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SICKNESS AS SIN:
OBSERVERS' PERCEPTIONS OF THE PHYSICALLY ILL

A Thesis Presented

By

LINDA LANG-GUNN

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University of Massachusetts in partial fulfillment
of the requirements for the degree of

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Psychology

SICKNESS AS SIN:
OBSERVERS' PERCEPTIONS OF THE PHYSICALLY ILL

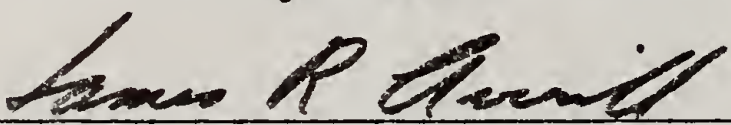
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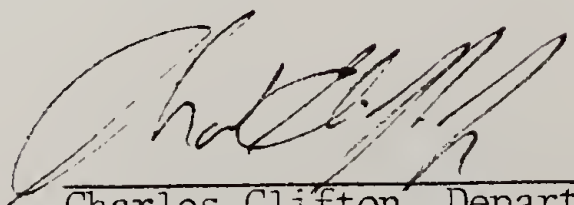
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C H A P T E R I

INTRODUCTION

The relationship between goodness and happiness, between wickedness and punishment is so strong, that given one of these conditions, the other is frequently assumed. Misfortune, sickness, and accident are often taken as signs of badness and guilt. If (a person) is unfortunate, then he has committed a sin.

Heider (1958, p. 235)

Illness is a universal phenomenon, and every society develops ways of defining and coping with illness. It is a fact of life with which everyone must live, although the effects of disease and reactions to illness may vary widely across individuals and cultures. Individuals and groups vary in their susceptibility to certain diseases, in their beliefs and attitudes toward illness, and in the ways in which they explain and adapt to illness. These variations in the distribution, definition, and reaction to illness have led to the recognition of illness as a psychosocial as well as biological phenomenon, and have increasingly become the objects of social and psychological inquiry.

A psychosocial view of illness raises many questions for which social psychological analyses are relevant. For example, how do people conceive of health and illness? What does disease mean to the individual, and how does this meaning change during the course of illness? How do an individual's or a society's notions regarding disease causation differ from the prevailing "scientific" view? How are lay notions of etiology related to efforts of prevention and treatment? How are concepts of health and illness related to individual and

cultural values? Is illness viewed as morally neutral or "bad"? Are individuals perceived by themselves or others as responsible or accountable for illness? How does illness alter an individual's self-perception, or perceptions and judgments by others? How are social attitudes toward the sick related to cultural values and conceptions of illness? Social psychology's history of theory and research on attitudes, person perception, and social judgment seem to uniquely qualify the field to address many of these questions.

The focus of the present paper is on responses to illness, particularly observers' reactions to victims of physical illness. From a social psychological perspective, the definition of a person as ill is, at least in part, itself a social judgment (cf. Branson, 1973; Fabrega, 1974; Freidson, 1970; Sedgwick, 1973; Veatch, 1973). More importantly, illness, especially chronic or disabling illness, can be viewed as a universal form of misfortune, a negative event which "singles out" some individuals in a seemingly random or haphazard fashion, for pain, suffering, and possibly death. The inability to predict illness and to restore health reliably are major sources of uncertainty and powerlessness in human life (Pflanz & Keupp, 1977). It is these general features of illness--universality, unpredictability, and uncontrollability--which have required all societies to explain and deal with disease in some manner, and which make illness an interesting context in which to explore basic social psychological processes.

The thesis underlying this paper is that notions of morality and responsibility are inherent in reactions to physical illness. Despite widespread acceptance in Western society of the "medical model" in

which illness is generally regarded as a natural event beyond the individual's control (King, 1962; Mechanic, 1968, 1978; Parsons, 1951; Veatch, 1973), lay concepts of disease are intimately related to larger social and moral values, and function in part to explain the selective occurrence of illness and to reduce the threat posed by the unpredictable and uncontrollable nature of illness. Blaming the victim of physical illness--by imputing a moral value to illness, or perceiving sickness as a consequence of immorality or irresponsibility--serves both to explain the undeserved suffering of the sick person, and to permit observers a means of avoiding a similar fate by rendering illness more predictable and controllable by an individual or a society.

Overview

This thesis will begin with a brief review of the nature of social attitudes toward the sick person historically and cross-culturally. Following this review, the social definition and social consequences of illness will be examined, including pertinent concepts and findings from the clinical and sociological literatures. Finally, social psychological models of reactions to victimization, including the stigma approach (e.g., Fabrega & Manning, 1972; Goffman, 1963; Safilios-Rothschild, 1970), and the "just world hypothesis" and other attributional perspectives (e.g., Heider, 1958; Lerner, 1970; Lerner & Miller, 1978; Walster, 1966; Wortman, 1976) will be presented.

A Brief Social History of Attitudes Toward the Physically Ill

Current social attitudes toward the physically ill and disabled undoubtedly reflect complex historical and cultural influences. Disease has always isolated its victims, although social attitudes toward the sick and the social position of the sick have varied considerably across cultures and centuries, ranging from total rejection to compassion, and even semi-deification (see, e.g., Safilios-Rothschild, 1970; Siegerist, 1945). These dramatic changes in attitudes toward victims of physical illness are, from a social psychological perspective, both interesting and potentially illuminating.

In primitive societies, magic, medicine, and religion are closely intertwined, and illness is generally viewed as the result of supernatural causes (e.g., Ackerknecht, 1946; Caudill, 1953; King, 1962; Read, 1966). In some primitive cultures, the definition of a person as ill is based exclusively on social criteria; if the person suffering from illness can continue to lead a normal life within the tribe, s/he is considered normal and does not elicit any special social reaction. However, if an individual is incapacitated by a more serious disease, the victim is abandoned by the tribe, including the victim's family (Sigerist, 1945). More often, illness is believed to result from spirit intrusion, soul loss, sorcery, or breach of taboo. Reactions to the sick person, like treatment of the illness (e.g., atonement, exorcism, appeasement of gods), follow logically from beliefs regarding the etiology of illness; the victim is believed to possess special spiritual powers and is elevated to the prestigious position of "medicine man" or

witch-doctor, or, more commonly, is feared and shunned by kith and kin alike.

Rejection of the notion of an "innocent victim" is evident in ancient Hebrew culture, where disease was viewed as punishment for sin:

Disease and suffering are inflicted by way of chastisement, in retribution for the sins of the individual, of his parents, or even of his clan. This was a concept of pitiless logic and of the clearest simplicity. . .Where such a view prevailed, the sick man found himself burdened with a certain amount of odium. He suffered, but it was believed that he suffered deservedly. His disease proclaimed his sin for all to see. He was branded, and socially isolated in a particularly severe way. Disease, however, was not only a punishment; it was also an atonement for guilt, and thus a redemption. (Sigerist, 1945, p. 68)

The victim of disease in ancient Greek society shared this burden of odium, because of a perceived deviation from perfection rather than moral standards. Health and other forms of "perfection" were highly valued, and the "inferior"--the weak, the sick, and the disabled--were tolerated only as long as improvement was considered possible. Malformed babies and other "inferior" persons were killed, and medical treatment was considered unethical for "hopeless" cases (Safilios-Rothschild, 1970; Sigerist, 1945).

Social attitudes toward the sick changed dramatically with the advent of Christianity--from disgrace to grace, punishment to purification. Through Christian doctrine, suffering was transformed from a punishment for past sins to a means of spiritual purification and perfection. Charity toward the sick and the disabled became an important duty; sympathy and care for the ill allowed the healthy to share the grace of suffering. Thus, as Sigerist (1945) and Safilios-Rothschild (1970) noted, Christianity produced fundamental and lasting changes in

society's attitudes toward the sick; it promoted a preferential social position for the sick which has, to some extent, persisted.

The Middle Ages in Europe witnessed a return to religious and supernatural explanations of disease. The visibly diseased and disabled were believed to be cursed or possessed by the Devil, and were held responsible for other misfortunes such as natural disasters and epidemics. The fear and hatred for the physically ill often resulted in persecution and torture.

The modern "scientific" model of disease in Western society views illness as an organic aberration which results from natural, amoral conditions beyond the individual's control. This perspective has been heralded as at once more objective and less punitive than magical-religious conceptions of illness. The notion of blamelessness is central to this more "scientific" and "humanitarian" view of illness; illness is a non-culpable form of deviance over which the individual has no control, and for which the individual is not to blame (see, e.g., King, 1962; Parsons, 1951; Safilios-Rothschild, 1970; Sedgwick, 1973; Veatch, 1973). On this view, the ill should be neither ostracized nor worshipped; instead, they should be viewed neutrally (or with "Christian compassion"), and isolated only insofar as confinement is necessary to their own or others' health.

These descriptions highlight the characteristic social attitudes toward disease and its victims in different cultures and during different historical periods. Contemporary attitudes toward victims of physical illness probably reflect the influence of each of these conceptions (viz.,

retribution, inferiority, blessedness, and objective neutrality). For example, Sigerist's (1945) observation that "until recently, there were still people who considered mental diseases a punishment for a disorderly life and venereal diseases a singularly appropriate chastisement because they manifested themselves in the organs with which people had sinned" (p. 70) is probably still true to some extent today, as is King's (1962) suggestion that "even among the highly educated members of our society, the idea occurs occasionally that painful and disabling illness may be some kind of punishment by God for sin" (p. 128). Vestiges of "pre-scientific" views may be especially common in the reaction to particular diseases, such as venereal diseases (Sigerist, 1945), leprosy (Sigerist, 1945), tuberculosis (Sigerist, 1945; Sontag, 1978), and cancer (Sontag, 1978).

In addition to highlighting cultural and historical influences on attitudes toward victims of physical illness, these different conceptions indicate the range of cultural variation in medical myths, beliefs, and practices, and suggest some general factors which may determine the nature of attitudes toward the sick, including characteristics of the illness (e.g., severity, visibility, etc.), beliefs about disease causation and individual responsibility for illness, and cultural values regarding health and illness, such as the degree of stigmatization associated with a particular illness (cf. Safilios-Rothschild, 1970). Before reviewing more recent evidence regarding attitudes toward the physically ill, it may be instructive to examine more carefully these and other factors which may affect social definitions and judgments about illness.

The Social Definition of Illness

Disease, illness, and sickness each have their own technical and colloquial meanings, and it is important at the outset to consider some distinctions among these terms. Conventionally, and throughout the remainder of this paper, "disease" refers to the more limited medical concept of an objective state of organic pathology. "Illness" refers to the more general subjective experience of discomfort, pain, or "ill health." Typically, disease is defined in morally neutral, objective, "scientific" terms. For example, the Oxford English Dictionary defines disease as "a condition of the body, or of some part or organ of the body, in which its functions are disturbed or deranged; a morbid physical condition." Illness, however, includes much more than bodily dysfunction; illness is defined as "the quality or condition of being ill" in any of several senses--"1. Bad moral quality, condition, or character . . . 2. Unpleasantness, disagreeableness; troublesomeness; hurtfulness, noxiousness, badness. 3. Bad or unhealthy condition of the body; the condition of being ill; disease, ailment, sickness, malady." To be ill, then, is to be in a socially as well as biologically altered state; "illness" denotes (and connotes) much more than physical morbidity, and has social as well as physical consequences. It is illness, not disease, to which the individual and others respond.

In a discussion of medical metaphors, Szasz (1975, 1977) has made

a similar observation about the meanings of "ill" and "sick":

The terms ill and sick are often used interchangeably. For example, we can say 'Jones has pneumonia, he is quite ill.' And we can say just as well, 'Jones has pneumonia, he is quite sick.' Ill, however, has a history and scope that have nothing to do with medicine or disease. It means, roughly, bad, unfortunate, tragic, or something of that sort. For example, we can speak of ill will or ill fate, but we cannot speak of sick will or sick fate. (Szasz, 1977, p. 141)

Sick, perhaps more closely linked to medicine or disease, also has moral and metaphorical uses (e.g., a "sick joke"). With these distinctions in mind, this section will consider some socially important features of illness.

Features of illness

Before considering some of the specific aspects of illness which may influence individuals' reactions, some of the essential features of illness should be noted. Generally, illness is unpredictable, uncontrollable, and undesirable. Unlike many events in an individual's life, illness is an unanticipated and typically undesirable and involuntary condition. Illness also usually involves some loss of control by the individual over normal activities, although the degree of disruption varies with the nature and the severity of the illness. For these reasons, serious physical illness almost always represents a "crisis" (Moos & Tsu, 1977). Davis (1963), in an intensive study of the "passage through crisis" of polio victims and their families, defined the crisis as "a relatively sudden and unanticipated disruption, of extensive and protracted significance, in the everyday activities, understandings, and expectations of a social unit" (p. 17).

The onset of illness is very difficult, if not impossible, to predict with any certainty. Despite medical advances in knowledge of disease causation, and epidemiological progress in the identification of "at risk" groups, the occurrence of a particular illness in a particular individual is still largely unpredictable (with the possible exception of some genetic disorders). Thus, although a society may be encouraged by its increasing ability to predict the frequency and distribution of illness in the population as a whole, illness is experienced at an individual level, and it is at this level that illness is largely unpredictable. In spite of epidemiological evidence and other data which indicate that individuals differ in their general susceptibility to illness, and that illnesses are not distributed among persons at random (e.g., Bakan, 1968; Brown, 1976; Hinkle, Pinsky, Bross, & Plummer, 1956; Hinkle & Wolff, 1975; Wolff, 1953), the individual likely perceives illness as "singling out" individuals in an arbitrary manner. Thus, the onset of illness may be the most important and least predictable phase of illness.

The diagnosis and prognosis of an illness are also potential sources of uncertainty for the individual. The uncontrollable nature of illness derives from the unknown etiology of many diseases, and the unknown prevention, treatment, or cure. The uncertainty and powerlessness in the experience of illness are often enhanced by the lack of correspondence between knowledge of the causes of disease and knowledge of effective treatment. That is, there are diseases which can effectively be treated despite an unknown etiology, and other diseases

for which the causes are known and a diagnosis can reliably be made, but for which no effective treatment is available.

The undesirability of illness seems patent; illness is, by definition, a negative event. This is not to say that the evaluation of a particular condition as negative and as constituting illness does not vary across individuals and cultures, but that the definition of a condition as illness, by an individual or society, implies that the condition is perceived as both abnormal and negative. Further, the undesirability of illness often does not rest solely on the biological deviance or social devaluation of the condition; illness is a major source of pain and suffering, and can disrupt and threaten an individual's life (cf. Fabrega, 1974; Freidson, 1970; Sedgwick, 1973; Veatch, 1973). However, like the attribution of illness itself, the perception of illness as negative, as a misfortune, is in part a social judgment (Shontz, 1975).

These general characteristics notwithstanding, it is clear that illnesses are remarkably diverse in nature; illnesses vary along a number of dimensions, and the specific characteristics of an illness will determine the extent to which the illness is perceived as unpredictable, uncontrollable, and undesirable. Although, social psychologically, the response to a specific disease entity is of less interest than the response to illness in general, an understanding of the impact of illness must acknowledge the diversity among illnesses. The compromise between the abstract entity "illness" and the diversity of specific diseases needed for the present analysis is knowledge of

some of the important dimensions along which illnesses may vary. For instance, illnesses may be chronic, common, contagious, fatal, confined to a developmental period, ethnic group, or sex, etc., and these characteristics can be expected to play a major role in the personal and social meaning of illness.

Classifications of illness

Every society has its own classification of illnesses, and these classification systems differ in the extent and nature of conditions classified as illness, and in the nature and complexity of the distinctions made among illnesses. Medical classifications in contemporary Western society are highly complex and differentiated; the major distinctions are based on etiological aspects of the disease (e.g., communicable, congenital, psychosomatic disease), the duration and course of the disease (e.g., acute versus chronic, self-limiting versus progressive), and the prognosis (e.g., disabling, fatal disease). Medically, diseases are also classified according to the symptoms and the organ or system of the body affected (e.g., heart disease; disease of the respiratory, circulatory, or digestive system).

Many of these characteristics, such as whether the disease is clearly the result of an external agent, whether the disease is contagious and could conceivably reach epidemic proportions, and the nature of the disease cycle, have socially and psychologically significant consequences. For example, communicable diseases are caused by various micro-organisms (i.e., an "external agent"), are transmitted between individuals by direct or indirect contact, and are often self-limiting (Coe, 1970).

These features of communicable diseases may affect the perceived culpability of the individual in contracting the disease, the incidence of the disease, the perceived threat of the disease to the individual and others, and interpersonal contact with the sick person (e.g., isolation or quarantine of the victims).

Although there is obviously some overlap between medical and lay classifications of illness (e.g., King, 1962), and many medical distinctions among illnesses have important consequences for the individual and others, lay classifications and belief systems regarding illness seem to reflect more heavily the personal and social consequences of disease. Illness is experienced, interpreted, and acted upon in a personal and social context, and the psychological and social aspects of illness are probably at least as relevant to the individual's experience of illness as the biological aspects.

In a factor analytic study of beliefs and feelings about three diseases (viz., poliomyelitis, cancer, and mental illness), Jenkins and Zyzanski (1968) identified three dimensions which were important in perceptions of these diseases: a "human mastery" dimension (i.e., the completeness of knowledge about the disease and the effectiveness of intervention), a social acceptability-social stigma dimension, and a personal involvement dimension. Fabrega and Manning (1972) identified two dimensions in addition to the duration of the disease episode and the prognosis, or possibility of cure, that are important in the response of individuals to illness--the degree of discomfort or disability, and the discreditation or stigmatization of the illness. Similarly, Fabrega

(1974), describing the nature of a "phenomenologic framework" of disease which would articulate the important experiential dimensions associated with illness, suggested that the four dimensions of discomfort, disability, discreditation, and danger might be significant for the individual.

Robinson (1971) collected semantic differential data on the concept of "illness," and found that the dimensions for which the average response differed from the midpoint by at least one point were bad, ill, and cruel. Robinson (1971) proposed several possible interpretations of the association of illness with "bad":

Illness could be seen in the sense of 'bad for', or causing problems for, the ill person and perhaps others. This is consistent with the notion of illness interfering with normal bodily functioning and the normal business of life. Clearly, illness could also be interpreted as bad in the sense of unwholesome, unfresh, or diseased. Finally, bad could be seen as implying not only evil . . . but immorality. (p. 45)

Herzlich (1973) examined the illness classifications and distinctions made by a hundred intensively interviewed respondents, and noted the extent to which the important distinctions for her respondents differed from medical or organic classifications. Unlike medical classification systems, the etiology of illness did not figure prominently in the classifications by her respondents, except to distinguish illness from other states such as accidents and physical disability. Herzlich's interviews also revealed few references to organic, objective, or impersonal factors; the individuals interviewed did not typically distinguish illnesses on physiological or biological bases.

What did emerge from these in-depth interviews was a personal or psychosocial frame of reference--distinctions referring to the severity, the pain, and the duration of illnesses. It is interesting to note that the seriousness of an illness was not a specific attribute, but "an accentuation of one of the features of a disorder"; that is, a disease was viewed as serious if it was chronic, fatal, or irreversible. Herzlich (1973) suggested that "seriousness thus plays the role of a super attribute expressing the relation of the individual to the illness rather than simply the nature of the illness itself" (p. 67). In general, Herzlich concluded that the attributes used by individuals in describing and understanding illness

have all the function of indicating the implications of the illness for the present or future life of the individual, and the way in which the person is involved in the illness. . . their function is not to simplify the multiplicity of diseases, but rather to render it meaningful by defining the relation to the individual in each case. The variety of individual relations and responses to illness is implicitly present in each of these classifications of illness. (Herzlich, 1973, pp. 68-69)

It appears, then, that although some medical distinctions among diseases, such as the duration and prognosis, are important in reactions to illness, they are important because of their personal and social meaning for the individual. The pain, discomfort, disability, or stigma associated with an illness have significant personal and social consequences for the individual, and help define the meaning of the illness and reactions to it.

The relative unimportance of the etiological aspects of illness in these descriptions is interesting, since most analyses of concepts

of disease (e.g., Balint, 1957; King, 1962; Pflanz & Keupp, 1977; Sigler & Osmond, 1973; Veatch, 1973) have focused heavily on beliefs regarding disease causation. However, descriptions of the characteristics of illness primarily address the nature of the illness or disease episode, rather than the onset or etiology of the illness. While pain, discomfort, and duration may define the individual's present and future relation to illness (Herzlich, 1973), it is etiological beliefs which elaborate the individual's past relation to the illness. Causal beliefs about illness play a significant role in personal and social reactions to illness; etiological beliefs explain the occurrence of illness in a particular individual, and delimit the extent to which the individual is assigned or absolved from responsibility for the illness.

Lay explanations of illness

Unlike medical or scientific explanations of illness, which often focus on how an illness occurs (e.g., germ theory), lay explanations are frequently preoccupied with why the illness occurred. Although patients often "know" something about an illness, through scientific or folk knowledge, or direct experience (Wadsworth, 1976), they still seek to understand why they (or particular individuals) are ill. That is, a person may know that his or her illness is caused by a virus, but this knowledge does not explain the singular or selective occurrence of the illness--"Why me?"

Zola (1972) observed that when an individual is asked what caused his or her illness (e.g., diabetes or heart disease), the scientific terminology, if not the content, of the answer is often quite accurate.

But if such inquires into the perceived causes of an illness are followed by probes such as "Why did you get X now?", or "Of all the people in your community, family, etc., who were exposed to X, why did you get . . . ?," then "the rational scientific veneer is pierced and concern with personal and moral responsibility emerges quite strikingly. Indeed the issue 'Why me?' becomes of great concern and is generally expressed in quite moral terms of what they did wrong" (p. 491).

Often, in response to the actual or rhetorical question "Why?", the ill person seems to provide an answer to the more personally and socially significant question "Why me?" This difference in the purpose of medical and lay explanations--the "how" versus the "why" of illness--may account for the lack of correspondence between scientific medical beliefs and lay beliefs, in spite of the general integration of medical beliefs with other aspects of culture:

One can find . . . lay explanations for the causes of common ailments alongside scientific methods of treating diseases. For example, the appearance of symptoms such as fever, sore throat, and frequent coughing are often attributed to the behavior of the victim--something he did or did not do--rather than to the appropriate biological cause such as a virus. Thus, the explanation that one "catches" a cold by not dressing properly or not taking vitamins regularly, etc., is commonly found even in areas where the best scientific medicine is available. (Coe, 1971, p. 121)

Although there is evidence which demonstrates the persistence of unverified folk beliefs in spite of available medical knowledge (e.g., King, 1962), attributions to the behavior of the ill person could also be interpreted as efforts to explain the selective occurrence of illness--why a particular person became ill--rather than what actually caused the illness. If almost everyone is exposed to germs and viruses, it makes

sense that laypersons would look to the behavior (or other characteristics) of the person to explain why one person "caught" a cold or flu, while another did not.

Illnesses which are not widespread in a social group, which single out individuals, seem especially likely to require answers to the question "Why me?" Sontag (1978), in a fascinating discussion of the popular mythology of TB and cancer, noted that the "singling out" of its victims is what once made tuberculosis seem so "interesting" or "romantic," and "also made it a curse and source of special dread":

In contrast to the great epidemic diseases of the past (bubonic plague, typhus, cholera), which strike each person as a member of an afflicted community, TB was understood as a disease that isolates one from the community. However steep its incidence in a population, TB--like cancer today--always seemed to be a mysterious disease of individuals, a deadly arrow that could strike anyone, that singled out its victims one by one . . . People could believe that TB was inherited . . . and also believe that it revealed something singular about the person afflicted. In a similar way, the evidence that there are cancer-prone families and, possibly, a hereditary factor in cancer can be acknowledged without disturbing the belief that cancer is a disease that strikes each person, punitively, as an individual. No one asks "Why me?" who gets cholera or typhus. But "Why me?" (meaning "It's not fair") is the question of many who learn they have cancer. (pp. 37-38)

Wolfenstein (1957) similarly observed that "a person may feel he is being punished when misfortune befalls him singly. But when he becomes involved in a large-scale disaster he may be more disposed to feel: this cannot be aimed at me" (p. 202). So important is the perceived selective occurrence of illness, the notion of individuals being "singled out" for illness, that, according to anthropological research, some local traditional classifications of illness distinguish between "public" illnesses (e.g., cholera or influenza epidemics) and "private"

or hereditary illnesses (Read, 1966). Today, with the control of infectious diseases and the increased incidence of chronic illness, most serious illnesses do appear to "single out" individuals and to raise the question "Why me?"

Causal beliefs about illness seem to have an important role in defining the personal and social significance of illness. Etiological beliefs not only explain why the illness occurred in a particular individual, but also delimit the extent to which the individual is held responsible or accountable for the illness. Indeed, during the initial phase of illness, the individual may be more concerned about his or her past relation to the illness, in terms of a role in the etiology of the illness, than in the nature of the illness, including the prognosis (Balint, 1957; Korsch & Negrete, 1972; Wadsworth, 1976). For example, Abrams and Finesinger (1953) discuss a patient with a malignant tumor who was "more disturbed about whether or not her past infection was the cause . . . than with the fact that she was dying" (p. 476).

The clinical literature provides considerable evidence that when events in life seem capricious and uncontrollable, as with the onset of serious illness, people have a need to find a general purpose or pattern of meaning in the course of events (Moos & Tsu, 1977). Although much of the evidence derives from unsystematic observations, the available data suggest that very often the search for meaning or an explanation of the illness takes the form of identifying the cause or assigning responsibility for the occurrence of the illness.

Bard and Dyk (1956), for example, intensively interviewed 100 patients who had undergone one of three surgical procedures: gastrectomy, colostomy, or radical mastectomy. Of the 100 patients, approximately half expressed spontaneous, unsolicited beliefs regarding the cause of their illness, beliefs which were "cast in terms of assigning culpability or responsibility for the illness" (p. 153). The self-blame beliefs or attributions made by these patients generally identified the illness as (a) punishment for wrong-doing in the past (generalized wrong-doing or a specific act), or (b) evidence of personal failure. The patients' attributions regarding their illnesses also revealed beliefs in retribution, fatalism, etc. Bard and Dyk (1956) concluded that

When confronted with serious illness, individuals must establish a belief explaining the event. The more serious the disease (threat), the more necessary the belief which has as its purpose the preservation of emotional integrity or the prevention of emotional disorganization. A sense of mastery essential for functioning requires the discovery of meaning in an otherwise disordered and chaotic situation Even minor threats to health, such as common colds, arouse speculation As the threat to health increases in severity and becomes a threat to survival, engaging in speculative activity to establish a belief becomes more necessary The irrationality of beliefs probably increases in direct proportion to the seriousness of the threat so that one would expect to find fewer irrational beliefs expressed in relation to the common cold than to cancer. (pp. 159-160)

Abrams and Finesinger (1953) also reported a marked tendency of cancer patients to explain the cause or responsibility for the disease. Thirty of their 60 patients blamed their own past actions, citing actions which ranged from a fall to sins. Almost all of the remaining patients attributed the disease to someone else, specifying causes

which ranged from contagion to acts of another person toward the patient, such as the sexual demands of a marital partner. Moses and Cividali (1966) observed that 30 of their cancer patients blamed others, and 8 patients blamed themselves.

An individual may perceive him or herself as responsible for the illness because of a direct causal role in the occurrence of the illness, or for failure to have prevented the illness from occurring. For example, Kübler-Ross (1969) described a patient with Hodgkin's disease who maintained that he had caused his illness by eating improperly. Similarly, Bard and Dyk (1956) observed that some patients held themselves responsible for their illnesses for reasons such as irregular or rapid eating habits, eating "inferior" food, or working too hard. Taylor and Levin (1976) reported that many women blame their breast cancer on premarital sex or other guilt-provoking acts.

