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Illness Behavior and the Health Transition in the Developing World

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Introduction

The “health transition” refers to the ongoing, worldwide increase in life expectancy that has occurred since the beginning of the twentieth century, more especially since the 1960s. In the 25 years from 1960 to 1985, global life expectancy at birth increased from approximately 48 to 59 years. Since this increase occurred in all regions of the world, the mortality differential between the developed and developing world has persisted (United Nations 1985).

The health transition also encompasses the changing configuration of causes of death and the changing character of morbidity. Acute infectious disease now accounts for less of the morbidity burden in some countries (although it remains a serious problem in sub-Saharan Africa, India, and the Middle East), while chronic disease (e.g., heart disease, stroke, and cancer) and behavioral problems (e.g., substance abuse, child abuse, depression, anxiety disorders, and suicide) account for more. This has resulted in a so-called “triple burden” of acute illness, chronic illness, and behavioral pathology in the Third World. Medically speaking, then, the health transition has three essential aspects: a decline in mortality, a change in morbidity, and an increase in behavioral pathology.¹

John Caldwell has cogently argued that the positive aspects of the health transition have resulted from the complex and synergistic interplay of modernizing social forces (e.g., urbanization, economic development, mass communication, and improved education) and direct biomedical interventions, such as childhood immunization, oral rehydration therapy, and village health systems (1986). This proposition

is based on the premise that as a result of modernization, people in the developing world are somehow increasing their use of available biomedical health resources in ways that result in prolonged life and improved health. Generally, the argument is that in the developing world — under the pressures of modernization and socioeconomic change — people consider biomedicine to be more effective than traditional medicine, that they avail themselves of biomedicine whenever possible, that biomedicine is increasingly accessible, that biomedicine is indeed more effective than traditional medicine, and that, as a result of all of these, health improves.

Recognizing the value of this theoretical contribution to our understanding of the health transition, this chapter seeks to build upon Caldwell's formulation by probing some of the complexities it subsumes. The analysis is intended to show how these two types of factors — modernizing social forces and biomedical interventions — might result in the changes that characterize the health transition, and also how they are actually played out in local cultural settings in the developing world. A review of cross-cultural studies reveals that "biomedicine" assumes different forms in different contexts, and that it is not always either the preferred mode of healing or the most effective one.

By focusing on one aspect of modernizing socioeconomic change — maternal education — and by documenting cultural differences in the perception and use of biomedicine in situations of medical pluralism, we hope to demonstrate convincingly that any adequate explanation of the health transition must take local cultural variation into account. To organize and concretize the discussion of local differences, we will draw upon the notion of illness behavior — the constellation of meanings and activities exhibited by an individual and his or her social circle in response to bodily indications perceived as symptoms (Mechanic 1978).

Our primary aim here, then, is to advance the theoretical proposition that the effects of both modernizing social change and biomedical interventions upon health status in the developing world are mediated by local-level processes, in particular, illness behavior.

The available cross-cultural data suggest not only that illness behavior is a mediating variable in the health transition, but also that it is undergoing change. Worldwide transformations in health status are leading to rapid changes in illness behavior, at the same time that illness behavior — often motivated by large-scale socioeconomic changes —

is producing changes in health. In short, illness behavior is dynamic. Thus, our second aim is to argue that illness behavior should be considered part of the health transition.

Illness Behavior

In a given individual or social network, illness behavior involves monitoring the body, recognizing and interpreting symptoms, and taking remedial action (e.g., seeking lay or professional help) to rectify the perceived abnormality. Help may be sought from a number of sources in the patient's social network, including friends, family, folk healers, and professionals. To focus on illness behavior is to emphasize the response of human beings to morbidity — to sickness and suffering — rather than to mortality *per se*.

Illness behavior also encompasses the ongoing response of the sick individual and those around him or her to the course of the illness. Examples here include attention to symptoms, compliance with therapeutic advice, changes in treatment regimens, and evaluation of therapeutic efficacy and outcome.

The notion of illness behavior should be distinguished from that of health behavior. The latter includes advertent and inadvertent behaviors that maintain health, or, conversely, place persons and groups at risk for ill health. Thus, behavioral risk factors for acute infectious diseases (e.g., hygienic practices, sexual behaviors) and for chronic conditions (e.g., cigarette smoking, alcohol and drug abuse, dietary practices) can be thought of as health behaviors, as can practices that are health enhancing (e.g., exercise, proper diet).

Thus we see that illness behavior is one component of the larger category of health behavior. Although illness behavior is the primary focus of this discussion, we will also consider health enhancing behaviors (e.g., maintenance of adequate nutrition or use of vaccination services) that are initiated in the absence of illness. Health behavior and illness behavior are inextricably linked.

Included under the rubric of illness behavior is what is termed the health- or help-seeking process — a series of activities aimed at rectifying the perceived aberration in the individual's state of health (Chrisman 1977). Help-seeking begins with symptom definition or an evaluation of the bodily problem. A strategy for responding to the symptoms, the treatment action plan, is then devised. Treatment action may involve any combination of self care, family care, and care from folk and professional

healers. The degree to which this plan is carried out by the ill person and his/her family is termed adherence (or compliance). Adherence is in turn strongly influenced by an ongoing evaluation of outcome. Both symptom definition and treatment action are affected by lay consultation and referral and by the social networks in which the individual participates.

Healer Choice in Medically Pluralistic Cultural Settings: A Preference for Biomedicine?

Cross-cultural data on illness behavior from situations of medical pluralism in the developing world indicate that both the perceived efficacy of biomedicine and the decision to use biomedical services are highly variable and subject to influence by a number of intervening factors.

