

Health transition research in Nigeria in the era of the Structural Adjustment Programme*



I.O. Orubuloye ^a and J.B. Oni ^b

^a Ondo State University, Ado-Ekiti, Nigeria

^b Graduate Studies in Demography, Australian National University

Before the arrival of Europeans in Nigeria, traditional medicine was the only recognized form of indigenous medical practice. The practitioners generally known as traditional healers throughout Africa are of several different kinds: some are herbalists, some bone setters and manipulators, and some dealt with spirits. An important part of their work is diagnosis which is practised by divination rather than by the multiplicity of tests used in scientific medicine (Orley 1980).

In Nigeria, the practitioners of traditional medicine are referred to by indigenous names such as the *adahunse* or *onisegun* or *babalawo* of the Yoruba (Johnson and Johnson 1921), the *gozan* of the Nupe people (Nadel 1942), the *mallam* (religious scholar), *wanzami* (barber-surgeon), *mai magan* (herbalist), *boka* (magician-healer), *masu bori* (spirit possession cult), and *sarguwa* (midwife) of the Hausa (Stock 1983) and the *dibia* of the Igbo (Ecoma 1963).

The advent of the Church Missionary Society in Nigeria in 1850 marked the beginning of modern scientific medicine there (Schram 1970, 1980); and Western scientific medicine came as a further alternative to the several existing indigenous systems of medicine (Orley 1980). The establishment of colonial government, however, meant that the predominant proportion of modern health care was provided by the government, the Christian medical missions, and a small proportion of independent private medical practice (Lucas 1980).

The advent of the African syncretic churches which possibly now account for nearly one-half of all Christians in southern Nigeria, led to the emergence of faith-healing Christian churches. Thus there are three distinct kinds of health care providers: modern health care providers, traditional health care providers and faith-healers. Their services are often sought concurrently and sequentially depending on the nature of illness.

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The distribution of medical care and curative health services during the colonial era, as well as at independence, was uneven with heavy concentrations in the capital and in large

urban centres to the detriment of the rural areas where the majority of the people live (Orubuloye and Caldwell 1975; Lucas 1980; Orubuloye and Oyeneye 1982).

During the colonial time and shortly after independence most government hospitals provided special facilities for civil servants, while the Christian medical missions provided hospital and community care for the most needy; and their programs were sometimes linked to their more vigorous activities in education (Lucas 1980).

Nevertheless, since 1946, health planning has featured prominently in all the National Development Plans in Nigeria. The major aims of the various pre- and post-independence plans were the provision of adequate pure water for everyone, progressive building of environmental hygiene, and the expansion of hospitals, maternity, and child welfare and dispensary services, coupled with rigorous campaigns of preventive medicine in the field (Nigeria 1940-56; 1962-68; 1970-74; 1975-80; 1981-85). In keeping with the philosophies adopted by the various pre- and post-independence plans, modern health facilities were expanded and treatment at public health facilities was until 1984 free for those under 18, all government workers and their families; and highly subsidized for the rest of the population.

The modern health system in rural Nigeria is largely a governmental one, with a health centre or small hospital in the Local Government Area Headquarters, staffed by at least one trained doctor as well as nurses and a compounder. In the nearest large town there is likely to be a larger government hospital as well as a number of private doctors and clinics (Orubuloye, Caldwell and Caldwell 1991:197). Nearly all the university towns have at least a specialist hospital or a teaching hospital supported by grants from the federal or state governments. The prosperous oil boom years which began shortly after the end of the Nigerian civil war in 1970 coincided with a rapid expansion in the health facilities, as well as in the educational and other social services. Every bed in government hospitals was filled, and there were long queues at the Out-patient departments. The period was one of rapid decline in infant and childhood mortality associated primarily with the provision of health facilities and expansion in female education (Orubuloye and Caldwell 1975; Caldwell 1979).

Social science health research in Nigeria in the 1970s and 1980s

Partly because of the existence of several systems of health care side by side, and the apparent uneven distribution of modern health facilities in Nigeria, much of the earlier social science health researchers in the 1970s and 1980s concentrated on health attitudes and treatment systems adopted: modern medicine, traditional healers, home remedies or faith-healing churches; or on the degree of access to health facilities (Caldwell 1994). One of the pioneering efforts was the research conducted in 1974 by Orubuloye under the supervision of J.C. Caldwell in southwest Nigeria on the effect of public health services on child mortality (Orubuloye 1974). The research showed that, when modern health facilities were available, most people used them; and there were significant differences by education of mothers and use of such services on the one hand, and child mortality on the other (Orubuloye and Caldwell 1975). The research also showed that modern medicines bought from chemists, patent medicine stores, and hawkers were also widely used. Several other subsequent studies such as that of Egunjobi (1983) in northern Oyo; Stock (1983) in Hadejia in northern Nigeria; Okafor (1984) in rural Bendel state; and Adedoyin and Watts (1989) in an indigenous area of the city of Ilorin confirmed the effects of accessibility and ability to pay in greater use of modern health facilities and improvement in health conditions. The cultural context of the decisions to use modern or traditional treatment also received a great deal of attention.

A 1974 study of the determinants of pattern and degree of use of health services in Western State, Nigeria, showed that in Okitipupa, 26 per cent of treatment took place in the traditional sector (herbalists, spiritualists, *mallam*), 57 per cent in the modern sector (hospital, health centre, dispensary clinic, maternity, chemist), 5 per cent either traditional or modern

(hawkers, herbal stores) and 12 per cent was self treatment (Ademuwagun 1977:899). The characteristics of patients in spiritual healing homes and of traditional doctors, and the factors which influenced their choice of health care providers, were examined as a response to their growing importance in the Nigerian health care system (Uyanga 1979).

The various stages involved in health-seeking were also studied (Igun 1979), while the response of parents to childhood diseases in a Nigerian Yoruba community has recently been studied by Adetunji (1991) who showed that mothers used alternative sources of health care rather than hospitals, clinics and maternity centres, in their treatment of diseases among children. The alternative sources were patent medicine stores where there were personal relationships between the customers and the owners of the medical stores, free consultancy and flexible pricing.

Adetunji (1991) also showed that parents' location, access to good advisers, the perceived seriousness of the sickness and religious beliefs of mothers were important determinants of their responses, while avoidance of blame was a major motivating force in parents' search for potential sources of health care. The study was undertaken in late 1988 and early 1989, when the structural adjustment program (SAP) had been in place for about three years, and the effect on health treatment was gradually becoming apparent.