People also fault themselves for failure to have prevented the illness. Breast cancer patients, for instance, may blame themselves for having delayed in seeking medical help (Abrams & Finesinger, 1953). Chodoff, Friedman, and Hamburg (1964), in a report of the coping process of parents of terminally ill children, described a mother who believed her daughter had "caught" leukemia from the tumors of a family pet which she, herself, should have removed from the household. Similar concerns about possible blameworthiness or negligence were also observed by Davis (1963) in his study of families of polio victims. The child's illness appeared to challenge the parents' conceptions of themselves as responsible and devoted parents, and they worried that

they could have done something to have prevented the illness, or to have lessened its severity. Such beliefs may be associated with what Davis (1963) described as a "key assumption in the American value system"--namely, that misfortune rarely touches those who take the proper precautionary measures.

In addition to specific acts of commission or omission, people may perceive their illness, or the illnesses of others, as punishment for prior deeds or misdeeds. Davis (1963) noted that even if parents had followed all known precautionary measures, they may still blame themselves because of an attitude toward misfortune which can "give rise to guilt feelings of a theoretical or metaphysical kind. Here the belief is that the family is somehow guilty of having pursued a faulty scheme of life that in unknown but predetermined ways resulted in misfortune to the child." In other families, the belief that "the child's disease was retribution for unknown transgressions was expressed in more conventional ways such as, 'What have we done that God has singled us out for this?' " (Davis, 1963, p. 37). Schoenberg and Senescu (1970) cited an example of a Catholic woman who was coerced by her husband to use contraception in order to limit their family size. After several years of diaphragm use, the woman developed cervical cancer, and viewed the disease as punishment for her transgression. Evidence of beliefs that illness represents some sort of divine retribution for prior transgressions or sins has also been reported by other researchers (Abrams and Finesinger, 1953; Bard and Dyk, 1956; Chodoff et al., 1964).

In some instances, the medical treatment, as well as the illness itself, may be viewed as punishment (Schoenberg & Senescu, 1970). Lambert and Lambert (1979), for example, noted that mastectomees who delayed in seeking medical care may believe that their delay contributed to the severity of the disease, and may view the extensiveness of the surgery (radical versus simple mastectomy) as punishment for such action.

There are exceptions, consistent with the historical conceptions discussed earlier, to these reactions to illness as misfortune. Illness is sometimes viewed as the result of divine will, but an act which reflects positively on the sick person, because it is a comment on their spiritual qualities or inner strength, or because it represents an opportunity for spiritual purification and enrichment. Several of Bard and Dyk's (1956) patients expressed this view: "God fits the burden to the back that can bear it. God must love me a lot," and "God chastizes those whom He loves" (p. 151). Similarly, Davis (1963) reported that the Catholic parents of a polio victim "chose to regard it as a stigma indicative of their son's blessedness and calling to the cloth" (p. 38). Herzlich (1973) also noted this conception of illness, albeit less common, in the views of her respondents. Some individuals perceived pain and illness as having formative value, through which the sick person or invalid attains a "personality ideal": "'The invalid grows in stature because he has an experience which others do not have. You can see people who have gained greatly psychologically, who have become exceptional people'" (p. 119).

Siegler and Osmond (1973), describing historically recurring models of illness, argued that the most common alternative to the medical model is "the moral one in which the illness is precisely the patient's fault: it is the punishment for immoral behavior" (p. 46). Siegler and Osmond maintain that both views, the medical and the moral, are almost always present. The clinical literature suggests that patients themselves may adopt a moral rather than medical view of their illness, perhaps because the moral model has greater personal and social meaning for the individual. Very often, what is taken as a causal explanation--a response to the question "Why?"--may, implicitly, be a response to the more personally and socially significant question, "Why me?" Indeed, since the causes of serious illness are often unknown or beyond an individual's control, understanding why he or she (or another person) was "singled out" may be more crucial in the individual's efforts to make sense of the misfortune than the actual causes of the illness.

The anthropological literature contains evidence of similar moral beliefs regarding disease causation. In more primitive societies, illness is often believed to represent retribution or sanction for past sins, and illness is frequently inseparable from norms for moral and social conduct (e.g., Coe, 1971; King, 1962; Susser & Watson, 1971). According to King (1962), illness is often believed to result from spirit intrusion, "soul loss," and breach of taboo:

Not infrequently do we hear people ascribe their illness or that of someone else to punishment by the Deity for wrongdoing . . . When someone of good character becomes ill with an incurable disease, those close and dear to him often ask "Why did it happen to him?"--by which they imply that such diseases should not strike good people. The idea of breach of taboo as a cause of disease has been pushed from the conscious lives of most of us, but not eliminated. (p. 100)

Many of these causal beliefs, including self-blame and the blame of others, may serve to deny the "intolerable conclusion that no one is responsible" and that the event has come about impersonally and meaninglessly (Chodoff et al., 1964). They provide a personal explanation and meaning for a potentially life-threatening event (Lambert & Lambert, 1979). But illness is a social phenomena as well as a personal event, and once the illness is known (or can be observed) by others, it has more than just a personal meaning.

Indeed, the causal beliefs and guilt expressed by ill persons often reveal concerns and fears about how others will perceive and react to them--"health and illness are experienced and thought of by the individual in reference to society" (Herzlich, 1973, p. 104). Hamburg and Adams (1967), for example, observed that severely burned patients and patients with severe poliomyelitis made efforts to test significant others to determine whether they would still be regarded with positive feelings despite their damaged conditions, and whether they could still win affection and respect in ways that had proved effective in the past. Lambert and Lambert (1979) maintain that family members, especially, should be encouraged to examine their reactions to the illness: "For example, do they see the individual as weak, do they feel that the illness places a stigma upon them, or

do they feel responsible for the illness?" (p. 257).

Concern about how they will be perceived by others is particularly strong for persons for whom the illness (or treatment) involves permanent disability or disfigurement. Davis (1963) reported that the families of polio victims, perhaps cognizant of their own prior attitudes toward disabled persons, believed that their misfortune would be accompanied by a loss of status. Similarly, Golden and Davis (1977), in a report of the reactions of parents of infants with Down's Syndrome, indicated that the "parents may view the child as unworthy or at least believe that others will perceive him that way" (p. 47).

Perhaps because of the unknown cause and uncertain cure, cancer, and the social consequences of cancer, may seem particularly frightening (Levine, 1962). Abrams and Finesinger (1953) concluded that guilt among cancer patients was related to a common belief that cancer is a disease of unclean origin, a mark of disgrace (cf. Sontag, 1978). Hinton (1973), in a discussion of the stresses which people with cancer must bear, noted a perceived loss of social status and a sense of alienation: "Patients sensed that many did not care about them as individuals any longer and some people positively wanted no more to do with them" (p. 63). Bard and Sutherland (1955) reported that a large proportion of breast cancer patients were deeply concerned that others might learn of their illness and mastectomy:

Unfortunately, concern about others knowing is often reinforced by attitudes in the community regarding the disabled. If a patient experiences a lowering of self-esteem, it is not difficult for her to conceive of social isolation or at least as being regarded as inferior as a consequence of radical mastectomy. (p. 668)

Similarly, Moos and Tsu (1977) noted that the terminally ill patient fears "that because of changes in body appearance or function, the physical or economic burdens of his care, or simply his new status as a dying person, family, friends and physicians may reject or abandon him" (p. 398). However, the actual reactions of others may sometimes be much more positive than the reaction anticipated or feared by a patient and his or her family. Davis (1963) reported that the considerable attention and sympathy from the friends and neighbors of parents of polio victims "clearly played an important part in mitigating the parents' feelings that they might have been negligent or were otherwise blameworthy for the child's illness" (p. 39).

These observations indicate that it is not enough for the sick person to cope individually. Illness has important social consequences, and requires personal and social adjustment by the individual and others. The adjustment and reaction of the individual is in part a function of the reactions--real or imagined--of others.

Social consequences of illness

One of the major concerns of the sick person is how others will perceive and react to him or her (Lambert & Lambert, 1979). Just as illness has an impact on an individual's self-perception, it is likely to affect the perception of the person by others. Beyond the obvious effects of illness on a person's physical activity and well-being, illness can affect a person's social status and relations with others. Based on prior experience and culturally shared beliefs and values regarding illness, the individual likely anticipates how others

will react to him or her. Thus, individuals' reactions to illness depend in part on their beliefs about how society and significant others will perceive them, and the actual reactions of others to them and their illness (Herzlich, 1973; Lambert & Lambert, 1979; Robinson, 1973; Safilios-Rothschild, 1970).

The reactions of others--real or imagined--can affect not only the individual's personal reaction and adjustment to illness, but whether he or she seeks medical care or accepts treatment. Safilios-Rothschild (1970) noted that in Greece, for example, persons afflicted with tuberculosis are very strongly motivated to deny and conceal symptoms as long as possible, because TB carries a social stigma for the individual and his or her family which cannot be removed, regardless of the treatment outcome. Susser and Watson (1971) made similar observations about the stigma associated with TB and the acceptance of treatment:

To (the patient), tuberculosis may conjure up "galloping consumption"; he may regard it as a sentence of death; he may see it as a curse on his family, a punishment for sin. Some people . . . attach a stigma to the disease, and consider the whole family of a patient as contaminated and dangerous (Rosenbluth & Bowlby, 1955). This attitude will help to strengthen the patient's feelings of guilt. If he is forced by illness to consult the doctor, he may subsequently ignore the doctor's course of treatment, hoping to conceal his condition from other members of his group, and thereby ward off the stigma attaching to it.
(p. 65)

There is also evidence that such reactions may vary according to education, social class, and ethnic origin. Jenkins (1966), in a study of group differences in perceptions and beliefs about tuberculosis, found that blacks were more familiar with TB than were whites and Latin Americans, that they perceived it as powerful, mysterious,

and embarrassing, and that they believed that "bad" people were more likely to get TB than "good" people.

When an individual is sick, "he feels that something is wrong with him as a whole individual, and his sickness is apt to permeate everything that he does and all the ways in which he perceives himself" (Coe, 1970, p. 91). This also appears to be true with respect to the perceptions of others--observers tend to form negative impressions of the person, and to view him or her as inferior in terms of all attributes on the basis of a visible or known negatively valued attribute (e.g., Bynder & New, 1976; Dembo, Ladieu-Leviton, & Wright, 1956; Goffman, 1963; Hunt, 1966; Wright, 1964). Bynder and New (1976) argued that physical disability is an example of physical impairment transformed into "social incapacity" imposed upon the person by others. Goffman (1963) has observed that it is common for people to view another person's physical disability as evidence of a moral defect; as a result, the person's entire identity may be "spoiled" by the disability.

With respect to disability, a frequent consequence of chronic illness, research has shown that people express more rejecting attitudes toward disabled than nondisabled persons. A number of studies have found that the disabled are the target of prejudice and discrimination similar to that expressed toward racial, ethnic, and religious minorities (see Chesler, 1965, for a review). For example, Centers and Centers (1963) found that "normal" children designated amputee classmates as the least liked by themselves and others, and perceived them as the least attractive, the least fun to play with, and the

saddest children in the class. Further, there is evidence that disabled students prefer nondisabled students as often as do the nondisabled students themselves (Ingwell, Thoresen, & Smith, 1967).

Despite the evidence of negative evaluation and social rejection of the sick and disabled, there are strong social and moral norms which proscribe open rejection or mistreatment of sick and disabled persons (Jordan, 1963). Safilios-Rothschild (1970) suggested that the source of this proscription may be the "cultural belief that the disabled are 'inferior' and it is therefore inhuman and cruel for their 'superiors' to reject or mistreat them. Safilios-Rothschild (1970) further proposed that "magical thinking" may reinforce this normative proscription at the individual level by "suggesting that the rejection or mistreatment of the disabled could result in the non-disabled being punished with a similiar affliction" (p. 129).

It is interesting to note that although observers' reactions seem to have an important influence on the individual's reaction and adjustment to his or her illness, the individual's reaction may have little impact on the reactions of others. Shontz (1975) has argued that almost all serious illness is regarded as misfortune, and that this is a social judgment which is almost invariably accompanied by the assumption that the unfortunate person suffers as a result of the illness. This judgment by observers, according to Shontz, is independent of the reaction of the person about whom the judgment is made. That is, the sick person may regard him or herself as fortunate, but this reaction may have little effect on observers, who may impose suffering if they fail to observe it in those deemed

"unfortunate," The demand that the unfortunate suffer establishes a self-fulfilling prophecy by which enforced suffering is attributed to the misfortune itself, and the ill person is placed in an inferior status position and devalued. Ultimately, Shontz (1975) argued, the sick person may become convinced that he or she is unfortunate, and perhaps even that his or her devaluation is deserved.

The social aspects of illness, revealed by lay classifications and explanations of illness, and personal and social reactions to illness, suggest three general classes of variables that may affect social judgments about illness: (a) characteristics of the illness, such as the severity, visibility, parts of the anatomy affected, the possibility of contagion, and the prognosis, (b) prevailing beliefs about disease causation, and about the role of the individual in the etiology and prevention of illness, and (c) cultural values regarding health and illness, including the degree of stigmatization associated with a particular illness. Despite the lack of systematic evidence of the effect of illness on perceptions of a person, there are theories in sociology and social psychology which indicate how observers' perceptions of a person should be influenced by knowledge that he or she is ill. These theoretical formulations suggest mechanisms by which the characteristics of illness and cultural beliefs about illness may be linked to observers' perceptions of the physically ill, and indicate additional factors which may affect observers' judgments regarding illness. Within sociology, role theory and labeling theory address many questions regarding social reactions to the

physically ill, and social psychological theories of social perception and attribution suggest additional cognitive and motivational factors that may affect observers' perceptions of victims of physical illness.

Sociological Perspectives

Medical sociology has long been concerned with the study of responses to illness, or more generally, behavior and interpersonal relations in health and illness. From a sociological viewpoint, illness is defined in terms of the situation and social behavior, as well as biology. Illness is generally regarded as a form of social deviance, and the sick person is seen as temporarily occupying a unique social position. With Parsons' (1951) classic analysis of the roles of patient and doctor in our society, the concept of the "sick role" gained prominence, and has provided the conceptual framework for much of the research in this area.

The sick role

In essence, Parsons (1951) viewed sickness as a form of deviance which presents problems for both the individual and the social system, because it hinders the effective performance of social roles. Society, which has a functional interest in controlling and minimizing the incidence of illness, develops a special, temporary social role for the sick person. By adhering to this defined role, the sick person adjusts both to the illness and to the demands of society. Through the sick role, the sick person is granted privileges typically denied to other types of social deviants, and sickness becomes a

"legitimated" form of social deviance. Four institutionalized expectations accompany the sick role: The sick person is exempted from 'normal social role responsibilities, which of course is relative to the nature and severity of the illness' (Parsons, 1951, p. 436). The sick person is not blamed for the illness, and cannot be expected to get well by an act of decision or will. However, the person must regard the state of being ill as undesirable, and must want to "get well." Finally, the sick person has an obligation to seek technically competent help, to cooperate with the physician, and to comply with prescribed health regimens (Parsons, 1951; see Levine & Kozloff, 1978, for a recent review).

For the present analysis, the most critical feature of the sick role is the person's exemption from responsibility for the illness. As noted earlier, the role of the sick person, historically, was not well differentiated from the roles of the criminal, the possessed, or the religiously inspired (Veatch, 1973). In contemporary society, being sick, according to Parsons (1951), is "distinguished from other deviant roles precisely by the fact that the sick person is not regarded as 'responsible' for his condition, 'he can't help it' " (p. 440). On this view, illness is a disvalued condition that results from "natural" causes, and the sick person is usually not blamed by others for his or her condition:

Most physical illnesses fall within definitions of "sickness" rather than "badness." We rarely hold people responsible or accountable for their physical ills, and although from time to time persons might not take necessary precautions to avoid risks of illness, we assume that illness is an event that happens to people, and that it is not motivated. There are, of course, occasions where physical illness may be viewed as "badness" if there is reason to believe that the patient's condition was self-inflicted for special advantages . . . And there are other situations where patients are considered as "crocks" and "malingerers" because no clear evidence of illness can be found . . . In such cases, doctors and other evaluators may be dubious as to whether the patient's condition is really an event (something that happens to a person involuntarily)." (Mechanic, 1968, pp. 46-47)

The exemption from responsibility for the condition is a corollary of the acknowledgment that the sick person, once he or she is ill, cannot willfully return to a state of health. Generally, according to Parsons, the sick person is exempted from responsibility for the condition, and recovery is perceived as not under his or her willful control: "The sick person is, therefore, in a state where he is suffering or disabled or both, and possibly facing risks of worsening, which is socially defined as either 'not his fault' or something from which he cannot be expected to extricate himself by his own effort, or generally both" (Parsons, 1951, p. 440). These features of the sick role, as described by Parsons, conform closely to the medical model and medical expectations of the patient. Illness is seen as deriving from natural causes, rather than any human action or intention.

Clearly, one of the major functions of the medical model has been the removal of individual culpability, and the moral and punitive consequences, for illness (Sontag, 1978; Veatch, 1973; Zola, 1972).

Medicine, in contrast to the legal system, deals with acts or conditions for which the individual is believed not responsible, and thus the individual is "treated" rather than "punished" (e.g., Robinson, 1973; Zola, 1972). Generally, it has been considered humane and enlightened to extend the medical model to other forms of social deviation, such as criminal behavior and alcoholism. Despite this ideal, however, moral judgments and issues of individual responsibility can still be discerned in all aspects of illness--from etiology to treatment and recovery.

The sick role requires that the person try to get well as quickly as possible, a requirement that includes seeking competent care and following prescribed treatment. Zola (1972) has argued that while the sick person may not be "directly condemned for being sick," the condemnation may be displaced to the person's response to illness and efforts to regain health:

Though his immoral character is not demonstrated in his having a disease, it becomes evident in what he does about it. Without seeming ludicrous, if one listed the traits of people who break appointments, fail to follow treatment regimen, or even delay in seeking medical aid, one finds a long list of 'personal flaws.' Such people seem to be ever ignorant of the consequences of certain diseases, inaccurate as to symptomatology, unable to plan ahead or find time, burdened with shame, guilt, neurotic tendencies, haunted with traumatic medical experiences or members of some lower status minority group--religious, ethnic, racial or socio-economic. In short, they appear to be a sorely troubled if not disreputable group of people. (pp. 490-491)

Moreover, failure to improve following medical intervention may lead to the sick person being perceived as a "bad" patient (e.g., Reynolds & Bice, 1971). Roth (1963) and Siegler and Osmond (1973)

have noted that patients themselves may adopt this moral basis for categorizing patients, and may equate recovery with being a "good" patient: "The 'good' patient believes, so to speak, that he should get time off for good behavior" (Roth, 1963, p. 38).

The medical view of illness as biological and occurring on an individual basis, and the emphasis on treatment, rather than prevention, also serve to focus attention on the individual in illness. Social and environmental causes of illness are generally regarded as of secondary importance; once illness has occurred, the source and the treatment of the problem are located in the individual (cf. Caplan & Nelson, 1973). Thus, the medical "battle" almost always takes place at an individual level (cf. Sontag, 1978):

. . . cancers today are recognized to result, in 60-90 per cent of the cases, from artificially created, environmental carcinogens, yet the prescribed treatment is ex post radiation, chemotherapy, and surgical removal rather than environmental prevention. Although, "normal" mental illness (depression, chronic anxiety, etc.) is similarly recognized to result from adverse social organization, again, the prescribed treatment is some combination of drugs, psychotherapy, transcendental meditation, and other forms of instrumental victim-blaming "cures." (Kelman, 1975, p. 629)

This focus on the individual is especially interesting in light of the fact that many of the greatest advances in disease control have been produced by non-medical intervention, particularly social, political, and environmental change (Dubos, 1971).

More importantly, the issue of "personal responsibility" seems to be re-emerging within medicine (Veatch, 1973; Zola, 1972). The control of infectious diseases and the increase in the incidence of chronic illness has been accompanied by a shift from the classical

medical doctrine of specific etiology to a multicausal view of illness which implicates both the individual and the social and physical environment in the disease process (Coe, 1970; Dodge & Martin, 1970). The implications for the individual of this shift from the infectious etiological model (viz., germ theory) to a multiple causation model have been succinctly stated by Illich (1976): "As long as disease is something that takes possession of people, something they "catch" or "get," the victims of these natural processes can be exempted from responsibility for their condition . . . The medical diagnosis of substantive disease entities that supposedly take shape in the individual's body is a surreptitious and amoral way of blaming the victim" (p. 165).

When prevention is emphasized over treatment, it is usually the personal burden of the individual: "People are being told that they are responsible for their own health and, consequently, for their illness. Sickness is becoming as disreputable as poverty was a generation ago. It is being viewed as personal failure" (Gustaitis, 1978, p. 22). A prominent spokesperson for the responsibility of the individual is Knowles (1977), who asserted that the individual has a "moral responsibility" to maintain his own health, and that the "primary critical choice" facing the individual is "to change his personal bad habits or stop complaining. He can either remain the problem or become the solution to it" (p. 78). Veatch (1973) has described the extent to which the individual is currently held responsible for illness:

Certainly a heart attack is partially preventable, and an individual who fails to watch diet, exercise, and standards for physical examination may be seen as blame-worthy if he has a coronary. Exposure to bacteria may be willful, through failure to observe sanitary and inoculation precautions known or thought to be effective. A parent may be blamed and feel guilty if his child suffers an attack of a preventable disease. The elaborate precautions taken by parents of the previous generation to avoid contact with children with polio suggests the extremes to which traditional illnesses can be culpable. Even cancer is now subject to the norms of the "seven danger signals." Genetic counseling and screening is moving rapidly to make even genetic disease a culpable event, albeit culpable at the parental level. (Veatch, 1973, pp. 65-66)

This new "blame-the-sick" perspective may be, in part, an inadvertent consequence of the "self-help" movement in health care (Crawford, 1977; Gustaitis, 1978). What began as a reaction to the overmedicalization of American life, and the professional and male domination of health care, the self-help movement "lends itself to the purposes of victim-blaming" because of its emphasis on individual control and responsibility for health (Crawford, 1977).

Individuals are not only being held responsible for their failure to prevent illnesses, but they are more and more frequently being identified as the cause of their own illnesses, and told that they can willfully cure themselves or ward off disease. Perhaps the most extreme example of this view are the persistent efforts to establish a "cancer personality" (e.g., Greene, 1966; LeShan, 1966; Paloucek & Graham, 1966; Schamale & Iker, 1966). Psychosomatic theories of illness, and notions of "lifestyle," "stress," and "personality" as causes of disease, are becoming increasingly popular, and even more seriously jeopardize the notion of blamelessness inherent in the

medical model and the sick role. The popularity of ideas regarding the possible psychogenesis of illness may herald a return to a self-blaming conception of illness in which the individual is further held responsible because of the stress, emotions, or psychological conflict which are believed to have induced the illness and possibly hindered recovery (e.g., Herzlich, 1973; Sontag, 1978; Veatch, 1973; Zola, 1972):

Theories that diseases are caused by mental states and can be cured by will power are always an index of how much is not understood about the physical terrain of a disease. Moreover, there is a peculiarly modern predilection for psychological explanations of disease, as of everything else. Psychologizing seems to provide control over the experiences and events (like grave illnesses) over which people have in fact little or no control. Psychological understanding undermines the "reality" of a disease. . . . Illness is interpreted as, basically, a psychological event, and people are encouraged to believe that they get sick because they (unconsciously) want to, and that they can cure themselves by the mobilization of will; that they can choose not to die of the disease. . . . Psychological theories of illness are a powerful means of placing blame on the ill. Patients who are instructed that they have, unwittingly, caused their disease are also being made to feel that they have deserved it. (Sontag, 1978, pp. 55-57)

Medical personnel as well as laypersons may blame a sick person because of the perceived psychogenesis of an illness: "One of the most devastating consequences of peptic ulcers is the widely held belief that the gastrointestinal alteration is brought about exclusively by psychic stress. Members of the health care team who adhere to this belief are prone to blame the individual for creating the illness" (Lambert & Lambert, 1979).

Thus, in contradistinction to the sick role model, the individual may be blamed for the disease itself, weak resistance to disease entities, failure to observe preliminary signs of illness, failure

to seek medical care immediately, and/or failure to get well. Note, however, that although the individual may be perceived as responsible for the illness, there is rarely any question of the undesirability of illness, or the unintentional nature of the person's activity. In addition to the above noted changes in medical views and health care philosophy, the discrepancy between Parson's sick role model and current beliefs regarding individual responsibility in illness may be attributable, in part, to confusion between the sociological level of analysis and the level of individual psychological experience (Herzlich, 1973; Levine & Kozloff, 1978). Despite changes in attitudes regarding personal responsibility for illness, the sick role model may describe general social expectations for some illnesses; however, it does not adequately deal with the attitudes, interpretations, and behavior of individuals.

Questions of responsibility and willful recovery are of vital importance in the reactions of the sick person and other individuals: "The way in which social action is seen, interpreted, and reacted to, both within and without illness situations is often based crucially on the attribution of individual responsibility" (Robinson, 1973, p. 55). Even if, in a broader social sense, the individual is not held responsible for his or her illness, the perceived role of the individual in the etiology or prevention of the illness are likely to be very important to the individual's understanding of the illness and the reactions of others toward the sick person.

Several researchers have studied the extent to which individuals

share Parsons' (1951) notions of the privileges and obligations accompanying the sick role. Twaddle (1969), based on interviews with 29 men, concluded that when the elements of the sick role were examined individually, Parsons' analysis described the modal response of his subjects. When the elements were treated collectively, however, the Parsonian model described the attitudes and behavior of only a small minority of the respondents. Similarly, Segall (1976) interviewed housewives and found that although few respondents "disagreed completely" with Parsons' conception of the sick role, many responses were "uncertain." A majority of the respondents did indicate that a sick person cannot be held responsible, but clear-cut agreement was observed for only one component of the sick role--sick persons have an obligation to try to get well. Even stronger criticism of the applicability of the Parsonian model to individual expectations or perceptions of others' expectations was expressed by Berkanovic (1972): "the sick role does not identify distinguishable areas in the cognitive process by which these respondents form behavioral expectations of the ill. The data support the suggestion that Parsons' system level analysis of the sick role as an ideal type is inadequate as a unit of analysis at the social-psychological level" (p. 58).

The applicability of the "sick role" concept, and the legitimacy of sick role incumbency, is also widely recognized to be a function of the characteristics of illness--nature, severity, and duration (e.g., Freidson, 1970; Gordon, 1966; Robinson, 1971, 1973; Wilson, 1970). The Parsonian model of the sick role is a temporary social role, and is generally regarded as appropriate for acute illnesses and conditions

(e.g., pneumonia, appendicitis, kidney stones, etc.). Freidson (1970) argued that the privileges and obligations posited by Parsons do not hold for some chronic illnesses, but he acknowledged that the sick role model does hold for some acute illnesses. Moreover, Freidson noted that the individual is not exempted from blame for some illnesses (e.g., venereal diseases), and he or she may suffer stigma for other illnesses (e.g., venereal diseases, mental illness, and even cancer).

The characteristics of chronic illness or permanent disability depart in crucial ways from Parsons' formulation of the sick role. With chronic illness or disability, the sick person cannot, by definition, be expected to get well, nor is he or she totally exempted from "normal social role responsibilities." For the chronically ill or disabled person, exemption from normal role responsibilities is typically partial rather than total, since many chronically ill persons are ambulatory (Kassebaum & Baumann, 1965). According to Robinson (1973), the incompatibility between having a chronic (and perhaps severe) illness condition and the temporary nature of the position of "patient," results in "a redefinition of the chronically symptomatic person's 'normal health.' That is, the chronic condition gradually becomes incorporated by the symptomatic person and others into the definition of the symptomatic person's 'normal health'" (p. 59).

The tendency to incorporate chronic illness or incapacity into a conception of "normal health" is supported by research in which respondents were asked to indicate whether or not a person with various conditions was "ill." Gordon (1966) found that persons were most

frequently regarded as ill for illness conditions with a serious, uncertain, or worsening prognosis. Persons with a controllable illness condition or in the process of being cured were the next most frequently identified as ill, and persons with a chronic condition or permanently disabled by a past condition were the least likely to be classified as ill. Gordon (1966) interpreted these data as evidence for "two distinct unrelated statuses and complementary role expectations associated with illness conditions" (p. 99). Expectations for ill persons--those with serious and uncertain prognoses--correspond to Parsons' conception of the sick role, and the role pressure applied by others "serves to discourage normal behavior" (p. 79). The second set of expectations referred to persons in the "impaired role"--persons with a known and nonserious condition. For persons regarded as impaired, role pressure tended to "support normal behavior" (p. 98). Unlike the sick role, the impaired role is relatively permanent, and is typically accompanied by a loss of status (Gordon, 1966; Siegler & Osmond, 1973).

