

# **Impact of Maternal Care and Cultural Beliefs on Childhood Morbidity and Mortality in Nigeria**

## **Introduction**

Infant and child mortality rates in many African countries have been decreasing in the recent decades. The dramatic decline in these rates is the outcome of a number of collective, reinforcing efforts by government and non-governmental organizations. Despite a general decline in infant and child morbidity and mortality, the rates are still high by world standard in the developing countries. In many developing countries, mortality among under-five children remains above 100 deaths/1000 live births and most of these deaths are preventable (Khan *et al.*, 1993; Isabelle *et al.*, 1998).

Majority of child deaths in developing countries can be attributed to several common illnesses or conditions like diarrhea, acute respiratory infection and malaria; most children suffer from more than one of these at a time (United Nations, 1985). Infant and child morbidity and mortality result from the combined effects of nutritional deficiencies, infection with preventable diseases, unfavourable socioeconomic conditions and environmental factors. This indicates that the reduction of childhood morbidity and mortality still remain a major public health priority, most especially in developing countries. Several studies indicate that children in Nigeria and in many less developed countries suffer from virulent attacks of infectious and parasitic diseases and that many deaths are preventable with available health technology. The most common and greatest killers of children in these countries are identified to be diarrhea and other vaccine preventable diseases such as measles, tetanus, polio, tuberculosis diphtheria (McGregor, 1964; Black, 1984; Foster, 1984; Walsh, 1979; Morley, 1973; Animashaun, 1977; Ogunlesi, 1961; Ayeni, 1980; Tomkins, 1981). These and other studies, also note the synergism of these

diseases with malnutrition and consequently, the effects of such synergism on child health and mortality (Bradley, 1984; Keymer, 1984; Chandra, 1981; Suskind, 1977).

The prevention of premature deaths and illnesses among high risk children has been an essential component of the health delivery system in Nigeria. The Primary Health Care (PHC) programme and Expanded Programme on Immunization (EPI) were adopted in Nigeria shortly after the Primary Health Care conference in Alma Ata, 1978. The primary health care programme is well established in almost all local governments in Nigeria and has concentrated on maternal and child health services and the control of childhood diseases. Also, the identification of the major diseases and the realization that most of them are preventable by simple available technology with the financial and material support from many international agencies, have led to the promotion of a child survival revolution (Feyisetan, 1990)

However in spite of the identification of the major childhood diseases and the development of modern medical technology to combat them, children in Nigeria and other less developed countries still die in large numbers from the attack of these diseases. Various government policies, programmes and strategies yielded little or no result to halt the situation. Infant and child mortality for Nigeria constituting about 97 per 1000 live births compared with Botswana (85 per 1000), Mauritius (28 per 1000) and developed region (16 per 1000), clearly shows that Nigeria has a very high infant and child mortality (United Nations Report, 1985). It is in this respect that we need to comprehend disease-specific and other health-related beliefs and practices of the population and integrate them into health promotion programmes to maximize the benefits that can be derived from these exogenously introduced health intervention programmes (Maina-Ahlberg, 1984; Feyisetan and Adeokun, 1989; Feyisetan, 1988; Parry, 1984; and Ubomba-Jaswa, 1988).