Medical pluralism, or the existence of several distinct therapeutic systems in a single cultural setting, is an especially important feature of medical care in the developing world (Leslie 1978). Patients may feel uncertain as to what type of care provider can cure their illness, leading them to consult both traditional and biomedical practitioners. Or they may decide that treatment of certain illnesses requires more than one type of assistance. 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.

Biomedicine is often highly regarded in the developing world — but not unequivocally so. Many studies, in fact, have shown that from the point of view of the patient, modern health services are often seen as no more effective than traditional medicine. For example, a study of illness behavior in Ethiopia found that traditional medicine was felt to be as effective as modern medicine in curing a variety of complaints (Kloos et al. 1987). Even in industrial East Asia, traditional medicine is often viewed as more effective than biomedicine for certain conditions, usually chronic disease (Locke 1980). Similarly, research in Singapore revealed that nearly 60 percent of patients visiting a traditional Chinese doctor reported effectiveness as their major reason for choosing such treatment (Ho, Lun and Ng 1984). Only a small minority gave “traditional beliefs” (7 percent) or cost (10 percent) as their major reasons for consulting a traditional practitioner. Indeed, patients in this setting had a well-articulated set of expectations regarding which type of healer — “Western” or “traditional Chinese” — was preferable for various conditions.² Finally, Sargent (1982) describes a setting in Benin where

traditional birth attendants are perceived as more effective — and may actually be more effective — than biomedical services.³ Indeed, perceived efficacy may accurately reflect actual efficacy. But the critical point is that it is perceived efficacy that guides healer choice.⁴ In a study of the efficacy of traditional and modern healers in Taiwan, Kleinman and Gale (1982) compared matched sets of patients treated by shamans and physicians for similar illnesses. Overall, the two groups showed similar patterns of improvement across illness types. Efficacy was examined using both subjective measures (e.g., patient assessment of the effect of practitioner on outcome) and objective measures (evaluation of outcome by the research team).

Patient and community preferences for indigenous healing systems often reflect the realities of how biomedicine is practiced in much of the developing world. In fact, biomedical practice in third world settings is inadequate in a number of ways. A typical encounter between patient and health care provider may last less than two minutes (Reid 1984). Descriptions of symptoms may be limited to a single sentence. Physical or laboratory examinations may be cursory or even nonexistent. Potentially toxic medication may be prescribed without either a full course of treatment or follow-up to determine subsequent effects (Weisberg and Long 1984). Iatrogenesis, inappropriate and inadequate treatment, and failure to properly inform patients and families of potential toxicity or alternative treatment options are commonplace. Primary health care units are often staffed by practitioners who are absent while performing more lucrative private services or by medical students and junior nurses whose training is inadequate. Care may even be delivered by staff who lack the most basic medical knowledge, as has been reported in Nepal (Justice 1986).

The existence of biomedical services in the vicinity of ill people does not mean that these services will be utilized, even if they are perceived as efficacious. In an Ecuadorian Indian community, for example, the home is regarded as a refuge from illness, while the outside world is considered to be disease-promoting. Thus, one study of a Saraguro community demonstrated that Indian mothers chose to avoid therapeutic care, whether professional or traditional, that was delivered outside the home (Finerman 1987). In other research, Guatemalan peasants were shown to avoid government facilities that provided biomedical care because they lacked drugs and equipment (Annis 1981).

Young (1981a, 1981b) found that in one Mexican village the critical considerations in the decision not to use a physician were of three types: (1) preexisting preference for folk treatment, which was considered to offer a higher likelihood of cure (21 percent), (2) access problems, such as lack of money or transportation (58 percent), and (3) recent experience of failure in attempting to achieve a cure through consulting a physician (21 percent). Thus, while nearly half of the choices not to consult a physician in this Mexican village were based on perceived or proven lack of efficacy, slightly more than half were based on logistic concerns.

The results of an epidemiological study following a major outbreak of polio in Taiwan in 1982 further demonstrate that the availability of effective biomedical interventions does not *ipso facto* ensure that they will be used (Kim-Farley et al. 1984). Surveys in two counties, Yun Lin and Chia Yi, indicated that despite community-wide vaccination programs, the spread of the disease reached epidemic proportions. The most important risk factor for developing polio in this case was clearly the failure to vaccinate. An unvaccinated child was found to be 80 times more likely to contract polio than a child who had received three or more doses of vaccine. Less significant risk factors included, in decreasing order of importance, non-municipal water supply (making a child five times more likely to develop the disease), sharing of toilets by more than one family, fathers who were unemployed or in unskilled jobs, and fathers with little education. The investigators were unable to determine, however, whether these other factors contributed independently to polio incidence or simply correlated with failure to vaccinate (Morbidity and Mortality Weekly Report 1983). Clearly, an appropriate biomedical resource, namely polio vaccination, was available in this case. However, noncompliance with the recommendation to vaccinate prevented the biomedical intervention from averting the epidemic.

The distance that must often be traveled to reach a biomedical practitioner in contrast to various types of traditional healers also represents a significant constraint on the use of biomedicine.⁵ A study of physician use in northern Nigeria found that per capita utilization of local government health dispensaries declined at a rate of 25% per kilometer (Stock 1983; Ayeni, Rushton and McNulty 1987). Distance has also been shown to reduce pharmacy use in Ethiopia (Kloos et al. 1986).

