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Perceived illness and its treatment
A naturalistic study in social medicine

HORACIO FABREGA
From University of Pittsburgh, Pittsburgh

SUMMARY This is the initial report of a longitudinal study conducted in a developing, culturally heterogeneous society. The study compares figures of frequency and length of perceived illness, subjective reports of biological and behavioural symptoms, and use of medical facilities in response to episodes of illness by female heads of households from two highly distinctive social-ethnic groups. Despite differences in socioeconomic status and cultural beliefs about disease and treatment, both groups showed roughly comparable rates of perceived illness, but certain differences were noted. The more prosperous Western group termed *ladinos*, showed they had had more illnesses which had also lasted longer, as well as higher levels of symptoms. The medical actions of the two groups in response to these episodes of illness differed. The significance of these results is discussed with respect to the multiplicity of factors which influence health status and judgements of perceived illness.

An important aim in social medicine is to develop a clear picture of how disease affects members of a population; this includes ascertaining the frequency of occurrence, the degree of interference produced by illness, and the treatments used. Often, these aims are realised by establishing the prevalence of disease entities for which the 'average morbidity' can be estimated and by asking respondents about the frequency of hospitalisation or of days of disability and confinement produced by disease. Each procedure has obvious limitations. Thus, a disease entity is only a general category in the biomedical taxonomy; more important than its average effects, it is precisely its mode of expression, its interaction with, and impingement on the life of a people which need to be measured empirically. Similarly, a research worker, who questions individuals about disease effects and treatment in categories which he himself identifies, runs the risk of imposing his model of what a disease should do and how it should be handled. For these reasons he may miss the more variegated ways in which the disease affects the people and how it is dealt with by them. Moreover, if he chooses to rely on retrospective reports over relatively long intervals of time the researcher encounters error because of poor recall. In this paper an attempt is made to measure the social responses to disease in a way which overcomes some of these limitations and which is a logical outcome of earlier field work on medical problems in non-Western people (Fabrega and Manning, 1973).

Background

Much literature in medicine and in social science is related to the conflicts between Western and so-called 'folk' medical systems. Both systems include concepts of illness and strategies for coping with it as well as curative procedures and medications. Differing systems of medicine are naturally a part of the cultural orientations of the groups. Folk systems of medicine constitute an important means through which non-Western people cope with illness and disease, and in developing societies they are often complementary to the Western one (Maclean, 1965).

The level of disease in developing societies is assumed to be high but is not well quantified and there are few data about how disease impinges on the daily lives of these people or of treatments used. These deficiencies mean that there is insufficient understanding of the burdens of illness and disease to people of developing societies (Fabrega, 1974).

Theoretical orientation and rationale

This study is focused on natural occurrences of illness in a defined sample of individuals. An illness episode is defined as a health problem perceived by a person or family. Whatever an observer may term the 'cause' of the illness, it is the person who describes, makes sense of, and responds to the episode in terms of concepts and theories which

he has learnt as a participant in his culture. This illness may be viewed partially as a social phenomenon which is rooted in physiological changes and described in terms of culturally learned habits leading to medically relevant behaviours, including treatment, deemed appropriate within the system of medicine which the person endorses.

Several factors influence how a person copes with an occurrence of illness: the perceived intensity or seriousness of the occurrence, the economic resources of the person, and the general beliefs and orientations of the person regarding illness. This study concentrates on illness only as it is perceived and expressed in specified symptoms. The principal aim is to concentrate on ethnic factors and to present figures on prevalence for episodes of illness, figures of the morbidity of these episodes, and quantitative data on the use of medical facilities.

