriculture, using crude tools, on land which is in many cases less than an acre in size. From meagre incomes, they are expected to send their children to schools where they pay fees, buy uniforms, books, and supplies. It seems to the researcher that all the efforts of the Nigerian government and universities to improve the social and economic situation of these people will be fruitless if nothing is done about the high fertility rate.

A change in people's attitudes concerning the desirability of large families is needed. The researcher fully realizes that the task of changing people's beliefs is a difficult one, but not, however, impossible. This requires more investigation, done tactfully and with understanding. It can then be followed up with education.

The "piggy-back" (a system of tagging an item of change on what the society is craving for) has been known to be a successful method for achieving change. Every family in Nigeria now seems to realize the importance of education. Parents go to any length to send their children to school. Education, then, can be the extension worker's tool for introducing this change.

The fact that the majority of the Christian women in this study were Catholic (33 of the 53 Christians) may be a factor in their attitude toward large families. The problems related to birth control are under study by the church. Official church policy, as well as community and university efforts could affect this attitude.

It may be significant that most of the women in this study (84 of the total 96) were from monogamous homes. While most of them expressed the opinion that there should be a span of years between the births of children, the researcher sees a rather impracticable situation where no scientific knowledge about birth control is available. A long interval between births can be understood in families where there are many wives for the husband to choose among, depending on whether or not they are lactating or menstruating. But the researcher wonders how this long-time interval between births, although ideal and practicable in the polygamous family system, can fit in the system of one man, one wife.

The high percentage of monogamous homes recorded in this study raises other questions. (1) Does this indicate that monogamy was a new trend in the Nigersity community? (2) Could it be that the husbands of the subjects involved in this study were so poor that they could not afford a second wife? (3) Could it be that funds were now being used for the education of the children rather than marrying more wives? It is also possible that this group, selected from the researcher's extension classes, included proportionately more monogamous families than the population as a whole contains.

It could be assumed that monogamy is becoming fashionable because of the changes in the society's economic, political and social structure. The woman, who is also the trader and the farmer, needs to realize that being an only wife in a household with all children of helpful age gone to school and with very limited help from her husband, is heavy work. If she is to produce many children under such conditions, her health may suffer and her duties be performed inadequately.

A large number (81.2%) of the women said that many children will neither affect their health nor their economic situations. This indicates that many people in the study were unaware of the heavy demands children make on the wife's health and on the economic resources of the family. This limited knowledge of human physiology and resource management may be related to other major findings of the study. Perhaps these contribute to the high rate of abortions, miscarriages, stillbirths and child mortality recorded in this study.

Many questions concerning high mortality could be related to other things, which though not included in this study were observed by the researcher during the interview. Appendix III (a) gives an account of a mother caring for a sick baby; Appendix III (b) describes sources of water for a mother with new-born children; Appendix III (c) nutritional needs and resources for children.

The researcher also made general observations of the people and living conditions as she visited their homes. Appendix IV gives details of these observations of the physical facilities, such as water and housing, and food availability and use. Photographs of some of the things observed are also included in Appendix IV.

One could surmise that the water sources - shallow wells, rivers, streams and springs which are used for bathing, laundry and even dumping refuse sometimes - are contaminated and contribute to the high death rate among the children.

The ways foods are handled and processed both in the markets and at home may also be a factor in the high death rate.

The housing, with poor ventilation and sanitation, may also contribute to the health hazards.

Any of these conditions listed above may affect the health conditions of the children. Many of the children, pictured in the Appendix on plates X, XI, and XII have the protruding stomach which is associated with 'kwashiorkor', a protein deficiency in young children.

IMPLICATIONS FOR EXTENSION PROGRAM:

The implications of the findings of this study for an extension worker are many and challenging.

1. It is obvious that extension education has a challenging opportunity to promote literacy, since 65% of the study group did not read or write. This can be done in many ways. One way is to teach basic literacy skills as part of the subject matter lesson, i.e. reading numbers on a tape measure, directions on a pattern, or ingredients in a recipe.