In short, Parsons' sick role model describes the general social expectations for the person who is sick with some illness conditions. The attachment of a diagnostic label, typically by a physician (or other authority), serves to legitimize the status of the sick person as ill, and to define the privileges and obligations of the sick person and others. The sick role is a socially disapproved, albeit legitimate, social role which is temporary and rather unstable. The sick role model is largely limited in its applicability to some acute

illnesses; chronic illness appears to depart in crucial ways from the fundamental elements of Parsons' model. The sick role model is not easily translated into expected individual reactions regarding illness, and it does not address the long-term social consequences of having been labeled "ill" or, in the case of chronic illness, of being permanently labeled "ill." Statements of labeling theory and stigma, however, have attempted to answer questions regarding the long-term social consequences of being labeled "ill." Although the labeling approach has stimulated some interesting research, it has not been well-articulated, and there is a lack of consensus regarding the principle elements of the theory, the limits of the theory, and the phenomena to which it applies (Schur, 1971). In the following section, no attempt will be made to present the issues and scope of the labeling perspective; rather, this discussion will include selected aspects of the literature which may contribute to an understanding of the social consequences of chronic illness.

Labeling and stigma

Entry to the sick role is usually accomplished by the attachment of a diagnostic label of "ill" by a medical doctor or other authority. Illness, within the sociological scheme of things, is regarded as a social category of deviance which derives its meaning from the social interpretation and evaluation of a biological abnormality (e.g., Freidson, 1970; Parsons, 1951; Sedgwick, 1973; Veatch, 1973). Thus, illness is "partly biologically and partly socially defined" (Parsons, 1951, p. 431). In order to constitute deviance and, thus, illness, the

biological condition must be perceived as abnormal and negative:

All sickness is essentially deviancy. That is to say, no attribution of sickness to any being can be made without the expectation of some alternative state of affairs which is considered more desirable. . . . All illness, whether considered in localized bodily terms or within a larger view of human functioning, expresses both a social value-judgment (contrasting a person's condition with certain understood and accepted norms) and an attempt at explanation (with a view to controlling the disvalued condition). (Sedgwick, 1973, pp. 32-36)

Thus, illness, sociologically defined, is a socially constructed deviancy. Labeling a person as ill--imputing biological and social deviance to a person--involves a social judgment (e.g., Freidson, 1970; Sedgwick, 1973; Veatch, 1973). The labeling perspective (e.g., Lemert, 1964, 1967) is not concerned with the reasons for a person possessing a deviant attribute such as illness, but with the effect of the attribute being recognized formally and publically. Conceptualizing illness as a socially deviant condition does not imply blame, since "legitimated" and "nonlegitimated" forms of social deviancy are distinguished in the literature. With respect to illness, Parsons (1958) argued that "to be ill is thus to be in a partially and conditionally legitimated state. The essential condition of its legitimization . . . is the recognition by the sick person that to be ill is inherently undesirable, that he therefore has an obligation to try to 'get well' and to cooperate with others to this end" (pp. 176-177).

Although the concept of illness as social deviancy is widely accepted in the sociological literature, the "deviant" nature of illness has not gone unchallenged. Robinson (1973) has argued that illness does not conform to usual definitions of deviancy. Cohen

(1966), for example, noted that deviant roles are typically disvalued (i.e., typically low status, undesirable roles), but that not all disvalued roles are deviant. What distinguishes the deviant and the disvalued role, according to Cohen (1966), is that the deviant knows what he or she is doing and is capable of doing otherwise, but chooses instead to violate a normative rule. Unlike the deviant, the disvalued person does not intentionally violate a normative rule and so may not legitimately be held accountable for his or her behavior. According to this distinction, the role of the sick person is disvalued, rather than deviant. Recall, however, that when Parsons (1951) chose to refer to the sick role as a deviant role, he made a similar point in arguing that the involuntary nature of illness distinguished the sick role from other deviant roles. Robinson (1973) further maintained that since illness is an expected aspect of everyone's life, and society anticipates that its members will become ill at times, illness does not involve the violation of a normative rule, and thus does not constitute deviancy. However, for the purposes of the present analysis, it matters little whether illness is regarded as "deviant" or simply "disvalued."

Clearly, there are varying degrees to which a person may adopt the sick role, and thus, varying degrees to which the illness may affect the person's activity and identity. Lemert (1964, 1967) has differentiated between primary and secondary deviant roles. Primary deviant roles are roles which have a minimal impact on a person's normal social roles and activities, while secondary deviant roles

require more extensive reorganization and redefinition of a person's identity and social roles. Freidson (1970) borrowed this distinction to illustrate the existence of different types of deviant roles in health and illness. Minor medical problems, for example, produce only a primary role; the individual with a cold, because the condition is minor and transitory, typically does not fully require the exemptions and responsibilities of the sick role. The person with a serious illness (e.g., appendicitis, polio), however, adopts the sick role completely, and it temporarily becomes a secondary role. In the case of chronic illness or disability, the condition is likely to lead to a permanent secondary role, and the person develops a moral or social "career" (Goffman, 1963; Lemert, 1964).

The importance of the distinction between primary and secondary deviant roles, as Field (1976) noted, is that it highlights the critical role of the reactions of the individual and others to the deviation. If it is perceived by the individual and others aware of it as an acceptable change in the normal behavior or condition of the individual, "then it will not lead to any substantial redefinition of the individual, nor, in the case of disease, will it lead to entry into the 'sick role.' Such 'normalizing' of primary deviance is a common and frequent part of our daily life, and it may continue even in the face of very extreme departures from the normal and expected. . . . However . . . when a person's behavior persistently fails to meet the expectations of others . . . a search for an explanation of the unusual behavior will be initiated" (Field, 1976, p. 337). The label chosen to

interpret or explain the unusual behavior or condition is critical in determining the subsequent reactions of the individual and others.

The label of "illness" and the role of the sick person are not socially valued, and can temporarily or permanently reduce an individual's status. An important consequence of any medical diagnosis or label is that it can stigmatize or "spoil" the identity of the person to whom it is applied. Recognition of the attribute or label by others can lead to the person being perceived primarily in terms of the disvalued attribute rather than other personal qualities (e.g., Dembo, Ladieu-Leviton, & Wright, 1956; Goffman, 1963; Hunt, 1966; Safilios-Rothschild, 1970; Wright, 1964), and can permanently affect the person's identity, particularly when the person is perceived not only as "different," but as "inferior" (cf. Shontz, 1975). The person perceived to possess a stigma (i.e., any attribute which discredits or lowers the status of a person once it is known) may be evaluated less favorably, perceived to have other "imperfections" or "defects" on the basis of the original one, and subject to considerable social discrimination.

Goffman (1963) has described the effects of negative social attitudes and the stigmatizing label:

An individual who might have been received easily into ordinary social intercourse possesses a trait that can obtrude itself upon attention and turn those of us whom he meets away from him, breaking the claim that his other attributes have on us. He possesses a stigma, an undesired differentness from what we had anticipated. . . . By definition, of course, we believe the person with a stigma is not quite human. On this assumption, we exercise varieties of discrimination, through which we effectively,

if often unthinkingly, reduce his life chances. We construct a stigma-theory, an ideology to explain his inferiority and account for the danger he represents, sometimes rationalizing an animosity based on other differences, such as those of social class. . . . We tend to impute a wide range of imperfections on the basis of the original one, and at the same time to impute some desirable but undesired attributes, often of a supernatural cast, such as "sixth sense" or "understanding" . . . Further, we may perceive his defensive response to his situation as a direct expression of his defect, and then we see both defect and response as just retribution for something he or his parents or tribe did, and hence a justification for the way we treat him. (pp. 5-6)

The stigma associated with illness, and the threat of a "spoiled" identity, may contribute to the denial of symptoms and reluctance to seek medical care (Field, 1976; Safilios-Rothschild, 1970; Tuckett, 1976).

The degree of devaluation or stigmatization of the sick person, and the extent to which the condition becomes an integral part of the person's identity, are in large part a function of the nature of the illness. As noted earlier, there are dimensions along which illnesses vary, and these dimensions are important in determining the reactions to illness of the person and others, especially those with whom he or she interacts. To review briefly, Fabrega and Manning (1972) identified four important dimensions of illness: (a) the duration of the illness or "disease episode," (b) the prognosis, or the extent and possibility of cure, (c) the degree of discomfort, incapacity, and disability, and (d) the stigmatization, or "potential for self-degradation." Freidson (1970) has suggested that variations in the abhorrence of disease are determined by two independent criteria, personal responsibility and seriousness of the condition, and Safilios-Rothschild (1970) has

similarly indicated a relationship between perceived personal responsibility and the strength of a stigma attached to an illness. For the individual labeled "ill," many of these factors are likely to affect his or her self-perception and the perception of the person by others.

Illnesses of a short-term acute nature are easily recognized and quite familiar to most people. Such illness generally has a rapid onset, clear and unambiguous symptoms, temporary discomfort and incapacity, and a self-limiting course (Coe, 1970; Field, 1976). With short-term acute illness, "the label of illness is often all encompassing and becomes the central organizing feature in the life of the ill person and often of his family. However, it is understood that this is only for a temporary period and that complete recovery will follow" (Field, 1976, p. 340). Short-term acute illness is the prototype for the sick role model (Parsons, 1951); the nature and consequences of acute illness correspond closely to the Parsonian formulation. The person is unambiguously labeled ill, is permitted to suspend normal activities, and receives special privileges for the duration of the illness. The sick role is, however, expected to be temporary, and the ill person is required to resume normal activities with the recovery of health.

Generally, there is no permanent stigma or devaluation associated with short-term acute illness (cf. Parsons, 1951). Indeed, the person who has not had the flu, measles, mumps, an allergy, etc., is, statistically, the "deviant":

Most sickness leaves no taint of deviance or disorderly conduct on the person's reputation. No one is interested in ex-allergics or ex-appendectomy patients, just as no one will be remembered as an ex-traffic offender. In other instances, however, the physician acts primarily as an actuary, and his diagnosis can defame the patient, and sometimes his children, for life. By attaching irreversible degradation to a person's identity, it brands him forever with a permanent stigma. The objective condition may have long since disappeared, but the . . . label sticks. Like ex-convicts, former mental patients, people after their first heart attack, former alcoholics, carriers of the sickle-cell trait, and (until recently) ex-tuberculosics are transformed into outsiders for the rest of their lives. . . . The medical label may protect the patient from punishment only to submit him to interminable instruction, treatment, and discrimination. (Illich, 1976, p. 84)

Although some short-term or curable illnesses may carry a stigma that survives the duration of the illness (e.g., venereal disease), it is long-term, chronic diseases for which the label of illness poses potentially severe social consequences for the sick person. With chronic illness, which characteristically has a much more insidious onset, and a less clearly defined duration and prognosis, the course of the disease and the social consequences of the illness are less certain. Unlike acute illness, for which the nature of the illness and the role of the sick person are rather clearly defined, and the social impact is typically limited to the short duration of the illness itself, chronic illness has long-term effects which are often of greatest concern (Field, 1976). Treatment of chronic illness usually takes the form of control rather than cure, since the disease processes that are characteristic of chronic illness are usually not reversible. Thus, even if the disease process is arrested, the effects of the illness (e.g., physical disability) and the label often persist.

Clearly, not all chronic illness stigmatizes the sick person. Fabrega and Manning (1972), in fact, have distinguished two types of chronic illness--stigmatizing and non-stigmatizing--based on social attitudes toward the illness. Social attitudes toward an illness are largely determined by the objective characteristics and popular conceptions of the illness. Although all chronic illnesses may be similar in the nature of the onset, course, and duration of the disease process, labeling of the illness by the "lay public" as stigmatizing or non-stigmatizing can have a profound impact on the self-perception of the sick person and perceptions of the person by others: "Clinically, emotionally, and socially the consequences of these types of illness are long-term and persistent; the illness leads, to a greater or lesser extent, to modifications of the person's conduct and character as perceived by both himself and others" (Field, 1976, p. 341). Illnesses for which the physical impairments or incapacities are minimal or not readily apparent will generally be non-stigmatizing. Stigmatizing long-term illnesses are typically those for which the physical impairments are observable and further are socially unacceptable. Chronic illness of any kind is likely to lead to a redefinition of the person's conduct and character, but the person with a non-stigmatizing chronic illness has some control over the impact of the disease on his or her life, whereas the person stigmatized by a chronic illness "has much less control due to the coerced and stigmatizing identity attributed to him" (Field, 1976, p. 341).

A similar distinction has been offered by Goffman (1963), who

differentiated the discredited person, about whom the "differentness" is known or evident, and the discreditable person, about whom it is neither known nor immediately observable. In both instances, the illness is likely to have an impact on the person's activity and identity, since the sick person often must decide (or be instructed) to restrict certain activities and change health habits. But the person with a stigmatizing chronic illness may have unnecessary changes in his or her lifestyle and activities imposed by the attitudes and reactions of others (cf. Shontz, 1975).

Thus, the sick person not only has to cope with the physical consequences of chronic illness, but he or she may also have to adjust to the unknown social and psychological consequences of a newly acquired "spoiled" identity. Even if the person's illness or disability cannot be directly observed (i.e., the person is "discreditable"), he or she may share or accept the anticipated negative reactions of observers; a stigmatizing illness can "spoil" an individual's conception of him or herself. Davis (1963), for example, described the problems facing polio victims:

Unless he has been impaired from birth or early childhood, so that his primary identity is that of a handicapped person, it is more than likely that he will share, at least initially, many of the prejudiced and squeamish attitudes that are commonly shown toward the handicapped. He will tend, openly or secretly, to place a high value on many activities and pursuits that are closed to him because of his impairment. His attempts, if any, to be accepted by "normals" as "normal" are doomed to failure and frustration: not only do most "normals" find it difficult to include the handicapped person fully in their own category of being, but he himself, in that he shares the "normal" standards of personal evaluation, will in a sense support their rejection of him. (p. 138)

Experimental research by Kleck and his colleagues (e.g., Kleck, 1966, 1969; Kleck, Ono, & Hastorf, 1966) has consistently demonstrated the negative interpersonal consequences of stigma, such as a physical disability. An interesting issue is whether observers' negative reactions are based on the sick or disabled person's condition per se, or the attributions about the person made on the basis of the condition. Although the crippling effects of polio may directly contribute to the social isolation described by Davis (1963), Macgregor's (1951) study of persons with facial deformities suggests that it is the attributions about the person, rather than the condition itself, which negatively affects social interaction. Facial deformities do not directly interfere with a person's capacity for social interaction and normal activities, but they do lead to negative evaluations of a person by others, and sometimes by the person him or herself. Persons with facial deformities are perceived by others, and sometimes themselves, as lacking social competence or moral character because of their physical appearance, and it appears to be these attributions, rather than the individual's condition, which hinder social interaction. Macgregor (1951) concluded that "such an affliction, therefore, is more of a social handicap than a physical one for the individual's suffering results from the visibility of the defect and what it means to others as well as to himself" (p. 630).

Thus, the social position of the sick person can be viewed largely as a consequence of social reactions to the person's condition, rather than the illness per se. The sick are not intrinsically less valuable

or "deviant" because of their illness or disability, but because others impute to them an undesirable difference (Freidson, 1965; Kitsuse, 1962; Lemert, 1964, Sedgwick, 1973). These social reactions can have a strong impact on the identity of the sick person. If the illness (or its physical effects) are stigmatizing, it can assume a central role in redefining the person's identity: "The new identity is incorporated in and structured by the reactions of the person and others interacting with them toward the stigma. What results is the development of a new set of stable definitions of the person's conduct and character" (Field, 1976, p. 345).

In social reactions to illness, as previously noted, there are counteracting pressures toward sympathy and aid of the unfortunate (e.g., Safilios-Rothschild, 1970). Just as the sick person may develop a perception of the illness as a "blessing in disguise" which revealed unknown personal virtues or strength, or true values and friends, observers may attribute a superior character to the victim of misfortune (e.g., Herzlich, 1973; Shontz, 1975), particularly if the person appears to be coping well and not suffering as a result of the illness. Further, because of strong social and moral norms which proscribe open rejection or mistreatment of unfortunate people, behavior toward the sick person is likely to reflect ambivalent attitudes.

In summary, the labeling and stigma perspectives suggest that one of the critical variables in the social construction of illness is the extent to which the identity of the sick person is "spoiled" or stigma-

tized by the imputed deviance (or devaluation) inherent in being labeled "ill." Although these theoretical perspectives are useful in describing the way in which social judgments about a person's physical condition, such as the attachment of a disease label, may lead to permanent changes in the individual's identity and social status, they are too general to predict reactions to particular illnesses or illness characteristics, except perhaps acute versus chronic illnesses. To be of predictive value, the labeling and stigma approaches require knowledge of social beliefs and attitudes toward specific illnesses and illness characteristics, and these data are generally not available (for exceptions, see Jenkins & Zyzanski, 1968; Monteiro, 1973; Pratt, 1956; Titley, 1969). Without knowledge of shared attitudes or conceptions of particular illnesses (e.g., coronary heart disease, cancer) or features of illness (e.g., duration, severity, prognosis), it is difficult to predict whether or not an illness will affect the perceptions of a person by others, and "spoil" the identity of its bearer. In short, it seems clear that the processes of labeling and stigmatization are important in social reactions to the physically ill, but these formulations are too general and vague to predict the social consequences of an illness for an individual.

The sick role model (Parsons, 1951) and the labeling and stigma approaches are complementary, in that Parsons' analysis best applies to illness of an acute nature, whereas the labeling and stigma approaches primarily address the social consequences of chronic illness, since the label persists at least as long as the condition to which it

is applied. Both perspectives emphasize social roles and norms involving illness, to the neglect of psychological reactions and interpretations of illness. Social-psychological approaches provide cognitive counterparts to sociological models of the roles and behaviors associated with illness, and bring a distinctively psychosocial perspective to the study of responses to illness.

Social Psychological Perspectives

Although social psychologists have only begun to actively research problems of health, illness, and medicine (Taylor, 1978), social psychology has the potential to make valuable contributions to these areas, including issues regarding social reactions to victims of physical illness. Individuals who are victims of negative life events, such as illness, are likely to have a special need for the support and reassurance of others (Coates & Wortman, in press), but there is considerable evidence in the social psychological literature to indicate that people are unlikely to be supportive and compassionate in their reactions to victims. In describing the processes underlying observers' reactions to victims, social psychological theories have identified motivational and cognitive factors which may lead people to react negatively to the victims of misfortune. In the following sections, these theories will be reviewed and applied to the social perception of victims of physical illness.

Motivational factors

From a social psychological perspective, individuals are assumed to be involved, more or less continuously, in attempts to make sense of the world (Heider, 1944, 1958), and to have motivations which are likely to affect the way in which they perceive the world and explain events in their lives. Knowledge of suffering, especially undeserved suffering, is difficult to understand and accept, and poses a potential threat to the posited needs underlying people's perceptions of the world. One such formulation, the "just world hypothesis" (Lerner, 1965, 1970, 1971; Lerner & Miller, 1978), proposes that individuals have a fundamental motivation to believe in a world where justice prevails. From this view, observers' reactions to the physically ill may be affected, at least in part, by a desire to maintain a belief in a just world.

Just world hypothesis. Lerner and his colleagues (e.g., Lerner, 1965, 1970, 1971; Lerner & Miller, 1978; Lerner & Matthews, 1967; Lerner & Simmons, 1966) have postulated a fundamental desire of people to believe in a "just world"--a relatively stable and predictable world where people "get what they deserve and deserve what they get." Maintaining a belief in the world as an orderly, stable, and predictable place is viewed as part of a continuous effort by people to understand the world and interpret events in their lives. Lerner (1970, 1971) has argued that if we can believe that only "bad" people will suffer, the world seems more just and predictable, and we will be protected from undeserved suffering ourselves (cf. Walster, 1966; Wortman, 1976). Thus, according to the just world hypothesis, observers' perceptions

of victims and the causes of misfortune function in part to maintain a belief in a just world, and to minimize the potential threat of undeserved suffering to observers.

The major focus of research generated by the just world hypothesis is the phenomenon of blaming a seemingly innocent victim of misfortune (cf. Ryan, 1971). Knowledge that a person is suffering through no fault of his or her own, that a negative event has happened to someone by chance, threatens the individual's conception of a just world: "The person who sees suffering or misfortune will be motivated to believe that the unfortunate victim in some sense merited his fate" (Lerner & Simmons, 1966, p. 203). The observer of undeserved misfortune, according to the just world hypothesis, can either decide that the world is not so just after all, and that innocent people sometimes suffer, or the observer can alter his or her perception of the victim or the victim's behavior so he or she appears to have deserved the suffering.

Since the observer is presumably motivated to maintain a belief in a just world, the conflict between knowledge of undeserved suffering and the belief that the world is just can be resolved by the observer convincing him or herself that the victim was in some way responsible for the misfortune. If the victim is perceived as behaviorally responsible for his or her own suffering (e.g., having engaged in foolish or careless acts), the suffering is no longer unjust. Another means of maintaining a belief in a just world when confronted with apparently undeserved misfortune is to decide that the victim, though innocent by deed, deserves the fate because of undesirable personal attributes (i.e., "bad people deserve to suffer").

It is important to clarify the difference between moral judgments and attributions of causality or responsibility (e.g., Harvey & Rule, 1978; Pepitone, 1975), since these judgments are not isomorphic and are easily confused. In the present context, the attribution of causality to an individual suggests that he or she engaged in an act which directly or indirectly contributed to the occurrence of the illness. Attributions of responsibility, on the other hand, refer to the culpability or blameworthiness of the person, and represent a moral judgment (cf. Ross & DiTecco, 1975). Thus, a person who is not perceived to have had a causal role in the occurrence of an illness may, nevertheless, be held responsible for its occurrence (e.g., negligence). In terms of the just world hypothesis, observers will derogate the victim's character only if the victim is perceived as innocent (i.e., not responsible for the illness).

Thus, to maintain confidence in a predictable and just world, victims can be perceived to deserve their fate as a consequence of having a "bad" character or engaging in "bad" acts (Lerner & Miller, 1978). If we believe that people do not suffer unless something is wrong with them or their behavior, we will feel protected from undeserved suffering ourselves. Despite moral and social norms which encourage compassionate reactions toward the unfortunate, the results of research on the just world hypothesis suggest that the more innocent the victim (in terms of behavioral responsibility), or the more severe the suffering, the greater the extent to which the victim will be derogated by observers. Further, just world effects (i.e., victim

derogation) are more likely to occur when the victim's suffering is seen as continuing (Lerner & Simmons, 1966), and when the observer does not identify with, or feel attracted toward, the victim (Lerner, 1974). In general, the less responsible the victim is perceived to be for his or her fate, or the worse the fate, the more likely it is that the victim will be derogated by others.

Several delimiting conditions for just world effects have been noted by Lerner and Miller (1978). According to this most recent formulation of the just world hypothesis, there are three factors which determine when observers will react to the suffering of others by derogating their character: (1) Derogation will not occur when the victim is perceived as behaviorally causing his or her own suffering, since there is little injustice in suffering as a result of your own acts; (2) if the victim is of high status or highly attractive, the observer is more likely to blame the person's actions rather than character, especially when the victim's character is beyond reproach; and (3) if the observer expects to be in a similar situation, he or she is more likely to react to the victim with empathy, and to focus on external causes of the misfortune.

Research on the just world hypothesis has ranged from laboratory experiments in which some participants were ostensibly subjected to electric shock (e.g., Lerner & Matthews, 1967; Lerner & Simmons, 1966), to studies using written reports of the suffering of others. In laboratory research, for example, Lerner and his associates found that observers tend to devalue and to ascribe negative characteristics

to an innocent person who they believe is going to receive painful electric shocks (Lerner & Matthews, 1967; Lerner & Simmons, 1966). Research using written scenarios of injustice and suffering has concentrated on observers' reactions to reported cases of rape (e.g., Calhoun, Selby, & Warring, 1976; Jones & Aronson, 1973; Smith, Keating, Hester, & Mitchell, 1976). These investigations have yielded fairly consistent support for the just world hypothesis.

A similar hypothesis regarding observers' perceptions and reactions to victims has been advanced by Walster (1966), who emphasized a desire for perceived control, rather than justice, as the motivation for blaming people who experience misfortune. Walster (1966) asserted that people do not want to believe that severe negative events can happen at random, since this belief implies that they could become victims of similar, unavoidable misfortunes. Rather than acknowledging their own vulnerability by conceding that a similar negative outcome could happen to them, observers will tend to blame a person involved in the event:

If a serious accident is seen as the consequence of an unpredictable set of circumstances, beyond anyone's control or anticipation, a person is forced to concede the catastrophe could happen to him. If, however, he decides that the event was a predictable, controllable one, if he decides that someone was responsible for the unpleasant event, he should feel somewhat more able to avert such a disaster. (Walster, 1966, p. 74)

By attributing responsibility for a negative outcome to a person, and convincing themselves that the person is different or somehow less capable than they are, observers can reassure themselves that they can avoid similar negative outcomes.

Thus, both the just world hypothesis (Lerner, 1965, 1970, 1971; Lerner & Miller, 1978) and Walster's (1966) analysis suggest that observers will tend to attribute negative events to factors other than chance, although the two formulations differ in the motivations presumed to underlie observers' reactions. Like the just world hypothesis, Walster (1966) has argued that the more serious the negative outcome, the greater the tendency to blame a person for the event. However, unlike the just world analysis, Walster's (1966) formulation predicts only that a person, rather than chance, will tend to be blamed for a negative event. If a person other than the victim is involved in the event (e.g., an accident), and can plausibly be held responsible for the event, then the victim will not necessarily be blamed or derogated for the misfortune (Wortman, 1976). In contrast, the just world hypothesis explicitly predicts that it is the person who suffered the misfortune--the victim--who will be blamed or derogated. The innocence of the victim is central to the just world formulation; if the victim is innocent, assigning blame to a nonchance factor, such as another person, may enhance an observer's perception of control, but it does not restore justice.

Thus, according to Walster (1966), reactions to victims of misfortune are influenced by observers' desire to view negative outcomes as the result of controllable (or avoidable) factors, so that they can avert the recurrence of a similar misfortune to themselves. The desire to believe in a predictable and controllable world posited by Walster (1966) corresponds to the motives presumed to underlie the process of attribution in general (e.g., Heider, 1958; Kelley, 1972). For

example, Kelley (1972) maintained that "attribution processes are to be understood not only as a means of providing the individual with a veridical view of his world, but as a means of encouraging his effective exercise of control in that world" (p. 22).

The just world hypothesis and Walster's formulation have been tested using a variety of negative events, including accidents and crime (especially rape), but to date, few efforts have been made to apply these analyses to observers' reactions to victims of physical illness (see Wortman & Dunkel-Schetter, 1979, for an exception). This failure to examine illness as a form of misfortune is curious, since, as Bakan (1968) noted, "disease is one of the most conspicuous manifestations of suffering and invites itself as a starting point for understanding suffering" (p. 3), including observers' reactions to the suffering of others. In contrast, the clinical literature, as we have seen, has devoted considerable attention to reactions to physical illness, but has focused almost exclusively on the reactions of the victims themselves or their immediate families, and their concerns and fears about the anticipated reactions of others.