Research setting

The study was conducted in San Cristobal de las Casas, a city of some 30 000 people, which is located in the highlands of the state of Chiapas in south-eastern Mexico. The city is the commercial, social, and religious centre for a hinterland which contains about 175 000 Indians of Mayan descent. In the city one may identify three principal ethnic groups: *Ladinos*, who are said to be of direct Spanish descent, *Mestizos*, or people of mixed Indian and Spanish descent, and *Indigenas*, or people of Indian descent. Most of the last reside in the countryside and are transients in the city but a number of *indigenas* are first-generation residents recently migrated to San Cristobal with their families. Although these immigrants are now influenced by their new style of life, these people none the less retain their Indian orientations in a number of important respects, including their way of perceiving and coping with illness.

Ladinos and *mestizos* speak Spanish, wear Western clothing, and identify with the values and institutions of the Mexican nation. The socially subordinate group is the *indigena* (Indian) which speaks Mayan dialects and is distinguished by the type of dress worn by each of the 12 nearby 'tribal' groups; but Indians residing semi-permanently in San Cristobal usually begin to adopt Western clothing. The characteristics that distinguish the various groups are not exclusively genetic or biological, but are also social and cultural.

The services available in the city, including medical care, tend to be divided and duplicated along what appear to be lines heavily determined by ethnicity. These competing medical care systems are labelled the 'folk' and 'biomedical' (Colby and van den Berge, 1961).

FOLK MEDICAL CARE

This is a system based upon belief in moral and social causation of illness, especially alterations in emotions and disruptions in social transactions both of which are seen as disturbing bodily states. Natural and supernatural phenomena are both believed to cause disease. Full and part-time practitioners of folk medicine, prescribe medicines which they themselves may prepare or which may be purchased from one of the many pharmacies of the city. Such medicines may include pharmacologically active agents which would ordinarily require a physician's prescription. Folk practitioners also perform curing ceremonies, and possess spiritual as well as naturalistic knowledge about illness. Our estimate is that there are probably about 60 folk practitioners (*curanderos*) who practise regularly in the city of San Cristobal. *Curanderos* are said to be used principally by *indigenas* and *mestizos*, although observations suggest that *ladinos* may often also seek their services.

BIOMEDICAL MEDICAL CARE

This contrasting system of medicine is scientific and Western. Treatment and care are undertaken by full-time, specially trained physicians of whom there are about 10 to 15 in private practice in the city. Many of these, in addition, are salaried by the state and federal governments which maintain clinics accessible to all residents. *Mestizos* and especially *ladinos* are said to be the ones who principally use the biomedical system, although in times of crises, *indigenas* are known also to frequent the medical clinics. Prescriptions offered by physicians are invariably dispensed by the pharmacies. It is important to emphasise that the city has adequate provisions for primary medical cure. Specialist care facilities are available in the capital of the state which can be reached by private or public transport in approximately two hours.

In a continuum of ethnicity and 'acculturation' stretching from the *ladino* to *indigena*, individuals placed at the poles of this continuum will be orientated towards the biomedical and folk system of care respectively. However, both systems of care may be used by persons of the various ethnic groups, and sometimes simultaneously if resources permit.

Methods and procedures

A panel of families (N = 174) living in the city constituted the study group. This panel comprised samples from each of the three dominant ethnic groups. The aim was to obtain random samples of sociologically representative families residing in the city, but logistic considerations made it difficult to achieve this as no suitable map of the city exists and census figures are unreliable. Earlier work has established that *barrios* (roughly equivalent to city districts, but comprising ethnically and socially homogeneous residents) were important ecological units in the city.

These units were selected as the sampling frame. Without maps it became necessary to identify the *barrios* by inspection. The interviewer (a native female with extensive experience in field research) selected a single household within a given street of a particular *barrio*. Any place of residence occupied at the time of her visit to the *barrio* could be selected using the following criteria:

The family contacted

was not transient in the city,

was personally not well known to the interviewer, and did not live on the same block or street as any other family unit of the study.

In addition the initial interview indicated that the interviewer would be welcomed for future interviews.