2. The evidence that many mothers in the Nigersity communities want large families, but do not seem to realize the health and economic strain this involves, indicates to one working in extension that there is need for educating people both in family and economic planning.

3. Information from the review of literature has indicated that the high rate of child mortality in Africa is due to poor housing, contaminated drinking water, impure food and a host of tropical diseases peculiar to different areas. The various observations made by the researcher during the interviews, recorded in Appendices III and IV, point out some abnormalities in the general conditions of living in the Nigersity communities. This indicates to the extension worker that there is need for educating the people in sanitation about their homes, water and foods. Also, there is need for nutrition education.

4. The research data indicate a lack of understanding of the reproductive process, and the health problems involved in pregnancy and child care. This should be taught to

adults as well as school children, so extension has a responsibility to do this. The data also imply the difficulty involved in getting information in these 'private' areas. An understanding of cultural beliefs should give the extension worker warning to move cautiously in some phases of his work.

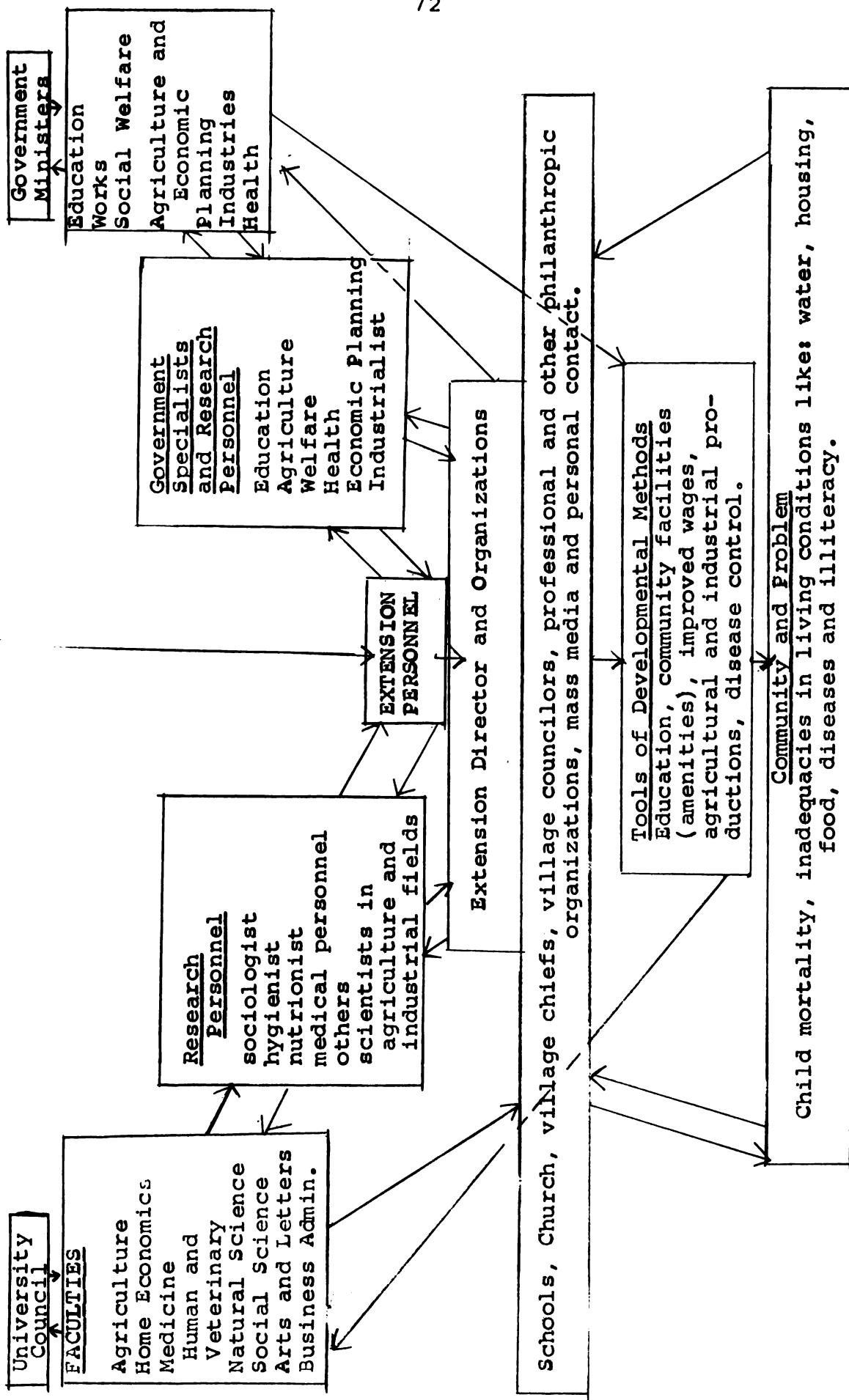
5. If monogamous families are a growing trend, techniques of work simplification and resource use will be needed by these women.