The effects of disease-specific beliefs on child morbidity and mortality are usually compounded by those behavioural practices and other non-disease specific beliefs (Ogunjuyigbe, 2004; Okri, 1995; Feyisetan, 1988; 1990; Soyinka, 1989a; Marison, 1988; Achebe, 1980; Achebe, 1958). As recognized by Ogunjuyigbe (2004), Feyisetan and Adeokun (1992), and parry (1992) the behavioural practices are those that relate to maternal and child feeding patterns. Of the non-disease-specific beliefs, the belief among the Yoruba, in the existence of “*abiku*” (children from the spirit world who can die at will) is relevant to our understanding of the health seeking behaviour of the people (Ogunjuyigbe, 2004; Soyinka, 1989b and Achebe, 1958) . Apart from this, there are other non-disease specific beliefs which may influence child survival through behavioural practices. The belief that “water impurities cannot kill someone” is an example. It is common to find villagers, in particulars, drawing water from a stream at a point below the one at which people wash clothes and bathe because of this belief. Even where villagers are provided with pipe borne water, farmers and their families still go to farms where the only source of drinking water are the streams. Mothers who believe in the efficacy of oral rehydration solution as a cure for diarrhea are also likely to prepare the solution with untreated water drawn from such streams. Success of health intervention programmes therefore depends, to a large extent, on how much parents believe that diseases are caused by viruses, bacteria and other organisms. The meaning of illness, its perception and definition, and behavioural responses to illness are the basic factors influencing the reaction of the public to public health programmes.

## **Data and method**

The objectives of the study were to identify people’s perceptions of the etiology of certain childhood diseases and determine the impact of such perception of health-seeking

behaviour, determine mothers' knowledge and use of health services; identify maternal and childhood feeding practices; and determine the impact of health-seeking behaviour and other child care practices on child morbidity and mortality in Ekiti and Ondo states of Southwest Nigeria. In order to achieve these objectives, a survey on the people's perception, etiology and cultural beliefs in Ekiti and Ondo states was conducted between 1999 and 2000. The study elicited information from 1695 eligible women of reproductive age (15-49 years) from the selected rural and urban areas in five selected Local Government areas of Ekiti and Ondo states. From the data collected, indirect infant morbidity and child mortality estimates were obtained.

Brass is one of the proponents of indirect method of mortality estimation. He based his mortality estimate on retrospective data given by women of reproductive age on the number of children ever born and their status (either dead or living). Other contributors in this line include Sullivan (1972), Trussel (1975), and Preston and Palloni (1978). However, indirect infant and child mortality estimates result from poor, inadequate and incomplete data especially in developing countries. Most deaths outside hospital premises were not recorded and that many people do not record infant deaths because they regard such occurrence as misfortunes, and when recorded, the age at death were either understated or overstated.

The method adopted in this study is the Lotus Program for the calculation of mortality by Samoza (1980). Data were provided or supplied for only two columns: the columns with the heading 'deaths in interval' and 'living in interval'. Entries in the preceding columns are predetermined while entries in all succeeding columns are calculated automatically. The last column shows the estimates of neonatal, postnatal, infant, child and under-five mortality rates that are generated from the data supplied in the two columns. In supplying the data to the two columns, one need to ensure that: for each child alive at the time of the survey, their age should

be determined in months (if less than 1 year) and in complete years (if aged between 1 and 5 years); and for each dead child, their age at death should be determined in months (if less than 1 year) and in complete years (if aged between 1 and 5 years) at the time of death.

The variables examined include age, religion, education, type of place of residence, perception of illness, health seeking behaviour and the respondents occupation as well as fertility-related variables such as children ever born, own children five years and under, age at marriage etc. Data analysis was carried out using both univariate and bivariate approaches. The univariate analysis deals with the frequency distributions that show how varied the respondents are on socioeconomic, child care and health seeking behaviour variables. At the bivariate level, the simultaneous analysis of two variables was carried out. The relationship either between socioeconomic variables and child health seeking behaviour as well as between child health and health seeking variables were examined. For the bivariate analysis, interval measured variables were changed through recoding into ordinal variables with few categories.

The socioeconomic characteristics of the respondents show that majority of the respondents fell within age range 30-39 (42.1 percent). Nearly equal numbers of respondents were interviewed from the rural and the urban locations (50.5 percent and 49.5 percent in urban and rural areas respectively). More than 90 percent of the women had received formal education. The highest being secondary or higher levels with 40.5 percent. Majority of the respondents (90.4 percent) professed to be Christians. The Muslims constitute only 7.4 percent of the total population, while those who are traditionalists represent only 1.2 percent of the whole respondents. About 86 percent of the respondents claimed to own one or two children under five years of age, while only 1.2 percent claimed to have 4 or more. Majority of the respondents

engage in either sales or services (58.8 percent), while close to 33 percent are also found in agriculture.