During the initial contact with a household, the interviewer acquainted herself personally with the female head of household, learned about the structure and composition of the household, and inquired generally about the illnesses of family members. She explained in general terms that the aim of the study was to learn about the medical problems and practices of the housewife and her family and that she would return for follow-up visits. Background demographic questions were asked during this visit.

A subsequent contact with the family, again through the female head of household, took place that same day or the subsequent one. This and all further interviews with a family were concentrated on actual occurrences of illness. Firstly, the interviewer asked questions about specific family hardships or crises that may have occurred to the family during the preceding two months. The items of information sought were drawn from the literature on social stress (Holmes and Rahe, 1967) and related to such hardships as pregnancies, deaths, separations, economic hardships, or changes of employment. At the end of these questions the householder was asked if any member of the household had had an illness during the two-week interval preceding the present contact. Detailed attention was paid to any illness reported by the female head to have affected household members.

Subsequent contacts with the family were made at intervals of about two months and followed the format of the second contact. Each family was interviewed on about five occasions during one year. The interviewer worked with approximately 40 families during any period of time and when the cycle of five contacts was terminated she added new units to the panel.

If an episode of illness was reported, the interviewer was required to record the severity of the illness for each day, and independently of that question, the presence or absence of each of a list of symptoms on each day. The symptoms covered many physiological as well as behavioural areas. The wording of these symptoms was derived from previous interviews with women in this city when descriptions of illness were elicited in an open-ended manner. The current set of questions neither suggested to the respondent, nor did it ask her to describe, what she meant by her answer. For example, she may report feeling weak or not feeling weak on a given day of illness, or that she performed household chores as usual or did not perform household chores as usual. What 'feeling weak' or 'doing household chores as usual' means to the subjects is not further defined and evaluated.

The information on each occurrence of illness of household members was entered into an illness

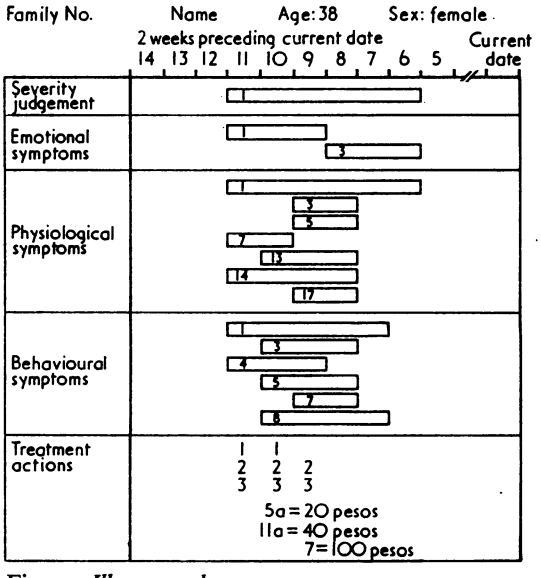

Figure *Illness graph*

graph. The Figure shows a hypothetical example of how an illness episode was coded by the interviewer. Numbers in the graph denote types of symptoms. The illness depicted began approximately 11 days before the interview and lasted six days, the reported symptoms suggest she had a mild illness and she felt alternately worried and shamed by the illness. The physiological symptoms indicate that this woman seemed to have what in Western medicine might be classified as a brief upper respiratory infection. From a behavioural standpoint, she felt restless, complained of discomfort, was irritable, slept a great deal, stayed at home from work, and was unable to pursue leisure activities. Despite these limitations, she was able to meet a number of her other responsibilities. The illness in question prompted her on the second day to visit a *curandero* and a physician at the cost of 20 and 45 pesos respectively, and on day three, to visit the pharmacy to spend 100 pesos.