The perception of illness as "singling out" individuals in a seemingly random and arbitrary fashion, as evidenced in the clinical reports of personal adjustment to illness, often dominates the sick person's "search for meaning" and need to assign responsibility or blame for the illness. Mattsson (1977), for example, described the inability of children to view their illness as a result of chance:

Uncertainty as to why pain and suffering occur is a psychic stress to anyone. The preschool child in particular has little ability to comprehend the causality and nature of an illness and tends to interpret pain and other symptoms as a result of mistreatment, punishment, or "being bad." In a child's mind nothing happens by chance, and he looks for reasons for an event such as illness. . . . They might then blame themselves or other family members for causing the disease. (p. 185)

Difficulty accepting the apparent random or arbitrary nature of negative events, as suggested by the just world hypothesis and Walster, is by no means limited to children:

That their child had been stricken at random by a chance, impersonal blow was very difficult to accept, just as it is generally difficult for human beings to feel that they are living in a meaningless world devoid of norms or of a framework of rewards and punishment for behavior. (Chodoff et al., 1964, p. 746)

The personal difficulty in accepting the seemingly random nature of illness and other negative life events suggests that a need to believe in a just or controllable world may influence victims', as well as observers' reactions to misfortune. In fact, the just world hypothesis has recently been extended to include both self and other reactions to misfortune (e.g., Bulman & Wortman, 1977; Lerner & Miller, 1978). Following Bulman and Wortman (1977), Lerner and Miller (1978) have suggested that victims may join observers in blaming their own character or actions for a misfortune, in an effort to make sense of the event and maintain a belief in a just world. Consistent with much of the clinical evidence reported earlier regarding self-attributions of responsibility and self-derogation by victims of physical illness, Lerner and Miller (1978) concluded that "people will often alter their conceptual system, in this case their perception of their own worth, to

impose order and justice on random events in their lives" (p. 1044).

In an effort to cope with the unpredictable and threatening nature of serious illness, the just world hypothesis (Lerner, 1970, 1971; Lerner & Miller, 1978) and Walster's (1966) analysis would predict that, like many victims themselves, observers will be motivated to either blame or derogate the victims of physical illness. Contrary to the sociological view that a judgment of "sickness" is not a judgment of "badness," that people are not perceived to be responsible or accountable for their illnesses, and that illnesses, like other events, happen to a person (Mechanic, 1968; Parsons, 1951), the just world hypothesis suggests that observers will tend to perceive a sick person as either "bad" or blameworthy. A similar prediction is derived from Walster's (1966) analysis since, unlike accidents, there is rarely another person involved in an individual's illness (i.e., a 'perpetrator'), unless, perhaps, the illness is perceived to be contagious.

However, there are explicit norms proscribing rejection of ill and disabled persons, unlike victims of other misfortunes, for which there are only general norms prescribing compassionate treatment (e.g., there are no norms which specifically proscribe rejection or blame of rape victims). The strength of these norms may tend to inhibit derogation or blame, or at least create ambivalence in observers' reactions to victims of physical illness (cf. Wortman & Dunkel-Schetter, 1979). Alternatively, the prospect of serious, perhaps life-threatening, illness may more strongly violate a person's belief in a just world than other negative life events, and thus may be more likely to elicit victim derogation or blame by observers.

To the extent that observers derogate or blame victims of physical illness, as the just world hypothesis (Lerner, 1970, 1971) and Walster's (1966) analysis would predict, it is important to emphasize that the reactions of observers, like the reactions of the victims themselves, represent efforts at coping with an unpredictable, uncontrollable, and potentially life-threatening event. Although physical illness obviously poses the greatest threat to the victim him or herself, in that it may threaten the individual's life or livelihood, as well as their fundamental beliefs about the world, knowledge of serious illness and undeserved suffering can also be very threatening to observers, since it implies that they could experience a similar fate. The just world hypothesis suggests that blame or derogation of the physically ill by observers can be understood as an attempt to make sense of the world, of undeserved pain and suffering, and not as simply an insensitive biased response.

An important determinant of whether an observer responds to a victim of misfortune with compassion or rejection is the extent to which the observer identifies with the victim. To the degree that the observer identifies with the victim, he or she is likely to respond with understanding and sympathy, rather than derogation (Lerner & Matthews, 1967; Lerner & Miller, 1978). According to the just world hypothesis, the identification of an observer with a victim is defined as the perception of a common fate, as opposed to personal similarity (Lerner & Matthews, 1967; Lerner & Miller, 1978).

However, Lerner and Miller (1978) themselves noted that "as events become close to (an observer's) world, the concern over injustices increases greatly, as does the need to explain or make sense of the events" (p. 1031). This would suggest that identification with a victim, in terms of situational or personal similarity, would enhance observers' sense of vulnerability, in a manner perhaps similar to that described by Mechanic (1972):

Basic to the undermining of a sense of invulnerability are social comparison processes. It is much less difficult to explain injury to people of unlike characteristics without threat to oneself in that one can attribute the injury to aspects of the person that are different from one's own. When such persons are more like oneself--in terms of age, sex, lifestyle, or routine--it is much more difficult not to perceive oneself at risk. (p. 1135)

With reasoning compatible with the just world hypothesis, Mechanic (1972) has argued that individuals' psychological survival depends upon their ability to protect themselves from fears and anxieties involving low-risk occurrences to which everyone is exposed, or dangers they are powerless to prevent. According to Mechanic, the relatively strong sense of invulnerability which people maintain through defense and coping processes can be undermined by the death of a close friend or other "near misses." From a just world perspective, an increased sense of vulnerability should enhance observers' need to believe in a just world, and their tendency to blame or derogate the victim.

An alternative motivation which may influence observers' reactions to victims has been proposed by Shaver (1970, 1975). Shaver's (1970, 1975) "defensive attribution" hypothesis is antithetical to the formulations of Lerner (1970, 1971; Lerner & Miller, 1978) and Walster

(1966), and may explain why observers apparently do not derogate or blame victims with whom they identify, despite a presumably enhanced sense of vulnerability.

Defensive attribution. Shaver (1970, 1975) has suggested, following the just world hypothesis and Walster's (1966) analysis, that because people want to believe that negative outcomes do not happen by chance, they will often blame the victim rather than attribute the negative event to chance. However, Shaver proposed that people are also strongly motivated to protect their self-esteem. If observers anticipate being in the same situation as the victim, derogating or blaming the victim might imply that they would also be at fault if they experienced a similar misfortune. Thus, according to the "defensive attribution" model, observers' reactions to victims will reflect a desire to avoid being blamed in the future.

Shaver's (1970, 1975) defensive attribution hypothesis suggests that the magnitude of observers' negative reactions to victims will depend on the perceived likelihood that they will experience a similar misfortune in the future. The more observers believe that they could experience a fate similar to the victim's, the greater their motivation to attribute the event to chance, rather than the victim, in an effort to protect themselves from possible future blame. Shaver (1970) suggests that when outcomes are severe, observers will prefer to believe in an arbitrary and capricious world than to believe that they might be blamed for a similar event or outcome in the future.

Like Lerner's (Lerner & Matthews, 1967; Lerner & Miller, 1978) conception of identification with the victim (i.e., perceived common fate), Shaver (1970) defines "relevance" to the victim in terms of situational relevance--the perceived likelihood that the observer will someday find him or herself in similar circumstances as the victim. Both the just world and defensive attribution hypotheses suggest that situational relevance is more critical than personal relevance or similarity in defining the observer's sense of vulnerability. However, these formulations differ in their predictions regarding the effect of perceived personal vulnerability on observers' reactions to victims. Shaver's (1970, 1975) model, as noted, predicts that victims are less likely to be derogated or blamed when their situation is perceived by observers to be relevant or similar to their own. In contrast, Lerner's (1970, 1971) and Walster's (1966) analyses seem to suggest that the more likely observers perceive their own victimization to be, the more threatening the event, and thus the more observers will tend to derogate or blame the victim. Lerner (Lerner & Matthews, 1967; Lerner & Miller, 1978), however, has also indicated that identification with a victim will tend to moderate just world effects and lead to compassion toward the victim.

The research evidence generally supports Shaver's (1970, 1975) prediction, and indicates that identification with the victim is an important delimiting condition for just world effects. In studies by Shaver (1970), Chaiken and Darley (1973), and Sorrentino and Boutellier (1974), observers who perceived their own victimization as more likely

tended to judge the victim more positively, presumably to avoid being blamed themselves in the future. However, identification with the victim could also result in more positive reactions by observers because of heightened empathy with the victim, rather than a desire to protect one's self-esteem and avoid future blame (e.g., Aderman, Brehm, & Katz, 1974; Clore & Jeffrey, 1972).

The defensive attribution model suggests that victims of serious illness will be responded to with compassion rather than rejection when observers perceive themselves as likely to experience a similar fate in the future. With the dramatic rise in the incidence of chronic illness, and more and more people facing the prospect of death preceded and prolonged by chronic illness, people may be increasingly likely to identify with victims of serious illness, and thus to react positively to them, and attribute their illness to chance. However, Parsons (1951) has argued that people are unrealistically biased toward a confidence that "everything will be all right," that they are "motivated to underestimate the chances of their falling ill, especially seriously ill," and that if they do become ill, they tend to overestimate the likelihood of a rapid and complete recovery (p. 443). To the extent that Parsons (1951) is correct, and observers underestimate their chances of becoming ill, they will be less likely to identify with victims of physical illness and, according to the just world hypothesis, will tend to derogate or blame the victims of serious illness for their misfortune.

Thus, social psychologists have proposed two opposing motivations which may influence observers' reactions to victims of misfortune--a desire to maintain a belief in a just (or controllable) world, and a desire to protect one's self-esteem and avoid blame. These views are somewhat analogous to the two opposing ideas which have shaped lay and medical concepts of illness and which are, according to Balint (1957), psychologically motivated:

According to the first, the patient was healthy, whole, and "good" until something in him turned "bad."
 According to the second, the "bad" thing had nothing to do with the patient--it came from outside and is, in the truest sense of the word, a "foreign body." In both cases the "bad" thing threatens him with pains, privation, or even destruction unless he can defend himself against it or get rid of it altogether . . .
 The psychological source of this (second) theory is the belief--and hope--alive in all of us, that we are essentially "good" and that anything "bad" must come from outside. (p. 254)

In addition to these motivational factors, cognitive or information-processing biases may lead observers to blame victims of physical illness. Like the motivational hypotheses just presented, these formulations suggest that observers will tend to derogate or blame victims of physical illness, but unlike motivational accounts, they do not view observers' perceptions and attributions regarding victims as efforts to satisfy fundamental needs or motives.

Cognitive factors

Cognitive formulations, instead of positing basic needs and motivations which influence or "bias" people's perceptions, emphasize general cognitive principles or tendencies which structure individuals' perceptions of the world. Much of the current theory and research on social perception and attribution is heavily rooted in Heider's (1958) analysis of "naive" or "common-sense" psychology, and it is Heider's principle of cognitive balance which will be considered first.

Cognitive balance. Heider's (1958) general principle of cognitive balance, underlying much of common-sense psychology, involves three main concepts--unit formation, sentiments, and balanced state. Briefly, separate entities (e.g., people, objects, etc.) comprise a unit, according to Heider (1958), when they are perceived to "belong together" (e.g., a person and his or her act). Sentiments refer to a positive or negative valuation attached to entities, usually persons or objects. The concept of a balanced state denotes "a situation in which the perceived units and experienced sentiments co-exist without stress" (p. 176). Generally, Heider (1944, 1958) hypothesized that the relationship between units and sentiments would tend toward a balanced state.

There are several ways in which the concept of a balanced state can be utilized to explain negative reactions toward victims of misfortune. Perhaps the most pertinent example of cognitive balance, cited in the opening of this chapter, is the perceived relationship between virtue and outcomes (cf. Lerner, 1970, 1971). In Heider's terms, goodness and happiness form a unit relation; they are often thought of as belonging together. Justice, an "ought" in Heider's analysis, requires a balance between virtue and outcome; justice is conceived as a fit between goodness and happiness, and wickedness and unhappiness. Given either condition--a virtue or an outcome--a person will tend to assume the existence of the other: "Misfortune, sickness, and accident are often taken as signs of badness and guilt. If (a person) is unfortunate, then he has committed a sin" (p. 235). Thus, victims of physical illness may be derogated or blamed not because of a fundamental need to maintain a belief in a just world (Lerner, 1970, 1971), but because there is a cognitive-perceptual relationship or "fit" between wickedness and unhappiness, badness and misfortune.

The principle of cognitive balance is also germane to notions regarding stigmatization and the perception of the sick or disabled on the basis of a disvalued or "deviant" attribute. Heider (1958) suggested that our perceptions of an individual's personality tends to be highly unified, such that a person's traits tend to be perceived by others as uniformly positive or negative (cf. Asch, 1952). In Heider's (1958) words,

We tend to have an over-all like or dislike of a person. Where several sentiments can be distinguished, they tend to be alike in sign. For instance, liking and admiring go together; the situation is unbalanced if a person likes someone he disrespects. In other words, the unit of the person tends to be uniformly positive or negative. This is known as the halo phenomenon. (p. 182)

This phenomenon specifies a mechanism by which people may "behave as if there were a natural incompatibility between the presence of a physical disability and 'positive traits and qualities' " (Safilios-Rothschild, 1970, p. 123).

As an example of this tendency to overestimate the uniformity or "homogeneity" of a person, Heider (1958) points to the relationship of external appearance to more central personality traits. A balanced situation exists if there is a correspondence or fit between external and internal characteristics--"if what looks good is truly good" (p. 183), or vice versa. As evidence of a perceived relationship between appearance and personality, Heider cites Spiegel's (1950) experiments on children's concepts of beauty:

The beautiful person . . . is the good person; the ugly person is bad. . . . The child forms a total concept which expresses the tendency that certain qualities of things "go together," or "belong together," such as beauty and goodness. The result of such an intellectual tendency is that a concept becomes a collection of qualities that "belong together" but which are not integrated into a unified whole in which the subordinate parts are inherently and necessarily articulated. This looseness obviously fits the child's concept of beauty; the beautiful person is good, rich, strong, health, has a car, can sing, dance, etc. (Spiegel, 1950, p. 21).

Thus, if several traits or characteristics of a person are considered, the observer will tend to perceive all of them as positive or negative

(Heider, 1958). This implies, in the case of a diseased or disabled person, that observers will tend to perceive the person's other traits as negative on the basis of the disvalued or stigmatizing characteristic, or, if little else is known about the person, observers will tend to attribute negative characteristics to the person.

Finally, Heider (1958) noted that the impressions we form of another person refer to dispositional characteristics--relatively stable and enduring properties of the person. When illness is chronic, it becomes a relatively enduring characteristic of the person, and is thus more likely to influence an observer's perception and evaluation of a person than acute illness, which is only a temporary property of the person (cf. Parsons, 1951).

Since Heider (1958), theories and research of attribution processes and human judgment have concentrated on laypersons' explanations and judgments about events, particularly human behavior (e.g., Jones & Davis, 1965; Jones, Kanouse, Kelley, Nisbett, Valins, & Weiner, 1972; Kelley, 1967, 1971, 1972; Slovic, Fischhoff, & Lichtenstein, 1977). Researchers have identified a number of cognitive "biases" and "heuristics" believed to affect social judgment. Many of these factors may affect observers' inferences regarding victims of misfortune, and each will be briefly discussed.

Cognitive biases and heuristics. One of the most widely accepted "biases" in attribution is the divergence in the perspectives and attributions of actors and observers. Following Heider's (1958) observation that people underestimate the impact of social and environ-

mental forces and overestimate the role of dispositional causes of behavior, Jones & Nisbett (1971) argued that actors tend to attribute the causes of their behavior to aspects of the situation, whereas observers tend to attribute the causes for the same behavior to dispositions or personality characteristics of the actor. This divergence in explanations for a person's behavior occurs, theoretically, because actors have more information about themselves and the impact of the situation, while for observers, the actor is the most salient feature. Observers' bias toward dispositional attributions (cf. Ross, 1977) may lead them to overestimate the causal role of the victim's own behavior in the occurrence of the illness, and to interpret the victim's current behavior (e.g., fear, anxiety, depression, etc.) as evidence of negative dispositions. For example, "an observer may reason that the cancer patient is complaining because he or she is 'weakwilled, selfish, and cowardly' " (Wortman & Dunkel-Schetter, 1979, p. 133).

In a similar vein, Tversky and Kahneman (1974) discuss cognitive "heuristics" used by people to assess the probability of an uncertain event. One judgmental heuristic--availability--describes situations in which people assess the frequency of a class, or the probability of an event, by the ease with which instances of the event can be brought to mind: "For example, one may assess the risk of heart attack among middle-aged people by recalling such occurrences among one's acquaintances" (Tversky & Kahneman, 1974, p. 27). Use of the availability heuristic may lead to biased predictions since some classes or events may be more or less difficult to retrieve from memory, to

imagine, and/or to associate with another event. Recall that whether observers react positively or negatively to victims of serious misfortune (Lerner, 1970, 1971; Lerner & Miller, 1978; Shaver, 1970, 1975) seems to depend largely on observers' perceptions of the likelihood that they will experience a similar fate. If occurrences of a similar illness among one's family, friends, or acquaintances are not easily recalled, imagined, etc., observers may underestimate the probability of experiencing a similar misfortune (cf. Parsons, 1951) and, as a result, may tend to derogate or blame victims of physical illness.

There is also evidence that observers, from the vantage point of hindsight, tend to perceive events as having been almost inevitable (Fischhoff, 1975; Fischhoff & Beyth, 1975). Knowledge that an event actually occurred tends to increase the observer's postdicted likelihood that the event would occur, although observers are largely unaware of the effect of outcome knowledge on their perceptions. As a result, observers' impressions of what they would have known without knowledge of the actual outcome are biased, as are their impressions of what they and others actually did know in foresight (Fischhoff, 1975). With respect to the present analysis, this suggests that observers, in hindsight, may perceive a person's illness as an almost inevitable consequence of the person's actions or habits (e.g., not eating properly, going outside in the rain, etc.), and may blame the person for not having known the consequences of the behavior, or for having engaged in the behavior, knowing the consequences.

According to Kelley (1967, 1971), the observer relies primarily

on the principle of covariation to validate attributions of causality--the observer attributes an event to the conditions (viz., person, entity, or occasion) with which the presence or absence of the event covaries. For example, to the extent that illness is perceived to be selective--to "single out" individuals--it is, in Kelley's (1967, 1971) model, a low consensus event. As suggested previously in the discussion of lay explanations of illness, if victims and observers are concerned with why a particular (and seemingly innocent) person became ill, the lack of consensus would imply that something about the victim's behavior or character is responsible for the singular misfortune. Lack of consensus may single out the individual as a cause of the illness in the same way that the illness "singled out" the individual.

Further, although observers may view an external disease agent (e.g., germs, viruses) as a necessary cause of an illness, it is probably not sufficient, given perceived selective occurrence of the illness. That is, since most people are presumably exposed to germs and viruses on a regular basis, disease agents are not sufficient to explain why one person became ill and another did not. Moreover, because people have little control over contact with disease agents, they may be motivated to identify a single cause perceived as both controllable and necessary to the occurrence of illness (cf. Janoff-Bulman, 1977), such as an aspect of the victim's behavior or character (e.g., "resistance"). Alternatively, Kelley's (1973) analysis of causal schemata in the attribution process suggests that as the extremity of events increases, so does the tendency of people to explain events

in multiple necessary rather than multiple sufficient causal terms. Applied to the present context, this implies that observers are more likely to believe that a number of causal factors must all be present for a serious illness to occur.

A related heuristic which may be used by observers in attributing causality for misfortune is the correspondence or fit between the magnitude of the perceived cause and the magnitude of the effect: In general, we would expect that factors will be perceived as causal to the degree that their magnitudes resemble the magnitude of the effects they are adduced to explain" (Nisbett & Wilson, 1977, p. 51). Nisbett and Wilson (1977) propose that when people are confronted with "large effects," they will seek comparably "large causes" for explanation. This suggests that victims and observers of serious illness may tend to prefer causes such as God's will, fate, or even the behavior of the victim, to relatively "small" causes such as germs or viruses. This is consistent with Balint's (1957) observation that "external agent" or "natural cause" notions of disease causation best fit illnesses of short duration (i.e., acute illnesses). People may find it very difficult to believe that a virus could cause a life-threatening or disabling illness.

In addition to these cognitive biases and heuristics which may affect observers' attribution processes, people may have more substantive "theories" of disease, including beliefs about disease causation and transmission, as well as beliefs regarding specific illnesses. Such an intuitive, a priori theory (Ajzen, 1977; Nisbett & Wilson, 1977) would represent a person's understanding of illness--how

it occurs, why it occurs, what it means--and might affect the person's perceptions and attributions about victims of physical illness. As previously noted, knowledge of people's beliefs regarding illness, especially the perception of a particular illness as stigmatizing or non-stigmatizing, is important for understanding and predicting the social consequences for a victim of illness.

Summary

Illness is a socially and biologically defined condition, and has social as well as physical consequences. Illness seems, in many respects, to involve moral evaluations, despite the supposed exemption for responsibility inherent in labeling someone "ill" (Parsons, 1951): ". . . on every level, from getting sick to recovering, a moral battle raged" (Zola, 1972, p. 492). In short, illness poses a threat to the world of everyday understanding, activities, and interaction, and may have very negative social consequences for the sick person.

What, then, are the conditions under which victims of physical illness will be reacted to with compassion, and what are the conditions under which they will be derogated or blamed because of illness? The various sociological and social psychological perspectives suggest a number of variables potentially important in the social construction of illness. A key variable, evident in each of these formulations, is a characteristic defining the illness itself--duration. Parsons' (1951) classic sick role analysis suggests that for short-term acute illnesses, individuals are likely to be exempted from responsibility for their

condition. The labeling and stigma approaches, however, indicate that illness of a chronic nature is likely to have a permanent effect on a person's social identity, perhaps even "spoiling" the person's identity, depending on social attitudes toward the illness.

Similar hypotheses regarding the impact of illness duration can be derived from social psychological theories of the motivational and cognitive factors which influence observers' reactions to victims. In contrast to acute illness, chronic illness is more likely to be perceived as a severe outcome (cf. Herzlich, 1973), and the person's suffering is more likely to be perceived as continuing. Thus, to the extent that observers do not anticipate a similar fate, they are more likely to attribute responsibility to the victim's character or behavior for chronic illness, in an attempt to maintain a belief in a just (or controllable) world. Finally, cognitive biases in the attribution process, including Nisbett and Wilson's (1977) magnitude of cause and effect "heuristic," also tend to indicate that "guilt-free germ theories" are not likely to be invoked in the explanation of chronic illness.

Short-term acute illness, on the other hand, is likely to be perceived as less severe and accompanied by only temporary pain and discomfort. Moreover, from a social psychological perspective, observers are probably more likely to anticipate having a similar condition (perhaps because of the relative ease with which acute illness episodes can be recalled), and are therefore less likely to blame the sick person for the illness. Indeed, given the number of important differences

between acute and chronic illness, there may be a discontinuity in the processes underlying reactions to these two types of illness. That is, the processes governing observers' reactions to victims of acute illness may differ from the processes involved in reactions to the chronically ill. For example, since most acute illnesses are probably not severe enough to engage a "search for meaning" or violate a person's belief in a just world, observers' reactions to acutely ill persons may be guided by social role expectations (e.g., Parsons, 1951), rather than any complex motivational or cognitive processes.

The duration of an illness is one aspect defining its perceived severity (Herzlich, 1973), but the degree of suffering (i.e., physical pain, discomfort, and incapacity) can also be viewed as an index of severity. The just world (Lerner, 1970, 1971; Lerner & Miller, 1978) and Walster's (1966) hypotheses would predict that the more severe the illness, the greater the threat to the individual's belief in a just (or controllable) world, and the greater the motivation to assign blame to factors other than chance. Thus, the longer the duration of an illness, or the greater its severity, the more likely it is that observers will derogate or blame victims of physical illness.

Finally, as noted repeatedly in earlier discussions, it is impossible to ignore the influence of the specific characteristics of illnesses and lay beliefs regarding particular illness conditions. Social "theories" or preconceived notions regarding particular illnesses may dictate the range of observers' responses by defining the possible

causes for the illness, and the extent to which the person is stigmatized or devalued because of the illness. In fact, entire "mythologies" of certain illnesses (e.g., TB, cancer) may develop among lay persons (Sontag, 1978). These beliefs and attitudes regarding particular illnesses--what causes them, what "type" of person "gets" them, etc.--are likely to be important mediators of the processes underlying observers' reactions to victims of physical illness.

The present study is an attempt to confirm and extend the just world hypothesis to illness as a form of misfortune. The just world hypothesis was selected as the major theoretical foundation for this study since it is the most clearly articulated and best substantiated analysis of observers' reactions to victims of misfortune. Illness, unlike other types of misfortune used in investigations of the just world hypothesis, seems especially likely to elicit "just world" reactions since it clearly involves pain and suffering, strikes "innocent" people, is often unanticipated and uncontrollable, and has effects which may be permanent and visible to others. Unlike the sociological analyses of reactions to illness, the just world hypothesis also makes explicit predictions regarding the effects of several of the variables identified as important in the literature--the duration and severity of an illness.

Briefly, in the present study respondents were given written information about the health of a person, and were asked to complete a detailed questionnaire about their impressions of the person, and their attributions about the person's state of health. The

information provided was manipulated to describe illnesses varying in duration (acute versus chronic) and in severity (mild versus severe). Six different illnesses were described (three acute and three chronic illnesses), in an effort to assure some generalizability of the results across specific illnesses, and to determine the extent to which the characteristics of a particular illness affect observers' perceptions and reactions to victims of physical illness.

CHAPTER II

METHOD

Overview

The respondents were presented with written information about a person in the form of a job application. The 'medical history' section of the application form contained the experimental manipulations by specifying illness conditions varying in duration (acute versus chronic) and severity (mild versus severe). After reading the information provided in the application, the respondents completed a questionnaire designed to measure the (a) perceived characteristics of the person, (b) attitudes toward the person, (c) perceptions of the person's illness, and (d) beliefs regarding the etiology of the illness, including the perceived responsibility of the person.

Respondents

The respondents were 238 students enrolled in an introductory psychology course at the University of Massachusetts. The students received course credit for their participation in the study.

Design

The design was a 2 x 6(2) hierarchical between-subjects design, in which six illnesses were nested within two levels of duration (acute versus chronic), and crossed with two levels of severity (mild versus severe). The three illnesses nested within the acute condition were kidney infection, pneumonia, and gastroenteritis, and within the

chronic condition, diabetes, coronary heart disease, and leukemia. The design also included a no-illness control group (see Table 1).

Procedure

The study was conducted during a regularly scheduled class session, and the experimental task was introduced to the participants as a person perception and interpersonal judgment task. The completed application forms and the questionnaire were randomly distributed, and the participants were asked to read the information contained in the application and to respond to a questionnaire about their impressions of the person. The respondents were informed that they would each be asked questions about their general impression of the person, and that each respondent would also be asked detailed questions about one specific aspect of the person, such as their employment or medical history. In fact, all respondents were administered a questionnaire which included detailed questions regarding their impressions of the person's medical history.

Each respondent received one of thirteen versions of a completed application (representing the twelve experimental conditions and the no-illness control condition), and the questionnaire. The application form, ostensibly completed by an actual job applicant, contained basic demographic information about the stimulus person, including personal information, the applicant's educational, employment, and medical history, and interviewer comments. The interviewer comments were included to provide ambiguous information regarding the applicant's personality (e.g., "David has a tendency to be critical of himself"),

TABLE 1
EXPERIMENTAL DESIGN

SEVERITY	ACUTE			CHRONIC		
	KIDNEY INFECTION	PNEUMONIA	GASTRO- ENTERITIS	DIABETES	CORONARY HEART DISEASE	LEUKEMIA
Mild	21	21	21	20	21	20
Severe	20	19	17	19	20	19

Note. Values represent cell ns. There were an additional 21 respondents in the control condition.

and contained statements which are readily accepted as accurate descriptions of personality (Ulrich, Stachnik, & Stainton, 1963). The experimental variables were manipulated within the medical history section; all other information provided was identical across conditions.

After reading the application form, the respondents completed a questionnaire which included ratings of the stimulus person on a series of adjective scales, perceived similarity and attitude toward the person, and a series of detailed questions regarding the person's health and the information provided in the medical history.