Research in Bangladesh has revealed a strong correlation between distance to a diarrhea clinic and visits to the clinic when an episode of diarrhea occurs. While about 95 percent of all episodes occurring in

patients who lived within one mile resulted in visits to the clinic, only about 35 percent (for females) and 70 percent (for males) of episodes occurring to patients who lived between two and three miles from the clinic were treated there (Rahaman et al. 1982).

Annis (1981) provides further evidence of the limiting effect of distance on the use of biomedical services. Citing data from the highland provinces of Guatemala, Annis observed that while only 16 percent of the local population lived within one kilometer of the health post, more than 50 percent of patient visits were made by persons living within this immediate area. Conversely, patients living more than 3.5 kilometers from the health post accounted for only 15 percent of post visits, even though more than half the population of the area lived at this distance.

The difficulty in reaching biomedical practitioners may be contrasted with the availability of the more popular varieties of traditional healers. For example, in several rural and urban Brazilian communities studied by Nations and Rebhun (1988), the population ratio of traditional healers was 1:150 in the rural communities and about 1:75 in the urban shantytown. The corresponding ratio for biomedical physicians was 1:2,000. Data from Bangladesh yield ratios for traditional healers and allopathic practitioners of 1:240 and 1:400 respectively (Sarder and Chen 1981). Finally, Ahern's (1978) research in Taipei suggests that "symbolic distance" can influence the use of biomedical practitioners, who are perceived as symbolically "more distant" from the experiential world of patients than are traditional healers.

Other sociocultural differences may also work against the use of biomedicine. Welch (1980) explains that a health post set up for the Ningerum of Papua New Guinea was at one point not widely used because the clinic staff, being from another region, were regarded by the local population as a potential source of sorcery. In rural Nepal, Justice (1986) has shown that primary health care workers are perceived as unreceptive and inaccessible to local peasants, who have therefore turned to the health center's "peon" — an uneducated handyman and member of the local community — for assistance with health problems.

In his study of disease classification and health behavior in rural Ghana, Fosu (1981) concludes that the perceived cause of a disease determines the choice between traditional healers and local biomedical clinics. The inhabitants of Bereduso, Ghana, classify diseases as being caused by natural agents, supernatural agents, or both. Fosu found that for diseases considered to have a natural cause, 3 percent of patients

consulted a traditional healer, while 53 percent sought help at a local clinic. However, for diseases considered to have a supernatural cause, 31 percent consulted a traditional healer while only 15 percent turned to the clinic. A mixed pattern of consultation emerged for diseases seen as having both kinds of causes. Significantly, diseases such as tuberculosis, insanity, epilepsy, pneumonia, asthma, and leprosy were all felt to have supernatural causes. In other words, those diseases perceived to be appropriately treated by biomedicine are sometimes not the ones for which effective therapy exists; alternatively, those diseases perceived to be appropriately treated by local healers are sometimes those for which biomedicine is effective.

A final set of variables that influence the choice of a healer are the patient's personal attributes, such as age, sex, education, residence, and occupation. Visits to a diarrhea clinic in rural Bangladesh, for example, were shown to be significantly associated with the patient's age and sex; older females and younger males tended to make fewer visits when ill (Rahaman et al. 1982).

The use of medical services for sick infants is profoundly influenced by the child's sex, with utilization rates often being considerably lower for females (McCormack 1988). Das Gupta (1989) demonstrates that in rural Punjab, the second and third female children, in particular, receive less expert attention for illness episodes. Citing research in South Indian villages, Caldwell (personal communication) has observed that when seeking treatment for sick children meant traveling outside the village to the nearest health center, boys were more likely to be brought to the clinic than girls. Since traveling to the health center meant taking time off from work, fathers brought children to the clinic on the weekly market day. They were more likely to bring sons than daughters because of concerns about leaving small girls in the marketplace all day.

The point here is that treatment decisions in the medically pluralistic settings typical of the developing world are complex. In reviewing selected cross-cultural research on illness behavior, we see that the choice of a healer is shaped by a wide range of factors, among them perceptions of efficacy, practical considerations (such as distance), symbolic considerations (such as the experiential distance between patient and practitioner), the perceived cause of the ailment and whether it is viewed as life threatening, and personal attributes of the patient. This body of research shows that the existence of biomedicine as a treatment option does not mean that it will be the preferred choice.

Socioeconomic Change Modifies Illness Behavior: The Case of Maternal Education

Maternal education provides a good tool with which to examine the issue of primary interest here: the relationship between the health transition, biomedical health interventions, and macrolevel socioeconomic change.

It has been repeatedly observed that societies with the highest levels of maternal education (which also tend to be those with the greatest female autonomy) are likely to show the highest rates of infant survival and to appear "healthier" according to other indexes. This is true of both developing and developed countries.⁶ The reduction of illness and death among infants has a more profound impact on the overall health status of a country than do corresponding decreases in mortality and morbidity in adults. Indeed, some of the greatest gains of the health transition may have resulted from changes in the care of infants, that is, adult illness behavior directed toward the very young.

Analyzing data from the 1973 Nigerian segment of the Changing African Family Project, Caldwell (1979) points to maternal education as the single most significant determinant of observed differences in child mortality. His subsequent discussion of the possible explanations for this phenomenon posits two intervening factors in this relationship: increased use of Western biomedical services and changes in the "traditional balance of familial relationships." The latter is seen as acting through both a redistribution of family resources in the direction of child care (at the instigation of the mother) and an increase in maternal assertiveness. This, in turn, leads to increased use of medical care, particularly biomedical care, for children.

This is in some ways a valid argument. However, increased use of modern medical alternatives available to traditional women may not be the most important way in which maternal education works to improve health status. The significance of illness behavior as an intervening variable seems to be far greater.