## **Knowledge and perceived etiology of childhood diseases**

Table 1 shows that fever (malaria) is mostly cited as childhood disease by the respondents as nine out of every ten mothers identified it as the most dreaded childhood disease. About 80 percent and 72 percent of the mothers respectively recognized diarrhea and measles as childhood diseases. It can also be observed from the table that higher proportions of mothers in the area identified these diseases spontaneously. Table 1 further shows that less than 5 percent of those who identified measles as a major childhood disease know the actual cause of the disease. However, there has been a considerable shift from supernatural to natural causes even though the stated natural causes are inaccurate. Most of the respondents gave “too much heat” or “dry season” as causes of measles. Only few respondents attributed measles to “the handiwork of the enemy or evil people or witches” or to “infidelity on the part of the mother”.

One out of every five women who identified tetanus as a major childhood disease also related tetanus to biomedically defined causes. The percentages of mothers who had accurate knowledge of the causes of diarrhea and fever are 56.7 percent and 67.3 percent respectively. Diarrhea in some quarters is traditionally believed to be as a result of eating “sweet food”. Nearly all mothers who have a misconception about the causes of diarrhea attributed it to “teething”. Causes of diarrhea that are classified as adequate include: “drinking of contaminated water”, “consumption of contaminated food” and “feeding of babies with dirty hands, spoons, cups or bottles”. Responses that attribute malaria fever to mosquito bites are classified as

adequate while inadequate responses include: “working/playing too much in the sun” and “dry season”.

**Table 1 about here**

### **Perceived methods of preventing and treating childhood diseases**

The percentage distribution of mothers according to the level of precision of their responses on measures of preventing the identified childhood diseases is presented in Table 2. The table shows that mother’s preventive measures are most precise for malaria fever as 53.2 percent of mothers suggested measures that include the use of anti-malaria drugs and the prevention of mosquito bites. Thus confirming the hypothesis that mother’s preventive and curative practices influence under-five morbidity and mortality. About 50 percent and 39.3 percent of the respondents suggested immunization as a preventive measures for measles and tetanus, respectively. It is interesting to note that, in spite of the inadequate knowledge about the causes of these diseases, high proportion of mothers still demonstrate adequate knowledge of preventive measures. Thus, confirming the assertion that “if mother has adequate knowledge of disease and its causes, she would be able to prevent their children from the infections”.

Table 2 shows the percentage distribution of mothers by level of precision of their responses on methods and timing of treating identified childhood diseases. It should be noted that the percentages of mothers that gave “more precise” measure of treating childhood diseases are much lower than the percentages that gave “more precise” means of preventing them. The table shows that mothers’ knowledge of “more precise” curative measures differs by disease. While 3.3 percent of mothers gave “more precise” methods of treating measles, the corresponding percentage for malaria is 28.1 percent. Large proportions of mothers merely recommend the use of drugs without specifying which drug to use. Many mothers have used

drugs bought from health centers (or hospitals) without knowing the names of such drugs. Majority of mothers believe that the diseases are so deadly as to require immediate attention either on the same day or within few days of noticing symptoms. The fact that some mothers think of treatment only when a child is critically ill with diarrhea or malaria calls for more education on the danger of delaying treatment for these diseases.

A little above 27 percent, 23.1 percent, 9.5 percent and 26.6 percent of all women suggest curative measures that have no relationship with any biomedically recommended treatment methods for measles, diarrhea, malaria and tetanus respectively. For all diseases, the proportion of women that suggest modern medical curative measures are much higher than those who know the correct causes of the diseases. The difference between the percentage of mothers that know the correct cause of measles (4.6 percent) and the percentage that suggest “modern medical” curative measures (72.6 percent) is worth noting. This difference reinforces the contention that inadequate knowledge of disease causation may be irrelevant in the choice of curative measures when and where appropriate preventive and curative measures are made available at low cost. The availability of primary health care centers, the enlightenment campaigns associated with the launching of the Expanded Programme on Immunization (EPI) in the area, and the health education component of antenatal care services must have provided mothers an opportunity to know more about modern preventive and curative measures for measles irrespective of their beliefs about causation.

