

‘Fatalism’, accident causation and prevention: issues for health promotion from an exploratory study in a Yoruba town, Nigeria

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Abstract

As countries experience the ‘epidemiological transition’ with a relative decline in infectious diseases, accident rates tend to increase, particularly road traffic accidents. The health promotion interventions intended to prevent or minimize the consequences of accidents have been developed in predominantly Western, industrialized countries. Although some of these solutions have been applied with success to less developed countries, there are also good reasons why such solutions are ineffective when tried in a different context. Health promotion as developed in the West has a particular ideological bias, being framed within a secular, individualist and rationalist culture. Different cosmologies exist outside this culture, often described as ‘fatalist’ by Western commentators and as obstructing change. Changing these cosmologies or worldviews may not fit with the ethic of paying due respect to the cultural traditions of the ‘target group’. Health promotion is therefore faced with a dilemma. In addition to different worldviews, the different levels of development also mean that solutions formulated in richer countries do not suit poorer countries. This paper uses a small exploratory study in a Yoruba town in Nigeria to examine these points. Interviews with key informants were held in March 1994 in Igbu-Ora and data were extracted from hospital records. Levels of

accidents from available records are noted and people’s ideas about accident prevention are discussed. Recommendations as to the way forward are then proposed.

Introduction

The aims of this paper are to highlight the issue of accidents and unintentional injuries in developing countries, with a focus on Nigeria, and to question the suitability of transferring to poorer countries strategies formulated in Western, industrialized countries. These strategies have been framed within a particular discourse which stresses the importance of individual and collective empowerment, an internal locus of control and the value of rationality, and within countries at a certain level of development, with improving rather than declining indices of living standards. The Yoruba, in south west Nigeria, have a worldview with pre-destination as a central idea, i.e. that one’s life (and death) has been mapped out before birth. This view is at odds with the dominant themes of the modern health promotion movement. Moreover, the Yoruba live in uncertain times, politically, socially and economically, and with possibly declining indices of development. The accident rate in Nigeria is appallingly high. What is the way forward for accident prevention strategies?

Accidents and unintentional injury in developing countries

Countries experiencing the so-called ‘epidemiological transition’, comprising a decline in mortality and morbidity from infectious diseases, tend to

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witness an increase in the relative importance of fatal and non-fatal injuries. Unintentional injury rates in developing countries have increased to become a significant cause of premature death and morbidity (Bradley *et al.*, 1992; Zwi, 1993; Murray and Lopez, 1994). Injuries from road traffic accidents (RTAs) are the most significant problem, so much so that motor vehicle-related mortality has been described as a 'disease of development' (Wintemute, 1985). There have been 'Dramatic increases in the proportion and absolute number of traffic fatalities in a number of developing countries' [see Odero *et al.*, p. 445 (Odero *et al.*, 1997)]. The number of vehicles in developing countries is increasing (Varma *et al.*, 1992). Of all road deaths occurring globally each year, 74% are in developing countries and there has been a 5-fold increase in traffic-related deaths in Nigeria over the last 30 years (Odero *et al.*, 1997). Moreover, there is a fatality per accident rate which can be 20 times higher than in developed countries (Jacobs and Sayer, 1983). Although a focus on RTAs is essential [by 1982 these accounted for 10% of deaths between the ages of 5 and 44 in 11 developing countries (Jacobs and Sayer, 1983)], for children, the role of domestic accidents is also crucial. In Nigeria they have been described as an 'important cause of morbidity', with the need for a 'comprehensive accident prevention programme' (Onadeko, 1983).

Indeed, some developing countries have questioned improving health care, education and other services, when, 'All these and other intended programmes aimed at making life easy for the people can be rendered meaningless if the people for which the facilities are meant are regularly killed or incapacitated through unnecessary accidents' [see Ogunsanya, p. 262 (Ogunsanya, 1991)]. This author is referring to Nigeria, which has one of the worst accident records in the world (Asogwa, 1992). The rising concern about unintentional injury rates is evidenced by the WHO setting up a special office to co-ordinate its global injury epidemiology and prevention programme. World Health Day in 1993 focused on injury prevention and the Eighth General Programme of Work of

the WHO (1990–95) gave accident prevention a prominent place within 'Health For All'. However, there is still a lack of recognition by some countries and funding agencies of the importance of unintentional injuries as a health problem. Smith and Barss's (Smith and Barss, 1991) review of the literature suggests that this is, indeed, still a relatively neglected area.