The destabilization of the health care system

Nigerian society has changed from what it was during the oil boom years of the 1970s; the greatest changes have occurred in the area of health care. The charging for health services from 1984 is a major departure from the welfare philosophies of the pre- and post-independence eras. The collapse of high export prices for petroleum, which accounts for 95 per cent of the nation's gross national product, and the introduction of SAP, the economic structural adjustment adopted to meet the difficulties created by the end of the oil boom, are important changes in recent times. The Nigerian currency unit, the Naira, was worth US\$1 before the 1987 float, but has now sunk to an all-time low value of US 25 cents. The floating of the Naira compounded the economic problem and made treatment compete with other personal and family costs as the cost of medicine rose sharply with other prices. In the first five years of the structural adjustment program, 1986-1990, government allocation of resources to the health sector ranged from just US 42 cents to US 62 cents per capita, an amount which was grossly inadequate to treat an attack of malaria (Popoola 1993), or a mere 1.6 to 1.9 per cent of the total federal government expenditure during 1980-90. The rising cost of health services and the imposition of user charges and fees where none previously existed have received the attention of other scholars in the health field (see Dennis 1992; Ogbu and Gallagher 1992).

Most government hospitals were almost deserted, as the number of people attending them dwindled rapidly, partly because of the expense of treatment caused by imposition of charges for government health services and a move towards selling prescribed medicines at market prices, and partly because most government hospitals have been reduced to mere consulting clinics for lack of equipment and drugs. Many patients were attempting home cures or had turned to the traditional medical system or to the faith-healing churches (Orubuloye, Caldwell and Caldwell 1991).

Although infant and childhood mortality has declined over the years, the current economic difficulties and the progressive deterioration of the health care system may have put a stop to the continuing decline in the levels of infant and childhood mortality. A comparison of child survival estimates from the 1986 Ondo State DHS and the southwest component of the 1990 Nigerian DHS suggests a significant rise in mortality (Orubuloye 1994). Similarly, a comparison of the 1992 and 1994 UNICEF reports on the *State of the World's Children* showed that infant mortality in Nigeria rose from 104 per thousand in 1988 (two years after

the introduction of SAP) to 114 per thousand in 1992, while childhood mortality rose from 174 per thousand to 191 per thousand during the same period (UNICEF 1992, 1994).

The collapse of the government health care system has increased the proliferation of private medical practice and the establishment of private hospitals and clinics. Most of the private hospitals and clinics charge exorbitant prices, while some adopt a flexible pricing system that enables low income earners to benefit from the services they provide. One such private hospital is the Lifeline Children's Hospital in Surulere (which means 'patient pays'), Lagos, established in January 1994. According to the Associated Press report of 21 November 1994, the events that led to the establishment of the Lifeline Children's Hospital are as follows:

when it became too painful to watch youngsters dying in government hospitals for lack of medicine and equipment, four women doctors from Lagos University Teaching Hospital (LUTH) bucked the system and opened Nigeria's first private hospital for children. Their achievement is one of the few bright spots in a nation suffering from the greatest economic and political crisis in decades

The report continued:

a stream of patients flowed through the 20-bed hospital and consulting rooms during a recent evening and a mother remarked: 'although treatment was expensive ... taking the kids to the government hospitals is like giving them the death sentence'. When one of the consultants was talking to the press, a nurse came in to report that a mother had no money for medicine. The consultant replied 'Heavens the child needs it, give it (the medicine) to the mother and tell her to bring the money next week'.

According to the report, a bed at Lifeline Children's Hospital costs 400 Naira or US\$18 per night, about one-third of the monthly salary of the lowest-paid government worker. The above is an example of the frustration for most poor people since the introduction of the 'user pays' principle to the health care sector and the collapse of the exchange rate in 1987.

In realization of the collapse of the health care systems, the federal government recently proposed a National Health Insurance Scheme as a complementary source of financing the health services. In a recent public statement by the government, it was emphasized that 'it has become obvious that there was a great advantage in making the public to pay a little premium against the rainy days to ensure that the health services were readily available and acceptable' (*West Africa* 1994:874).

The study of who makes treatment decisions and bears the cost was of particular importance both for the understanding of the influences on morbidity and mortality, and for suggesting interventions that would ease the most acute difficulties at a time when the cost of treatment had become more difficult for many families to meet than had been the case for a generation (Orubuloye, Caldwell and Caldwell 1991).

The Nigerian Health Transition research program

Consequent upon the establishment of an exploratory program by the Rockefeller Foundation in 1987 to examine the state of knowledge on the cultural, social and behavioural determinants of health, and the subsequent International Workshop held in Canberra in May 1989, the Nigerian Health Transition research program was initiated in 1990. The objectives of the program include the understanding of the cultural, social and behavioural determinants of health, and the part played by these factors in the achievement of lower levels of mortality and improved conditions of health. The outcome of the research program is to assist in policy formulation and the development of intervention programs that will lead the health seekers

and the community toward appropriate health-seeking behaviour that will promote good health for all by the end of the 1990s.

The initial program was conceived by senior officers of the Health Services Division of the Rockefeller Foundation, while the Nigerian program was developed and co-ordinated by I.O. Orubuloye. John Caldwell acted as adviser and technical support was received from the Health Transition Centre, National Centre for Epidemiology and Population Health, Australian National University. Funding of the Nigerian program was provided by the Rockefeller Foundation. Although the research program is based at the Nigerian Institute of Social and Economic Research (NISER), Ibadan, it is being executed by 20 researchers drawn from 11 universities and research institutions across Nigeria.

As a prelude to the larger program funded by the Rockefeller Foundation, a pilot study funded by the Australian National University was undertaken in late 1990 in a single village in Ekiti district of southwest Nigeria. The research was conceived as a pilot study to guide the major program, by developing appropriate research methodology and instruments for the main research program. The research showed that most child health treatment was paid for by one person only, usually a parent, and that the treatment chosen was decided by the person meeting the cost. The research also demonstrated that mothers were likely to pay for minor illness, either for themselves or their children, but the father's role became more important as the cost rose (see Orubuloye, Caldwell and Caldwell 1991). A number of intervention strategies that are likely to ease the problem of delay in seeking treatment were suggested.

The larger survey was planned to take place in three stages. The first stage undertaken in September–October 1992 consisted of a household survey and a retrospective survey of all women 15–59 years old with at least one surviving child under 15 years of age in each household. The second and third stages designed as follow-up to the first one were scheduled for March–April 1993 and September–October 1993. The first stage was successfully executed in ten out of the 21 states existing in Nigeria as at 1991. The political crisis following the annulment of the 1993 elections made it difficult and dangerous for the continuation of the field survey in all the states. The research described here is therefore, the first stage of the Ondo State segment of the Nigerian program. A similar survey on Family Structure and Treatment of Child Illness in Ekiti District, Nigeria was also conducted between April 1993 and February 1994. The result is presented separately in this paper.