**Table 2 about here**

Table 3 shows that mothers between the ages of 25 and 39 years are more likely than others to suggest “modern medical” curative measures. As shown in the table, knowledge of “modern medical” curative measures is not influenced by education. Also, Christian mothers

unlike their Muslim counterparts are more likely to suggest “modern medical” curative measures. Though, generally, small proportion of the mothers rely on modern medical means for treating tetanus, but the proportion of Muslims is far lower than that of Christians. Less than 5 percent of Muslims believed in the efficacy of orthodox medicine in treating tetanus. Mothers who lived in the city before age 12 and those who have adequate knowledge of the causes of the diseases are more likely to suggest “modern medical” curative measures compared with their counterparts.

### **Table 3 about here**

#### **Health seeking behaviour**

Mothers’ health seeking behaviour during the last episode of child illness by selected variables is shown in Table 4. Four sources of care were identified in the study area. These are the use of hospital based care, pharmaceutical drugs (either prescribed by doctor/nurse or self-prescribed), use of herbal treatment and the decision to resort to prayer. Multiple responses were allowed since it is possible for a mother to combine two or more types of care during illness.

Table 4 shows that mothers who were born in urban areas have a higher tendency to utilize each type of care. This might be the effect of socialization associated with the kind of upbringing these women have while growing up in the urban areas. More of these women favoured the use of hospital (61 percent) and pharmaceutical drugs (60.5 percent) which are more modern in the treatment of common childhood illnesses than the other two methods. The relationship between mother’s age and health seeking behaviour is significant for all the types of care considered ( $p < 0.5$ ). Mothers below 35 years appear to be more desperate to get care for their children during illness. Utilization of each type of care is highest for women that attained secondary or higher levels of education. The pattern of health care utilization as presented in

Table 4 is such that mothers who work in places outside the home use each type of care than those who work within the premises. The table further shows that Christians are more like to rely on prayer and on orthodox medicine than their Muslim counterparts. The study shows that Muslims place much reliance on herbs and other traditional medicine than Christians.

**Table 4 about here**

### **Discussion and Conclusion**

This paper has shown that the persistent high rate of infant and child morbidity and mortality in Nigeria could not be unconnected with health seeking behaviour and accurate definition of disease causation. It is also emphasized in the paper that though, infant and child morbidity and mortality rates are now decreasing as a result of introduction of cheap imported medical technology and public health programme, but there is need to incorporate and integrate the health seeking behaviour to public health programme to give room for further decline. The need to comprehend cultural beliefs about diseases has been reinforced in the paper. This is in effect due to the fact that people's perceptions of disease etiology will influence their health seeking behaviour and that where traditional curative measures differ significantly from or conflict with modern medical therapeutic methods, modern health services may be underutilized. This may be partly responsible for the persistence of high levels of child morbidity and mortality in Nigeria.

Efforts are being geared towards bringing down infant and child morbidity and mortality in Nigeria. The WHO has been working so hard in ensuring that everybody has access to health care. Good health according to WHO covers not only low probability of premature death but also low incidence of disease and the resulting disabilities. Also Federal Government has made concerted efforts in the recent past to help make health care accessible to all and sundry. A more

remarkable attempt was made through the National Agency for Food and Drug Administration Control (NAFDAC) at enlightening the general public on the need to sanitize the pharmaceutical and food industry. These efforts will not yield expected results until people's belief, behavioural practices and disease etiology are incorporated and integrated into the health intervention programmes. Finally as pointed out by Feyisetan and Adeokun (1989), the availability of modern curative measures may not be sufficient conditions for their adoption but may still depend on the people's perception or conception of the causes of ill-health. Education of mother, especially those residing in the rural areas, is paramount in bringing down level of infant and child morbidity and mortality. Mothers who are exposed to education and public enlightenment programmes on child care will have rational perceptions of diseases cause and are likely to adopt modern therapeutic measures which have been found to have significant reducing impact on child mortality.