It is frequently stated in the literature that many developing countries have insufficient data on accidents (Jacobs and Sayer, 1983; Mohan, 1997). This is particularly the case for the poorest countries, many in sub-Saharan Africa; Asogwa (Asogwa, 1992) describes how even fatalities are under-reported. In India, Mohan (Mohan, 1984) estimated that only one-third of deaths from injuries were recorded in official statistics. Hospital data only record cases which reach hospital—and these may not necessarily be the most severe. Olurin (Olurin, 1971) found that only 20% of eye injuries in Nigeria were seen in hospital. Udomah and Edafiogho, p. 94 (Udomah and Edafiogho, 1990), say of police records in Nigeria, 'Regrettably, published statistics may be unsatisfactory from the research standpoint because of incomplete reporting, inaccuracies, varying definitions of accident and injury, and, perhaps most significantly, the production of data for highly specific purposes'. Notwithstanding these difficulties, what data there are indicate a worsening situation and an increasing fatality rate per accident (Asogwa, 1992; Oluwasanmi, 1993). Ogunsanya and Waziri, p. 87 (Ogunsanya and Waziri, 1991), state that in 1988 '...the country recorded 25 292 accidents with 9077 deaths', resulting in 'an embarrassing rate of 69 accidents and 24 deaths every day of that year...This situation is disturbing as the majority of those killed fall within the productive age of 16–44. Today in Nigeria, death by accident far exceeds those by any communicable disease in the country'. Road accidents have been recognized as a major public health problem in Nigeria for some time (Asogwa, 1978). Trading is a central part of Nigerian culture and traders travel large distances to markets, particularly to the 'inter-kingdom periodic markets' (Mills-Tettey and Fadare, 1991).

Routes linking major metropolitan centres, such as the Ibadan–Lagos Expressway, are particularly dangerous. Oladepo and Brieger (Oladepo and Brieger, 1986) showed that a third of all accidents on this road involved fatalities, with speeding causing 28.9% and 'carelessness' 24% of accidents.

Whilst it is true that the statistical picture is incomplete, it could be argued that some reduction in accident rates can be achieved by applying what is already known (Jacobs, 1982; Forjuoh and Li, 1996). Asogwa, p. 154 (Asogwa, 1992), has called for 'technical know-how from advanced motorized countries where road accidents are well under control using well tested countermeasures' to be applied to Nigeria. A number of developing countries have adopted countermeasures such as speed limits and controls on drink-driving, and legislation for seat belts and motorcycle helmets (Zwi, 1993). Hills and Jacobs (Hills and Jacobs, 1981) have called for caution, however. The efficacy of countermeasures in developed countries, they argue, may not be definitive, but also what might be effective in developed countries may not be effective in developing countries and vice versa. The transfer of technical solutions to the problem of accident prevention clearly needs to take account of the level of development and availability of resources. An everyday activity in many developing countries, such as wood cutting, causes considerable eye injuries, but it is hardly practical to suggest the wearing of goggles, as in industrialized countries. Likewise, the continued reliance on kerosene and other fuels for cooking is likely to continue to cause burns and poisonings. Poorer countries have lower private vehicle ownership, high rates of passenger vehicle accidents, use of open-back vehicles (Nelson and Strueber, 1991), reliance on motorcycles (Falope, 1991) and 'token compliance' with, for example, motorcycle helmet wearing (Conrad *et al.*, 1995) or seat belt use (Hauswald, 1997). Asogwa's (Asogwa, 1980) before-and-after study of motorcycle helmet legislation in Nigeria showed a sharp *increase* in injuries and fatalities after introduction of the legislation! Sayer and Downing (Sayer and Downing, 1981) and Jacobs and Sayer (Jacobs and Sayer, 1983)

note that the 'culture' of driver behaviour must also be considered and driver training (Oladiran and Pheko, 1995). In puzzlement at why road accident countermeasures in Nigeria have not resulted in any reduction in accidents, Asogwa, p. 154 (Asogwa, 1992), wonders whether there are 'other factors yet to be unravelled.... There are many gaps in knowledge that need to be filled through...research'.