The 1992 Ondo State health transition research

Ondo State was carved out of the former Western State of Nigeria in 1976. The state is located in the southwestern part of Nigeria. It has a land area of about 20,595 square kilometres and a population of 3,884,485 (1991 census); it comprises 26 local government areas. The area consists of lowlands in the south and rugged hills in the northernmost part. It lies within the tropics with two distinct seasons, rainy and dry.

Ondo State is predominantly Yoruba and resembles the rest of the Yoruba region. Although there are various distinct dialect groups in the state, the people have basically the same way of life. The dominant religion is Christianity with strong and visible African syncretic churches. Most women devote much of their time to trading, while farming is the dominant traditional occupation of the men.

Although there are few industrial establishments in the state, Ondo State is proud of its educational achievements and the importance its people attach to education. Nearly all children have access to primary and secondary education, and the establishment of two universities in the state, in recent years, has increased the opportunities for university education. However, the measures instituted from the beginning of 1984 and the charging of fees recently introduced in the secondary schools have led to a rapid decline in school enrolments. There are 729 health institutions owned by the government, religious and private

organizations: four specialist hospitals, 72 general hospitals, 144 health centres, 261 maternity centres, and 242 dispensaries. Each of the 26 administrative areas has at least one general hospital and a number of health centres, maternity centres and dispensaries. Medical services were free at all government health facilities for children under 18 until 1983. Since 1984 charges for health services have been established in all government health institutions. The huge change in the exchange rate since 1987 increased the burden of health care services on many families.

The sample for the Ondo State study was taken from Ondo Town and from six of its satellite villages. Ondo Town is one of the major urban centres in Ondo State, with a population of about a quarter of a million. It is a nodal point of main roads, a commercial centre, a place of small industries, many related to the timber and cocoa industries, and an important educational centre (Orubuloye, Caldwell and Caldwell 1992). Ondo Town has a specialist hospital, about a dozen private hospitals and clinics, and a high density of chemist and patent medicine stores. For the rural component of the study six villages were selected; they are inhabited by Ondo people who had migrated there as cocoa farmers and timber producers. Although the people reside permanently in the villages, they maintain a close relationship with Ondo Town, visiting it regularly and on major festival occasions. Each of the villages has a health centre or dispensary staffed by at least a trained nurse or midwife and a compounder. In addition, the villages are visited by hawkers of modern pharmaceuticals. Traditional practitioners also abound. A survey of household facilities showed a general poor condition of water supply and toilet facilities even in Ondo Town where only six per cent had piped water connected to their houses while another five per cent fetched piped water from public taps; the majority depended on well water which was hardly treated.

Ondo Town was divided into five clusters, and in each cluster an interviewing path was determined that passed every house. Houses along the route were chosen on alternate sides with a fixed sampling fraction of 50 houses in each cluster. In each house, all households with women 15-59 years of age with at least one surviving child under 15 years of age were interviewed. The sampling strategy yielded 255 interviews from 210 households in Ondo Town. In the rural areas, all the houses were visited, and 286 women 15-59 years of age with at least one surviving child under 15 years of age were interviewed from 242 households. The survey was limited to Yoruba women, in keeping with the basic objective of showing the differences or similarities in illness behaviour and the treatment of illness among the various ethnic and cultural groups in Nigeria. Most of the interviews in Ondo Town and the villages were carried out late in the afternoon when most of the women had returned from trading or farming. However, women traders who sell their wares in and around their houses were interviewed in mid-morning or mid-afternoon.

Co-operation was enhanced first by making sure that most of our interviewers and supervisors were from Ondo and spoke the Ondo dialect fluently, and had worked with us in an earlier survey in Ondo Town (Orubuloye et al. 1992). Co-operation was reinforced by seeking permission from the quarter High Chiefs in Ondo Town and the village heads.

The survey findings

The population

The characteristics of the population are summarized in Table 1. The age structures of both the urban and the rural population were similar; slightly more than one-half were under 35 years of age. In Ondo Town only three per cent reported that they were 50 years old and above, and no respondent in the rural areas was found in this group. Given the age structure of the population, the proportion of women under 35 years of age suggests that the level of

fertility was high, and that reproduction started early, and tended to extend for a considerable length of the women's reproductive life-span. Christianity was the dominant religion, with African syncretic churches accounting for 54 per cent of the Christian population in Ondo Town and 49 per cent in the rural areas. There was also a strong Muslim community in the rural areas, and a small proportion of adherents to traditional religion as well. It was a well educated community by Ondo State standards. About two-thirds of Ondo Town respondents and about one-half of the rural ones had some formal education. Of the urban respondents 39 per cent had at least some secondary education, as did 20 per cent of the rural respondents. Farming and trading were the dominant occupations in the rural areas, most of it related to the cocoa and timber industries. The majority of the urban respondents were traders in imported and locally produced goods. Those in white-collar occupations worked mainly in government and private offices in the town.

Marriage was still largely universal and stable, and tended to be polygynous. The majority of women were still in their first marriages, while 70 per cent of urban and 77 per cent rural women were first wives of their husbands. There was no evidence that polygyny is on the decline; what appears to be on the decline is its intensity, with only a few polygynists now having more than two wives.

There was evidence that an increasing number of women were pooling their resources with their husbands. This appears to be a recent phenomenon, as confirmed by a more recent study in the Ekiti District (Oni 1994). However, there was no significant difference between the urban and the rural areas on one hand, and between the young and educated, and the old and uneducated on the other. This is a major change. In West Africa, and indeed among the Yoruba, most women have their own budgets, control resources and make decisions based on these resources (Orubuloye et al. 1991). The change is probably a product of the collapse of high export prices for petroleum and the economic program adopted to meet the difficulties created by the end of the oil boom.

The charging for health treatments from 1984 affected the whole population and made treatment compete with other personal and family costs. The floating of the Naira in 1987 compounded the economic problem and the cost of medicine rose sharply with other prices. It has therefore become inevitable for families to pool their resources to meet their basic needs.