The following is intended to broaden existing conceptualizations of the impact of educated mothers upon child health by reviewing the cross-cultural literature on illness behavior in relation to maternal education and the health status of children. Again, building on previous thinking in this area; we aim to document the complexity of this relationship by (1) reflecting on the nature of education for women in the

developing world, (2) suggesting that maternal education works through a variety of mechanisms to affect child health, and (3) proposing that seeking biomedical care may be only part of a larger phenomenon that is influenced not only by maternal education, but by other key social changes as well. We emphasize that our theoretical model is one that is partially supported by the literature. In short, while illness behavior helps to explain some of the effect of maternal education, it cannot explain all of it.

In much of the developing world, education for women often means one-to-six years of primary education. Any putative effect of maternal education upon child health must therefore somehow be realized on the basis of as little as one or two years in school. This simple observation strongly suggests that it is not the content of what is taught in school that is important, since health education *per se* is unlikely to be part of such limited schooling.

Since education seems to teach young girls something besides content, it is critical to disentangle the other strands of this social intervention in order to understand its impact on health status. One of these strands might be the ancillary benefits that accrue from the very "experience" of going to school. Another is the fact that education may make a woman more desirable as a spouse, thereby leading to marriage to a wealthier man, greater economic resources, and, as a result, improved health status for her children. Attending school may keep a young girl out of a dangerous work environment, thereby preserving her health for future pregnancies and increasing the birth weight (and consequent health) of her children.⁷ Data from Malaysia suggest that education for women may result in postponed marriage, meaning that a mother will be older when her children are delivered. This also promotes child survival (DeVanzo 1984).

In their review of maternal education and child survival in developing countries, Cleland and van Ginneken conclude that "health beliefs and domestic practices" are essential to an explanation of the relationship between maternal education and child mortality (1988). Citing data from the United Nations and the World Bank, they show that, on average, each one-year increment in women's education corresponds to a 7 to 9 percent decline in deaths of children under five years of age. The effect is more pronounced in childhood than in infancy. After considering a number of mediating factors that might account for this effect, the authors conclude that increased education has little impact on such changes in

reproductive behavior as birth spacing or nutritional practices during pregnancy. Rather, they argue that about half of the gross effect of maternal education actually reflects the economic advantages associated with education, such as clothing, housing quality, and other ancillary benefits.

Overall, however, Cleland and van Ginneken seem to agree with other authors that exposure to Western medicine necessarily results in improved health, the implication being that maternal education enhances health by increasing the use of biomedical health services. For example, the authors assume that substitution of modern drugs sold in pharmacies for traditional herbal remedies results in improved self-care.

At the same time, Cleland and van Ginneken conclude that the effect of maternal education "transcends access to modern health services" and that "it appears probable that domestic behavior is the key to the enhanced survivorship of children born to educated mothers" (1988:1365). They postulate a number of effects of maternal education upon attitudes, including two that are not supported by the anthropological literature. These are, first, that compared to the uneducated, educated mothers "attach a higher value to the welfare and health of children," and second, that they are "less fatalistic about disease and death."

In fact, considerable empirical evidence supports the contention that maternal education has a broad range of effects upon illness behavior aside from fostering the use of biomedical services. Moreover, these effects may themselves work to improve health status.

Maternal education influences each of the following aspects of the help-seeking process: symptom definition, treatment action, adherence to treatment, evaluation of outcome, and social networks and lay consultation.⁸ Maternal education influences symptom definition in a number of ways, some of which have been documented in developing world settings. Spending some time in school, even if what is taught there is not immediately relevant to health and disease, can help to develop certain cognitive abilities in ways that facilitate the identification of bodily symptoms. Learning new modes of categorization, for example, can mean that symptoms will be more readily classified as indications of illness or not, and that categories of illness will tend to be distinguished from one another (Tsui, DeClerque and Mangani 1988).

The ability to recognize the presence of illness may also be enhanced by education, as research by Das Gupta (1989) in rural Punjab, Levine et al. (1987) in urban Mexico, and McClain (1977) in Mexico suggests.

Often, the content of education is ineffective in changing beliefs about disease causation and health maintenance. In some situations, however, the content of education has been shown to have a meaningful impact in such diverse areas as nutrition, sanitation, and family planning (Das Gupta 1989).

Maternal education is also related to treatment action. Changes in this aspect of illness behavior, influenced by maternal education, have been claimed to result in the increased use of biomedical services (Caldwell 1979; Cleland and van Ginneken 1988).

Most examinations of the impact of maternal education on health practices have focused upon only a small part of treatment action. The education of mothers may contribute to a change from the more person-oriented view associated with peasant and working classes to an institution-oriented view found in professional and managerial circles. As a result, maternal education can bring about an increased ability to negotiate with medical institutions.

Schooling may increase a woman's ability to procure health care in a number of ways. For example, it may foster an appreciation of institutional time, which in turn may increase access to knowledge and assistance (Lindenbaum 1990). Educated women may also be more familiar with, and therefore better skilled in handling, the interrogatory style of health care providers, especially biomedical practitioners. And education may function as a form of assertiveness training, making women more likely to leave the local area in search of health care for their dependents (Caldwell 1986).

On a practical level, maternal education influences treatment action insofar as it makes educated women better financial managers. Good financial management expands options for therapy in times of sickness (Cosminsky 1987). The content of what is taught may also help mothers to choose appropriate healers and therapy (e.g., oral rehydration for diarrhea, spiritual healers for possession) and to understand disease causation (which might lead to better hygiene).