The present exploratory research addresses the gaps not by considering the appropriateness of technical solutions formulated predominantly in the West, but by exploring the differing worldviews of the countries where they were developed and that of where they might be applied. Accident prevention raises fundamental issues about different cosmologies, different views on accident causation and on the desirability of particular courses of action.

The exploratory study

An exploratory study was carried out to establish the feasibility of developing a research proposal into accident prevention in south-west Nigeria. This stage of research is often not reported in the literature. The aim was to talk to key informants—health workers and people in the community—to gain a picture of the perception of accidents as a public health problem, of accident causation and of what people thought could be solutions, in order to see what issues there might be in taking health promotion interventions forward. The possibility of using data extracted from records held at hospitals and from death registers was also to be explored. The exploratory study was carried out in Igbo-Ora, a Yoruba town of 30 000 people in the southwest of Nigeria that is particularly well documented as it has been the location for the Ibarapa Community Health project, established by University College Hospital, Ibadan, since 1976. Igbo-Ora has a well-developed system of primary health care and relatively effective systems for recording vital statistics data (Ayeni and Olayinka, 1979). Data were collected opportunistically. Focus groups were carried out with 20 medical students

and tape recorded. Six *babalwos* (traditional priests) were visited and interviewed, with one taking us through the ritual of a consultation. Twenty informal interviews were carried out with local people at their homes; this was a purposive sample and all the respondents were women, as data were also being collected on reproductive health. Four health workers, some paid and others volunteers, were interviewed and tape recorded. These data could provide a basis upon which to frame proposals for a larger study.

Accident data from Igbo-Ora

Data extracted from the death records held at the public hospital in Igbo-Ora for 1988–92 are shown in Table I. It is felt that these data under-represent accidents.

Of the 54 accidental deaths, 31 (57%) were caused by RTAs. The other main causes were snake bites (seven deaths), gun shot wounds (two deaths) and electric shock (two deaths). Responsible for one death each (extracted verbatim from the records) were the following: thunder accident (a farmer), native poisoning, poisoning, kerosene poisoning, nail accident, cutlass accident (a butcher), fracture, drowning, burns, head injury, home accident and overdose of native medicine. The deaths do indeed fall into the 'most productive years'. Of the 54 deaths, 16 (nearly 30%) were aged 16 or less, 16% were over 60, and the remainder, 54%, were between the ages of 17 and 60. Of the 31 RTA deaths, five were children, or 16%, with 18 (58%) male adults and eight (26%) female adults. All the women were petty traders and half the men were drivers by occupation.

Table I. Deaths in Igbo-Ora 1988–92

Year	Total	Accidents (% of total deaths)
1988	311	12 (3.8)
1989	312	3 (1)
1990	380	12 (3.2)
1991	342	15 (4.4)
1992	338	12 (3.5)

[Oladepo and Brieger (Oladepo and Brieger, 1986) have shown that professional drivers are 5 times more likely to have an accident than are drivers who do not drive for a living.]

Data taken from admissions records to the hospital and private clinics (the three facilities which treat accidents) show a similar dominance of RTAs. All entries relating to unintentional injuries were extracted for 1 year, from March 1993 to March 1994. Ninety-nine entries were recorded, of which 63 were injuries caused by RTAs. Table II shows the main causes of admission.

Responsible for two admissions each were: domestic, fell from tree, broke leg and human bite. Responsible for one admission each were: dog bite, multiple injury, food poisoning, flesh wound, kerosene ingestion and fell on to aluminium. Again, these descriptions are taken verbatim from the records.

Of the 63 RTAs, 31 involved adult males (49% of total), 14 female adults (22%) and 19 (30%) were aged 16 or less, with equal numbers of boys and girls involved. The data do not indicate whether those involved were car occupants, pedestrians or other vehicle users. Two accidents involved two people being admitted from the same accident, one caused three admissions and the rest were single admissions.