TABLE 1
Characteristics of population (percentage distribution)

Characteristics	Subgroup	Urban (N=255)	Rural (N=286)
Age	15-34	51	54
	35-49	46	46
	50-59	3	0
	Median age	34	33
Education	No formal schooling	28	49
	Primary only	31	30
	Secondary only	39	20
	Above secondary	3	a
Occupation	Farming	8	47
	Trading	71	47
	Artisan	9	1
	Teaching	3	1

	White collar	8	1
	Other (at school, unemployed)	3	a
Religion	Christianity:		
	- Catholic	18	20
	- Protestant	24	25
	- Other Christians	49	43
	Islam	8	11
	Traditional	1	1
	None	a	0
Marital Status	Currently married	93	96
	Divorced /separated	6	3
	Widowed	2	1
Type of union	Monogamy	64	66
	Polygyny	36	34
Position among husband's wives	First	90	96
	Second	7	4
	Third and above	3	-
Pooling of resources with husband	Yes	35	44
	No	66	56

^a less than one per cent

In Ondo Town, 92 per cent of all currently married women were living in the same house or compound with their husbands, and the proportion for the rural areas was 96 per cent. This is important for understanding how treatment decisions were made and costs of treatment met. The data on fertility indicate that fertility was high. Although there was the evidence of an onset of fertility decline in the region (Caldwell, Orubuloye and Caldwell 1992; Orubuloye 1994), there was virtually no restriction of births by contraception. Child mortality was high, at about the same level recorded in another survey in the region by Orubuloye, Caldwell and Caldwell (1991). There was evidence here and from other studies (Orubuloye 1994), that mortality may be rising because of the current economic difficulties.

Child fostering was typical of the Yoruba pattern. In Ondo Town, about the same proportions of children were fostered in and fostered out, while the rural areas sent out more than they received. The majority of children were fostered by relatives for the purpose of education or for learning a trade, and because it conformed with traditional custom and practice.

Individual women's most recent illness

Respondents were asked to indicate the type of illnesses which they had suffered during the month preceding the survey, the duration of the illness, the person who decided on treatment, where treatment was received, the cost of treatment and the person or persons who paid for the treatment. Ninety-five per cent of Ondo Town women and 94 per cent of the rural women

reported some type of illness. There were also close similarities in the types of illnesses reported. Fever (malaria) accounted for slightly more than one-half of all illnesses reported, while body pains accounted for another one-third of all cases. Dysentery was reported by about five per cent while skin diseases accounted for another four per cent. Sixty-six per cent of the Ondo Town women reported that the illnesses lasted up to three days; the corresponding proportion for the rural areas was 69 per cent. Only nine per cent of the women in both the urban and the rural areas reported that the illnesses lasted for more than one week.

The existence of several distinct therapeutic systems in a single cultural setting has been viewed as an important feature of medical care in the developing world (Leslie 1978). Generally, care is sought from several types of providers concurrently or sequentially, and the various types of care are often seen as complementary rather than conflicting (Christakis, Ware and Kleinman 1994). In Nigeria, there are several types of health care providers: traditional practitioners, mostly commonly herbalists and *mallam*; practitioners of modern medicine; and faith-healing Christian churches. In addition, medicines are procured from chemists and modern pharmaceutical stores, and hawkers.

In order to assess the extent to which respondents shifted from one type of health care provided to another, we asked them to indicate the various choices made during the illness which occurred during the month preceding the survey. The responses are shown in Table 2.

Certainly, there was an understatement of faith-healing, probably because of the tendency for people to seek care from one or two health care providers concurrently. Two points are clear from Table 2: a tendency for health seekers to shift from one type of health care provider to another as the illness progressed; and distinct patterns of health-seeking behaviour differing between the urban and the rural women. The proportion of urban women using modern health care providers increased as the illness progressed. The situation was not consistent among the rural women, where a major shift occurred between the various choices. Although more rural women than urban women patronized chemist or patent medicine stores, the proportion for both urban and rural women also increased as the illness progressed. However, most rural women probably bought their medicines from hawkers.

TABLE 2
Choice of health care provider for respondents during the month preceding investigation
(percentage distribution)

Health care provider	Urban			Rural		
	1st (N=241)	2nd (N=138)	3rd (N=108)	1st (N=268)	2nd (N=131)	3rd (N=95)
	%	%	%	%	%	%
Home - traditional	20	8	3	13	8	6
Home - modern	27	28	9	14	18	10
Private hospital/clinic	11	14	18	10	15	17
Government hospital / health centre	38	33	53	55	28	34
Faith healing	1	1	1	2	2	1
Chemist/medical stores	4	16	16	6	30	33
% using modern health care providers	49	47	72	65	33	51
% of all home or self treatments ^a	48	37	13	29	38	17
% using chemist/medical stores	4	16	16	6	30	33

^a including faith-healing

The pattern observed among the rural population is not unrelated to the cost of treatment. As illness progresses the cost becomes prohibitive for much of the rural population primarily because the services are usually not available nearby. Nevertheless, the pattern conforms with what was believed to be a general pattern of Yoruba treatment decisions. According to Maclean (1976) there are always choices to be made between treatment and non-treatment, between treatment now and waiting to see what happens, between self-treatment and treatment by one or another medical expert.

Now that the costs of treatment are prohibitive, the person who decided on where treatment was received is important for the understanding of how treatment costs are met. Table 3 shows a comparison between the person who decided where treatment was received and who paid the cost. For the urban population, there was a close relationship between decision-making on treatment choice and meeting the cost. Although there was a minor shift among the rural women, there was a distinct pattern between the rural and the urban women. The association between paying for women's treatment and deciding upon it showed that there was a close relationship between making the treatment decision and paying for it. However, more relatives assisted the women in Ondo Town when treatment decisions were taken by the women, whereas in the rural areas, more relatives assisted the husbands when treatment decisions were taken by the husbands.

The average cost of treatment was about 60 Naira (US\$3.33 at the time of survey). The cost was substantial, given the low wages and the sharply rising costs of housing, food, transport, education and other basic needs. Although husbands met a substantial part of treatment cost, more urban women than rural women paid for their treatment. When the cost was high, support was sought from relatives as well.

TABLE 3
Decision on where treatment was received and payment for treatment costs (percentage distribution)

Person who decided on or paid for treatment	Urban		Rural	
	Person who decided (N=241)	Person who paid (N=241)	Person who decided (N=268)	Person who paid (N=260)
	%	%	%	%
Husband	52	52	72	66
Woman	25	22	13	10
Jointly	20	22	14	22
Others ^a	3	4	1	2

^a including husband's parents and own parents and older siblings

The findings emerging from this study differ from the exploratory survey conducted in Ekiti village two years earlier (see Orubuloye, Caldwell and Caldwell 1991). The cost of health treatment has risen greatly since the exploratory survey was undertaken. Many women are finding it increasingly difficult to meet the cost of their treatment. The situation is worse in the rural areas where real income has depreciated because of the rapid decline in the value of the Naira.