Independent Variables

Illness duration (acute versus chronic) and illness severity (mild versus severe) were manipulated by varying the information contained in the medical history section of the completed application received by the respondents. The medical history section contained a preliminary screening item which required the applicant to rate his or her present health, and to elaborate on ratings other than "good" or "excellent." In the no-illness control condition, the health rating by the applicant was "excellent"; in all experimental conditions, the applicant's self-rating of present health was "fair." To counter the implausibility of an applicant rating him or herself in "fair" health, the application form stated that all applicants were required to submit a medical report by a physician.

To manipulate illness duration and severity, the information provided in the applicant's explanation for the "fair" rating of current

health was varied. The explanation revealed a mild or severe case of kidney infection, pneumonia, or gastroenteritis in the acute conditions, or a relatively mild or severe case of diabetes, coronary heart disease, or leukemia in the chronic conditions.

The second question in the medical history section asked whether the applicant had been hospitalized within the past year. The response to this item was varied to underscore the severity manipulation. In the severe conditions (all six illnesses), the medical history indicated that the applicant had been hospitalized within the past year. Prior hospitalization was also noted in the applicant's explanation of the health problem.

The information contained in the medical history for each of the experimental conditions was as follows:

Acute conditions

Kidney infection (mild)

I am currently recovering from a mild kidney infection which I developed two weeks ago. Otherwise, I am in generally good health.

Kidney infection (severe)

I am currently recovering from a severe kidney infection which I developed two weeks ago. Because of serious complications, a high fever, and considerable pain, I had to be hospitalized for several days for observation and treatment. Otherwise, I am in generally good health.

Pneumonia (mild)

I am currently recovering from a mild case of pneumonia which I developed two weeks ago. Otherwise, I am in generally good health.

Pneumonia (severe)

I am currently recovering from a severe case of pneumonia which I developed two weeks ago. Because of serious complications, a high fever, and considerable pain, I had to be hospitalized for several days for observation and treatment. Otherwise, I am in generally good health.

Gastroenteritis (mild)

I am currently recovering from a mild case of gastroenteritis (inflammation of the stomach and intestinal lining) which I developed two weeks ago. Otherwise, I am in generally good health.

Gastroenteritis (severe)

I am currently recovering from a severe case of gastroenteritis (inflammation of the stomach and intestinal lining) which I developed two weeks ago. Because of serious complications, a high fever, and considerable pain, I had to be hospitalized for several days for observation and treatment. Otherwise, I am in generally good health.

Chronic conditionsDiabetes (mild)

During an examination two years ago, my doctor detected a mild form of diabetes, and recommended a program of diet, exercise and occasional medication to manage the condition.

Diabetes (severe)

I was hospitalized two years ago with diabetes after suffering a diabetic coma. Since then, I have been following a prescribed program of diet, exercise, and insulin therapy to reduce the possibility of hypoglycemia, insulin shock, or the complications commonly associated with diabetes.

Coronary heart disease (mild)

During an examination two years ago, my doctor detected signs of coronary heart disease, and recommended a diet and exercise program to minimize the possibility of a heart attack.

Coronary heart disease (severe)

I was hospitalized two years ago with coronary heart disease after suffering a major heart attack. Since then, I have been following a prescribed program of diet, exercise, and medication to reduce the possibility of another heart attack, although I still suffer occasionally from shortness of breath and chest pain.

Leukemia (mild)

During an examination two years ago, I was diagnosed as having leukemia (a cancer which results from the uncontrolled production of abnormal white blood cells). I underwent short-term treatment, with positive results. Most of the symptoms are gone, my doctors are optimistic that the disease will continue in remission, and I am currently leading a fairly normal life.

Leukemia (severe)

I was hospitalized two years ago for leukemia (a cancer which results from the uncontrolled production of abnormal white blood cells). I underwent long-term chemotherapy and radiation treatments, with mixed results. I am currently leading a fairly normal life, but some of the symptoms and side effects from treatment remain, and I occasionally experience considerable fatigue and pain.

Dependent Measures

All respondents completed a questionnaire containing the following measures, with the noted exceptions for the no-illness control group.

Victim derogation. On 7-point bipolar adjective scales, the respondents rated the person on sixteen general personality attributes. Positive poles were intelligent, unselfish, courageous, valuable, mature, happy, clean, honest, imaginative, active, fortunate, warm, friendly, responsible, good, and strong. The participants also responded to a more general attitude item by rating their personal feelings toward the person on a 7-point scale ranging from "very negative" to "very positive."

Perceived similarity. To assess the extent to which respondents

perceived themselves to be similar to the stimulus person, they were asked to rate their similarity to the person on a 7-point scale anchored by "very dissimilar" and "very similar."

Health ratings. To verify the experimental manipulations, the respondents were asked to list any "illnesses or health problems" reported by the person, and to rate the person's state of health and the permanence of the person's illness or condition on 7-point scales. To assess personal experience or familiarity with the illness, the respondents were asked whether they, a very close friend, or a member of their family had ever had the illness or condition reported by the applicant. In the control condition, the respondents were asked only to evaluate the person's state of health.

Perceived vulnerability. To measure the perceived threat of the illness to the respondents (i.e., their perceived vulnerability), respondents in the experimental conditions judged the likelihood that (a) they themselves and (b) the average person in this country would develop the illness or condition at some time in their life. The two likelihood ratings were indicated on 7-point scales ranging from "very unlikely" to "very likely."

Causal beliefs. The respondents were asked two open-ended questions regarding (a) their beliefs about the causes of the particular illness, and (b) measures which could prevent the illness. These items were omitted in the questionnaire for respondents in the no-illness control group.

Person responsibility. Respondents were asked several questions about their perceptions of the person's responsibility for the illness, including (a) how careful the person was about his/her health before developing the illness, (b) the extent to which the person could have done something to prevent the illness, and (c) the extent to which the person is to blame for the illness. On 7-point scales ranging from "not at all responsible" to "completely responsible," the respondents also judged the responsibility for the illness of four person-related factors--genetic makeup, character or personality, behavior, and life-style or personal habits.

With the exception of the item regarding prevention of the illness, which was omitted, these questions were modified for respondents in the no-illness control group to ask about the person's health. The respondents in the control group were asked their perceptions of the person's carefulness about his/her health, the extent to which the person is responsible for his/her health, and the responsibility of heredity, character, behavior, and lifestyle for the person's health.

General responsibility. To measure the perceived responsibility for the illness (or health, for the control group) of the person vis-à-vis other factors, the respondents were asked to rate, on 7-point scales, the responsibility of six factors--the environment, the person, other people, chance, God, and fate. The respondents were also permitted to specify any other factor which they believed was responsible for the person's illness (health).

Illness ratings. The next series of questions asked the respondents to rate the person's illness on twenty dimensions, such as mild-severe, good-bad, painless-painful, curable-incurable, and controllable-uncontrollable. These ratings provided additional manipulation checks for the duration and severity factors, and information on other dimensions along which the illnesses may vary. Respondents in the no-illness control condition rated the person's health on these dimensions, with the exception of the three dimensions which refer specifically to illness: curable-incurable, acute-chronic, and not contagious-contagious.

Belief in a just world. Following completion of the questionnaire, the respondents were administered the Just World Scale (Rubin & Peplau, 1975). Respondents were asked to indicate on a 5-point continuum their degree of agreement or disagreement with each of the twenty items on the Just World Scale (e.g., "People who meet with misfortune often have brought it on themselves").

CHAPTER III

RESULTS

Overview

The data for the experimental conditions were analyzed by a 2 x 6(2) hierarchical between-subjects unweighted means analysis of variance. This analysis provides tests of the main effects for Duration and Severity, the pooled variability of each set of three illnesses about its appropriate mean, and the two-way interactions of Duration x Severity and Illness x Severity. Subsequent to the analyses of variance, several multiple comparison procedures were employed to address the following differences among experimental and control group means (Dunn, 1961; Kirk, 1968; Myers, 1972): (a) Dunnett's procedure was used to evaluate comparisons of the no-illness control condition with the grand mean of the experimental conditions and the cell means representing each effect of interest in the experimental design (viz., Duration, Severity, and Illness effects); (b) pairwise differences among the six illness conditions, and the Duration x Severity cell means, were analyzed with the Newman-Keuls procedure ($\alpha_{EW} = .05$); and (c) selected comparisons between the mild and severe conditions within each illness were evaluated according to the Bonferroni t procedure, in order to identify the specific differences which may have contributed to significant Illness x Severity interactions. Correlations among selected measures were also examined,

although they generally tended to be of low magnitude, given the restricted range within cells.

It should be noted, at the outset, that in many of the analyses which follow, a significant effect for Illness was obtained in the analysis of variance, but the Newman-Keuls comparisons yielded no significant differences among the illnesses. This apparent discrepancy is attributable to the different conceptual issues addressed by each of these statistical procedures. Rather than conducting pairwise comparisons among the illnesses separately within the acute and chronic conditions, subsequent comparisons were made among the six illnesses, without reference to Duration. Conceptually, the analysis of variance effect for Illness nested within Duration conditions is best described as a goodness-of-fit test which assesses the degree to which Duration exhausts the variability among the illnesses. Given a significant Illness effect, it is of interest to consider comparisons among the illnesses independent of their classification as acute or chronic. Statistically, the analysis of variance comparisons comprised by the pooled Illness effect involve six pairwise comparisons (i.e., three comparisons within each Duration condition), whereas the Newman-Keuls comparisons among the six illnesses control an experimentwise error rate associated with fifteen comparisons. Accordingly, the magnitude of observed differences among a set of illness means may be significant by the analysis of variance, and yet fail to exceed the critical difference for the Newman-Keuls procedure.

Manipulation Checks

All respondents correctly reported the person's illness, and their ratings of the person's state of health confirmed the experimental manipulations (see Table 2). The overall rating of state of health in the experimental conditions was 4.35, compared to a mean rating of 1.86 in the no-illness control condition. In the acute, chronic, mild, and severe conditions, as well as in each of the six illness conditions, the person was rated as significantly more ill than the no-illness control condition (all p s < .01 by Dunnett's test). Among the experimental conditions, the stimulus person was perceived as more ill in the chronic ($F(1,226) = 4.57, p < .04$) and severe conditions ($F(1,226) = 25.63, p < .001$). However, there was also a Duration x Severity interaction ($F(1,226) = 5.29, p < .05$), which reflected a "ceiling" effect in perceived illness: In the acute-severe, chronic-mild, and chronic-severe conditions, the stimulus person was perceived as more ill than in the acute-mild condition, but there were no significant differences among the former conditions ($\alpha_{EW} = .05$). Finally, there was a main effect for Illness ($F(4,226) = 5.08, p < .01$), although Newman-Keuls comparisons revealed no statistically significant differences among the six illness means.

Additional verification of the experimental manipulations was provided by ratings of the illnesses on the dimensions of mild-severe, acute-chronic, short-lived-persistent, and short-long. There was a main effect for Duration on each of these measures: The illnesses nested within the chronic condition were perceived as significantly

TABLE 2

MEAN MANIPULATION CHECK RESPONSES AS A FUNCTION OF DURATION AND SEVERITY

Variable	No-illness Control group	DURATION		SEVERITY	
		Acute	Chronic	Mild	Severe
Health rating	1.86	4.18++	4.75++	4.57*	4.18++
Perceived permanence	--	2.30	5.44	388.09***	4.53++
Mild-Severe	2.86	4.20++	4.86++	11.17**	4.26
Acute-Chronic	--	3.22	4.60	42.68***	5.40++
Short-lived-Persistent	4.40	3.71	5.63++	99.35***	3.96
Short-Long	5.10	3.39++	5.68	174.34***	4.69
				4.22+	0.03
					13.18***

Note. All means are based on a 7-point scale. Higher numbers indicate poorer health, greater permanence of the condition, greater severity, chronicity, persistence, and length.

***p < .001

**p < .01

*p < .05

++ p < .01 by Dunnett's test

+ p < .02 by Dunnett's test

more severe, chronic, persistent, and long than illnesses nested within the acute condition (see Table 2). There was a main effect for Severity on the ratings of mild-severe and short-long: In the severe conditions, the illnesses were perceived as significantly more severe and long than in the mild conditions. For both the mild-severe and acute-chronic ratings, a Duration x Severity interaction revealed ceiling effects similar to the effect observed for state of health ratings. In the severe conditions, acute and chronic illnesses were rated as more severe than illnesses in the chronic-mild condition, which in turn were perceived as significantly more severe than illnesses in the acute-mild conditions ($F(1,225) = 6.96, p < .01$). Similarly, for the acute-chronic rating, chronic-severe illnesses were rated as more chronic than chronic-mild illnesses, and both chronic-severe and chronic-mild illnesses were evaluated as more chronic than illnesses in the acute-mild and acute-severe conditions ($F(1,219) = 6.37, p < .02$).

Thus, both the primary manipulation check measures and supplementary ratings confirmed the experimental manipulations. A person with any of the illnesses described was perceived as being in poorer health than a person with no known health problems, and the person with an illness of a chronic and/or severe nature was perceived as being in poorer health than a person with an acute and/or mild illness. Moreover, respondents accurately perceived the chronic illnesses as more permanent than the acute illnesses, and confirmed the manipulations of illness severity.

Victim Derogation

Ratings of the personal attributes of the stimulus person revealed a consistent, but very weak trend toward more negative evaluation of the person as a function of illness (see Figure 1). A multivariate analysis of variance of the evaluations of the person (excluding the rating of fortunate-unfortunate) by the experimental and the no-illness control group yielded a weak, but significant effect ($F(15,236) = 2.32, p = .004$). In the univariate analyses of variance, illness was the only variable which had a consistent effect on evaluations of the person; there was a significant main effect for Illness on ten of the sixteen bipolar ratings, and a marginally significant effect for two of the remaining six items (see Table 3). Subsequent comparisons revealed significant differences among the illness means for ratings of courageous, mature, clean, fortunate, and strong. With the exception of the ratings of dirty-clean, the differences observed among the illness means were differences between leukemia and the other five illnesses. The person with leukemia was perceived as more courageous, more mature, less fortunate, and stronger than the person with any of the other illnesses, among which there were no significant differences. For the rating of cleanliness, the person with gastroenteritis was rated significantly less clean than the person with leukemia; none of the means for the other illness conditions differed significantly.

Compared to the person ratings in the no-illness control condition, mean ratings of the stimulus person in the experimental conditions were generally lower. Leukemia was the only illness for which

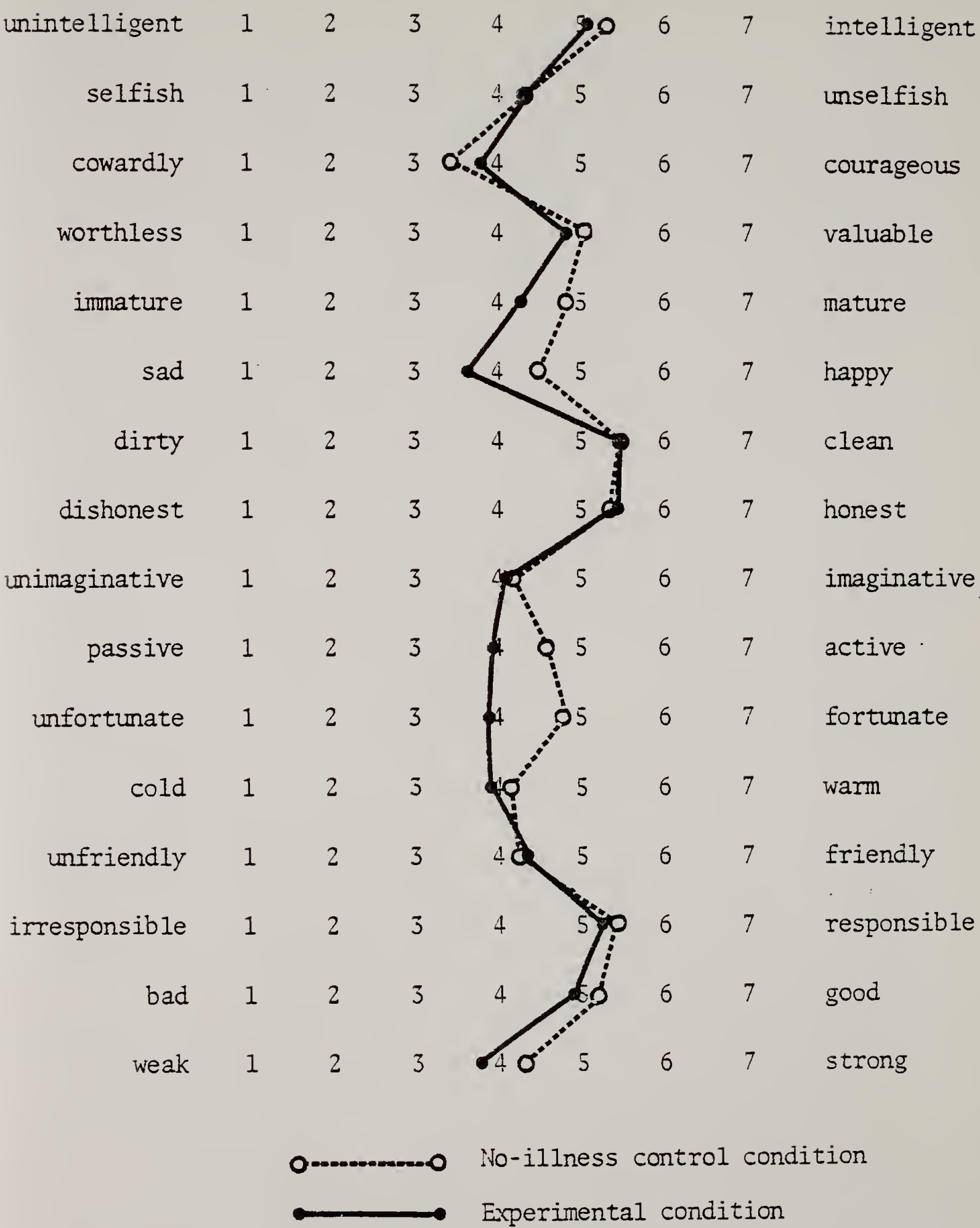


Figure 1. Mean person ratings for the control ($n = 21$) and experimental conditions ($n = 238$).

TABLE 3
MEAN RATINGS OF THE STIMULUS PERSON AS A FUNCTION OF ILLNESS

Variable	No-illness control group	ACUTE				CHRONIC				F
		K	P	G	D	C	L			
Intelligent	5.38	5.02	5.05	5.13	5.08	4.93	5.13	1.08		
Unselfish	4.29	4.10	4.36	4.16	3.95	4.63	4.54	6.69***		
Courageous	3.52	3.81 _a	3.75 _a	3.74 _a	3.67 _a	3.54 _a	4.97 ⁺⁺ _b	37.95***		
Valuable	5.05	4.69	4.95	4.76	4.62	4.61	5.05	5.57***		
Mature	4.90	4.10 _a	4.18 _a	4.21 _a	4.44 _a	3.93 _a	5.10 _b	14.75***		
Happy	4.52	3.50 ⁺⁺	3.65 ⁺	3.47 ⁺⁺	3.59 ⁺	3.76	3.90	1.80		
Clean	5.52	5.67 _{ab}	5.53 _{ab}	5.08 _a	5.49 _{ab}	5.46 _{ab}	5.85 _b	9.56***		
Honest	5.43	5.59	5.48	5.26	5.44	5.32	5.97	6.87***		
Imaginative	4.14	3.90	4.05	4.13	3.90	4.02	4.46	4.27**		
Active	4.57	3.81	4.05	4.13	3.87	3.78	4.33	4.06**		
Fortunate	4.86	4.10 _a	4.08 _a	4.26 _a	3.92 _a	4.15 _a	3.13 ⁺⁺ _b	14.82***		

TABLE 3 (CONTD)

MEAN RATINGS OF THE STIMULUS PERSON AS A FUNCTION OF ILLNESS

Variable	No-illness control group	ACUTE				CHRONIC				F
		K	P	G		D	C	L		
Warm	4.10	4.05	3.95	3.95	3.79	3.95	4.05			0.98
Friendly	4.24	4.10	4.33	4.47	4.31	4.34	4.26			1.53
Responsible	5.52	5.21	5.33	5.18	5.18	5.39	5.51			2.14*
Good	5.19	4.95	5.03	4.89	4.92	4.80	5.11			2.05*
Strong	4.29	3.83 _a	3.55 _a	3.89 _a	3.56 _a	3.59 _a	4.59 _b			21.50***

Note. Higher values indicate a more positive evaluation. Means sharing no common subscript differ significantly by Newman-Keuls comparison ($\alpha_{EW} = .05$).

*** $\underline{p} < .001$

** $\underline{p} < .01$

* $\underline{p} < .05$

⁺⁺ $\underline{p} < .01$ by Dunnett's test

⁺ $\underline{p} < .02$ by Dunnett's test

the evaluation of the person consistently exceeded the mean for the control group (see Figure 2). However, by Dunnett's test, which controls for the experimentwise error rate and the non-independence of comparisons, few of the illness means differed significantly from the control group, and all but one of these differences occurred for the ratings of happy and fortunate (see Table 3). Compared to the person with no illness, the person described as having a kidney infection, pneumonia, gastroenteritis, or diabetes was perceived to be significantly less happy, and the person with diabetes or leukemia was regarded as significantly less fortunate. For the evaluation of courageousness, the mean rating for each of the illness conditions exceeded the rating for the no-illness control condition, although only the rating of the person with leukemia was significantly higher than the control group rating.

On the general attitude item, for which the respondents indicated their personal feelings toward the person, there was also a significant main effect for Illness ($F(4,227) = 8.46, p < .001$), although Newman-Keuls comparisons revealed no significant differences among the six illness means. Again, the mean evaluation of the person by the no-illness control group ($M = 4.43$) was more positive than the mean rating for each of the illness conditions, with the exception of leukemia ($M = 4.72$). However, none of the experimental-control group comparisons achieved statistical significance by Dunnett's test ($\alpha_{EW} = .01$). The average within-cell correlation between the mean of the person ratings and the general attitude item was .638.

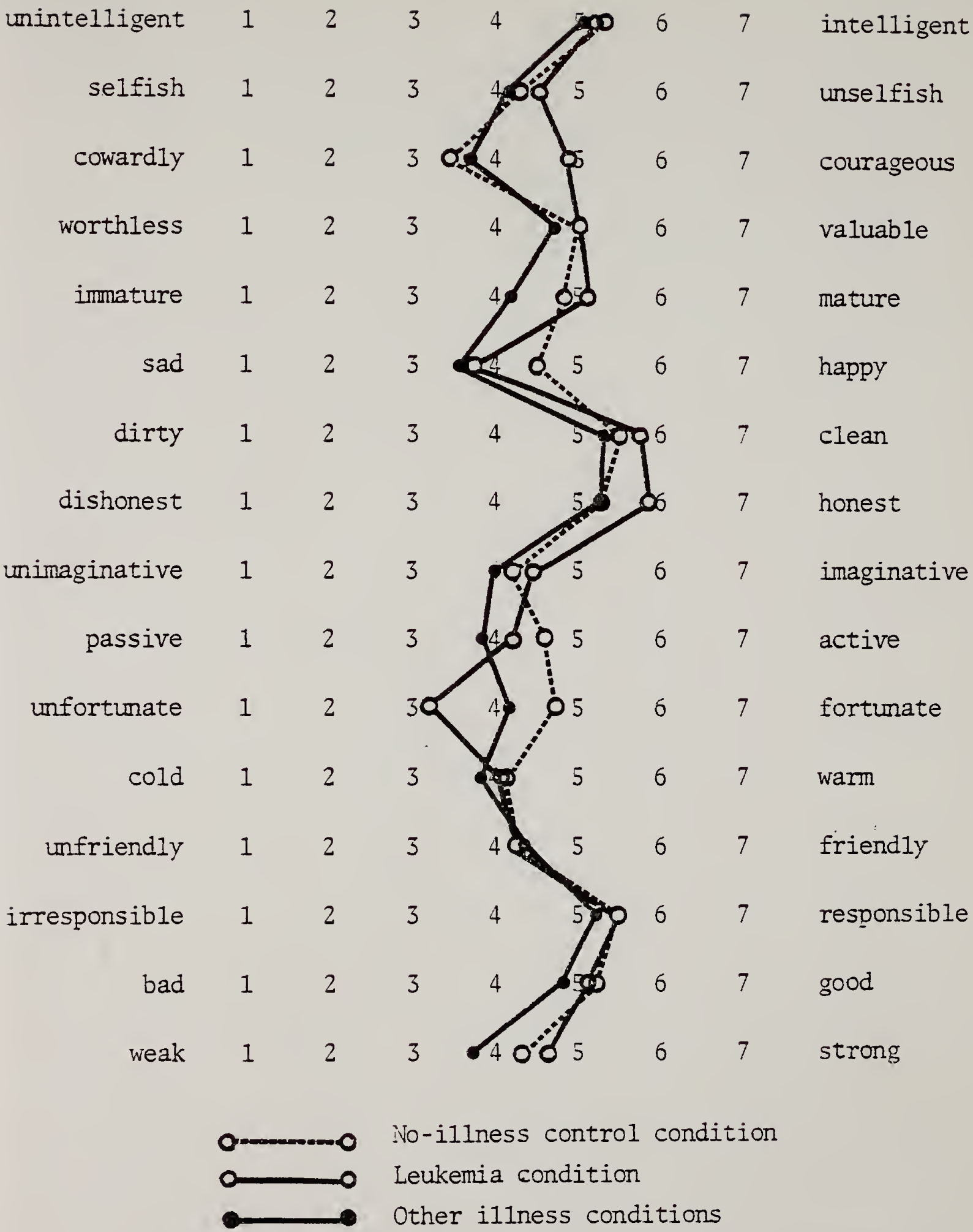


Figure 2. Mean person ratings for the control (n = 21), leukemia (n = 39), and other illness conditions (pooled, n = 199).

Perceived Similarity

Analysis of variance of respondents' ratings of their similarity to the stimulus person revealed no significant differences as a function of the experimental variables. Likewise, although all ratings of perceived similarity in the experimental conditions were somewhat lower than the ratings in the no-illness control condition, Dunnett's test yielded no significant differences between experimental and control group means. The average within-cell correlations between perceived similarity and the mean person rating and attitude item were .377 and .450, respectively.

Illness Familiarity & Perceived Vulnerability

There was a significant main effect for illness on responses regarding illness familiarity ($F(4,227) = 31.64, p < .001$). Subsequent comparisons revealed that respondents in the pneumonia and diabetes conditions reported significantly greater personal familiarity with the illness than respondents in the other four illness conditions. The average within-cell correlation between familiarity ratings and respondents' estimates of the likelihood that they and the average person would develop the illness were .318 and .239, respectively.

Analyses of variance of experimental group respondents' judgments of the likelihood that they themselves and the average person would develop the illness revealed very different patterns of results

for these two likelihood ratings. For the ratings of the likelihood of oneself developing the illness, there was a significant main effect for Duration ($F(1,227) = 11.11, p < .01$): Respondents judged themselves to be less likely to develop a chronic illness ($M = 2.58$) at some time in their life than an acute illness ($M = 3.25$). There was also a marginal Duration x Severity interaction ($F(1,227) = 3.42, p < .07$); Newman-Keuls comparisons indicated that respondents perceived themselves to be significantly less likely to develop a mild or severe chronic illness, compared to a mild acute illness. Estimates of the likelihood of developing a severe acute illness were intermediate, and did not differ significantly from the ratings in the other Duration x Severity cells.

In contrast, for estimates of the likelihood that the average person would develop the illness, there were significant main effects for the other two experimental variables--Severity ($F(1,227) = 6.61, p < .02$) and Illness ($F(4,227) = 9.68, p < .001$). Respondents judged the average person to be more likely to develop a mild ($M = 4.24$) than a severe illness ($M = 3.80$). With respect to the illness effect, Newman-Keuls comparisons among the six illness means did not yield any significant differences.