Of the total number of accidents, 33, or one-third, involved children. The outcome is not recorded (i.e. death or discharge). The data from the death records does include information on how long the individual was hospitalized before death. This shows that only 10 of the RTAs died before reaching hospital; the others arrived alive. This is

Table II. Admission to three health care facilities for unintentional injuries

Cause	No. of admissions	Of which children
RTA	63	19
Snake bite	10	3
Burns	6	5
Gun shot	3	0
Assault	3	0

significant given that one of the main reasons for the larger fatality rate per accident in developing countries is the lack of timely hospital treatment. Likewise, several of the victims of snake bite, burns and other injuries were in hospital for several days if not weeks before death. The absence of effective anti-snake venom was a significant problem. It may be a case too, that effective treatments are not available for other types of injury.

It is impossible to estimate what percentage of deaths and injuries appear in the 'official' statistics above for Igbo-Ora. There is widespread use of traditional healers and sometimes villagers go to the clinic or hospital only when other remedies have failed. From anecdotal evidence it would seem that there may be a tendency to treat home and farm accidents within the home, whereas road accident victims are more likely to be taken to the clinic. The data may under-represent particular types of accident, such as fractures, which may be taken to a bone setter.

A student project which extracted data from the medical register and outpatient records in Igbo-Ora found that of 501 accidents, 42.7% were trauma from falls and 39.5% were from road traffic accidents. Accidents were most frequent for those under the age of 20 and for males (74.9%) rather than females (25.1%) (Afolabi *et al.*, 1982). Another study in Igbo-Ora found that 43.4% of apprentices to a variety of trades (including tailoring, motor mechanic, barbering, etc.) had had accidents during their training (Osinubi *et al.*, 1985).

Accident causation and Yoruba belief

All informants saw accidents as a major problem, but the lay people had little to say apart from shaking their heads and agreeing how sad it was. Some background to Yoruba beliefs is necessary before discussing the comments of the study participants. In common with other African systems of belief about disease causation, the Yoruba believe that some diseases (such as malaria) have a simple, natural cause and others have supernatural causes

(Ayoade, 1979; Oladepo and Sridhar, 1987; Ramakrishna *et al.*, 1989; Moloje, 1992). The latter include sorcery, witchcraft and 'spirit instructions'.

Bastian (Bastian, 1992) notes that death is 'rarely seen as natural in any Nigerian culture'. Jimoh's study (Jimoh, 1985) of attitudes to death of 245 Nigerian university students show that the majority thought that death, including after an injury, was caused by the 'work of wicked people', the gods or other forces. The death of many Nigerians is believed to be caused by forces outside the deceased. Except in very old persons, death is hardly ever seen as having been caused by ill health, unavoidable accidents, or any other natural causes. Instead, when a person dies, it is the 'wicked' who have 'done their worst' or the 'forces of evil' which have 'struck again' (p. 76).

The significance of forces outside the individual is related to the concept of predestination, which is basic to Yoruba philosophy and daily life. *Oludamare*, the creator of life, seals people's fate before they come into the world. Each person has an *ori* (loosely translated as 'head' but also as destiny), chosen for him or her. 'Each individual's *ori* is his personal divinity who regulates his life in conformity with the wishes of the divinities who exist for the general public interest' [see Abimbola, p. 34 (Abimbola, 1975)]. It is possible to find out what life has in store by consulting the deity *Orunmila*, who was present when each person's destiny was decided. To do this, an Ifa priest, or *babalawo*, is consulted, who uses a system of verses, the Odu, and a set ritual, to communicate with the divinities and so to advise the client. Idowu (Idowu, 1962) comments that 'As far as they (the Yoruba) are concerned, the full responsibility of all the affairs of life belongs to the Deity, their own part in the matter is to do as they are ordered through the priests and diviners' (p. 5). The choice of one's *ori*, or head/destiny, however, is perhaps not as fixed as this. The choice of a 'good' head gives the potential for success, not success itself, so there is still room for personal effort and hard work.