Child's illness during the month preceding the investigation

The purpose of the study was to examine whether there would be substantial differences between reports on the respondents' own illnesses and those of their children. Hence, the same questions posed about the respondents' own illnesses were asked about their children's illnesses. Of respondents in Ondo Town 91 per cent reported one type of illness or another in respect of their children during the month preceding the survey, compared with 85 per cent in the rural areas. The patterns of illness in the urban and rural areas were similar but differed slightly from the pattern reported for the respondent's own illness. Fever (malaria) reported by about three-quarters led the list, while dysentery reported by about one-tenth was next. The incidence of measles, chickenpox and whooping cough was astonishingly low probably because of the nationwide immunization program that was successfully carried out in Ondo State shortly before the introduction of SAP. As in the case of the respondents' own illness, the majority of the children's illnesses lasted for a few days. Less than ten per cent persisted beyond one week; and five per cent in Ondo Town and seven per cent in the rural areas reported that the child was currently ill.

The distribution of where treatment was received was closer between the experience of the mothers and that of their children on one hand, and between the rural and urban areas on the other. As indicated in Table 4 the shift was also between home or self treatment and hospital treatment or buying medicine from the chemist or hawkers.

The association between paying for child's treatment and deciding upon it showed that there were no differences between the person deciding on and meeting the cost for the mothers' treatment and the treatment of their children. When the husband decided upon treatment he met the cost. Similarly, when the mother decided, she paid for it.

TABLE 4
Choice of health care provided for child's illness during month preceding survey

Health care provider	Urban			Rural		
	1st (N=448)	2nd (N=287)	3rd (N=233)	1st (N=496)	2nd (N=271)	3rd (N=204)
	%	%	%	%	%	%
Home-traditional	27	5	1	19	4	4
Home-modern	21	31	8	12	25	7
Private-hospital	12	13	20	12	14	21
Government hospital / health centre	38	42	60	54	31	46
Faith-healing	a	a	2	a	1	1
Chemist/medical stores	1	10	9	3	25	21
% using modern health care providers	50	55	80	66	45	67
% of all home or self treatment ^b	49	37	11	32	30	12
% using chemist or medical stores	1	10	9	3	25	21

a less than one per cent

b including faith-healing

However, the association between cost of child's treatment and the person meeting the cost was statistically highly significant for both Ondo Town and the rural areas. Nevertheless, in Ondo Town more women paid fully for their child's treatment than in the rural areas, where

more women made joint contribution with their spouses in meeting their children's treatment costs. The current economic difficulties and the rising cost of health treatment appear to have placed more of the health care burden on the husbands than had been the case in the past. The help which was traditionally received from relatives is apparently on the decline.

Experience with health care providers

The inadequacy and unreliability of the modern health services are some of the major constraints to their use in many developing countries. Patients are usually not given enough time to present their case to the health care provider. A typical encounter between patient and health professional may last less than two minutes (Reid 1984), while descriptions of symptoms may be limited to a single sentence, and physical or laboratory examinations may be cursory or even non-existent (Christakis et al. 1994).

Educational attainment has been found to be positively related to more frequent use of Western-type health care givers (Okafor 1984). Similarly, educated mothers have been found to experience lower child mortality partly because of their ability to negotiate better health treatment conditions with the health professionals (Orubuloye and Caldwell 1975; Caldwell 1979).

Previous experience of persons seeking treatment from the care-givers may influence the decision to delay treatment or use a particular health professional at the onset of another illness. Respondents were therefore asked to recall a typical experience with health care providers in a recent time when they sought treatment for themselves or their own children and other children from a government hospital or a health centre. They were asked to indicate the length of time they stayed with the doctors or nurses, whether they were given medicine, whether they understood the instructions, whether the medicine worked, and whether they went back to tell the staff the outcome of the treatment. The responses are analysed here.

Respondent's treatment

Ninety-six per cent of the respondents in the urban area, and 88 per cent of those in the rural areas were able to recall a typical encounter between themselves and health professionals relating to their own treatment. The duration of the encounter according to the educational status of the respondents showed that there were significant differences between the responses of the respondents in the rural areas and the urban area. Of the respondents in the urban area, 53 per cent spent less than ten minutes with health care providers, while 41 per cent spent more than ten minutes. The corresponding figures for the rural areas are 47 and 60 per cent. However, there were no significant differences between the various educational groups in the rural areas, while there were significant differences between those of the urban area.

Contrary to expectation, it appears that, on the whole, the less educated respondents spent more time with the health care providers than the educated ones. Two factors could be responsible for the pattern observed here. The educated women are far more likely to be precise and to give an accurate description of the symptoms of their illnesses, while more time may be needed by the health care providers to elicit information from the less educated women. It is also possible that the less educated women were not precise about the duration of the encounter thus leading to an overestimation on their part. In addition, the dwindling number of patients in government hospitals may have made it possible for the health care providers to devote more time to their patients than had been the case in the past when there were long queues.

Ninety per cent of the respondents in the rural areas reported that they were given medicine compared to 72 per cent in the urban areas. The difference was statistically significant. Surprisingly, 98 per cent of the rural respondents compared to 83 per cent of the

urban ones reported that they understood the instructions. The difference was also statistically significant. However, there were no significant differences in understanding the instructions among the various educational groups in both the urban and the rural areas. Nearly all the respondents reported that the medicine worked: 99 per cent in the urban areas and 96 per cent in the rural areas. However, 36 per cent of the urban respondents and 45 per cent of the rural ones went back to report the outcome of the treatment to the health care providers. The majority of the respondents who did not go back to see the health professionals acted so because they had fully recovered from the illness or because the health care providers did not advise them to come back. However, there were significant differences between the responses of the respondents in the urban area and those of the rural areas. Many of the respondents in the urban area did not go back to see the health care providers because they had fully recovered from the illness, while the majority of those in the rural areas did not go back because they were not advised to come back.

Own child's treatment

The distribution of the duration of the mothers' encounter with health care providers for their children's treatment was similar to that of the mother's treatment. While the differences between the education groups in the urban area were statistically significant, no significant differences were observed between the education groups in the rural areas.

Of the mothers in the urban area 73 per cent were given medicine for their children's illnesses compared to 90 per cent of the mothers in the rural areas. Although the percentage of educated mothers who were given medicine was slightly higher in the urban areas, the difference was not statistically significant. As in the case of mothers' treatment, the majority of the respondents in both the urban and the rural areas reported that they understood the instructions, and there were no differences between the various educational groups. Nearly all the respondents reported that the medicine given to their children worked. However, 48 per cent of mothers in the rural areas, and 35 per cent of those in the urban area went back to report the outcome of the treatment to the health professionals. Again, for the majority of mothers who did not go back it was because their children had fully recovered from the illness or because they had not been advised to come back. The reason for the majority of the mothers in the urban area not returning to the health care providers was that their children had fully recovered; the reason in the rural areas was that the health care providers did not advise them to return. The difference between the urban and the rural mothers was statistically significant.