Results

DEMOGRAPHIC CHARACTERISTICS

The sample consisted of 60 *ladinos* and 65 *indigenas*, female heads of households who experienced 101 and 112 illness episodes respectively during the year they were followed-up. The two groups of housewives were alike with regard to age, marital state, and number of children. In general, the housewives were in the third and fourth decades of life, were married, and had an average of about three children. There were, however, some obvious differences with regard to the social characteristics of the two groups: *Ladino* housewives showed a higher level of education, longer period of residence in San Cristobal, higher economic status, and tended to live in the more central areas of the city. The *indigena* group had a much higher proportion of persons who had been born and reared in rural-agricultural settings. These differences are consistent with the ethnic status of the two groups. At the initial interview, each housewife was asked a question about her perceived level of general health which was graded on a four-point scale. The two groups did not differ significantly in a statistical sense with respect to their answers to this question although a somewhat greater number of *indigenas* reported having poor health.

THE ASSOCIATION BETWEEN HARDSHIP AND THE OCCURRENCE OF ILLNESS

No one reported more than a single illness in any two-week period. *Ladino* housewives reported an illness in 37% of contacts to the household, *indigena* housewives in 31%. A total 'hardship' count (total 'yes' answers to questions on hardship) was correlated with a binary illness score (0 = no illness; 1 = illness). For *ladino* housewives, the correlation coefficient between illness score and hardship was +0·27, which suggests a certain degree of association. For *indigena* housewives, the value of the coefficient was only 0·05, which is low. Thus only for *ladinos*, is there a positive association between hardship and reported illness.

GENERAL FEATURES OF ILLNESS EPISODES

The relevant measures are shown in Table 1. *Ladino* housewives reported longer illnesses (12·3 v. 10·6 days). In the event of an illness *ladino* housewives were more likely to visit the physician (0·74 v. 0·21) and pharmacy (0·67 v. 0·42) whereas, in the event of illness the *indigena* was more likely to visit the *curandero* (0·70 v. 0·28). If during an illness a *ladino* sought a medical care agent, then she was more likely than an *indigena* to re-visit that agent during the same episode of illness. This greater tendency for *ladinos* to return to a medical care agent during an illness episode applied for physicians, *curanderos*, as well as the pharmacy.

BEHAVIOURAL CONSTRAINTS DURING ILLNESS

The behaviour symptoms we have described as work-related in Table 2 can be considered in economic terms as the disability of morbidity: what the individual is able physically to do and not to do while ill. These are shown with their

Table 1 *Characteristics of illness episodes*

	Illnesses			*Percentage of illnesses for which help was sought from*			*Average no. of times help sought from a medical care agent*		
Housewife	*Average no.*	*Total no.*	*Average duration (days)*	*Curandero*	*Physician*	*Pharmacy*	*Curandero*	*Physician*	*Pharmacy*
Ladino	0·37	101	12·3	28	74	67	1·65	1·70	1·50
Indigena	0·31	112	10·6	7	21	42	1·36	1·37	1·16

Table 2 *Mean duration of symptoms in days*

Cluster	*Ladino*	*Indigena*
Work related		
Interference in leisure activities	7·8	6·1
Interference in work away from home	7·5	5·8
Confined to house	6·6	4·6
Interference in chores within home	4·0	3·7
Stayed in bed	3·8	3·3
Slept a great deal	3·2	3·3
General physiological symptoms		
Weakness	9·8	7·1
Dizziness	2·1	1·0
Disorientated	3·6	1·7
Restlessness	6·4	4·6
Fever and chills	2·8	2·5
Loss of appetite	9·8	7·9