Maternal education affects adherence to treatment. Education may increase mothers' abilities to comprehend medical recommendations and to remember them or write them down accurately. With respect to cognitive development, education may modify a patient's construction of reality so that it is easier for her to assimilate and accept medical recommendations (McClain 1977). A woman's experience in school may make her more comfortable with outsiders, thereby increasing her trust

in health care workers and her willingness to follow potentially efficacious medical advice.

Evaluation of treatment outcomes may vary with mothers' educational levels. A mother with little education may mistakenly decide a child is no longer ill, seriously ill, or in need of further therapy. Such decisions may result in inappropriate termination of certain potentially effective forms of care. Chronic diarrhea, for example, may be accepted as normal and therapy may be arrested.⁹

Education also has a number of predictable and documented effects upon a mother's social networks and practices of lay consultation. In many developing countries, women marry and have children when they are still very young, often by age 16. In such settings, providing even two years of primary schooling for girls is a relatively recent innovation. For these women, being in school may increase the size and sophistication of the social network, giving them access to more resourceful lay consultants.

Borrowing the terms of social network theory, school experience may increase the range and decrease the insularity of a woman's network by improving her marriage prospects and taking her into the outside world (Lindenbaum 1990). Through its effect on social networks, school experience may increase the size of the therapy management group (Janzen 1978). A woman's rhetorical competence (based on a sense of self-efficacy) at communicating her concerns regarding her own illness or those of her dependents to members of her social network or family may benefit from education. For example, in Bangladesh, educated women have higher status within the family and are better able to marshal resources for the care of the ill (Lindenbaum 1990).

Maternal education has a number of predictable and demonstrated effects upon the home environment. Educated women have been shown to maintain cleaner households (Bertrand and Walmus 1988), to be better financial providers, and to provide better nutrition for their children, all of which potentially decrease disease incidence. Literacy may also facilitate the use of sanitary facilities, such as piped water, in a way that reduces the onset of disease (Esrey and Habicht 1988). Das Gupta (1989) found that better educated mothers provide more hygienic conditions for their children.

Evidence that maternal education may lead to increased illness should also be noted here. For example, educated mothers have been shown to breastfeed less (Caldwell and MacDonald 1982; Goldberg 1984). They

are also more likely to seek employment outside the home (Farah and Preston 1982; Hobcraft, McDonald and Rutstein 1984), which might adversely affect child health if there were less direct supervision of children as a result.

Our intention here has been to lay out some of the ways in which maternal education, one of many possible examples of large-scale socioeconomic change in modernizing societies, can be expected to modify health and illness behavior. All of these behavioral changes may in turn work to improve health status. Quicker identification of symptoms and more accurate recognition of disease, recourse to more appropriate or effective healers, improved compliance with recommendations that increase efficacy and reduce iatrogenesis, more appropriate evaluation of outcome, and favorable modifications of risk factors, such as diet, hygiene, and parenting practices, may all exert a positive influence on health. We now look at ways in which Western biomedicine, as it becomes an integral part of indigenous cultures, is itself modifying illness behavior.

Changing Patterns of Illness Behavior are Part of the Health Transition

An integral part of the health transition is an ongoing evolution in illness behavior. The health transition involves not only change in the patterning of health indicators, but also a transition in the use of health services. This is often best appreciated at the local level.

The transition in illness behavior is driven by particular aspects of traditional and cosmopolitan medical practice in the modern world. These include the proliferation of Western pharmaceuticals and convergence in the content of traditional and cosmopolitan medicine in many developing societies. Stated in general terms, illness behavior is changing under the pressure of the same social changes and health inputs that have given rise to the health transition.

Pharmaceuticals

The widespread distribution of Western pharmaceuticals, the proliferation of pharmacies throughout the developing world, the growth of indigenous pharmaceutical companies, and the fact that these companies often conduct their own research have all had a dramatic impact upon illness behavior in developing societies.

For many of the rural and urban poor in the developing world, the pharmacy is the only contact with the Western health care system. In El Salvador, for example, 55 percent of poor families and 23 percent of upper-class families in one study were shown to rely on commercial pharmaceutical practitioners as their primary source of health care (Ferguson 1988). The implications of this are clear. The easy availability of "prescription" drugs in the developing world and the ordinary poor training of pharmacists who stand to benefit financially from the sale of their wares can lead to significant iatrogenesis and inappropriate drug use. This has been documented both in the highly urban setting of Seoul, Korea (Kim 1989), and in a more rural setting in Taiwan (Kahane 1987).

Pharmacists in the developing world dispense more than drugs. They also offer medical advice and function as comprehensive health care providers. As a result, pharmacists are perceived as being very similar to doctors. For example, Logan reports that in urban Mexico, "many people routinely consulted the local pharmacist 'almost like a doctor' [*casi como doctor*]. They presented their physical complaints and described their symptoms, expecting the pharmacists to diagnose their illnesses and to prescribe treatment. The pharmacists obliged their clients by labelling their illnesses and by selling them the pharmaceutical preparations they recommended...[Moreover], many people self-diagnosed their illness and medicated themselves..." (Logan 1988).

Pharmacists are often preferred as care providers for some of the same reasons folk healers are preferred over physicians: they treat patients more politely, offer faster service, are more convenient, and have adequate supplies on hand. Both the care and the medications provided by pharmacists are often regarded as superior. Lay pharmacists in Guatemala, for example, are highly regarded as care providers; they are popular because of their easy accessibility, familiarity with the local people, and the fact that they extend credit (Cosminsky and Scrimshaw 1980). In El Salvador, Ferguson argues, village pharmacy personnel "serve as interpreters between different medical care traditions, glean[ing] what they can from information they receive regarding Western medications and relying to a large extent on shared cultural understandings of the nature and treatment of illness" (Ferguson 1988:31). The information pharmacists rely on, in general, is provided by sales representatives of local distributors.