However, predestination does provide one explanation for misfortune, including accidents and

a reason not to take precautions. One young Muslim Yoruba when interviewed explained that he did not wear a motorcycle helmet as he had consulted the *babalawo* and knew that he was in no danger. From talking to local people, it is clear that Muslims and Christians may also adhere to belief in traditional African deities, and that they and believers in traditional African religion all consult *babalawos*. Awolalu (Awolalu, 1979) confirms this. The practice of consulting a *babalawo* is widespread and approximately 160 such Ifa priests live in Igbo-Ora. Many of those interviewed could not or did not want to explain the Ifa system of thought—*babalawo* literally means ‘the keeper of secrets’. One man, educated to a higher level than most, said that many people did not know what philosophy lay behind the *babalawo*’s work but consulted him anyway. His account followed closely that found in the literature above. A health worker explained that:

If you want to travel out you need to go to the *babalawo* first and ask, ‘Now I want to go to Lagos’ or you might ask for your sister and...he will say ‘Ah! Tell her not to travel now because the road is not clear’. So you know the question of wearing safety helmet or something like that doesn’t arrive before because you are asked not to travel. So the accident has been prevented.

The *babalawo*’s role is to tell the future, not to give ‘safety medicine’. Once it is known whether it is safe to travel or not, a choice can be made. If it is not safe, the *babalawo* may ask for a sacrifice to be made, for example, of a chicken; ‘as soon as you make the sacrifice the road is clear for you, so that’s it’. The *babalawo* might also be consulted after an accident to find out whether the person felt to have caused the accident or who had been its victim had done anything ‘wrong’.

Another commented, ‘If there is an accident they can go to the *babalawo* and perhaps you have done something you shouldn’t do’. Also, ‘once your *ori* is working well, you believe that nothing will happen to you’. Washing one’s *ori*/head was an important ritual and potions were available also to rub onto one’s *ori*.

Medical students, who had worked in accident and emergency facilities, felt that the Yoruba belief in predestination was a ‘major problem’ in relation to accident prevention work and that education was needed. They could all tell ‘accident stories’ and their dominant theme was of ‘candidacy’ (Davison *et al.*, 1991), i.e. certain individuals who had behaved erratically were prime candidates for an accident. The students held their own ‘rational’ explanations whilst also being aware of distancing themselves from the ‘non-rational’ beliefs of their patients.

One health worker explained that more people were turning to the *babalawo* for help, just as more people were turning to traditional sources of water, such as ponds, once the wells had dried or collapsed due to non-maintenance. Likewise, people were losing faith with modern hospitals due to their lack of resources and poor staff morale, and turning back to the traditional structure of Ifa to find solutions to problems. Traditional beliefs are perhaps becoming more important again in times of relative economic decline and political uncertainty. The positive functions of a fatalistic worldview are seldom mentioned, but, as Abimbola comments, ‘By shifting the responsibility for human failure or success largely from human beings, this concept frees them from any sense of guilt and dependency which usually causes psychological disturbances’ [see Abimbola, p. 34 (Abimbola, 1975)]. Such beliefs may be useful in helping Nigerians live through a time when it appears that their living standards are controlled by outside economic forces. The wider economic and political scenario will be considered briefly, although it is not the main subject of this paper.

Increasing poverty and structural adjustment programmes

Good quality data from industrialized countries clearly show the effect of poverty and relative economic and social disadvantage on accident rates, and anti-poverty strategies are arguably one of the best ways to reduce accidents and injuries (Quick, 1991). It is a commonly held view, both from the Nigerian literature and from

anecdotal evidence, that life is much harder now than during the comparatively rich years of the oil boom. Okolie, p. 210 (Okolie, 1995), has described the Nigerian 'state's increasing incoherence and loss of autonomy (leading) to more confusion, uncertainty, unpredictability, corruption and worsening conditions of life of most of the people'. Structural adjustment programmes (SAPs) (i.e. the programmes of economic reform imposed by the World Bank and the International Monetary Fund, and the hardship these have led to for ordinary people) were mentioned by several contributors to the Accident Control Workshop held in Lagos in 1991 (Bolade and Ogunsaya, 1991) as contributing to the accident rate. This is because vehicles are no longer maintained to satisfactory standards, roads are not maintained, more corruption exists (e.g. buying of licences and certificates) and yet people still need to travel to make a living. Nigeria reached a certain level of development where, for example, fast, straight roads were built, but vehicle maintenance and enforcement of regulations have not kept pace (Asogwa, 1992). Lack of resources and of a co-ordinated response to the problem has been blamed for lack of progress in preventing road accidents in other African countries (Bezzaoucha *et al.*, 1988). There is some evidence of the effect of SAPs on health (Onimode, 1989) but the precise relationship between SAPs, economic decline and increases in injuries requires further empirical research. Ironically, the petrol shortages in Nigeria may lead to a reduction in RTAs. It was the medical students' view, however, that fuel shortages lead to increases in burns, due to the mixing of fuels and the use of the wrong types of fuels for certain purposes. It was also their view that financial constraints in hospitals meant that delays in treatment were occurring. Treatment would not be given unless essential items such as syringes could be paid for by patients or their relatives. Such assertions require caution and further research is needed to look at the precise effect on accident rates of increased poverty at the household level. Given the relatively unstable