There were, however, substantial differences between respondents' ratings of their own likelihood of developing an illness, and their estimates of the likelihood that the average person would develop the illness (see Figure 3). For each of the six illness conditions, correlated t -tests revealed that respondents perceived themselves to

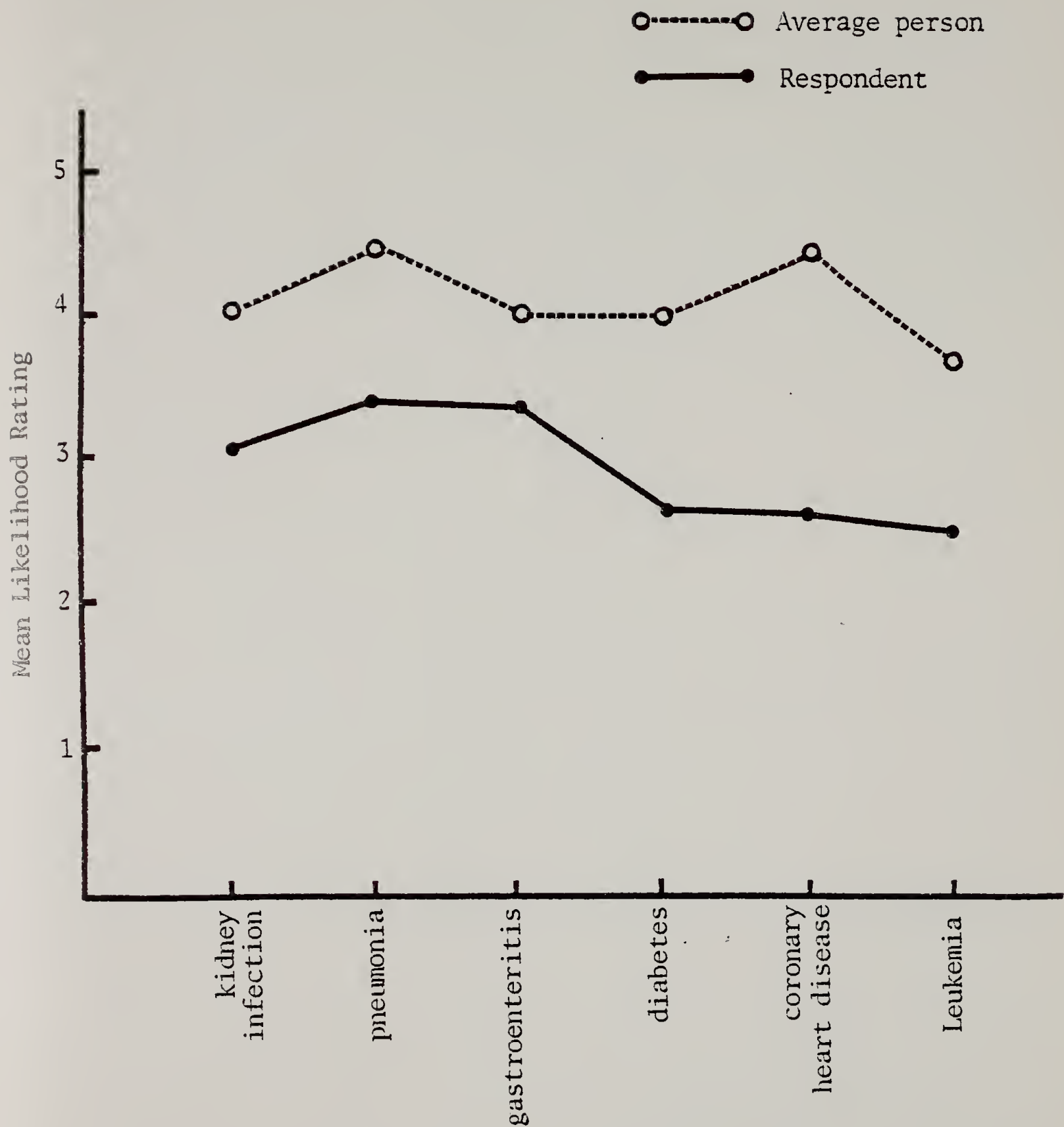


Figure 3. Mean ratings of the likelihood of oneself and the "average person" developing an illness (approximate n per cell = 40). Higher values indicate greater likelihood.

be significantly less likely than the average person to develop the illness: kidney infection ($t(40) = -3.55, p < .001$), pneumonia ($t(38) = -4.05, p < .001$), gastroenteritis ($t(36) = -3.26, p < .01$), diabetes ($t(38) = -4.01, p < .001$), coronary heart disease ($t(40) = -6.00, p < .001$), and leukemia ($t(37) = -4.76, p < .001$).

Causal Beliefs

Verbatim responses to the two open-ended questions are presented in Appendix C. In general, there seemed to be a close correspondence between the causes identified by a respondent, and the preventive measures recommended. It was not uncommon for a respondent to indicate, for example, that "improper eating habits" were the cause of an illness, and to suggest that a person "eat properly" to prevent the illness. The strongest association between causes and prevention seemed to occur for causes related to behavior, or behavioral aspects of one's lifestyle, such as eating, exercise, and relaxation habits. A popular response to the prevention item was simply to "take care of oneself" generally, and this response was also given by respondents who indicated that they did not know the cause of an illness.

For kidney infection, there was a relatively high proportion of respondents who indicated that they had "no idea" or did not know the cause (26.3%, $n = 10$). The most frequently cited factors were an external agent, such as germs, a virus, bacteria, or an infection (28.9%, $n = 11$), and eating habits or diet (18.4%, $n = 7$). Other causes mentioned by more than a single respondent were drinking

(10.5%, $\underline{n} = 4$), "not taking care of oneself" in a general or an unspecified manner (7.9%, $\underline{n} = 3$), heredity or genetics (7.9%, $\underline{n} = 3$), impurities or a cold in the kidneys (5.3%, $\underline{n} = 2$), and a constitutional weakness of the kidneys (5.3%, $\underline{n} = 2$).

For pneumonia, low resistance to disease or being "rundown" was the factor mentioned most frequently (38.5%, $\underline{n} = 15$), often in conjunction with a reason such as "not taking care of oneself" in a general or an unspecified manner (33.3%, $\underline{n} = 13$), or specifically in terms of a previous illness condition, especially a cold (25.6%, $\underline{n} = 10$), lack of sleep or rest (20.5%, $\underline{n} = 8$), eating habits or diet (10.3%, $\underline{n} = 4$), occupational pressure or overwork (10.3%, $\underline{n} = 4$), stress (7.7%, $\underline{n} = 3$), or exercise habits (5.1%, $\underline{n} = 2$). In fact, pneumonia was the only illness for which the concept of "resistance" was prominent in respondents' causal attributions. Two other frequently mentioned factors seemed to be perceived as having a more direct causal role: an external agent such as germs, a virus, bacteria, or an infection (20.5%, $\underline{n} = 8$), and weather conditions, specifically, exposure to cold and/or dampness (15.4%, $\underline{n} = 6$). Other factors cited by more than one respondent were chance (5.1%, $\underline{n} = 2$) and not dressing appropriately for weather conditions (5.1%, $\underline{n} = 2$).

The two major factors perceived to cause gastroenteritis were stress, anxiety, worry, tension, or nervousness (86.1%, $\underline{n} = 31$), and eating habits or diet (58.3%, $\underline{n} = 21$). The causal attributions for gastroenteritis were those which might be expected for peptic ulcers and, in fact, two respondents explicitly likened the illness to ulcers.

Other perceived causes which were mentioned by more than a single respondent were an external agent--germs, a virus, bacteria, or an infection (11.1%, $\underline{n} = 4$), occupational pressure or overwork (11.1%, $\underline{n} = 4$), and external pressure, unspecified (5.6%, $\underline{n} = 2$).

The most frequently mentioned cause of diabetes was heredity or genetics (54.0%, $\underline{n} = 20$), although a surprisingly high proportion cited eating habits or diet as a cause (40.5%, $\underline{n} = 15$). More than 10% of the responses were purely descriptive, although many of these were inaccurate, such as "blood difficulties" or "body not producing enough sugar." Obesity or weight were mentioned by 8.1% ($\underline{n} = 3$), and exercise habits or inactivity were cited by 5.4% ($\underline{n} = 2$) of the respondents.

Coronary heart disease was the illness for which the most causal factors were mentioned; all but four of the respondents who cited a cause mentioned multiple causes, often as many as three or four causal factors. Stress, anxiety, worry, tension, or nervousness were mentioned frequently (55.0%, $\underline{n} = 22$), as were eating habits or diet (45.0%, $\underline{n} = 18$) and exercise habits or inactivity (42.5%, $\underline{n} = 17$). Also mentioned by a relatively large proportion of respondents were heredity or genetics (25.0%, $\underline{n} = 10$), obesity or weight (20.0%, $\underline{n} = 8$), and smoking (17.5%, $\underline{n} = 7$). Additional factors which were cited by more than a single respondent were high blood pressure or cholesterol level (15.0%, $\underline{n} = 6$), occupational pressure or overwork (12.5%, $\underline{n} = 5$), constitutional weakness of the heart (7.5%, $\underline{n} = 3$), and "not taking care of oneself" in a general or an unspecified manner (5.0%, $\underline{n} = 2$).

For leukemia, a large proportion of respondents indicated that they did not know the cause of leukemia or that the cause was unknown (29.4%, $\underline{n} = 10$), or they simply described the condition (11.8%, $\underline{n} = 4$). The only cause cited frequently by respondents in the leukemia condition was heredity or genetics (52.9%, $\underline{n} = 18$). Additional causes mentioned by more than one respondent were chance (5.9%, $\underline{n} = 2$), God's will (5.9%, $\underline{n} = 2$), exposure to radiation or carcinogens (5.9%, $\underline{n} = 2$), chemicals or foreign substances in food (5.9%, $\underline{n} = 2$), and smoking (5.9%, $\underline{n} = 2$). Despite the relatively high proportion of respondents who indicated that they did not know the cause(s) of leukemia, and the relatively few number of causes mentioned, several respondents explicitly indicated that multiple factors were necessary for leukemia to occur: "I don't think that any one thing can make you get it"; "I think it is a freak thing caused by many factors."

It is important to note that even among respondents who cited the same causal factor, such as "stress" or "heredity," the factor may be attributed different roles in the occurrence of illness. For example, some respondents seemed to suggest that stress has a direct causal role in the occurrence of an illness, whereas other respondents seemed to regard stress as a factor which simply "sets the stage" for disease by lowering the individual's resistance. Similarly, heredity may be treated as a pathogenic factor itself, or it may be accorded a "contributing" or "facilitating" role, and regarded as necessary but not sufficient for the development of disease. For instance, in the leukemia condition, one respondent indicated that a person is "born

with cancer cells," whereas another respondent who cited genetics as the cause added that no "one thing can make you get it." Although, for the most part, the responses were logical, if not accurate, there were instances of seemingly illogical reasoning. One respondent, for example, stated that leukemia "probably has something to do with genetics," and added "it may be an indiscriminate disease." Similarly, another respondent in the leukemia condition reported that "it just happens, so I suppose chances are 50/50."

Person Responsibility

Analyses of variance revealed a consistent pattern of results for responses to the items measuring perceptions of the person's responsibility for the illness (see Table 4). There was a main effect for illness on the item regarding perceived carefulness about health, and main effects for both Duration and Illness for the measures regarding prevention, blame, and the responsibility of heredity, character, behavior, and lifestyle. There were no main effects of Severity on any of the person responsibility items.

For perceived carefulness about health prior to developing the illness, there was no significant difference between the acute and chronic conditions. However, Duration had a significant effect on all of the remaining person responsibility items. Compared to the chronic condition, respondents in the acute condition judged the person to be more able to have prevented the illness ($F(1,227) = 27.09$, $p < .001$) and more to blame for the illness ($F(1,227) = 29.35$, $p < .001$). For ratings of the extent to which the person could have

TABLE 4

MEAN RATINGS OF PERSON RESPONSIBILITY AS A FUNCTION OF DURATION

Variable	No-illness control group	DURATION			F
		Acute	Chronic		
Careful	5.43	3.68 ⁺⁺	3.50 ⁺⁺		0.78
Prevent	--	4.46	3.50		27.09***
Responsibility/Blame	5.24	3.97 ⁺⁺	2.96 ⁺⁺		29.35***
Heredity	4.62	3.38 ⁺⁺	5.06		80.27***
Character	4.29	3.83	2.82 ⁺⁺		21.16***
Behavior	4.76	4.43	3.24 ⁺⁺		34.81***
Lifestyle	5.24	4.72	3.78 ⁺⁺		24.37***

Note. Higher values indicate greater carefulness, ability to prevent illness, blame (responsibility for no-illness control), and responsibility.

*** $p < .001$

⁺⁺ $p < .01$ by Dunnett's test

prevented the illness, there was also a Duration x Severity interaction ($F(1,227) = 4.78, p < .03$): Compared to the mild conditions, the person with a severe acute illness was perceived as more able to have prevented the illness, while the person with a severe chronic illness was perceived to be less able to have prevented the illness. On the ratings of the responsibility of the four person-related factors, heredity was judged to be significantly less responsible for acute than chronic illnesses, while character, behavior, and lifestyle were perceived to be significantly more responsible for acute than chronic illness (see Table 4).

Compared to the no-illness control group, the person with an illness was judged by respondents in the experimental conditions to be significantly more careless about his/her health prior to developing the illness ($ps < .01$ by Dunnett's test). Interestingly, the extent to which the ill person was blamed for the illness in both the acute ($M = 3.97$) and chronic ($M = 2.96$) conditions was significantly less than the degree of responsibility attributed to the person for health ($M = 5.24$) in the no-illness control group. That is, the person without an illness was credited with greater responsibility for his/her health than the person with an illness was blamed for the illness.

With respect to the perceived role of specific factors in health and illness, heredity was perceived to be significantly less responsible for acute illness ($M = 3.38$) than for chronic illness ($M = 5.06$) or for

health ($\underline{M} = 4.62$). In contrast, character, behavior, and lifestyle were perceived to be significantly less responsible for chronic illness ($\underline{M} = 2.82, 3.24, \text{ and } 3.78$, respectively) than for acute illness ($\underline{M} = 3.83, 4.43, \text{ and } 4.72$) or for health ($\underline{M} = 4.29, 4.76, 5.24$). The responsibility ratings for heredity were negatively correlated with blame (average within-cell $\underline{r} = -.175$), whereas the ratings for character ($\underline{r} = .505$), behavior ($\underline{r} = .513$), and lifestyle ($\underline{r} = .496$) were positively correlated with blame. The only factor which was related to respondents' estimates of their own likelihood of developing the illness was heredity, with which there was a low negative correlation ($\underline{r} = -.103$). Overall, lifestyle was perceived to be the factor most responsible for health and acute illness, whereas heredity was perceived to be the greatest factor in chronic illness. According to the overall pattern of responsibility judgments, the person-related factor perceived to be the least responsible for health and chronic illness was character, whereas for acute illness, heredity received the lowest mean responsibility rating (see Figure 4).

The analysis of variance main effects for Illness and subsequent comparisons for each of the person responsibility items yielded some interesting qualifications to this general pattern of results (see Table 5). For each of the illness conditions, the person was perceived to have been more careless about his/her health prior to developing the illness than the person with no known illness ($\underline{ps} < .01$ by Dunnett's tests), although the difference between the experimental and control group was only marginal for leukemia

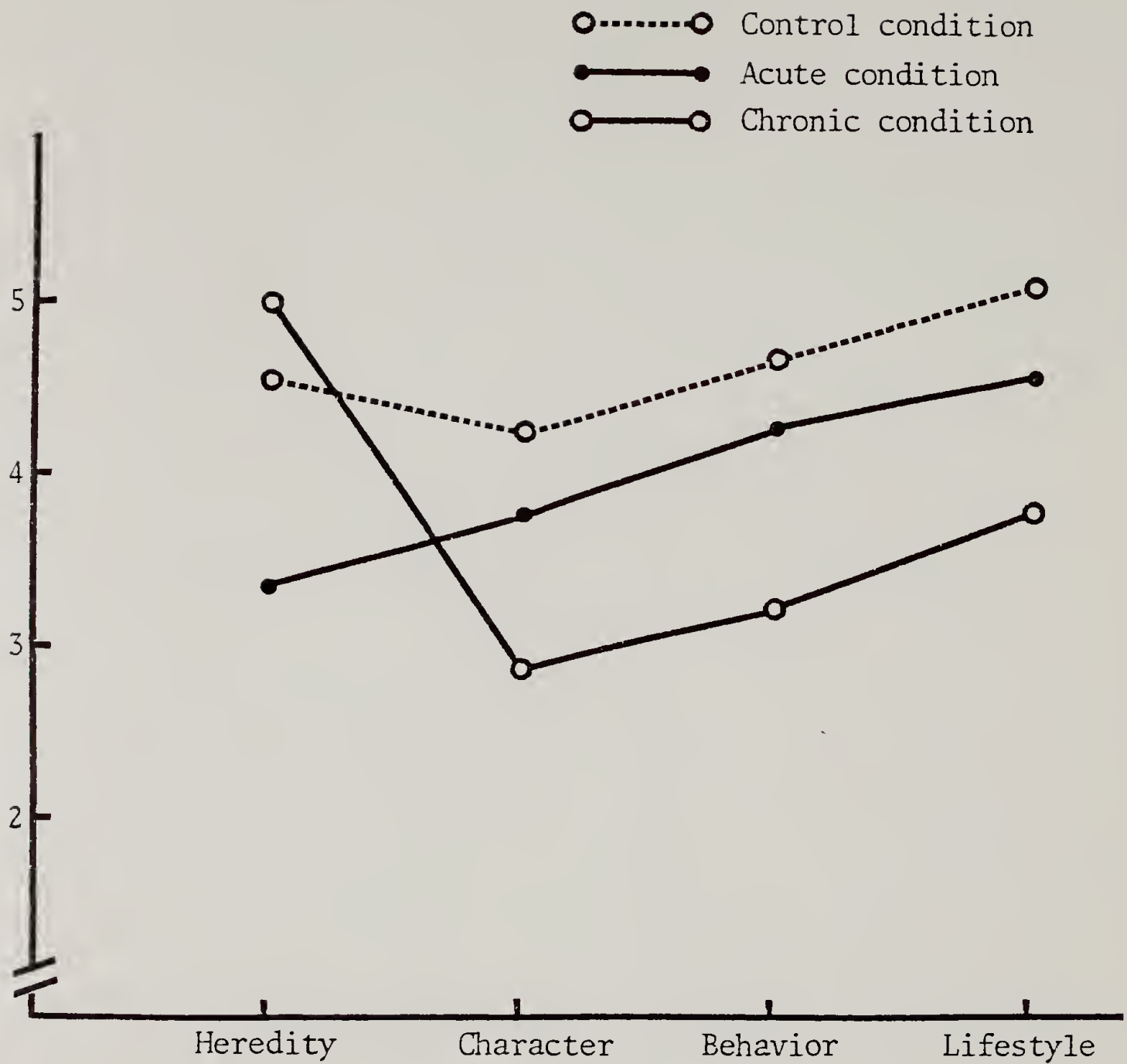


Figure 4. Mean responsibility ratings of heredit, character, behavior, and lifestyle for the no-illness control condition ($n = 21$), and the acute ($n = 120$) and chronic ($n = 119$) experimental conditions. Higher values indicate greater responsibility.

TABLE 5

MEAN RATINGS OF PERSON RESPONSIBILITY AS A FUNCTION OF ILLNESS

Variable	No-illness control group	ACUTE				CHRONIC			
		K	P	G	D	C	L	F	
Careful	5.43	4.10 ⁺⁺ _{bc}	3.43 ⁺⁺ _b	3.47 ⁺⁺ _b	3.38 ⁺⁺ _b	2.61 ⁺⁺ _a	4.54 ⁺ _c	53.90***	
Prevent	--	3.90 _b	4.70 _c	4.82 _c	3.41 _b	4.76 _c	2.26 _a	63.56***	
Blame/ Responsibility	5.24	3.40 ⁺⁺ _b	4.28 _c	4.26 _c	2.82 ⁺⁺ _b	4.29 _c	1.69 ⁺⁺ _a	70.11***	
Heredity	4.62	4.10 _b	2.70 ⁺⁺ _a	3.29 ⁺⁺ _a	5.21 _c	4.66 _{bc}	5.33 _c	23.15***	
Character	4.29	3.26 _b	3.85 _{bc}	4.42 _c	2.33 ⁺⁺ _a	4.17 _{bc}	1.90 ⁺⁺ _a	46.12***	
Behavior	4.76	3.76 _b	4.70 _c	4.87 _c	2.97 ⁺⁺ _a	4.41 _{bc}	2.26 ⁺⁺ _a	48.47***	
Lifestyle	5.24	4.31 _c	4.80 _c	5.08 _c	3.56 ⁺⁺ _b	5.07 _c	2.64 ⁺⁺ _a	57.03***	

Note. Higher values indicate greater carefulness, ability to prevent illness, blame (responsibility), and responsibility. Means sharing no common subscript differ significantly by Newman-Keuls ($\alpha_{EW} = .05$).

*** $\underline{p} < .001$ ⁺⁺ $\underline{p} < .01$ by Dunnett's test

⁺ $\underline{p} < .02$ by Dunnett's test

($p < .05$). There were also significant differences among the illnesses in respondents' ratings of carelessness: The person with coronary heart disease was judged to have been significantly more careless about his/her health, and the person with leukemia was perceived to have been significantly less careless, compared to the other illnesses. Mean carelessness ratings in the kidney infection, pneumonia, gastroenteritis, and diabetes conditions were intermediate, and differed significantly from the ratings for both coronary heart disease and leukemia, with the exception of the rating for kidney infection, which did not differ significantly from the rating for leukemia ($\alpha_{EW} = .05$ for Newman-Keuls comparisons).

The pattern of responses to the item regarding prevention closely paralleled the extent to which the person was blamed for an illness. The person with leukemia was judged to be significantly less able to have prevented the illness, and was blamed significantly less than the person with any of the other illnesses ($\alpha_{EW} = .05$). Similarly, the person with a kidney infection or diabetes, although perceived to be significantly more able to have prevented the illness than the person with leukemia, was judged to be significantly less able to have prevented the illness, and less blameworthy, than the person with pneumonia, gastroenteritis, or coronary heart disease ($\alpha_{EW} = .05$). Only the degree of blame in the leukemia, kidney infection, and diabetes conditions was significantly less than the degree of responsibility attributed to the person for health in the no-illness control condition ($p_s < .01$ by Dunnett's tests); mean ratings of blameworthiness in the

pneumonia, gastroenteritis, and coronary heart disease conditions did not differ significantly from the mean rating of responsibility of the person for his/her health by the control group. Overall, the average within-cell correlation between blame and perceived carefulness was $-.466$, and between blame and prevention; $r = .677$.

For the ratings of responsibility of the four specific factors of heredity, character, behavior, and lifestyle, a slightly different pattern of results for Illness emerged (see Figure 5). The pattern of responses to these four items were quite similar for pairs of the illnesses: leukemia and diabetes, coronary heart disease and kidney infection, and pneumonia and gastroenteritis. For leukemia and diabetes, character was judged to be the least responsible factor for the illness, and heredity received the highest mean rating of responsibility; differences between leukemia and diabetes and the other four illnesses on these two items were statistically significant by Newman-Keuls comparisons ($\alpha_{EW} = .05$). Compared to the ratings of responsibility for health in the no-illness control condition, character, behavior, and lifestyle were perceived to be significantly less responsible for the illness of a person with leukemia or diabetes ($p_s < .01$ by Dunnett's tests). For kidney infection and coronary heart disease, character was also judged to be the least responsible factor (albeit more responsible than for leukemia or diabetes), and lifestyle was perceived to be the factor most responsible for these two illnesses, although not significantly more responsible than for pneumonia and gastroenteritis. There were no significant differences between these two illness conditions

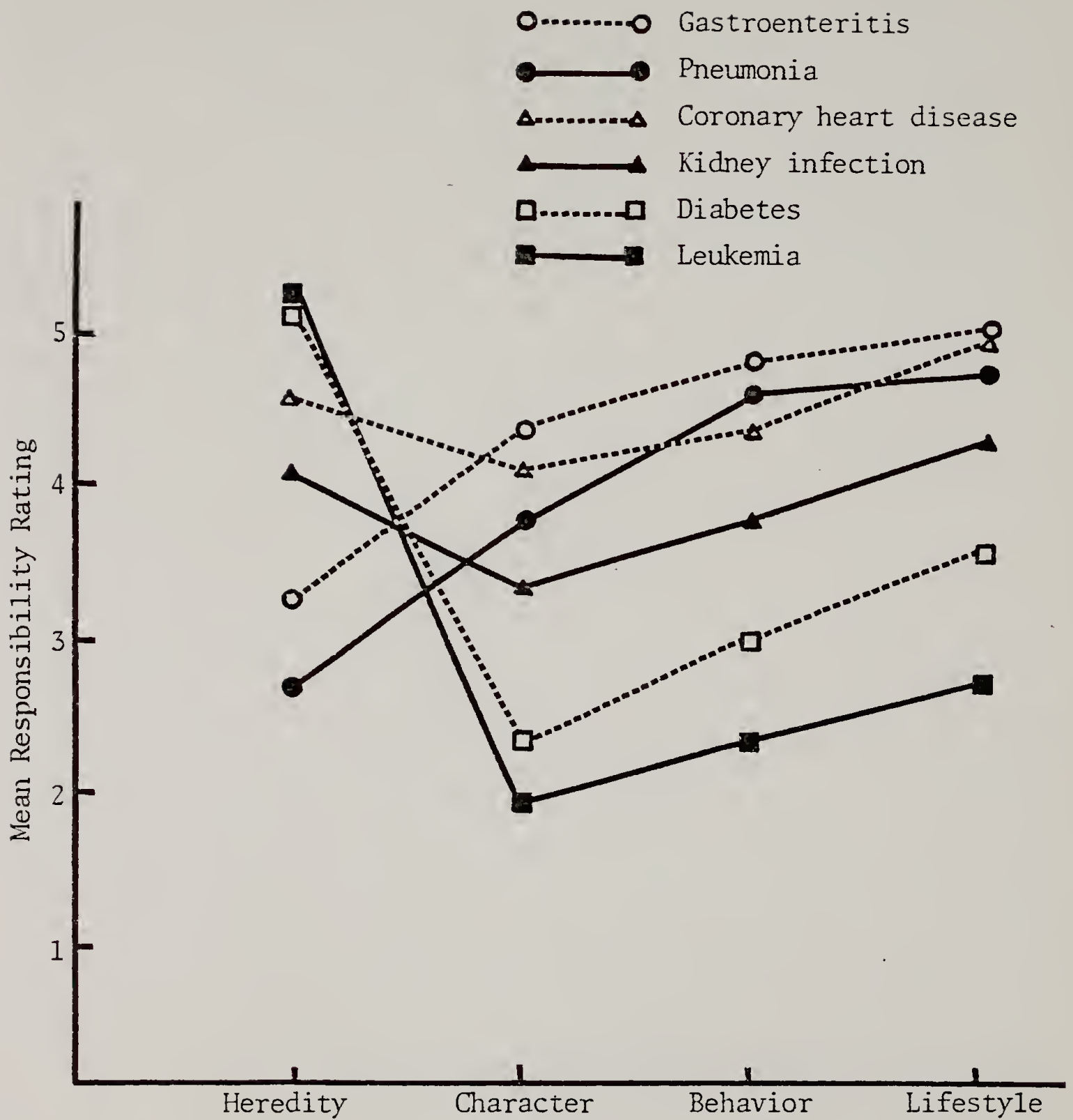


Figure 5. Mean responsibility ratings of heredity, character, behavior, and lifestyle for each of the illness conditions (approximate n per cell = 40). Higher values indicate greater responsibility.

and the control group on ratings of the responsibility of heredity, character, behavior, and lifestyle. For pneumonia and gastroenteritis, lifestyle was also perceived to be the factor most responsible for the illness, but heredity was judged to be the least responsible factor, and was rated significantly lower than for the other illness conditions and the no-illness control group.

There were also marginal Illness x Severity interactions for five of the seven person responsibility items. For diabetes and gastroenteritis, an increase in severity lead to a decrease in perceived ability to have prevented the illness, blameworthiness, and attribution of responsibility to character, behavior, and lifestyle. In contrast, the person with severe leukemia, relative to the mild condition, was perceived to be more able to have prevented the illness and more blameworthy, and character, behavior, and lifestyle were judged to be more responsible for the illness. For the other three illnesses, there was no consistent pattern of interaction across the five measures. Moreover, for each of the items for which the analyses of variance yielded an Illness x Severity interaction, Bonferroni t-tests indicated that only the differences between mild and severe diabetes were significant.