## References

- Achebe, Chinua (1958): *“Things Fall Apart”*, London: Heineman.
- Achebe, Chinwe (1986): *The World of the Ogbanje*. Enugu, Nigeria: Fourth Dimension.
- Feyisetan, B.J. (1988): Issues in an examination of the relationship between maternal education and child mortality” IDRC: Proceedings of a workshop held in Accra on Research Issues in Child Health and Child Care.
- Feyisetan, B.J. (1990): “The need to investigate disease-specific and other health-related cultural beliefs in child mortality studies” Proceedings of the International Seminar on *Morbidity, mortality and social policy: A focus on the young and the elderly*, held in Bello Horizonte, Brazil, December 13-15.
- Feyisetan, B.J. and L.A. Adeokun (1992): “Impact of child care and disease treatment on infant mortality” In E. Van de Walle, G. Pison and M. Sala-Diakanda (eds) Research Issues in Child Health and Child Care.
- Federal Office of Statistics (FOS) (1992): *Nigeria Demographic and Health Survey, 1990* Lagos.
- Morrison, Toni (1988): *Beloved*. Thorndike, ME: Thorndike Press.
- National Population Commission (2000): *Nigeria Demographic and Health Survey, 1999*. National Population Commission, Abuja, and Demographic and Health Surveys, IRD/Macro International, Inc.
- National Population Commission (NPC) (Nigeria) and ORC Macro (2004) *Demographic and Health Survey, 2003*, Calverton, Maryland: National Population Commission and ORC Macro.
- Ogunjuyigbe, P.O. (2004): Under-Five Mortality in Nigeria: Perception and attitudes of the Yorubas towards the existence of “*Abiku*”. *Demographic Research*, Germany, Vol. 11, No.2, pp.41-56, 2004.
- Ogunyemi, Chikwenye Okonjo (1996): *African Wo/Man Palava: The Nigerian Novel by Women*, University of Chicago Press.
- Okri, Ben (1993): *The Famished Road*. New York: Anchor.
- Okri, Ben (1995): “Spirit-child: Abiku Migration and Post-modernity”, *Research in African Literature* 26(1): 20-29.

- Parry, E.H.O. (1984): "People and Health: The Influence of Culture" *World Health Forum*, Vol.5 pp.49-52.
- Preston, S.H. and Palloni, A. (1978): "Fine tuning Brass-Type mortality estimation with data on age on surviving children" *UN Population Bulletin*, Vol.10, pp.72-91.
- Soyinka, Wole (1989a): *Abiku*. Senanu and Vincent.
- Soyinka, Wole (1989b): *Ake: The Years of Childhood*. New York: Vintage International.
- Sullivan, J.M. (1972): "Models for the estimation of the probability of dying between birth and exact ages of childhood" *Population Studies* Vvol.26, No.1.
- Trussel, J. (1975): "A re-examination of the multiplying factors for Brass Technique for determining childhood survivorship rates" *Population Studies*, Vol.3, No.1.
- Uboma-Jaswa, S.R. (1988): "Culture and Health: Lessons from data collection on child health in Ghana" IDRC: Proceedings of a workshop held in Accra on *Research Issues in Child Health and Child Care*, 100-101.
- UNICEF (1987): *The State of the World's children*, Oxford University Press.
- UNICEF (2000): *The State of World's Children*, UNICEF, New York.