political situation in Nigeria and the decrease in living standards for many, there is not an environment conducive to accident reduction.

Health promotion discourse and accident prevention

It is part of the modernist, Western project to regard all events as controllable and all accidents as preventable (Green, 1995). The UK Department of Health (Department of Health, 1992) thus comments, 'In theory at least, all accidents are preventable'. Likewise, 'It is vital to counter the view of accidents as random events due to bad luck' [see Henwood, p. 26 (Henwood, 1992)]. It is striking, in the accident literature, that discussion of preventive actions are based on 'rational' approaches and seldom take into account people's 'non-rational' explanations of causes. Thus Smith and Barss, p. 259 (Smith and Barss, 1991), assert that 'Injuries are no longer considered accidents or acts of God, and can be subjected to epidemiologic study like that conducted with other health conditions'. This may be the view of researchers, but it is not one held by all lay people. Recent years have seen increased willingness to incorporate lay beliefs into health promotion activity and to accept that what appears 'rational' to one person or culture may not to another, but this appears to be lacking in the area of accident causation. In the Western worldview, an Act of God is a label applied only when all 'rational' explanations have been exhausted. Polnay, p. 105 (Polnay, 1992), comments that even with '...true acts of God some would argue that these too can be avoided by appropriate action'.

In cases where people hold 'un-scientific' views about illness or disease causation, it is taken as evidence of their need for education. Thus in their review of successful interventions to prevent injury in developing countries, Forjuoh and Li, p. 1551 (Forjuoh and Li, 1996), assert that, 'The lack of knowledge about the causes of injury, along with the low level of education in many countries...has resulted in people's adherence to the fatalistic theory of injury as acts of God'.

This view is located within the dominant health promotion discourse which stresses the values of rationality, logical thought, planned decision making, self-efficacy and an internal locus of control. Thus, Tones *et al.*, p. 55 (Tones *et al.*, 1990), note,

...if individuals perceive themselves as ‘copers’; if they believe that they are in control of their lives and have the capacity to act logically and decisively, then their chance of adopting a given health action which they believe is sensible is that much greater than those having a different self-concept. On the other hand, action is less likely where someone’s Perceived Locus of Control (to use Rotter’s term) is external. In other words a person who believes that life’s choices are governed by the vagaries of fate or determined by a conspiracy of powerful others and faceless organizations will be less likely to mobilize the personal resources needed to face a potentially threatening situation.

It is better, the above quotation asserts, to be in charge of one’s own life than to trust it to God, the gods or other forces. The ‘belief that it is possible to be in charge of one’s life’ [see Tones *et al.*, p. 13 (Tones *et al.*, 1990)] is a key value of the modern health promotion movement.

In summary, this contemporary health promotion discourse is predominantly Western and secular, and possibly sits uneasily with other liberal values such as respecting other people’s cultural sensitivities. The notion of producing culturally sensitive health education materials and strategies is well accepted, but there seems to be little recognition of the extent to which the entire health promotion movement represents a particular way of looking at the world. There is, however, the beginning of a close and critical scrutiny of health promotion discourse (Bunton *et al.*, 1995; Sidell *et al.*, 1997). The stress on the importance of individuals taking control of their lives, of being ‘empowered’ and directing their lives from within rather than seeing themselves as controlled by external forces is at odds with a number of other ‘ways of seeing’, which dispute that it is the case that one can take

charge of one’s own destiny, or indeed, that this is desirable. It can be argued that this is the case among the Yoruba. Regarding ‘accidents’, it is very possible that an injury was intended, as the individual has failed in some duty or was predestined to suffer such an ‘accident’. The Yoruba are not alone in believing that one’s fate does not reside within the person; there are similar beliefs in many other African cultures and other world religions. These beliefs raise complex questions for the health promoter intent on preventing accidents or minimizing their effects. What then are the potential strategies for tackling accidents, presuming that it is morally indefensible simply to ignore them? A number of ways forward are suggested.