General Responsibility

The six general responsibility items measure the perceived responsibility for the illness of the person vis-à-vis other factors, namely, the environment, other people, chance, God, and fate. Analyses of

variance for these items again yielded main effects for Duration and Illness, and no main effects for Severity.

There were significant main effects for Duration on all of the general responsibility items except other people and chance (see Table 6). The environment was judged to be significantly less responsible for chronic illness than for acute illness ($F(1,227) = 19.75, p < .01$) or for health ($p < .01$ by Dunnett's test). There was a marginal Duration x Severity interaction for attributions of responsibility to the environment ($F(1,227) = 3.59, p < .059$): Compared to the mild conditions, the environment was judged to be more responsible for severe acute illness, and less responsible for severe chronic illness. Consistent with the results for the blame item, the person was also perceived to be less responsible for chronic illness than for acute illness ($F(1,227) = 20.86, p < .001$) or for health ($p < .01$); the average within-cell correlation between blame and attribution of responsibility to the person was .605. In the ratings of the responsibility of other people, however, there was no significant difference as a function of Duration, although other people were judged to be significantly more responsible for a person's health than for chronic illness ($p < .01$ by Dunnett's test). Blame was positively correlated with each of these factors: environment ($r = .253$), person ($r = .605$), and other people ($r = .145$), but only attributions of responsibility to the environment were related to respondents' estimates of their own likelihood of developing the illness ($r = .134$).

TABLE 6

MEAN RATINGS OF RESPONSIBILITY AS A FUNCTION OF DURATION

Variable	No illness control group	DURATION		<u>F</u>
		Acute	Chronic	
Environment	5.05	4.67	3.86 ⁺⁺	19.75***
Person	5.38	4.84	4.02 ⁺⁺	20.86***
Other people	3.95	3.13	2.91 ⁺	1.18
Chance	4.90	4.40	4.41	0.02
God	3.43	2.61	3.39	7.78**
Fate	3.57	3.34	3.96	5.60*

Note. Higher values indicate greater responsibility.

***p < .001

⁺⁺p < .01 by Dunnett's test

**p < .01

⁺p < .05 by Dunnett's test

*p < .05

Attributions of responsibility to chance also did not differ significantly as a function of Duration; there were no differences between the attribution of responsibility to chance for acute illness, chronic illness, or health. Like the ratings of the environment and the person, Duration had a significant effect on responsibility ratings for God and fate, but the order of the means was reversed. God was perceived to significantly more responsible for chronic illness than for acute illness ($F(1,227) = 7.78, p < .006$). Similarly, fate was judged to be significantly more responsible for chronic than for acute illness ($F(1,227) = 5.60, p < .02$). Dunnett's tests yielded no significant differences between experimental and control group means for the attribution of responsibility to God and fate. Blame was negatively correlated with each of these factors: chance ($r = -.408$), God ($r = -.114$), and fate ($r = -.128$), although none of these factors were correlated with respondents' estimates of their own likelihood of developing the illness.

The main effect for illness was significant for each of the general responsibility items, and subsequent Newman-Keuls comparisons revealed significant differences among the six illness means for all of the items except other people (see Table 7). The environment received the lowest responsibility rating for diabetes, and the highest responsibility rating for pneumonia, gastroenteritis, and coronary heart disease, among which there were no significant differences. For comparisons among the illness conditions and the control group, the environment was perceived to be significantly less responsible for

TABLE 7
MEAN RATINGS OF RESPONSIBILITY AS A FUNCTION OF ILLNESS

Variable	No-illness control group	ACUTE			CHRONIC				
		K	P	G	D	C	L	F	
Environment	5.05	4.24 _b	5.13 _c	4.66 _{bc}	3.08 ⁺⁺ _a	4.63 _{bc}	3.82 ⁺ _b	30.67***	
Person	5.38	4.45 _b	4.88 _b	5.24 _b	3.51 ⁺⁺ _a	5.22 _b	3.26 ⁺⁺ _a	49.11***	
Other people	3.95	2.81	3.35	3.24	3.00	3.39	2.31 ⁺⁺	10.19***	
Chance	4.90	4.69 _{ab}	4.40 _{ab}	4.08 _{ab}	4.54 _{ab}	3.78 _a	4.95 _b	12.61***	
God	3.43	2.93 _{ab}	2.68 _{ab}	2.18 _a	2.85 _{ab}	3.32 _{ab}	4.03 _b	8.33***	
Fate	3.57	3.86 _a	3.05 _a	3.08 _a	3.72 _a	3.15 _a	5.05 ⁺ _b	21.28***	

Note. Higher values indicate greater responsibility. Means sharing no common subscript differ significantly by Newman-Keuls ($\alpha_{FW} = .05$).

*** $p < .001$

⁺⁺ $p < .01$ by Dunnett's test

⁺ $p < .05$ by Dunnett's test

diabetes ($p < .01$) and leukemia ($p < .05$) than for health. Similarly, the person was judged to be significantly less responsible for diabetes and leukemia than for health ($p < .01$) or for kidney infection, pneumonia, gastroenteritis, and coronary heart disease ($\alpha_{EW} = .05$). For ratings of the responsibility of the person, there was also an Illness x Severity interaction ($F(4,227) = 3.63, p < .01$): Compared to the mild condition, there was a decrease in attributions of responsibility to the person in the severe condition for all illnesses except leukemia, for which there was an increase in responsibility attributed to the person in the severe condition. However, diabetes was the only illness for which the difference was significant by Bonferroni t -tests. On the responsibility attributions to other people, there was also a significant Illness main effect, but there were no significant differences among the six illnesses by Newman-Keuls comparisons. For experimental-control group comparisons, other people were perceived to be significantly less responsible for leukemia than for a person's health; there were no differences in the attributions of responsibility to other people for health and for the remaining five illnesses.

The factors of chance, God, and fate each received the highest mean responsibility ratings for leukemia. However, for attributions of responsibility to chance, there were no significant differences between leukemia and the other illnesses, with the exception of coronary heart disease, for which chance was perceived to be significantly less responsible. Moreover, there were no significant differences between the responsibility ratings of chance by the no-illness

control group and the experimental groups. For mean ratings of the responsibility of God, the only significant difference among the illnesses was for leukemia, for which God was perceived to be significantly more responsible than for gastroenteritis. Again, there were no significant differences in attributions of responsibility to God for a person's health by the no-illness control group, and attributions by the respondents in the illness conditions. For attributions of responsibility to fate, leukemia differed significantly from the control and each of the other illness conditions (all p s < .05); fate was judged to be more responsible for leukemia than for health or for kidney infection, pneumonia, gastroenteritis, diabetes, and coronary heart disease.

Illness Ratings

There were a number of significant main effects for each of the experimental variables on the series of ratings of the illnesses, as well as numerous experimental-control group differences (see Figure 6). For Duration, there were significant main effects on all but five of the twenty ratings--internal-external, common-rare, controllable-uncontrollable, not embarrassing-embarrassing, and passive-active (see Table 8). Compared to acute illness, chronic illness was perceived to be more severe, long, strong, incurable, bad, chronic, interesting, threatening, unfair, and persistent, and less painful, fast, uncomfortable, contagious, and dirty (see Figure 7). Comparisons with the ratings of health by the no-illness control group, which in-

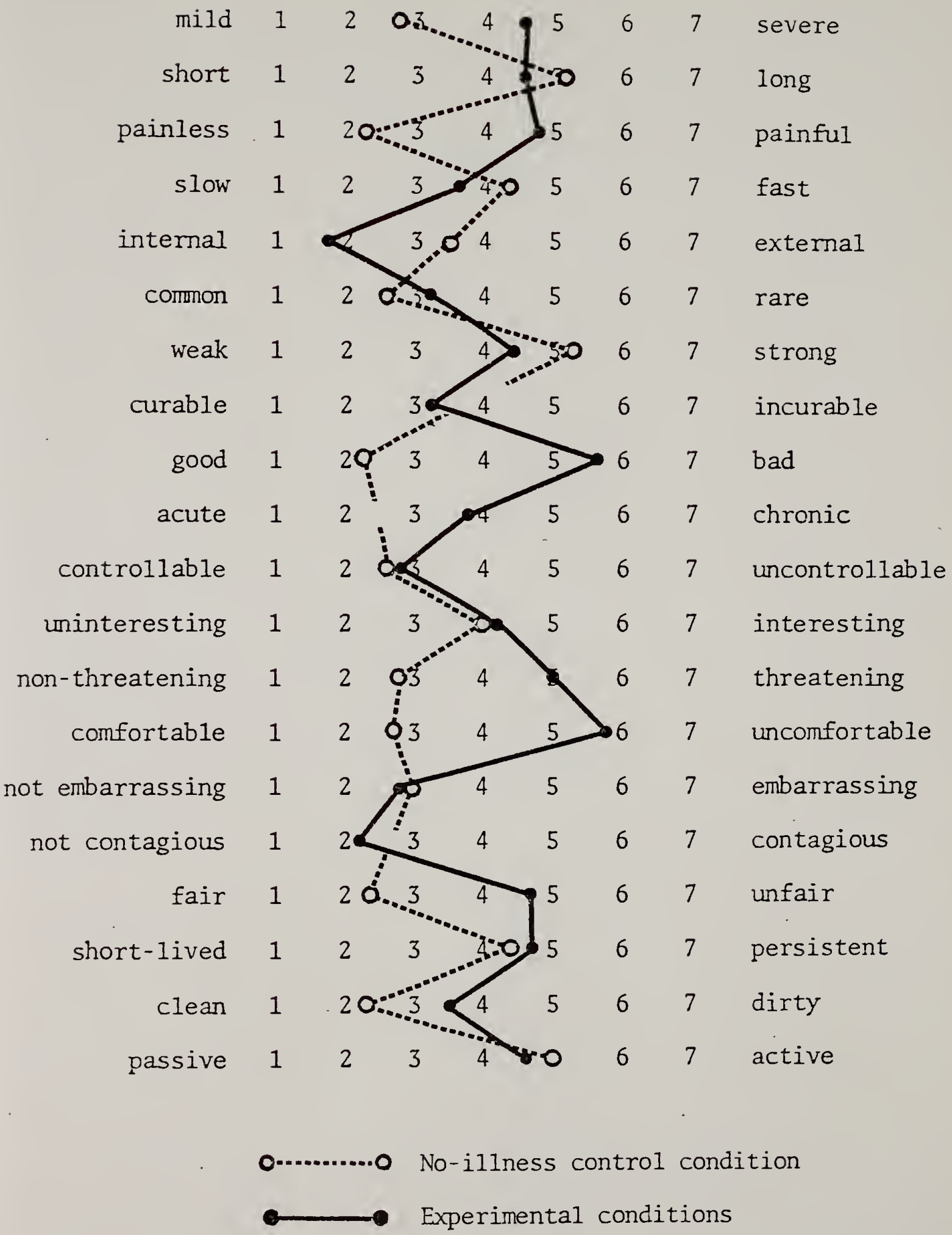


Figure 6. Mean illness ratings for the control (n = 21) and experimental groups (n = 238)

TABLE 8

MEAN ILLNESS RATINGS AS A FUNCTION OF DURATION AND SEVERITY

Variable	No-illness control group	DURATION			SEVERITY		
		Acute	Chronic	F	Mild	Severe	F
Mild/Severe	2.86	4.20 ⁺⁺	4.86 ⁺⁺	11.17**	3.74 ⁺	5.40 ⁺⁺	82.67***
Short/Long	5.10	3.39 ⁺⁺	5.68	174.34***	4.22 ⁺	4.87	13.18***
Painless/Painful	2.19	5.20 ⁺⁺	4.55 ⁺⁺	15.42***	4.28 ⁺⁺	5.52 ⁺⁺	54.16***
Slow/Fast	4.33	4.01	3.35 ⁺	10.99**	3.87	3.48 ⁺	4.07*
Internal/External	3.52	1.78 ⁺⁺	1.84 ⁺⁺	0.11	1.75 ⁺⁺	1.87 ⁺⁺	0.46
Common/Rare	2.57	3.27 ⁺	3.06	1.41	3.02	3.32 ⁺	3.11
Weak/Strong	5.19	4.19 ⁺⁺	4.68	6.60*	4.16 ⁺⁺	4.73	10.05**
Curable/Incurable	--	1.87	4.39	186.15***	3.02	3.27	1.66
Good/Bad	2.19	5.47 ⁺⁺	5.89 ⁺⁺	5.29*	5.39 ⁺⁺	6.00 ⁺⁺	14.09***
Acute/Chronic	--	3.22	4.60	42.68***	3.87	3.96	0.18
Controllable/ Uncontrollable	2.62	2.83	2.90	0.14	2.69	3.05	3.06

TABLE 8 (CONTD)
MEAN ILLNESS RATINGS AS A FUNCTION OF DURATION AND SEVERITY

Variable	No-illness control group	DURATION			SEVERITY		
		Acute	Chronic	F	Mild	Severe	F
Uninteresting/ Interesting	4.00	3.48	4.71	33.90***	4.06	4.12	0.05
Non-threatening/ Threatening	2.81	4.51 ⁺⁺	5.47 ⁺⁺	23.62***	4.69 ⁺⁺	5.30 ⁺⁺	8.78**
Comfortable/ Uncomfortable	2.76	6.14 ⁺⁺	5.51 ⁺⁺	20.84***	5.61 ⁺⁺	6.06 ⁺⁺	10.67**
Not embarrassing/ Embarrassing	3.00	2.98	2.80	0.62	2.72	3.08	2.66
Not contagious/ Contagious	--	2.82	1.51	43.07***	2.16	2.17	0.01
Fair/Unfair	2.43	4.34 ⁺⁺	5.03 ⁺⁺	14.85***	4.63 ⁺⁺	4.74 ⁺⁺	0.28
Short-lived/Persistent	4.40	3.71	5.63 ⁺⁺	99.35***	4.65	4.69	0.03
Clean/Dirty	2.29	3.98 ⁺⁺	3.00	26.56***	3.58 ⁺⁺	3.40 ⁺⁺	0.76
Passive/Active	5.00	4.54	4.60	0.06	4.44	4.70	1.41

Note. Higher values indicate greater severity, length, painfulness, etc.

*** $\underline{p} < .001$ * $\underline{p} < .05$

⁺⁺ $\underline{p} < .01$ by Dunnett's test

** $\underline{p} < .01$

⁺ $\underline{p} < .05$ by Dunnett's test

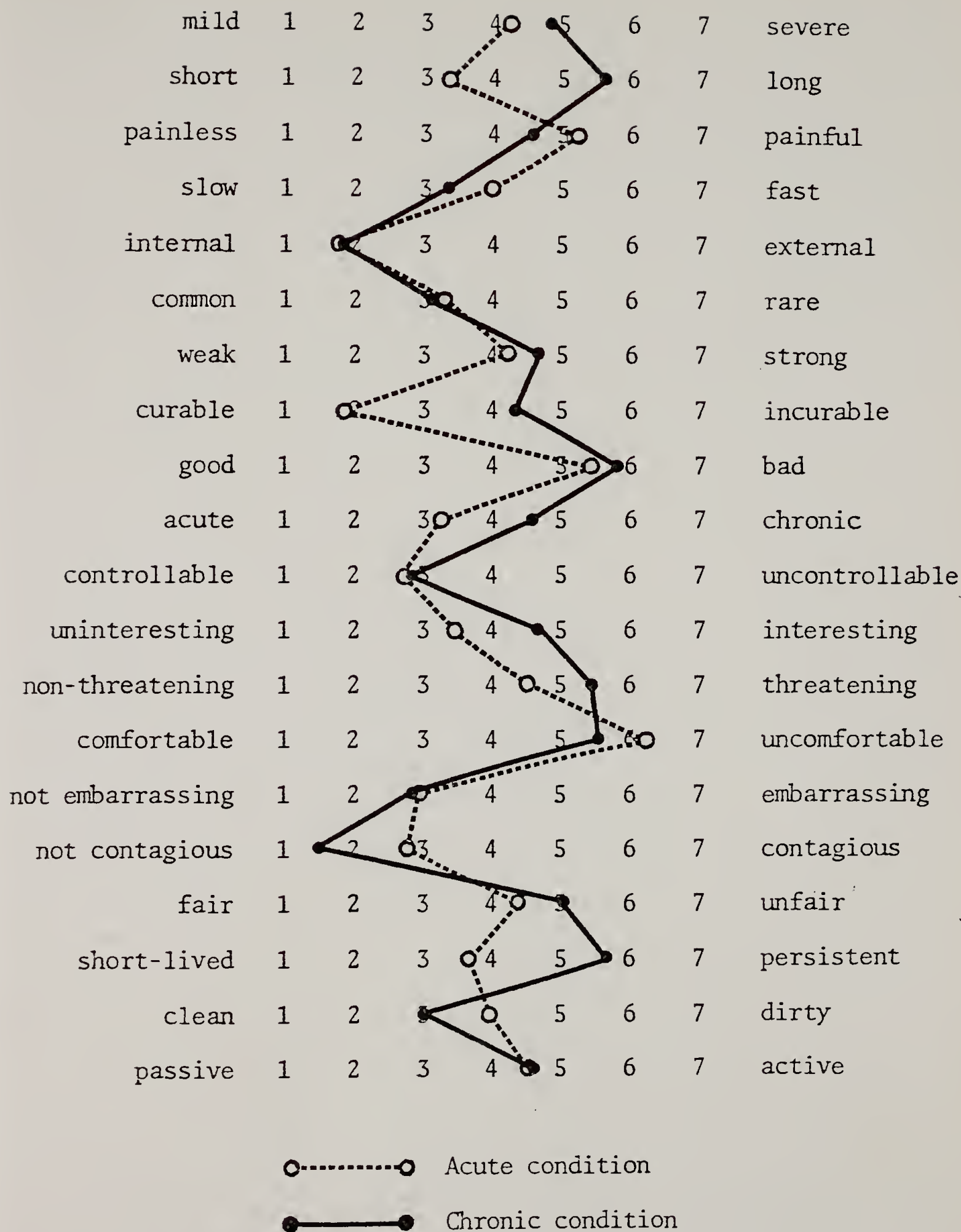


Figure 7. Mean illness ratings for the acute ($\underline{n} = 119$) and chronic conditions ($\underline{n} = 119$)

cluded all but the ratings of curable-incurable, acute-chronic, and not contagious-contagious, indicated that both acute and chronic illnesses were perceived as more severe, painful, internal, bad, threatening, uncomfortable, and unfair than health (all p s $< .01$ by Dunnett's tests). Further, acute illness was perceived to be less long ($p < .01$), less common ($p < .05$), less strong ($p < .01$), and less clean ($p < .01$) than health. Chronic illness was also perceived to be slower ($p < .05$) and more persistent ($p < .01$) than health.

For Severity, there were significant main effects on the ratings of mild-severe, short-long, painless-painful, slow-fast, weak-strong, curable-incurable, non-threatening-threatening, and comfortable-uncomfortable (see Table 8). Relative to the mild condition, severe illness was judged to be more severe, long, painful, fast, strong, bad, threatening, and uncomfortable (see Figure 8). Thus, both chronic and severe illness were perceived as more severe, long, strong, bad, and threatening. The effects of Duration and Severity differed for three of the ratings: Chronic illness was perceived as less painful, fast, and uncomfortable than acute illness, whereas severe illness was perceived as more painful, fast, and uncomfortable than mild illness.

In addition, there were Duration x Severity interactions for the ratings of mild-severe, acute-chronic, and curable-incurable, and Illness x Severity interactions for the ratings of mild-severe, short-long, and curable-incurable. For the ratings of mild-severe and acute-chronic, the Duration x Severity interactions revealed ceiling effects in the perception of duration and severity which were previously

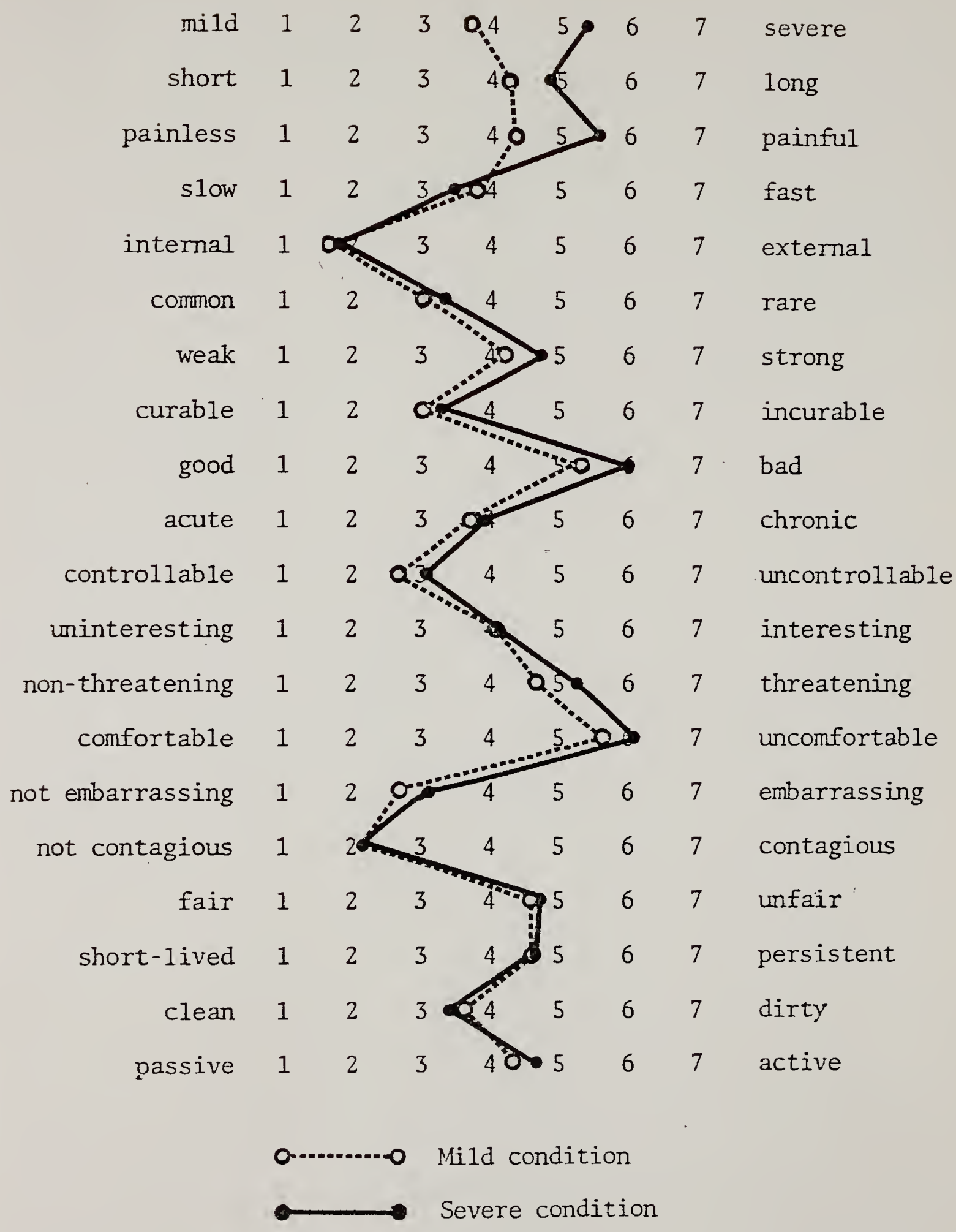


Figure 8. Mean illness ratings for the mild ($\underline{n} = 124$) and severe conditions ($\underline{n} = 114$)

discussed. The Illness x Severity interaction for the mild-severe rating reflected a similar effect: Compared to the mild condition, Bonferroni t -tests indicated that all of the illnesses were perceived as more severe in the severe condition, but the increase in perceived severity was not significant for coronary heart disease and leukemia (kidney infection, t (225) = -6.86, p < .01; pneumonia, t (225) = -4.46, p < .01; gastroenteritis, t (225) = -3.06, p < .01; diabetes, t (225) = -4.65, p < .01; coronary heart disease, t (225) = -1.12, ns ; leukemia, t (225) = -2.13, ns).

On the curability ratings, the Duration x Severity interaction revealed a tendency for severe acute illness to be perceived as more curable than mild acute illness, whereas severe chronic illness was judged to be less curable than mild chronic illness (F (1,225) = 6.28, p < .02). The Illness x Severity interaction (F (4,225) = 8.15, p < .001) indicated that, compared to the mild condition, ratings of incurability increased for severe pneumonia, diabetes, and leukemia, and decreased for severe kidney infection, gastroenteritis, and coronary heart disease. However, only the differences for diabetes (t (225) = -5.03, p < .01) and coronary heart disease (t (225) = 2.67, p < .10) approached significance. Finally, the Illness x Severity interaction for ratings of short-long (F (4,227) = 3.08, p < .02) revealed that all of the illnesses, except coronary heart disease, were perceived as longer in the severe condition, compared to the mild condition, although the increase was significant for only kidney infection (t (227) = -.304, p < .05) and diabetes (t (227) = -3.03, p < .05).

Experimental-control group comparisons for Severity indicated that, compared to the mean ratings for health, both mild and severe illness was perceived as more severe, painful, internal, bad, threatening, uncomfortable, unfair, and dirty (see Table 8). Further, mild illness was judged to be more short ($p < .05$) and more weak ($p < .01$) than health, and severe illness was perceived to be more slow ($p < .05$) and more rare ($p < .05$) than health.