The rampant misuse of pharmaceuticals in the developing world takes many forms. A recent study of self-medication practices in Brazil

and the Philippines reveals that in both countries, antibiotics are applied as crushed powder to wounds and skin lesions, as well as taken internally (Haak and Hardon 1988). Ferguson (1988) reports having observed mothers giving babies a teaspoon of tetracycline daily "as a preventive measure," despite the fact that the drug is contraindicated for use in small children. Pills are often packaged individually in the developing world. Patients may buy no more than four pills, regardless of their complaint or the medicine's effect. Injections tend to be highly regarded in developing societies; they are felt to be intrinsically stronger and more preferable, especially for serious illness. In fact, the last few decades have seen the emergence of a wholly new type of health care provider: the itinerant injectionist. Patients demand injections (Cunningham 1970; Kleinman 1980; Good 1987).

Western medicines are available not only through biomedical practitioners and pharmacists. Traditional healers throughout the world are increasingly using Western drugs. In one study in Bangladesh, for example, 30 percent of homeopaths and 5 percent of traditional healers were found to be using allopathic drugs; 44 percent and 3 percent, respectively, were giving injections (Sarder and Chen 1981). Ninety percent of Indian traditional healers in another study made some use of Western drugs (Bhathia et al. 1975). Wolffers (1988, 1989) found that 50 percent of traditional practitioners in a rural community in Sri Lanka used Western drugs such as narcotics, antibiotics, and steroids. These practices are rationalized as being a response to the growing demand for pharmaceuticals from patients who are increasingly familiar with the procedures of biomedicine, and who expect comparable interventions from traditional healers.

Finally, we should note those instances in which the distribution of pharmaceuticals has moved beyond the domain of biomedical practitioners, pharmacists, and even traditional healers, into the hands of local entrepreneurs. For example, Whyte (1991) reports that in Uganda, hospital workers (not only doctors, but also nurses, aides, drivers, and janitorial staff) supplement their income by setting up small businesses, or "private clinics," for dispensing Western medicines that they may have appropriated from the government clinics where they work. Those who manage to procure a steady supply of drugs develop a reputation as informal medical practitioners in the community. Untrained and eager to make a profit, these practitioners tend to furnish medicines indiscrimi-

nately, invoking local cultural knowledge, if not actual misinformation, in distributing their goods.

A well-developed network for the distribution of Western drugs makes them easily and widely available for self-treatment, even in remote areas (Hardon 1987; Abosedo 1984). Self-medication is the most common way of using medicines in most developing societies; this is the main impact, the most prominent inroad, that biomedicine has made in traditional communities throughout the world. For example, Whyte (1990) has also reported that in Uganda, residents prefer to purchase medicines in the marketplace rather than in a professional setting, in part because they already know what medicines they wish to use and are therefore interested neither in diagnosis nor prescription.

Studies of pharmaceutical use in Ethiopia (Kloos et al. 1988) and Mauritius (Sussman 1988) suggest that the proportion of patients who practice self-medication in a sophisticated way with Western drugs varies according to type of illness. A pharmacist in Sri Lanka described the situation thus: "The patient knows what he wants, I know what it costs, and I don't see the need for any additional information" (Wolffers 1988).

Thus, in the developing world, biomedicine is yielding control of one of its most powerful and distinctive features — its pharmacopoeia — to local pharmacists, traditional healers, and patients themselves. Owing to international and local commercial practices, the proliferation of pharmaceuticals is responsible for the commodification of stress and distress, as well as the practice of taking medicines for every problem. It is certainly responsible for a considerable amount of pharmacogenic illness in developing societies.

Convergence of Traditional and Biomedical Practice

The use of Western drugs by traditional healers is one major way in which the spread of biomedicine is changing traditional medical practice. It is just as important to realize, however, that traditional and biomedical practice are now part of a system of mutual influence in which each is being shaped by the other. Evidence suggests that in medically pluralistic settings, the differences in the therapies recommended by different types of healers are steadily decreasing. It is not unrealistic to expect, in fact, that these two systems of healing may eventually converge.

For example, in a study of Ayurvedic vaidyas and their biomedical colleagues in Sri Lanka, Waxler (1984) found that doctor-patient interaction styles, physical diagnostic techniques, and prescribing pat-

terns were all remarkably similar. The efficacy of their work was also perceived to be comparable. Waxler argues that the persistence of distinctions between Ayurveda and biomedicine, despite this convergence of practice, is attributable to the fact that the two systems provide opportunities for social mobility to different segments of the population. Nevertheless, she considers the futures of these medical practices to be interdependent.

Similarly, Ladinsky and colleagues (1987) show that contemporary Vietnamese medicine is a "harmonious merging of Chinese, Vietnamese, and Western medical systems." For example, traditional medicines are often taken together with antibiotics to protect the patients from the possible side effects of Western medicines. A similar situation has been observed in Northern Thailand (Weisberg 1982, 1984).

The changing patterns of illness behavior documented in these examples further corroborate the argument being advanced in this chapter. Pharmacists' role as caregivers as well as drug dispensers in the developing world, the adoption of Western pharmaceuticals by traditional practitioners, the increasing reliance on Western medicines for self-treatment, and the convergence of traditional and biomedical systems of healing are all indications of the variety of ways in which Western biomedicine is being integrated into indigenous cultures. This variety is additional evidence of the complexity of the relationship between biomedical interventions and changes in health status and underscores the importance of attending to local cultural differences. In any given case, one cannot simply assume that biomedical treatment is effective, while traditional health care or self-care is ineffective.