duration during illness for each group in Table 2. In five of the six work-related measures listed, the *ladinos* manifest a larger value indicating that in an absolute sense illness 'costs' more to this group. In an average illness the *ladino* reports she is unable to engage in any activities, work or leisure, away from home for approximately seven and a half days during roughly 60% of the duration of an illness and about 85% of these days are actually spent exclusively in the home; when she is confined to the home because of illness, she is unable to do household chores for 60% of the time and takes to bed for 55% of the time; when she takes to bed, she spends approximately 85% of the time asleep. The *indigena*, on the other hand, reports inability to engage in work or leisure-related activities away from the house for approximately six days of an average illness, or roughly 55% of an average illness. Compared to the *ladino*, then, she is slightly more prone to continue activities away from the house in the event of illness. Approximately 78% of days of limited outside activities are actually spent exclusively in the home; when she is confined to the home because of illness she is unable to do household chores 80% of the time and takes to bed 70% of the time; and when she is in bed, she spends virtually all of her time asleep or dozing. In short, once confined to the house, the *indigena* seems to experience a proportionately greater amount of interference than the *ladino*. The *ladino* restricts herself more to the house while ill but it is the *indigena*, once restricted, who shows greater interference.

PHYSIOLOGICAL CONSTRAINTS DURING ILLNESS

The general physiological manifestations of illness and the duration of these symptoms are listed in Table 3. The symptoms indicate general discomfort, and a disruption of overall physiological well-being. These physiological disruptions were as pronounced as interferences in work activities. Moreover, the symptoms indicate a similar trend to that rated above: *Ladinos* report more general physiological symptoms during illness.

Table 3 *Expected no. of days of general physiological and work-related symptoms for one year*

	Ladino	*Indigena*
Leisure	75·0	49·2
Work away	72·2	46·7
Confined to house	63·5	37·1
Chores indoors	38·5	29·8
Stayed in bed	36·6	26·6
Slept	30·8	26·6
Weakness	94·3	57·2
Dizziness	20·2	8·1
Disorientated	34·6	13·7
Restlessness	61·6	37·1
Fever and chills	26·9	20·2
Loss of appetite	94·3	63·7

Discussion

Analyses of frequency of illness by season and month of the year failed to reveal any high levels of association which suggested that illnesses did not cluster during the rainy season or the winter months as we had thought previously. This suggests that any two-week interval, on the average, is representative of a housewife's experiences with illness across time. This, together with the fact that each family was followed-up for a full year, means that the sampling scheme can be used to make inferences about medical experience for all 52 weeks of the year. In the light of these considerations one can tentatively state that the chances of a female head of house experiencing an illness during any two-week interval is 1 in 3, *Ladino* 0·37, *indigena* 0·31, and that during the year she may be expected to experience between eight and nine illness episodes. This figure may seen high, although it is similar to that reported for a study conducted in Honduras, and is within the range given by White *et al.* (1961) who reviewed reports on the ecology of medical care (White *et al.*, 1961; Teller, 1973).

In neither ethnic group was there a positive association between perceived health status, obtained during the initial contact, and frequency of illness episodes during the subsequent contacts with the housewife. In fact, although a somewhat greater proportion of *indigena* women reported that their health was poor, the *indigena* group actually reported proportionately fewer illnesses during the period of the study. This suggests that an individual's perception of her perceived health is not predictive of her actual future experiences with illness.

The *ladino* group showed a positive association between frequency of occurrence of hardship and illness. This is consistent with the findings of other workers in social medicine who show that both on retrospective and prospective time scales 'social hardship' and illness tend to cluster together (Gunderson and Rahe, 1974). The interesting finding in the present study is that the *indigena* group did not show this association. There are many explanations that may be offered for this difference. One factor that may be important is that the more socially marginal and economically deprived group, the *indigena*, is already more 'stressed' and that for this reason any additional potential effects of social stress are blunted. One could also claim that there is an ethnocentric basis to our choice of 'hardships'. This seems unlikely, since previous work and also preliminary interviews with the informants indicated that the events chosen for study are viewed as psychosocially noxious by representatives of all groups. It is possible that among *indigenas* some events do in fact entail less emotional readjustment because of the different values placed on social relations among members of household, or with neighbours, and because the events are simply more common among them. A related possibility is that we excluded from our list of hardships events that were uniquely important to the *indigena*—such as, relationships with persons still residing in the countryside or violations of ritual practices. A final possibility is that *indigenas*, because they pay more regard to and are more influenced by supernatural agents, tend to some extent to minimise worldly ones such as work, economic setback, or bereavement (Fabrega and Silver, 1973). The 'stresses' chosen for study were worldly circumstances and, although verbally disvalued, may simply be muted in their psychobiological effects. Only future work can clarify whether these possibilities are valid.