Firstly, there is a need for further research to elicit from local people their beliefs about different types of accidents and their causation, and the acceptability and efficacy of safety measures. Predestination is only one type of explanation for misfortune; there are also other factors such as transgression of taboos, ancestors, jealousy from others, and what Westerners call ‘witchcraft’. Bastian, p. 216 (Bastian, 1992), notes that ‘witchcraft themes dominate popular discourse of all sorts’ in Nigeria. Setiloane (Setiloane, 1978), noting the derogatory connotation of ‘witchcraft’, has argued that Africans need to define their own terms rather than relying on colonial translations of concepts important to African cultures. Also what is ‘supernatural’ to a secular culture may be ‘natural’ to another culture! Bastian has written of the complexity of ideas about roads and pathways in colonial times as well as today, and of the Nigerian fascination with the evils on the road; ‘Most of the people I knew agreed that night-time travel in Nigeria was tantamount to suicide because of all the dangerous forces, material and otherwise, that made their way along the darkened roads’ [see Bastian, p. 102 (Bastian, 1992)]. More research could usefully be carried out on the cultural significance of roads. Among the Yoruba, there is a need to investigate the local terms for accidents, such as *ijamba*, which has a range of connotations. One attempt to study children’s domestic accidents

in Igbo-Ora was thwarted by the mothers' view that it was bad luck to discuss such things, but also because it reflected badly on their mothering (W. R. Brieger, pers. commun.). It is fatuous to suggest that because people have a particular set of beliefs that they are satisfied with the status quo or do not 'mind' accidents when explained by external forces. In tandem, it would be essential to investigate the effects of relative national economic decline on household poverty and thence on to injury rates. Research would also be useful to find improved ways of record keeping and of co-ordination of existing records, which would provide useful data for health promotion activities. As seen above, the descriptions given for causes of accidents are not too helpful for health promotion purposes. Needless to say, such research needs to be qualitative (Ramakrishna and Brieger, 1987). There are major questions regarding who carries out the research and this author is well aware of the issues in researching African culture as a non-African (Dixey, 1985). Interestingly those Western anthropologists, such as Evans-Pritchard (Evans-Pritchard, 1937), so criticised now by African social scientists (Amadiume, 1987) have had their work used to try to understand contemporary lay beliefs in developed countries, e.g. Davison *et al.* (Davison *et al.*, 1991).

Secondly, there needs to be a more critical and self-reflexive critique of health promotion. An orthodoxy has developed [see Davison *et al.*, p. 26 (Davison *et al.*, 1997)]:

...the 'locus of control' trend in psychology has operated within an ideological perspective which takes as axiomatic that belief in individual control is 'correct', while belief in other agencies requires some kind of rectification (usually education). This type of analysis has led to the production of the idea that health promotion is involved in a battle for the hearts and minds of the population, a struggle between a modern belief in lifestyle and an atavistic culture of 'fatalism'.

Western secular health promoters may need to recognize that some accidents are indeed Acts of

God or of gods, 'witchcraft', sorcery or are predestined to happen—in other words to accept the reality of a worldview based on another cosmology. In addition, 'fatalism' needs to be seen within its social context: 'Fatalism, in some situations, is better construed as a realistic appraisal of the potential for individual control rather than an intrapersonal quality associated with an external locus of control' [see Rogers *et al.*, p. 33 (Rogers *et al.*, 1997)].