Table 1: Percentage distribution of respondents by knowledge of common childhood diseases and perception of etiology of disease

<b>Disease knowledge</b>	<b>Measles (N=967)</b>	<b>Diarrhea (N=967)</b>	<b>Malaria (N=967)</b>	<b>Tetanus (N=967)</b>
Spontaneous	46.4	32.9	61.9	23.8
Probe	25.6	46.9	28.4	21.8
Don't know	28.0	20.2	9.7	54.4
<b>Perception of disease cause</b>				
Adequate	4.6	56.7	67.3	19.2
Less adequate	95.4	43.3	32.7	80.8
Total	100.0	100.0	100.0	100.0

Table 2: Percentage of mothers by level of precision of responses on prevention, curative measures and timing of treating common childhood diseases

<b>Precision on prevention of disease</b>	<b>Measles (N=967)</b>	<b>Diarrhea (967)</b>	<b>Malaria (967)</b>	<b>Tetanus (967)</b>
More precise	49.5	43.9	53.2	39.3
Less precise	44.1	48.5	38.6	55.4
Going to Hospital	6.4	7.6	8.2	5.3
<b>Precision of stated curative measures</b>				
More precise	3.3	19.0	28.1	18.7
Less precise	27.4	23.1	9.5	26.6
Unspecified drugs	39.2	29.1	27.4	39.1
Going to Hospital	30.1	28.9	34.9	15.6
<b>Time elapsed before seeking treatment</b>				
Same day	75.2	75.2	55.5	88.5
Within a few days	22.9	19.3	35.2	8.5
If seriously ill	1.5	5.5	9.2	2.7
Other	0.3	-	0.1	0.3

Table 3: Percentage of mothers that gave “modern medical” means of treating common childhood diseases by selected background characteristics

<b>Background characteristics</b>	<b>Measles (N=967)</b>	<b>Diarrhea (967)</b>	<b>Malaria (967)</b>	<b>Tetanus (967)</b>
<b>Current age</b>				
15-24	65.0	73.8	86.3	63.8
25-29	71.4	77.6	93.2	78.4
30-34	75.7	80.1	92.4	77.8
35-39	76.3	80.7	91.3	77.2
40-49	62.3	72.8	88.9	67.9
<b>Education</b>				
None	72.9	78.5	90.8	71.9
Primary	75.3	78.5	91.0	71.5
Secondary or Higher	69.6	73.9	89.6	76.3
<b>Religion</b>				
Catholic	73.3	83.2	90.5	17.8
Protestant	73.1	73.9	90.1	46.5
Other Christian	75.8	78.9	92.9	31.0
Islam	61.0	77.2	86.4	4.7
<b>Place of residence</b>				
Urban	69.2	77.6	89.8	51.9
Rural	76.5	76.0	91.3	48.1
<b>Husband Education</b>				
None	79.3	79.8	91.6	56.9
Primary	68.0	72.9	88.8	27.5
Secondary	70.3	74.2	89.5	2.0
Higher	72.2	82.0	92.7	2.0
<b>Residence before age 12</b>				
Village	67.3	75.6	89.6	31.0
Town	71.3	72.2	86.7	38.8
City	79.2	82.2	94.6	30.2
<b>Total</b>	72.6	76.9	90.5	73.4

Table 4: Percentage distribution of respondents by their health seeking behaviour and according to their socio-economic background

	<b>Hospital</b>	<b>Pray</b>	<b>Drugs</b>	<b>Herbs/Local Doctor</b>
<b>Place of birth</b>				
Urban	60.8	54.7	60.5	86.7
Rural	39.2	45.3	39.5	13.3
<b>Age</b>				
Less than 35	76.6	66.7	74.5	100.0
35 and above	23.4	33.3	25.5	-
<b>Education</b>				
None	8.9	1.3	5.3	-
Primary	15.8	8.0	16.9	33.3
Secondary or higher	75.3	90.7	77.8	66.7
<b>Place of work</b>				
At home	17.7	11.5	16.8	23.1
Away from home	82.3	88.5	83.2	76.9
<b>Religion</b>				
Christians	88.0	90.7	85.6	32.3
Muslims	12.0	9.3	14.4	67.7