The problem of educating masses of people is not a simple one which the extension worker can face without support from other institutions. This requires the cooperation of the universities, government, other educational institutions, the churches, civic, professional, philanthropic and other organizations of the community. The diagram on page 72 shows how my plan for improvement can be coordinated with these various institutions.

Implications for Further Research

Many of the problems encountered while analyzing the data indicate the need for further research to be done with an improved schedule. Some of the questions generated hostility in the respondents, and this might well have affected the responses, as in the pregnancy history. Some questions were loosely framed and may have misled the respondent, as the question on working while pregnant. It is doubtful that the women interviewed interpreted 'working' as the designers of the questionnaire intended. In other questions the data would have been more meaningful if even more specific information had been gathered, as in size of family, total

ORGANIZATION SCHEME



number of pregnancies, intervals between pregnancies. Some of the questions could be phrased in a grouping more meaningful to the Nigersity women, i.e., a 24-month break in interval, since that is the traditional length of time between children.

The difficulties in the collection, handling and coding of the data indicate that some findings of the research are far from reliable. Therefore, there is still the need for more precise data. This requires more experienced and skillful researchers in the fields of maternal and child welfare in order that more reliable rates for fertility and child mortality can be obtained.

The significance of monogamous families in the study requires further investigation with a larger sample to know whether this is true of the rest of the community, or limited to this group selected from the researcher's extension class. *

The living conditions of the people need to be investigated more completely. As indicated by the researcher's observations, water, food and housing seemed of varying, and generally low quality for the women in the Nigersity area who were interviewed. Research in these areas will furnish information which will be useful in further improvement plans.

Summary

The essential problem in this study was to gather information about the Nigersity community's fertility and child mortality rates. This information is useful for home economics extension programming and also as demographic and

benchmark knowledge for the university.

The study was interdepartmental, developed by the Sociology and Home Economics Departments of the University of Nigeria. It was a non-random study, with a total of 96 subjects. The researcher collected the data herself. The questionnaire was comprehensive and contained both direct questions and open-ended ones. Coding of the data was not done by the researcher. Analysis of the data was done in simple proportions and percentages.

The major findings of the study are:

1. More than half of the study population could not read or write.

2. No divorce was recorded. Only one of the 96 was separated from her husband.

3. Most families involved in the study were monogamous (84 of the 96 women.)

4. The average number of people in the households interviewed was 7.3 persons.

5. Out of the total of 699 persons estimated in the families in the study, 365 were children under 15 years old.

6. An estimated 3.8 children were in each household, but not all children were born to the woman in the study.

7. The majority of the study population wished for more children than they had for such reasons as fondness for children, prestige, security in old age, wealth, and likely loss of some of the children.