Other children's treatment

A total of 33 respondents (22 urban and 11 rural) reported that they encountered health professionals in relation to other children's treatment. Fourteen out of the 22 respondents in the urban area compared to four out of the eleven respondents in the rural areas reported that they stayed with the doctor or nurse for less than ten minutes. The remainder stayed for ten or more minutes. There were no differences between the various educational groups. As in the case of the respondents' own children, the majority of the other children were also given medicine by the health care providers. Again, nearly all the respondents reported that they understood the instructions. Twenty-one out of the 22 respondents in the urban area compared to 9 out of 11 in the rural areas reported that the medicine worked for the other children. However, only two respondents in the rural areas and nine in the urban area went back to report the outcome of the treatment, mostly because the children had fully recovered or because they had not been advised to return. Only two out of the respondents in the urban area who did not report back sought treatment elsewhere.

The number of foster-children involved in the 1992 Ondo study is too small to establish a case for any preferential treatment between the biological offspring of mothers and foster children. This has been reported in the 1993/94 Health Research in the Ekiti District.

The 1993/94 health research in the Ekiti District

The data used in this section of the paper were collected in six communities (two semi-urban and four rural) in the Ekiti District of Ondo State, between April 1993 and February 1994. A total sample of 1538 Yoruba households were covered in the quantitative survey which generated information on household responses to various child illnesses. In each of the six communities, four clusters were randomly selected, from which dwelling units were selected on a systematic basis until a quota for each cluster was reached. One household with one currently married woman of child-bearing age 15-49 years with at least one surviving child under 15 years of age was selected for interview. The survey was limited to one household in each dwelling unit so as to cover a large number of families in the communities.

The first section of the questionnaire was on household listing. Questions were also asked of the respondents on the most recent illness that occurred to all children living in their households. The questions covered type of illness, the symptoms noticed, the person who first noticed the symptom, the duration between awareness of child illness and seeking treatment, the person who decided on where to seek medical help, and the person or persons who paid for the treatment. Questions were also asked on how respondent shifted from one type of health care providers to another in the course of illness.

In addition to the quantitative survey, seven focus-group discussions were held: six for all mothers with at least one surviving child, and one for the fathers. Data generated from the focus-group discussions and the in-depth interviews were used to support the findings from the quantitative data. The focus-group discussions were on the perception of illnesses, the understanding of the causes of illnesses and health behaviour associated with treatment within the households. The results of the quantitative survey are presented here.

Table 5
The characteristics of the population

Characteristics	Subgroups	Semi-Urban		Rural	
		N=727	%	N=811	%
Age	15-34 years	40		56	
	35 + years	60		44	
Education	No schooling	9		13	
	Primary	16		31	
	Secondary	39		38	
	Above secondary	36		19	
Occupation	Trading	38		51	
	Farming	12		12	
	Civil Servant	31		18	
	Artisan	7		12	
	Housewife only	6		3	
	Students	6		4	
	Marital status	Currently in union	88		89
	Divorced /separated	7		8	
	Widowed	4		3	
Religion	Christianity:				

	-Protestants	29	34
	- Catholics	18	23
	-African churches	43	32
	Islam	7	10
	Traditional	2	0
	None	1	1
Type of union	Monogamous	78	62
	Polygynous	22	38
Position among husband's wives	First	36	73
	Second	22	38
	Third and above	3	8
Pooling of resources	Yes	27	25
Husband and wife living together	Yes	79	76
Child fostering	In	7	9
	Out	13	24

The population

Table 5 presents a summary of the characteristics of the respondents. A majority of the semi-urban women were in their late thirties, while those in the rural areas were considerably younger. The educational distribution is typical of the general pattern in Ondo State and that of the Ekiti District in particular. Most women under 50 years now have some schooling, and most of the younger women some secondary schooling. Christianity was the dominant religion, with the African Christian churches now accounting for almost one-half of all Christians. This is a major change, and the result of a major conversion in recent years.

As in the rest of Ondo, farming and trading were the major occupations. A significant proportion were reported as civil servants, mostly teachers, administrators, clerks and nurses who worked in the local government headquarters. Marriage was nearly universal, stable with between one-fifth and two-fifths currently in polygynous unions. Between three-quarters and four-fifths were currently living with their spouses, while about one-quarter were pooling resources with their husbands. Pooling of resources with husbands on the scale reported in the Ekiti study, as in the Ondo survey, is new and not unrelated to the current economic difficulties. The fertility and child survival patterns were similar to those reported for the Ondo survey. The mean number of children ever-born was 3.9 for the semi-urban and 3.7 for the rural areas. These figures are comparable to that of 3.7 reported for Ondo Town and 4.0 reported for the rural areas in the Ondo survey. The mean number of children reported dead was 0.4 for the semi-urban areas and 0.5 for the rural areas. Again, the figures are comparable to 0.4 reported for Ondo Town and 0.5 reported for rural Ondo.

The pattern of child fostering is typical of the district in particular and of the Yoruba in general, with more children fostered out than fostered in. Approximately 11 per cent of the semi-urban women and 14 per cent of the rural ones were reported as heads of their households. Although the majority of the women in this group were currently married and their husbands living elsewhere, the mere reporting themselves as the heads of their households is significant. It is a manifestation of the increasing role of women in the management of the household economy.

Case studies of children's most recent illness

In all, 2,279 cases of child illnesses were reported from 1,538 households. The number of children reported ill was almost equally divided between the two locations where the study

was conducted: 50.1 per cent in the semi-urban areas compared to 49.9 per cent in the rural areas. The average number of children reported ill by each household was 1.4 for the semi-urban population and 1.6 for the rural areas. The distribution of the various types of illness reported is shown in Table 6. The patterns of illness by the major categories used above were similar to those reported in the Ondo survey.

Fever, mostly malaria, was dominant, while convulsions, cough-related illness and measles were significant. The sudden appearance of measles on the scale reported in the Ekiti survey is a major concern, and may well be a direct result of the failure of the immunization program. The recent withdrawal of financial support to the Expanded Immunization Programme (EPI) by USAID may well compound the situation. The majority of mothers responded quickly to their children's illnesses. In less than seven per cent of the cases did the illness last more than one week before treatment was sought.