The treatment practices of the groups tended to conform to expectations, with the *indigena* more likely to seek treatment from folk practitioners and the *ladino* from physicians. Specifically, during an episode of illness the *ladino* is more than three times as likely to visit a physician than is the *indigena*, and does so in 75% of cases. Conversely, during any illness the *indigena* is more than twice as likely to visit a *curandero* than is the *ladino*. The *ladino* seeks help from the pharmacy in 65% of cases. What is surprising is that in 42% of illness episodes the *indigena* sought help from the pharmacy, something that accords with the role played by such establishments in the highlands (Fabrega and Silver, 1973).

Each of the medical care actions taken by an individual involved going outside the home. The total medical care actions taken create a new variable, namely *total units* of medical care purchased during illness outside the home which show that the *ladino* uses more medical care than the *indigena* (1·7 v. 1·3 units). These figures are consistent with those which indicate that during any one illness the *ladino* is more likely to re-use that same facility. In short, the results show that the socially dominant and economically more successful *ladino* group is the one which uses more medical care.

The data reinforce the greater burden which illness has on the *ladino* group. For example, the *ladino* is likely to be confined to the home because of illness for approximately 63 days during the year; she is 'confined to bed' because of illness approximately 36·5 days during the year. The corresponding figures in the *indigena* are 37 and 26·5 days. Similarly, as regards general physiological symptoms, the *ladino* claims to experience approximately 94 days of weakness and also 94 days of loss of appetite during the year because of illness, and the *indigena* as likely to experience these two general physiological symptoms on 57 and 63·5 days.

Attempts to interpret the relevance of these data to morbidity highlight the complexity inherent in estimating the impact which disease has on individuals from contrasting social circumstances. Firstly, there is the obvious limitation which memory places on these data about length, severity, and symptoms caused by illnesses a few days before the interview. The reliability of the information may very well vary across cultural groups who have different concepts of time. There was some limitation on the interview system and its record; error was no doubt owing to the attempt to record intricately such data. Finally, limitations in the data can be ascribed to the sampling method which was to a large extent dictated by the ecological and logistic realities of these settings. All of these problems are germane to survey studies but are accentuated in developing and culturally heterogeneous settings. In conclusion 'biologically based' disease processes may be more frequent and have a heavier behavioural toll on *ladinos*, in spite of the fact that they are economically better off and make greater use of scientific medical care. Another possibility is that the *ladinos* are more vulnerable to social hardship and for this reason have more frequent, longer, and costlier illnesses. Perhaps the last

reason merely provides legitimate dispensations for the greater strain *ladino* housewives experience.

One might claim excessive and injudicious use of scientific care by *ladinos* and the value of combining folk and scientific care for common recurring medical problems by *indigenas*. To verify this would require systematic clinico-scientific surveillance which is expensive. In future analyses of the data, tentative answers to such questions might be forthcoming when attention is given to the pattern of evolution of illness episodes and medical care actions.

Psychosocial factors must be considered in an interpretation of these morbidity measures. Restriction to the home and/or to bed because of illness are 'actions' which are obviously influenced by the level of physiological functioning, by culturally influenced behaviour dispositions, and by material conditions of life. To some extent, the same kinds of variables are likely to influence one's claim that one feels weak or anorectic. However, I believe that differences in economic level and conceptions of the illness role in the two groups are important in influencing the pattern of reporting illness and seeking medical care.

Reprints from: H. Fabrega, University of Pittsburgh, Western Psychiatric Institute and Clinic, 3811 O'Hara Street, Pittsburgh, PA 15261, USA.

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