Implications for Research and Health Policy

A number of significant gaps in our knowledge of illness behavior in the developing world remain to be filled by additional research. These may be divided into the following categories: (1) the nature and efficacy of biomedical services in developing countries, (2) the precise impact of social change, such as improved maternal education, on health and illness behavior, (3) the problem of suffering, (4) illness behavior in chronic illness in Third World settings, and (5) the ways in which particular types of illness behavior work to influence health status.

An illness behavior perspective directs our attention away from abstract, idealized representations of health and health services, toward a concern with people's actual experiences as they seek, receive, and

deliver health care within the give-and-take of real-life contexts. To fully understand how biomedicine is practiced in developing societies and to ascertain how effective it is, we should adopt not only the bureaucratic gaze of the public health official, but also the ethnographic gaze of the anthropologist. The anthropologist's perspective takes us well beyond formal systems of biomedical care, to the realms of traditional healing, lay practice, and self-treatment. Because most of these have not been well studied, they should figure prominently on the agenda for future research on the health transition.

The effect of specific socioeconomic changes, such as increased education of mothers, upon illness behavior also requires further study. Needed are basic descriptive and analytic studies of the actual content of education for children. The existence of parallel systems of schooling (e.g., secular and religious schools) may help to reveal the relative contributions of content and process to the effect of education upon health. How does schooling affect the illness behavior of the students themselves? Do children with more or less education vary in the kinds of health behaviors they exhibit? Under what circumstances does education change illness beliefs?

While we tend to associate traditional healing with the developing societies of the Third World, it is important to recognize that nonbiomedical approaches to health care survive and even flourish in highly industrialized nations (McGuire 1988; Sonoda 1988). Why might this be? One reason is that unlike biomedicine, whose focus is narrowly biological, traditional healing seeks to relieve not only bodily distress, but also suffering, the psychic pain that ensues from an assault on the social, psychological, and moral worlds of the self. In ascribing meaning to the seeming pointlessness of illness, or symbolically reconnecting a sick person to his or her social world, or simply witnessing, and therefore validating, the existence of pain, the traditional healer confronts illness as human experience, not just as organic pathology. The survival of traditional healing in "developed" countries, and of "traditional" functions of the healer within biomedicine itself, testifies to the value and importance of this orientation toward the provision of care.

Like illness and death, suffering is universal to the human condition. Yet research on the health transition in developing countries has focused almost exclusively on morbidity and mortality. A responsible and humane approach to the study of health problems in the Third World requires that suffering be included as an object of analysis. An illness

behavior perspective allows us to incorporate this other fundamental aspect of human experience into our evolving program of research.

As we have seen, the changing composition of morbidity in the direction of increased chronic illness is one of the defining characteristics of the health transition. Yet very little is known of the nature of illness behavior in chronic disease in the Third World or of the social factors that affect it. The wide variety of choices and practices we have described suggests that the outcome of chronic illness reflects a "social" course more than a "natural" one.

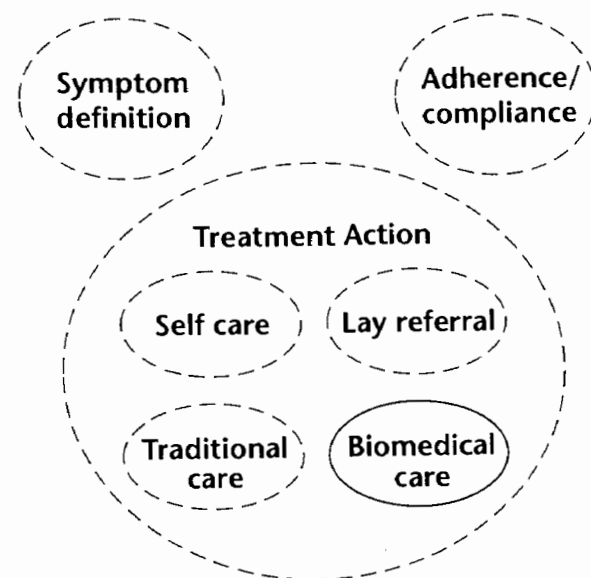
Additional research should illuminate the burden of disability in developing societies. The role of traditional healers in attending to the suffering of chronically ill individuals is of particular significance here, but so is the way in which social supports at the family and community levels amplify or dampen disablement.

Finally, we need to know more about the mechanisms and processes through which illness behavior influences health status. What are the implications for the health transition of the widespread misuse of oral antibiotics and parenteral drugs? Evidence has accumulated that in optimal circumstances, preventive services, such as vaccination and water purification, can improve the health of people in the developing world. But do curative biomedical services also make a difference in mortality at the local level? In settings of medical pluralism, do families that choose different healers for a given disease differ on objective measures of health status? Does adherence to recommended biomedical treatment affect the ultimate outcome?

The major implications of illness behavior for health policy can be indicated in a series of questions: How can health programs promote lay recognition of disease states so that appropriate action is taken quickly? How can they foster social networks instrumental in supporting and referring patients to appropriate health care providers? How can they eliminate obstacles to help seeking? How can they foster compliance with medical regimens?