Thirdly, it may be possible for the authorities to pursue engineering measures to promote safety. Three approaches—education, engineering and enforcement—are usually used together to prevent and reduce the effects of accidents. In Western countries, there has been recognition that measures which require no action from the potential victims or perpetrators of accidents are superior to those which rely on education of that victim or perpetrator. Thus if roads are made safer through engineering measures, fewer casualties result than if there were reliance, for example, on pedestrian or driver education. Low-cost remedial engineering measures have shown promise in developing countries (Jacobs and Sayer, 1983).

Thus it is possible to create safer environments without consulting the public whose safety is being protected. How does this approach sit with the dominant theme within the health promotion movement of community participation? 'Community participation' is clearly an attempt to ensure that the health promotion agenda is not simply imposed, but that people are consulted and involved to varying degrees. Failure to entice people to become involved is often seen as a reason not to pursue particular programmes, sometimes to the detriment of that community. The pursuit of engineering measures to promote safety raises a number of difficult issues. Although this approach has led to improvements having been made in developed countries, it can smack of paternalism. It also assumes somehow that those in charge of engineering, of policy making and enforcement are not themselves in possession of 'traditional' or 'fatalistic' views, but have more 'modern' approaches. It may be possible, however, to pursue engineering and enforcement measures, and those which gener-

ally help to provide a more 'supportive environment' in ways which are neither paternalistic nor unacceptable to the people. It is a central tenet too of Yoruba belief that one can make efforts to improve one's lot in life and thus 'fatalism' should not be equated with passive resignation. Indeed, the role of the *babalawo* is to give advice about danger avoidance. Again however, this is where more research would illuminate an acceptable strategy.

In the meantime, some of the factors which would improve safety levels are already known and these appear to be culturally acceptable. Many of the 'answers' to road safety were present in theory at the training workshop on 'Accidents and Safety Control of Mass Transit Operations in Nigeria' held in 1990 in Benin City (Bolade and Ogunsanaya, 1991). There are examples of good practice which have resulted in excellent safety records, e.g. Igodan (Igodan, 1991) and Iyang (Iyang, 1991), including proper breaks for coach drivers and attention to shift patterns. Sahdev *et al.* (Sahdev *et al.*, 1994) have shown that after an accident, lack of pre-hospital care, delays in transportation and failure to diagnose correctly lead to a higher fatality rate. There would seem to be considerable scope for reducing the consequences of accidents, such as improving emergency services and better care after an accident. This clearly, however, is dependent upon resources. A lesson that is clear from industrialized countries is that anti-poverty measures would have a beneficial effect on accident rates and this is an issue for the international donor community. There is also a role for urban planning, which is often lacking in Nigeria (Nkambwe, 1985). The role of international consultants in transport issues has been questioned (Farahmand-Razai, 1994) and Mohan (Mohan, 1997) calls for 'a much larger group of committed professionals' rather than 'roving experts' to enable the transfer of technical expertise between less industrialized countries.

Conclusion

This exploratory study into an important problem has highlighted the complexity of carrying out

health promotion work in the accident prevention area. It has raised issues for research methodology, and has suggested fruitful avenues for more work. Nigeria's accident rate, particularly for RTAs, has reached frighteningly high levels. This is unacceptable and it would be unethical to ignore it. Basic to Yoruba belief is the idea of pre-destination, which has led to a belief that accidents may be pre-determined, and to the use of the *babalawo* to give advice about the future. The dominant discourse of contemporary health promotion tends to see fatalism as atavistic and unhelpful. However, 'fatalism' may be a rational perspective in the social and economic circumstances, and who can judge whether there are gods or a God who predetermine people's fate? Health promotion needs to recognize its secular, modernist, individualist biases, and its pre-occupation with control and empowerment. There are measures which can be taken, however, to reduce accidents and their effects, and people's beliefs should not be taken to mean that they are satisfied with the status quo. Discussion of preventative actions need to incorporate a wider range of factors, such as cultural beliefs and understanding, and accidents need to be placed within a social, economic and political context. There needs to be an increase in resources given both to research to understand the problem, and to tackling it.

Acknowledgements

Thanks are given to the British Council for funding visits to Nigeria, to Dr Bill Brieger, without whom this paper would not have been possible, Mr Emmanuel Adams for his help in Nigeria, Professor Keith Tones for comments on earlier versions of this paper and to my colleague Sally Foster.

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Received on September 2, 1996; accepted on March 18, 1998