8. Most subjects (81.2%) felt that having more children would neither affect their health or economic levels.


9. Most subjects said that 19 months or more should elapse between births.

10. It was estimated that 59.1 is the rate of terminated pregnancies per 1,000 births; 14.775 is the still-birth rate per 1,000 births; 147.778 is the death rate for children up to 5 years old.

11. For all children up to the age of 14 years recorded in the study, the death rate is 210.95 per 1,000 live births.

Conclusion

One hesitates to draw conclusions from some of the findings of this study, due to the anomalies already mentioned. However, on the basis of the estimated rates on terminated pregnancies, still births and child mortality, one can conclude that the Nigersity communities have problems in these areas. From my observations, it is evident that the Nigersity communities are rapidly moving into modern life, with the establishment of the University and the general development in the country. On the basis of this study, however, one can conclude that the people's attitude towards child bearing are influenced, to a large extent, by traditional beliefs and practices. This cultural lag is bound to produce more serious complications, both in health and economic situations, if left unchecked.



The goal of furnishing information set out for in this study is achieved, and it is hoped that this is yet another "small sand in a growing dune of knowledge,"¹ about the problems of Nigerian families. It is hoped that this will stimulate other investigations which will enhance the planning of extension programs by the extension worker with additional information about the community's problems.

¹Axinn, N.W. Op. cit., p. 98.

APPENDIX I

Date: _____ Time: _____

Tract No. _____ S.S. No. _____

Name of Village: _____

No. of Household in compound-village: _____

UNIVERSITY OF NIGERIA
DEPARTMENT OF SOCIOLOGY
"NIGERSITY" -- NSUKKA SURVEY
HOUSEHOLD CARD

Interviewer's No.: _____

For Office use only: _____

Code: _____

*Members who eat and sleep regularly.		SEX	AGE GROUP			MARITAL STATUS				REMARKS			
***Members who eat and sleep irregularly.			M	F	Under 5	5-14	15-44	45 & over	NM		M	Sep	Div
No.	FULL NAME	Relation to Head											
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													

Name of Interviewer:

Name of Village:

Time of Interviewer:

Tract No: S.S. No.:

1. UNIVERSITY OF NIGERIA

DEPARTMENT OF SOCIOLOGY

NIGERSITY DEMOGRAPHIC-FERTILITY STUDY

(For Married Women Only)

Date:

Code:

	Number on Household Card or Relation to Head	REMARKS
In your opinion what is the best number of children that a family should have?	Number	
Why do you think that a family should have more children than the number you suggest?		
Why do you think that a family should not have fewer children than the number you suggest?		
How many children have you had in your life?	Total number of children	
How many of them have died?	Number of children deceased	
How many of your children are alive now?	Number of children now living	

Tract No. _____
S.S. No.: _____

2. Nigersity Survey (Contd.)

		<u>REMARKS</u>
How many still-born children have you had in your life? Have you had any pregnancies which did not reach their term? How many?	Number of still-born children YES NO No Answer Number of pregnancies which did not reach their term	
Are you pregnant at present?	YES NO No Answer	
How many times in all have you been pregnant?	Total Number of pregnancies	
Do you think there are any health conditions which are preventing you from bearing children?	YES NO Unknown	
Are you satisfied with the number of children you have at present?	YES NO No Answer	
(Persons answering "no" should be asked the following questions) How many more or how many fewer children than you have at present would you like to have?	The same number Fewer More No Answer The number may be unlimited	

Tract No.: _____
S.S. No.: _____

3. Nigersity Survey (Contd.)

Serial No.of
House in Compound:

		REMARKS
Do you think that bearing another child would adversely affect (a) Your health? (b) Your economic situation? (c) Your physical appearance? (d) Make you look older than you are?	<p>If yes,</p> <p>Yes Health Economic No Physical Look older No answer Others Specify</p>	
What is, in your opinion, the best age for a woman to get married?	<p>Ideal age for marriage: _____ years</p> <p>No opinion</p>	
How soon after marriage do you think a woman should have her first child?	<p>After _____ years or after _____ months</p> <p>No opinion</p>	
At what age do you think a woman should bear her last child?	<p>Ideal age for last delivery _____ years</p> <p>No opinion</p>	
How long a time do you think should elapse between two births?	<p>Between the first and second child _____ years _____ months</p> <p>Between the second and third child _____ years _____ months</p> <p>Between the third and fourth child _____ years _____ months</p> <p>Between subsequent births _____ years _____ months</p> <p>No opinion</p> <p>Approve _____ Disapprove _____</p> <p>No opinion</p>	
Do you approve or disapprove of women working while they pregnant?		

Tract No.: _____
 S.S. No.: _____

4. Nigersity Survey (Contd.)

Serial No. of
House in Compound:

		REMARKS
Where were you born?	<p>In Nsukka District Another town or village in Nigeria Specify village, town or Region or Country _____ Specify.</p>	
Have you been living in Nsukka since your birth?	<p>Yes (if yes omit 13) No</p>	
If no, how long have you been staying in Nsukka?	<p>More than 10 years _____ 5 years or more _____ 2 years but less than 5 years _____ 1 year but less than 2 years _____ 6 months but not 1 year _____ less than 6 months _____</p>	
What is your Religion?	<p>Christian _____ Moslem _____ Traditional _____ Others _____ Specify: _____</p>	

Tract No.: _____
 S.S. No.: _____

5. Nigersity Survey (Contd.)

Serial No. of
House in Compound:

		REMARKS
If Christian or Moslem, specify denomination or section (i.e., Methodist, Amadiya)	Specify denomination or section _____	
What is your native tongue?	Specify _____	
Have you ever attended school or are you attending school now?	Never _____ (if never omit 17) Now _____ Past _____	
What is the highest type of school you attended?	Primary _____ Secondary _____ Modern II _____ Other _____	
Highest class attained?	Specify _____ Primary Modern II Secondary, Post, Secondary.	
Can you read and write any of the Nigerian languages?	Yes _____ No _____ (if no, omit 18a & 18b)	
If yes, what Nigerian language can you read and write?	Main language only, i.e. Efik, Ibo, Hausa, Yoruba _____	
What non-Nigerian language can you read and write?	Main languages only (English, French, Spanish, Portuguese) _____	
Have you ever been married?	Yes _____ No _____	

Tract No.: _____
S.S. No.: _____

Serial No. of
House in Compound:

6. Nigersity Survey (Contd.)

		REMARKS
If yes, are you at present married, divorced, separated, or widowed?	Married _____ Divorced _____ Separated _____ Widowed _____	
Where do you do your marketing?	Village Market _____ Several village markets _____ Enugu Market _____ Nsukka market _____ Other places _____ Onitsha Market _____ Specify.	
How many times a week do you go marketing?	One _____ Two _____ Three _____ Four _____ Five _____ Six _____ Seven _____ None _____	
What things do you "buy" in the markets?	Food _____ Tobacco _____ Seeds _____ Clothing _____ Palm Wine _____ Cooking Ware _____ Medicines _____ Hardware _____ Soaps & Cosmetics _____ Other _____ Specify.	
What things do you "sell" in the markets?	Food _____ Tobacco _____ Seeds _____ Clothing _____ Palm Wine _____ Cooking Ware _____ Medicines _____ Hardware _____ Soaps & Cosmetics _____ Other _____ Specify.	