Government officials, public health experts, and health care workers in international health all tend to define their policy concerns too narrowly, focusing almost exclusively on how the quality and frequency of interactions between biomedical professionals and patients might be improved. But, as we have seen, illness behavior encompasses much more than those aspects of help-seeking that result in patients' interactions with biomedical practitioners. The components of help-seeking in

Figure 11-1 Illness Behavior



Illness behavior encompasses many purposeful actions by people confronting illness. Most attention to date has been devoted to the study of the interaction of patients with biomedical practitioners (solid line). But, as we have seen, such a focus is too narrow; many other aspects of illness behavior are relevant to the health transition, especially in the developing world (dotted lines).

relation to other aspects of illness behavior are represented diagrammatically in the illustration above.

Pharmaceutical policy is an especially important area where illness behavior has implications. More attention must be devoted to the ways in which pharmaceuticals are used (and misused) in developing societies. As we have seen, the use of Western drugs bought from local pharmacies or drug peddlers is the principal contact most people throughout the developing world have with biomedicine. Too many assumptions are made, however, about drug-use behavior. For example, it is sometimes wrongly assumed that the replacement of traditional pharmacies by their biomedical counterparts is partly responsible for the health transition. From a policy perspective, much should be done to foster more appropriate use of drugs, to educate drug users and prescribers, and, where it is shown to be dangerous, to constrain drug availability (e.g., through government sponsored essential drug lists or

through more stringent regulation of international pharmaceutical firms). Attempts must also be made to tame the craving for injections and to foster more patience in those who expect an immediate response from Western drugs (and who stop taking them if they do not get one). Finally, communities must be empowered with the knowledge necessary for appropriate use of the technology that is already in place. How can families and communities, in other words, be encouraged to use pharmaceuticals in ways that constitute a more effective mode of self-care?

The near-veterinary quality of much biomedical care in developing societies, coupled with the pharmaceutical abuses that place populations at high risk for iatrogenesis, require responses at different levels. Control of the commercial abuse of caregiving in clinics, pharmacies, and mass media advertisements is essential. But also essential are efforts to increase lay and professional appreciation of the value of core cognitive tasks, such as careful elicitation of a history (responsible in and of itself for 80 percent of accurate diagnoses in primary care), explanation of the reasons for treatment (a cost-effective way to increase compliance and participation in preventive programs), and communication aimed at improving health education for health maintenance.

Conclusion

The basic point we have established is that any attempt to explain the social and behavioral roots of the health transition is incomplete unless it takes local cultural variation into account. To advance this argument, we have isolated a particular theoretical formulation — the notion that the health transition is the product of the combined forces of biomedical intervention and modernizing social change — and illustrated some of the different meanings and impacts these forces have when they are introduced into indigenous cultural settings around the world. The conceptual medium for carrying out this exercise has been illness behavior.

The decision to adopt an illness behavior perspective brings with it a number of advantages, such as the reorientation of attention away from mortality, toward the less-studied problem of morbidity. A focus on illness behavior can also be misleading for our purposes, however, unless the scope of the concept is made clear.

Because it highlights processes such as symptom identification and help-seeking, illness behavior may be mistakenly interpreted as a purely

individual-level phenomenon. In fact, illness behavior is social as well as individual, because economic and political forces, socially-defined relationships, and cultural meanings are all reflected in the ways individuals respond to the perception and experience of illness.

It is this capacity to span macro- and micro-levels of analysis that makes illness behavior particularly useful as an organizing framework for social science research on the health transition. Because it illuminates the social nature of the individual, an illness behavior perspective offers a valuable alternative to large-scale epidemiological studies in tracing the social origins of changes in health status. Research that approaches the social through the individual — that defines as the object of analysis particular people within a particular cultural setting — offers a valid, empirically grounded, and comparatively inexpensive approach to understanding the social and behavioral determinants of health change.

Notes

- 1 The first two of these three aspects will be taken up in this chapter. For a discussion of behavioral pathologies in relation to the health transition, see Sugar, Kleinman and Heggenhougen, in this volume.
- 2 In fact, the classification of conditions as more appropriate for treatment by indigenous healers or biomedical practitioners varies considerably across cultures. In the case from Singapore cited above, for example, traditional Chinese medicine was strongly preferred for rheumatism, fractures, menstrual irregularities, and anemia, and significantly preferred for diarrhea, measles, worm infestations, influenza, and constipation. In Nigeria, traditional healers have been found to be strongly preferred for psychiatric disease, fractures, snake bites, and convulsions. Nnadi and Kabat, 1984.
- 3 See also Sokoloff, "The Proud Midwives of Huchitan," Honors Thesis, Harvard Medical School, 1986.
- 4 There is further the troubling problem of the meaning of "efficacy." Is this phenomenon to be understood in terms of subjective or objective improvements — or both?
- 5 We recognize that important distinctions among the many different types of traditional healers found around the world are glossed over in this report. These distinctions have been subsumed under the larger category of "traditional" healer in the interest of focusing attention on the issues of primary interest for this discussion.
- 6 McCormack (1988) has argued, however, that maternal education in the absence of other favorable societal features, such as female autonomy and control of wealth, may not have the desired effect upon health.

- 7 For a more extensive discussion of the mechanisms which may link women's education to child health, see LeVine et al., in this volume.
- 8 Virtually all of the following discussion could apply equally well to fathers. However, mother's education has repeatedly outweighed father's education as a predictor of child health status, presumably because of mothers' greater role in health care and child-rearing.
- 9 It is worth noting that termination of treatment may paradoxically result in better health care. For example, mothers might accept the persistence of low-grade symptoms after a course of otherwise effective therapy, thereby avoiding exposure to a new and potentially dangerous drug. Nations and Rebhun, 1988.

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