Table 7 shows the distribution of the choice of health care providers in respect of child illness. Of the women in the semi-urban areas, 32 per cent sought treatment at the onset of their children's illness from government hospitals or health centres compared to 24 per cent who did so in the rural areas. Home treatment with herbs or medicine bought from stores or hawkers was reported by 45 per cent of semi-urban women and 62 per cent of the rural ones. Partly because of the general lack of private health care providers in the areas, and mostly because of the cost, only three per cent and two per cent in the semi-urban and the rural areas respectively used their services. Traditional health care providers or faith-healing were employed by 21 per cent in the semi-urban areas and 13 per cent in the rural areas.

Table 6
Distribution of the types of illnesses reported

Type of illnesses	Semi-urban		Rural	
	(N=1142)	%	(N=1137)	%
Fever (malaria)	46		70	
Convulsions	11		6	
Measles	9		6	
Stomach-related illness ^a	9		7	
Skin-related illness ^b	5		2	
Cough-related illness ^c	10		3	
General body pains ^d	3		2	
Others ^e	2		2	
Don't know	5		2	

^a Stomach-related illnesses include dysentery, diarrhoea, stomach ache and frequent bowel motions

^b Skin-related illnesses include chickenpox and smallpox, body sores (*inarun*), scabies and boils

^c Cough-related illnesses include tuberculosis, pneumonia, asthma, cold and catarrh

^d General body pains include chest, back, ear, eye pains; rheumatism (*lakuregbe / arunmoleegun*).

^e Others include 'did not reach seven days' (*makije / bomodije*), fontanelle (*oka-ori*), epilepsy (*warapa*), mumps (*segede*), anaemia, kwashiorkor, accident, bleeding, uvulectomy (*belubelu*), polio, appendicitis and matted hair (*dada*)

In the semi-urban areas, 78 per cent of the women compared with 86 per cent in the rural areas reported that their children fully recovered from their illnesses after the first treatment; while one per cent from each of the two locations had died, 22 per cent of the children in the semi-urban areas and 13 per cent of the rural ones were still ill.

Table 7
Choice of health care providers for child's illness during the month preceding the survey: 1st, 2nd and 3rd treatment (percentage distribution)

	Semi-urban			Rural		
	1st (N=1142)	2nd (N=248)	3rd (N=215)	1st (N=1137)	2nd (N=145)	3rd (N=93)
Hospital	32	12	2	24	27	3
Treated at home by parents	45	83	96	62	63	96
Family or private doctor	3	1	1	2	0	0
Traditional / faith-healing	21	11	1	13	10	1

There was a major shift during the second choice of treatment from hospital treatment in favour of home treatment by respondents in the semi-urban areas, while there was some consistency among the rural respondents. Nearly all the women in the two locations shifted to home treatment as the third choice of treatment as the illness progressed. This is a major departure from the findings from the Ondo survey: in Ondo Town, the proportion of women who used hospital treatment increased as the illness progressed. The pattern observed in the Ekiti study is not unrelated to the prevailing economic situation and the rising cost of health treatment. Between 1992 and 1994, the cost of treatment has more than doubled. Those who could not afford the cost simply resorted to home treatments by using herbs and medicine bought from medicine stores or hawkers. These are now major alternative sources of health care. However, they provide less efficient treatment because most of the medicines bought from hawkers are of little value, while patients hardly take enough dosage before they abandon treatment completely.

Table 8 shows a comparison between the person who decided upon treatment and who paid for it. A significant proportion of the semi-urban women were paying for their children's health treatment compared with the rural women, while the proportion of older siblings and relatives contributing to treatment cost has declined rapidly in the semi-urban areas. The pattern is comparable to that of the Ondo survey.

Table 8
Association between paying for child's treatment and making treatment decision (per cent distribution)

Person who paid for treatment	N	Person who decided upon treatment			
		Husband	Woman	Jointly	Others
Semi-urban					
Husband	808	53	44	1	2
Woman	278	19	75	9	5
Jointly	14	43	36	21	0
Others	38	11	74	3	13
Rural					
Husband	701	75	21	2	2
Woman	302	13	84	a	3
Jointly	47	66	19	11	4
Others	57	19	14	5	61

^a less than one per cent

The association between paying for the child's treatment and the cost is presented in Table 9. The cost of a single health treatment has risen greatly compared to the situation when the Ondo study was conducted in 1992. The average cost of treatment of fever (malaria) was about 100 Naira or US\$5 in 1994 when the survey was conducted compared to 60 Naira or US\$3.33 when the Ondo survey was undertaken in 1992. There was a further drop in the official exchange rate from 18 Naira to 22 Naira to one US dollar between 1992 and 1994. During the same period there was also an increase in the price of petroleum from 70 kobo or about one US cent to 3.25 Naira or 15 US cents per litre since October 1994. The increase in cost of fuel has made the health situation worse.

As in the case of Ondo study, husbands met a substantial part of treatment cost, and the association between the person meeting the cost and the cost of treatment was statistically highly significant. The contribution of older siblings or relatives became significant for the rural respondents as the cost of treatment rose.

One of the main aims of the 1993/94 Ekiti study was to examine whether the status of a child within the household affects the kind of health treatment given to it. The survey therefore attempted a distinction between the biological children of the family and foster-children. Because of the small number of foster-children reported in the survey, the data are combined in this analysis for both the semi-urban area and the rural areas. A total of 168 foster-children were reported ill during the month preceding the investigation. The figure represents 7.4 per cent of all children reported ill during the period. The analysis is made in respect of the person who first noticed the child's illness, the duration of illness before treatment was received, where treatment was received, the person who decided on treatment, and the person who paid for treatment.

Table 9
Association between paying for child's treatment and cost of treatment (percentage distribution)

Person meeting cost	Cost in Naira and US dollars ^a					
	Semi-urban			Rural		
	Under Naira 100	Naira 100-200	Naira 201+	Under Naira 100	Naira 100-200	Naira 201+
	under US\$4.5 (N=878)	US\$4.5-9 (N=117)	US\$9+ (N=144)	under US\$4.5 (N=911)	US\$4.5-9 (N=116)	US\$9+ (N=84)
Husband	72	68	70	65	56	57
Woman	26	19	21	28	25	19
Joint	b	4	2	3	12	7
Others	2	9	7	4	7	17

a based on exchange rate of US1.0 to 22 Naira

b less than one per cent

Table 10 shows the relationships between the status of the child and the person who first noticed the child's illness. Clearly there were significant differences in the persons who first noticed the child's illness and the status of the child in the family. The fostered children were at a disadvantage.