Tract No.: _____
 S.S. No.: _____

7. Nigersity Survey (Contd.)

Serial No. of
House in Compound:

		REMARKS
How many shillings do you spend a week in the markets?	Less than 5/- 5 - 9 10-19 20-29 30-39 40-49 50-59 £ 3 £ 4 £ 5 and over	
When you get sick do you:	Stay at home? _____ See a doctor _____ Get your medicine for yourself _____ Call your religious leader _____ Go to medical center? _____ Try to get in a hospital _____ Others _____ Specify _____	
Have you ever had any of the following?	Tuberculosis _____ Malaria _____ Goiter _____ Dysentary _____ Yaws _____ Worms _____ (Specify) _____ Leprosy _____ Eye trouble _____ Yellow fever _____ Small Pox _____ Skin trouble _____ Measles _____ Yellow Jaundice _____ Chicken Pox _____ Sleeping sickness _____ Other _____ Specify _____	

PREGNANCY HISTORY

Result of Pregnancy	First Pregnancy	Second Pregnancy	Third Pregnancy	Fourth Pregnancy	Fifth Pregnancy	Sixth Pregnancy	Seventh Pregnancy	Eighth Pregnancy
Live-birth								
Still-birth								
Miscarriage								
No Answer								
Date of birth or of miscarriage (month and year)								
Date of death (month and year)								

APPENDIX II

AN INCIDENT DURING THE INTERVIEW

There were some occasions when dramatic events developed between the researcher and the respondents. The following episode between the researcher and an elderly woman probably in her fifties will illustrate the point. The researcher had met this woman on many occasions during some of her visits to the other women who lived in the same compound. This old woman took a special interest in the researcher. The researcher arranged for an interview, which the woman accepted. The researcher went on the appointed date. Our interview ended with this question "In your opinion, what is the best number of children a woman should have?" In the first place, the respondent did not see any sense in the question. She asked whether it was people or God who decided the number of children one had. The researcher explained why she wanted her opinion on this, and how her experience and knowledge as an older person will help the researcher and other people working in the University build a University of our own. She calmed down a little bit and explained that she hated to discuss children because children hated her. Pushing the point further, a life history of the woman developed. It happened that this woman had had 17 pregnancies. Five of these were either aborted, stillborn, or miscarried. Twelve others who were born alive were between a month and two years old when they died. This started with

a distressful voice and broke into shouting crying and sobbing. The researcher and the school teacher who accompanied her tried for more than one hour to calm her down but could not. Her cries and shouts attracted other members of the compound and a large crowd formed in front of the woman's hut. After about two hours pleading and sympathizing with the woman, the researcher left the hut with the respondent still moody and upset.

APPENDIX IIIA

A MOTHER CARING FOR SICK BABY

Mrs. A.; Ibagwa Nkwo

Mrs. A.'s baby is about a year old. He was down with a high fever which has reached a state of convulsion. The mother had rubbed him with black soot, tied his wrists and ankles with grass and hung a huge monkey head around his neck. When the mother was asked why the baby was dressed in this way, she explained that it helped to drive away the evil spirits which were bothering the baby.

Again when the mother was asked why she did not take the baby to the hospital or health center, she said that the distance (6 miles) to the health center is very far for her to walk carrying the baby. There is no money to pay the registration fee, and besides, the hospital people do not know how to cure this type of disease.

APPENDIX IIIB

A MOTHER HANDLING WATER PROBLEM

Mrs. B.; Enugu-Ezike

Mrs. B. had twins which were three weeks old the day the health sister (W.H.O. Nurse) and I visited her home. Four other women had come to visit Mrs. B. A discussion about water was going on. Mrs. B.'s location is one of those areas in Nsukka district where homemakers walk 5 to 6 miles to fetch water. Each of these women had brought water to

Mrs. B., in amounts ranging from a pot of 4 gallons to cans of 1/2 gallon. The rainy season had just begun and some pots of water brought in for Mrs. B. were a light cream color and must have been drawn from shallow wells. The health sister inquired whether Mrs. B. boiled the water before giving it to the babies, and Mrs. B. answered "sometimes."

Mrs. B.'s twin boys had been circumcised at home. The wounds had been covered with a grey greasy dressing probably prepared by a native doctor.

APPENDIX IIIC

A MOTHER FEEDING A BABY

Mrs. C.; Edemani

Mrs. C. was feeding her baby (about 5 months old) with corn pap (light porridge of corn starch) when the researcher walked in for an interview. A teaspoon of this corn pap was poured down the baby's throat when it cried.

The researcher asked the mother what other foods were given to the infant besides corn pap. She answered that the baby ate only that until it was old enough (7 months or more) to eat adult foods. Adult foods are mostly starchy roots, nuts, fruits, vegetables, with a little meat and fish.

The mother was asked whether meat, fish, milk or eggs were given to the baby and other 4 children who were between the ages of 2 and 12. She answered that she gives some of these foods sometimes when she has them. But she would not give them too much meat or fish, because they

might steal. She also said that they kept chickens not to eat their eggs but for production of more chickens. Also if the family was in financial difficulties, the chickens or the eggs could be sold. Besides, women were not supposed to eat eggs, since this may lessen their chances of being productive. Her three children, who are girls, observed this taboo.

The researcher made inquiries from many other women in the extension classes around the Nigersity communities, and found that most of the women seemed to be practising the same feeding customs and practices with their children.

APPENDIX IV

General Observations

Water - Generally, water had been one of the greatest problems for homemakers in the Nsukka area. Some homemakers in the researcher's extension class explained that they used to walk 10 to 16 miles to fetch water during the dry season before 1960 when the government brought water to the University. Even then, many homemakers still walk distances ranging from one to at least 5 miles to their nearest water supply.

Water sources in Nigersity vary. Water is fetched from the rivers, streams, springs, deep or shallow wells and village taps. Plate I shows a deep well in a village center, Plate II a village tap near a market place, and Plate III a spring hole on the slope of a hill.

Carrying water from this spring which is about one mile down the valleys of a steep hill is another hard task that faces homemakers. Occasionally men help in carrying the pots of water on bicycles and push them up hill. Plate IV shows men helping in this task.

When conducting interviews, the researcher observed where water is stored in the homes. Most homemakers stored water in many clay pots of 2 to 8 gallons volume. These pots were left behind the women's kitchens, under a shade tree and very often circled around with a bamboo fence. Plate V shows water storage in one of the homes visited.

Food - The general impression of the researcher is that many people eat mainly starchy roots - yams, cocoa-yams and cassava which are the staples of the Eastern Region of Nigeria. Beans and all kinds of nuts, fruits and vegetables, meat and fish form a little of their diets.

Food preparations and handling during the distribution were also observed. Food is generally prepared in the kitchen over open fires. Sometimes during the dry season food is cooked outside the house. Grinding of flour or other ingredients is done on a stone placed on an elevated mud platform outside the kitchen. Often these platforms are left uncovered and domestic animals feed on the scraps dropped around the stone and lick the stone, too. Plate VI shows a grinding stone on a raised mud platform.

Most foodstuffs are still displayed unwrapped in the open markets. Such foods as fresh or dried meat, fish, vegetables, fruits, etc. are handled and thrown around by different buyers who often examine the food, weigh them by lifting them up, before they negotiate the price with the seller. Plates VII and VIII show market places and women bargaining for food.

Housing - Many houses in the Nigersity area are mud thatched. Women usually have their individual huts which are away from the big family house. These huts are usually one room with adjoining storage space where foodstuffs and personal belongings are kept. Sometimes chickens and domestic animals share a part of these huts.

The huts in many cases did not have windows and therefore seemed not to have enough light in them. Many beds seen were rows of bamboo tied together, and placed on an elevated hollow mud platform. Some beds had mats over them. Fire was often made under the bed, especially the first few weeks after the women have had babies. The mother and baby shared the bed. Plate IX shows one of these bedrooms. Notice that a baby's arm sticks out from behind the lady spinning cotton. Plates X, XI, and XII show the outside of a hut, large concrete family house and children of the compound standing in front of them. Note the protruding bellies of the children in the picture.

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