Table 10
Relationship between the status of the child and the person who first noticed the child illness (percentage distribution)

Person who first noticed child's illness	Child's status	
	fostered (N=168)	non-fostered (N=2111)
Mother (foster-mother)	42	89
Father (foster-father)	4	5
Foster-child's parent	5	-
Child complained	29	4
Others ^a	21	2

^a Others include relatives and neighbours

Table 11
Duration of illness before treatment was received according to child's status (percentage distribution)

Duration of illness (in days)	Child's status	
	Fostered (N=168)	Non-fostered (N=2111)
1	35	58
2	12	19
3	10	12
4	8	4
5	13	3
6	6	1
7	9	2
8	8	2

On the duration of illness before treatment was received, the biological children of the family were at an advantage with more than one-half receiving medical attention on the first day compared with about one-third of foster-children. The distribution is shown in Table 11. Again, the differences were statistically highly significant.

There was also an apparent differential between the status of the child and where treatment was received. The relevant data are presented in Table 12. Although the difference is small, the foster-children were at a disadvantage in terms of hospital care.

Table 12
Treatment place according to child's status (percentage distribution)

Treatment place	Child's status	
	Fostered (N=168)	Non-fostered (N=2111)
Hospital or health centre	24	28
Home treatment	57	53
Family / Private doctor	1	2
Traditional /faith healing	18	17

The association between the status of the child and the persons who decided on treatment, and the person who paid for it is presented in Table 13. The differences were statistically highly significant and reflect the true status of the children.

Although there were close similarities in the pattern of child's illness and health seeking behaviour observed from the 1992 Ondo survey and the 1993/94 Ekiti study, one major change has been the apparent increase in the use of home treatment probably as a result of the rise in cost of treatment. Another is the sudden appearance of measles and other diseases that were virtually eradicated before the introduction of the structural adjustment program in 1986.

The Ekiti study also revealed some degree of discrimination against foster-children in responses to health treatment. The rising cost of treatment may well aggravate the health condition of this disadvantaged group.

Table 13
Association between the status of the child and the person who decided/paid for the treatment
(percentage distribution)

	Child's status			
	Fostered		Non-fostered	
	Who decided (N=168)	Who paid (N=168)	Who decided (N=2111)	Who paid (N=2111)
Father (foster-father)	30	47	50	67
Mother (foster-mother)	53	23	45	26
Jointly	4	6	1	3
Others ^a	13	24	4	3

^a mostly foster-child's parents and relatives

Summary and discussion

The studies reported in this paper show that the majority of mothers and their children suffered from a wide range of minor and often ill-defined complaints. Generally, health care was sought from several types of health care providers concurrently and sequentially and the various types of health care providers were seen as complementary rather than conflicting. Although a large proportion of women sought treatment from modern health care providers at the onset of illness, the proportion of those who employed home or self treatment was also significant. Faith-healing and traditional health care were under-reported primarily because of the tendency for people to use more than one health care provider concurrently at the onset of illness. However, studies elsewhere in southern Nigeria have shown an increase in the use of traditional health care providers by less educated women, and of faith-healing by both adult literate males and females (Uyanga 1979).

Generally, there was a tendency for respondents in the Ondo study to shift from one type of health care to another in the course of illness. Nevertheless, there was a distinct difference in health-seeking behaviour between urban and rural respondents. Most respondents in the urban area moved from home or self-treatment to hospital treatment as their illnesses progressed, while rural respondents tended to use a combination of hospital treatment, and modern medicines purchased from patent medicine stores or hawkers. In the Ekiti study, only a few respondents took their children back for treatment at the government hospital or private clinics after the first round of treatment. The majority did not return primarily because of the additional cost of treatment, so they resorted to home treatment with herbal preparations or medicine bought from chemists or hawkers.

Perhaps the central findings of the studies reported in this paper are the association between making decisions about treatment and paying for it, and the association between paying for treatment and the cost. When decisions were made by the women about their own treatment or that of their children, the women invariably paid for such treatment. However, when the cost was high, the husband paid a substantial part of it. The differences between the responses in the studies reported here were not significant.

A detailed analysis of females' contribution to the household expenditure from the Ondo study showed that 16 per cent of the women in the urban area and seven per cent of those in the rural areas met all their treatment costs, while the corresponding proportions for children's illness were ten per cent for the urban area and five per cent for the rural areas. Nevertheless, 63 per cent of the respondents in the urban area and 61 per cent of those in the rural areas

contributed to their own health treatment, while 55 per cent in the urban area and 56 per cent in the rural areas also contributed to their children's treatment. Apart from housing, women's contribution to other household expenditure had increased greatly since the advent of the current economic difficulties. The burdens had become a matter for a great deal of discussion and complaint among all women, irrespective of where they lived and their socio-economic status.

For the majority of mothers who did not return to report the outcome of their own treatment or that of their children to the health care providers, this was primarily because they were not told to report back. This has been a major source of complaint among the health care providers. Even when patients are given specific instructions to report back to the health care providers after a treatment regime, they hardly ever do so because of the additional costs that may be involved.

Contrary to expectation and the existing body of knowledge on health-seeking behaviour in many developing countries, education of mothers appeared to have had little influence on the health-seeking behaviour of mothers in the Ondo study. Nearly all the analyses carried out on treatment behaviour and costs showed no significant differences between women with no formal schooling and those with some schooling. The present difficulties arising from the measures instituted to redress the economic situation have probably had more effect on the educated mothers, who depended mainly on salaries or earnings from trading, and on their husbands' salaries and wages which were frequently in arrears for several months. Trading was at a low ebb, while farmers found it difficult to transport and sell their farm products. In addition, the real value of the earnings had declined, and was at variance with the costs of goods and services. The imposition of charges for government health services, and a move toward selling prescribed medicines at market prices, had created an extra burden on the educated mothers who were already accustomed to using modern health care providers.

These studies were carried out at a time when the Structural Adjustment Program was firmly in place and its impact had become evident in all aspects of life. Since the introduction of the program in 1986, the cost of treatment had risen excessively, and had become more difficult for many families to meet than had been the case for many decades. Certainly, the findings of the researches have several implications for health improvement through the adoption of appropriate intervention strategies. We now know that an increasing number of health-seekers are shifting to less efficient systems of health care, while more families than before are carrying the burden of health care. The poor are increasingly finding it difficult to meet health costs because of the high cost of treatment. The present state of the health care system and the poor responses to illness may have temporarily put a stop to the achievements in reducing morbidity and mortality before the introduction of SAP.

There are now apprehensions of a general rise in the level of morbidity, infant and childhood mortality. This is a major concern for many families and health care providers. Intervention strategies aimed at establishing flexible payment schemes and political will that can ease the burden created by the current economic difficulties are most urgently needed: the continuous extension of the 'user-pays' principle to the health care sector will make the goal of good health for all almost impossible, at least in the foreseeable future.

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