There was a significant main effect for Illness on each of the twenty ratings (see Table 9). For the ratings of internal-external, good-bad, not embarrassing-embarrassing, and passive-active, Newman-Keuls comparisons yielded no significant differences among the six illnesses. For ratings on the other sixteen dimensions, there were a number of different patterns among the six illnesses. On four of the ratings, short-long, curable-incurable, acute-chronic, and short-lived-persistent, Newman-Keuls comparisons among the illnesses revealed differences primarily between the acute and chronic illnesses. For the ratings of short-long and acute-chronic, each of the acute illnesses--kidney infection, pneumonia, and gastroenteritis--was judged to be significantly more short and more acute than each of the chronic illnesses. Each of the acute illnesses was also perceived to be significantly more curable than each of the chronic illnesses; among the chronic illnesses, coronary heart disease was perceived to be significantly more curable than diabetes. Finally, each of the acute illnesses were perceived to be significantly less persistent than each of the chronic illnesses and, among the acute illnesses, pneumonia

TABLE 9

MEAN ILLNESS RATINGS AS A FUNCTION OF ILLNESS

Variable	No-illness control group	ACUTE				CHRONIC			
		K	P	G	D	C	L	F	
Mild/Severe	2.86	4.05 ⁺⁺ _{ab}	4.72 ⁺⁺ _{bc}	3.84 ⁺⁺ _a	4.05 ⁺⁺ _{ab}	5.15 ⁺⁺ _c	5.36 ⁺⁺ _c	28.57***	
Short/Long	5.10	3.45 ⁺⁺ _a	3.35 ⁺⁺ _a	3.37 ⁺⁺ _a	6.03 _b	5.46 _b	5.56 _b	4.40**	
Painless/Painful	2.19	5.45 ⁺⁺ _b	4.78 ⁺⁺ _b	5.37 ⁺⁺ _b	3.67 ⁺⁺ _a	4.68 ⁺⁺ _b	5.31 ⁺⁺ _b	38.54***	
Slow/Fast	4.33	4.31 _b	3.70 _b	4.00 _b	3.49 _b	3.93 _b	2.62 ⁺⁺ _a	18.50***	
Internal/External	3.52	1.50 ⁺⁺	2.23 ⁺⁺	1.61 ⁺⁺	1.77 ⁺⁺	1.90 ⁺⁺	1.84 ⁺⁺	7.68***	
Common/Rare	2.57	3.46 _b	3.10 _b	3.24 _b	2.77 _{ab}	2.29 _a	4.15 ⁺⁺ _c	45.22***	
Weak/Strong	5.19	4.24 _{ab}	3.93 ⁺⁺ _a	4.42 _{ab}	4.24 _{ab}	4.76 _{ab}	5.03 _b	9.18***	
Curable/Incurable	--	1.88 _a	1.69 _a	2.05 _a	4.87 _c	3.98 _b	4.36 _{bc}	9.50***	
Good/Bad	2.19	5.38 ⁺⁺	5.53 ⁺⁺	5.53 ⁺⁺	5.50 ⁺⁺	5.98 ⁺⁺	6.15 ⁺⁺	6.22***	
Acute/Chronic	--	3.15 _a	2.97 _a	3.54 _a	4.61 _b	4.63 _b	4.57 _b	2.30	

TABLE 9 (CONTD)

Variable	No-illness control group	ACUTE			CHRONIC			
		K	P	G	D	C	L	F
Controllable/ Uncontrollable	2.62	3.05 _{ab}	2.73 _a	2.68 _a	2.13 _a	2.83 _a	3.74 _b	21.10***
Uninteresting/ Interesting	4.00	3.38 _a	3.63 _a	3.42 _a	4.85 _b	3.90 _a	5.44 _b ⁺⁺	17.54***
Non-threatening/ Threatening	2.81	4.64 _{ab} ⁺⁺	4.90 _b ⁺⁺	3.95 _a ⁺	4.49 _{ab} ⁺⁺	5.71 _c ⁺⁺	6.21 _c ⁺⁺	34.18***
Comfortable/ Uncomfortable	2.76	6.05 _{bc} ⁺⁺	6.10 _{bc} ⁺⁺	6.29 _c ⁺⁺	4.92 _a ⁺⁺	5.61 _b ⁺⁺	5.97 _{bc} ⁺⁺	20.17***
Not embarrassing/ Embarrassing	3.00	3.31	2.50	3.13	2.46	2.90	3.03	7.73***
Not contagious/ Contagious	--	1.81 _a	4.90 _b	1.74 _a	1.74 _a	1.22 _a	1.59 _a	111.90***
Fair/Unfair	2.43	4.80 _a ⁺⁺	4.13 _a ⁺⁺	4.08 _a ⁺⁺	4.92 _a ⁺⁺	4.56 _a ⁺⁺	5.62 _b ⁺⁺	18.81***
Short-lived/ Persistent	4.40	3.76 _{ab}	3.20 _a ⁺	4.22 _b	5.95 _c ⁺⁺	5.51 _c ⁺	5.44 _c	12.79***

TABLE 9 (CONTD)

Variable	No-illness control group	ACUTE			CHRONIC				
		K	P	G	D	C	L	F	
Clean/Dirty	2.29	4.07 ⁺⁺ _C	4.18 ⁺⁺ _C	3.68 ⁺⁺ _{bc}	2.42 _a	3.10 _b	3.47 _{bc}	14.07***	
Passive/Active	5.00	4.95	4.38	4.26	4.54	4.63	4.62	3.38**	

Note. Higher values indicate greater severity, length, painfulness, etc. Means sharing no common subscript differ significantly by Newman-Keuls ($\alpha_{FW} = .05$).

*** $\underline{p} < .001$

** $\underline{p} < .01$

⁺⁺ $\underline{p} < .01$ by Dunnett's test

⁺ $\underline{p} < .05$ by Dunnett's test

was perceived to be significantly less persistent than gastroenteritis ($\alpha_{EW} = .05$ for the comparisons for each item).

There were distinctive effects for individual illnesses on the remaining items (see Figures 9-14 for rating profiles of each illness). Leukemia differed from most of the other illnesses on four of the ratings. Leukemia was judged to be significantly less fast and more unfair than each of the other five illnesses, among which there were no significant differences. Leukemia was also perceived to be significantly more uncontrollable than the other illnesses, with the exception of kidney infection, for which the difference was not significant. On judgments of common-rare, leukemia was rated as significantly less common than each of the other illnesses, among which there were additional differences: Each of the acute illnesses was perceived to be less common than coronary heart disease, and diabetes did not differ significantly from either the acute illnesses or coronary heart disease on this rating.

Both leukemia and diabetes were perceived as significantly more interesting than kidney infection, pneumonia, gastroenteritis, and coronary heart disease ($\alpha_{EW} = .05$). Diabetes alone was judged to be significantly less painful than each of the other five illnesses. Diabetes was also judged to be significantly less uncomfortable and less dirty than each of the other illnesses, although there were differences among the other illnesses on these two ratings. Gastroenteritis was rated significantly more uncomfortable than coronary heart disease, but the mean ratings for kidney infection, pneumonia,

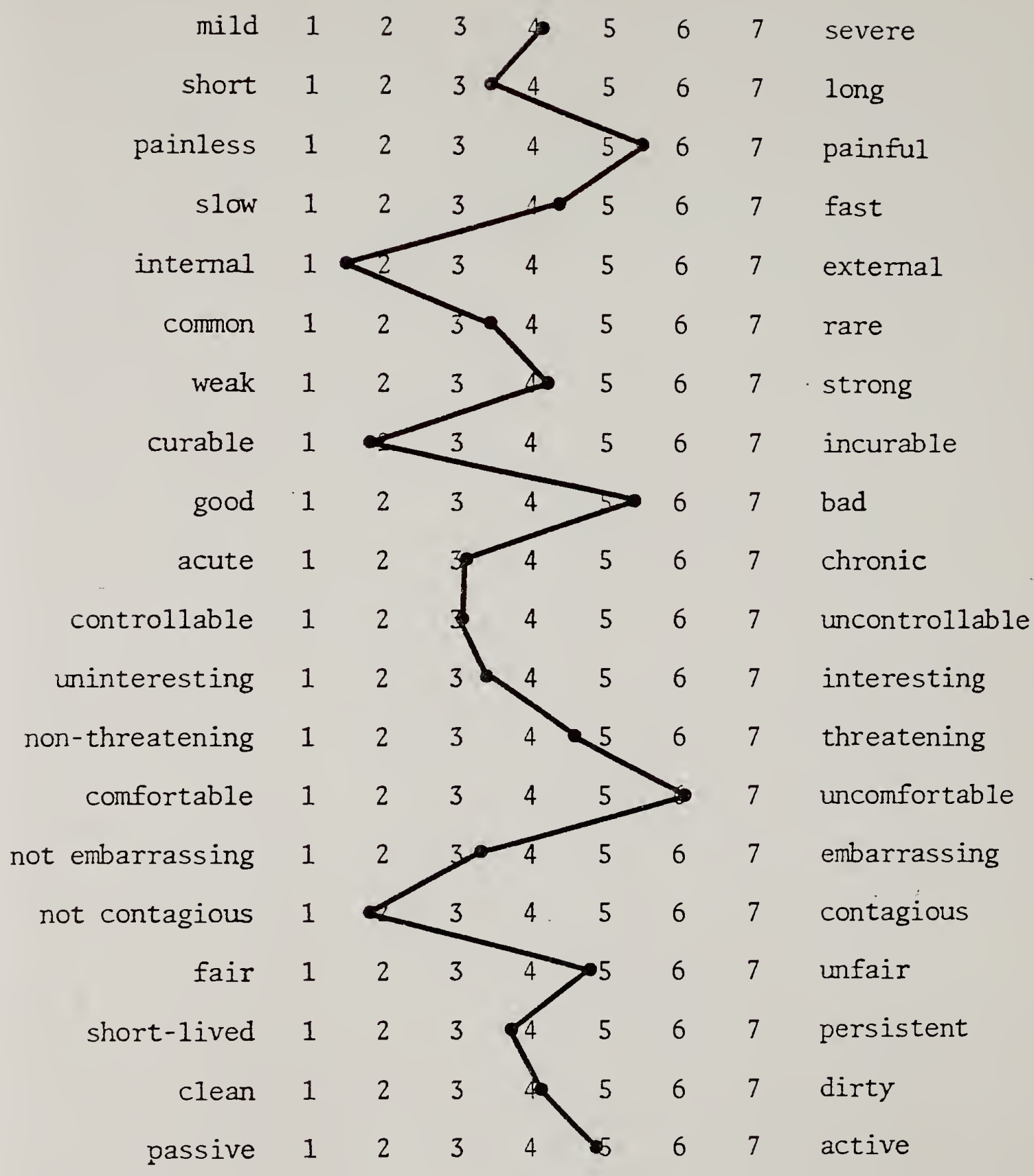


Figure 9. Mean illness ratings for kidney infection ($n = 41$)

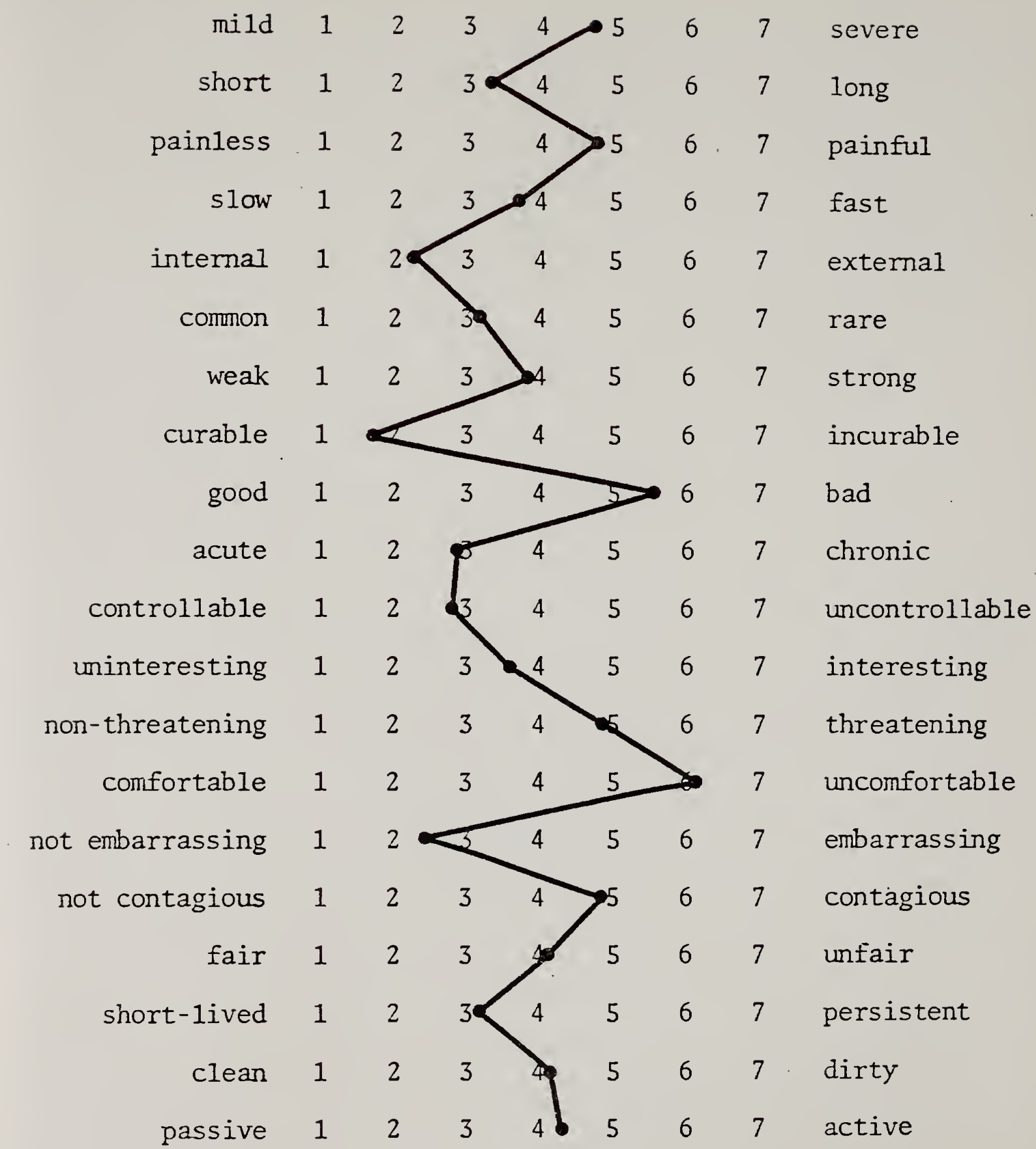


Figure 10. Mean illness ratings for pneumonia ($n = 40$)

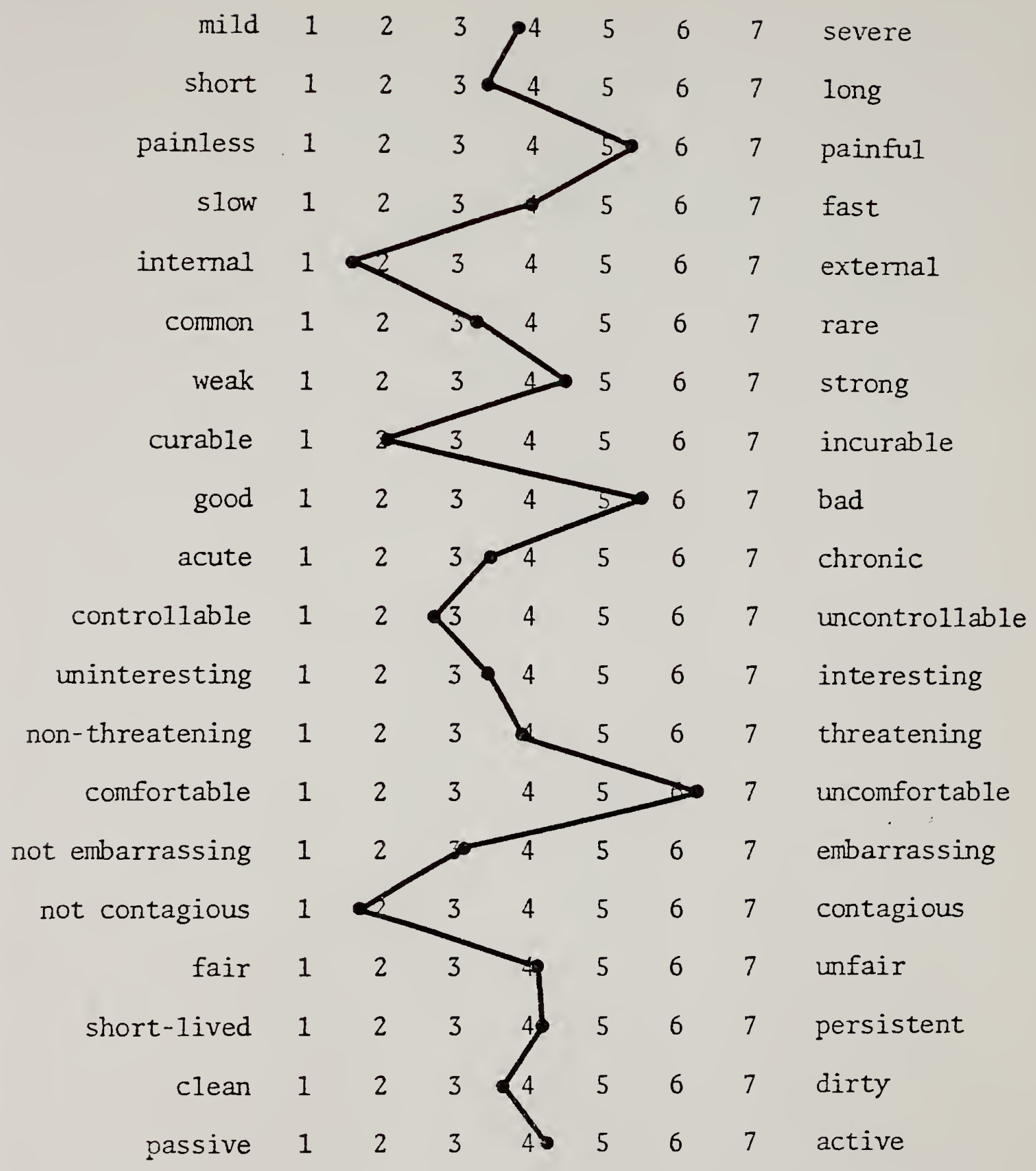


Figure 11. Mean illness ratings for gastroenteritis (\underline{n} = 38)

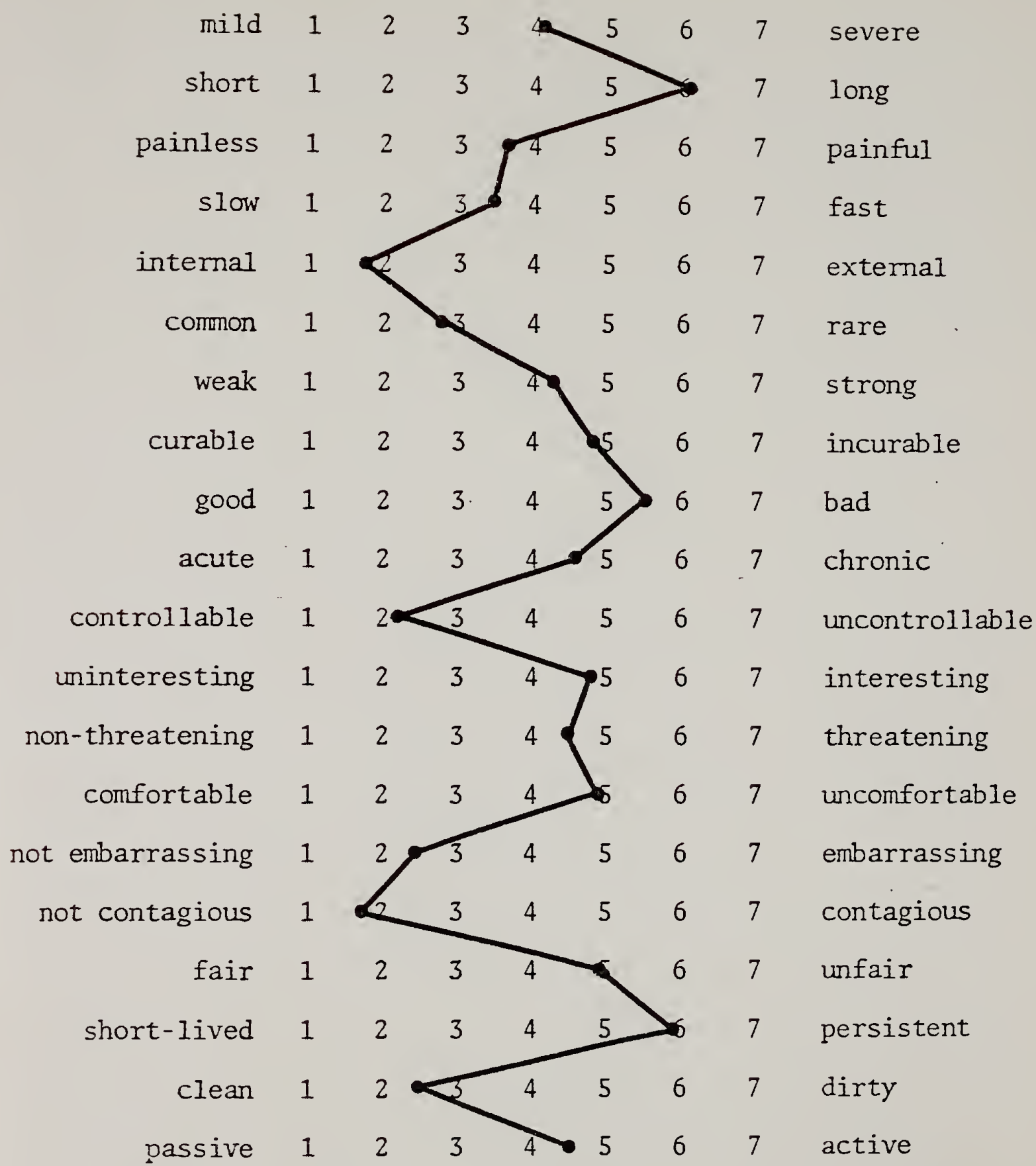


Figure 12. Mean illness ratings for diabetes (n = 39)

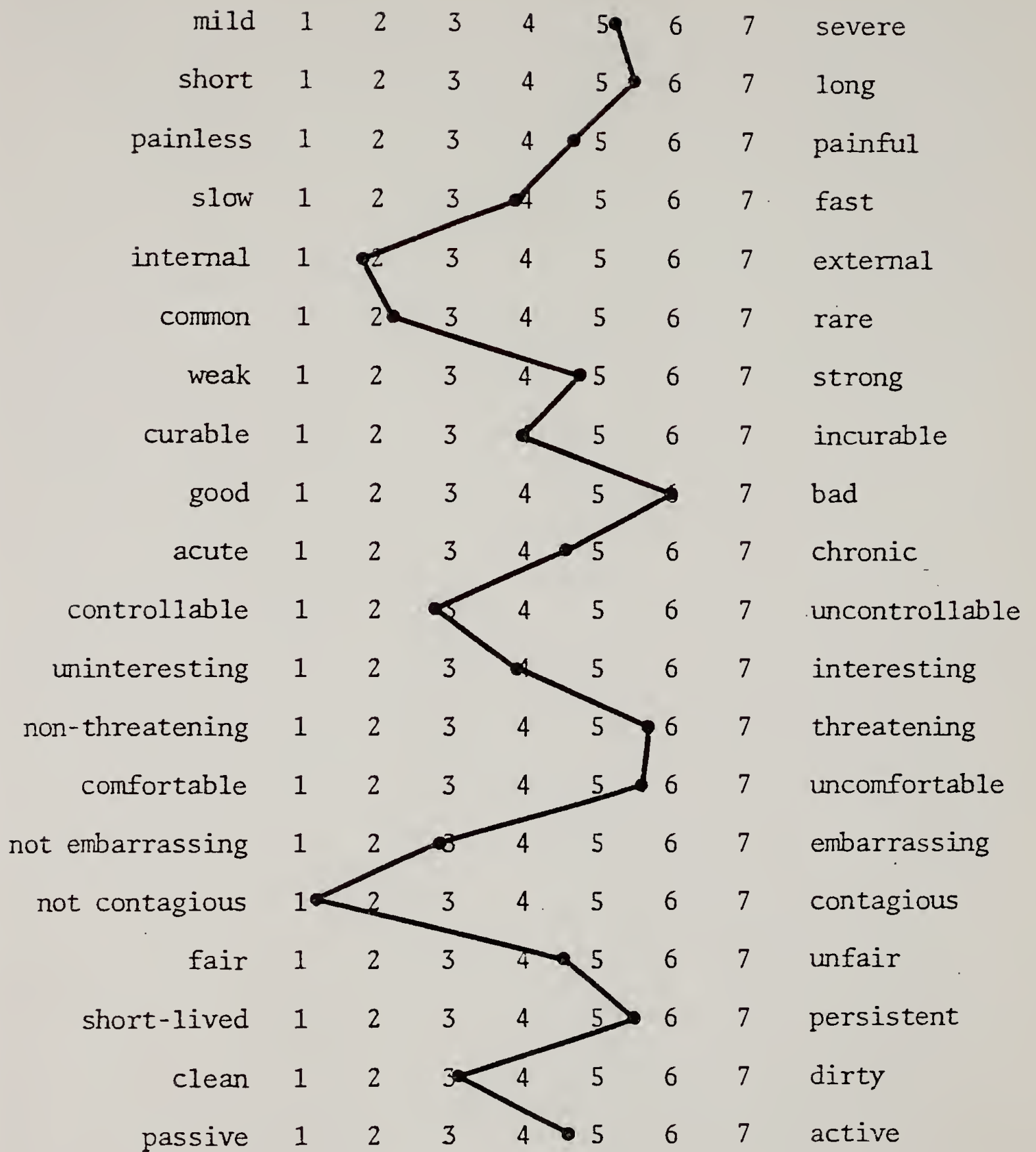


Figure 13. Mean illness ratings for coronary heart disease ($n = 41$)

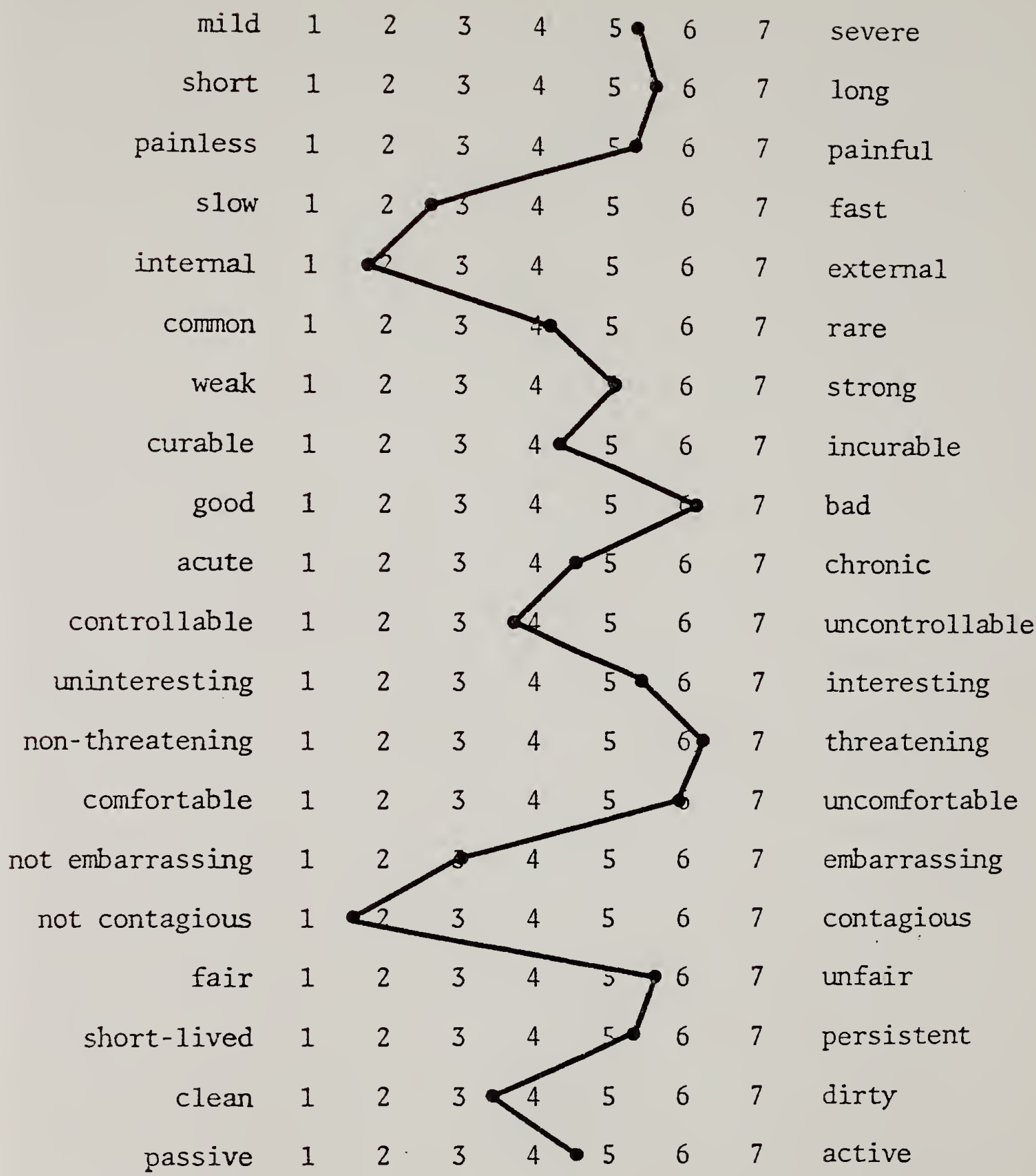


Figure 14. Mean illness ratings for leukemia ($n = 39$)

and leukemia did not differ from the ratings for these two illnesses. On the ratings of clean-dirty, kidney infection and pneumonia were judged to be significantly more dirty than coronary heart disease, while the cleanliness ratings for leukemia and gastroenteritis were intermediate.

Leukemia and coronary heart disease both differed significantly from the other four illnesses on the ratings of mild-severe and non-threatening-threatening. Leukemia and coronary heart disease were perceived as significantly more severe than kidney infection, diabetes, and gastroenteritis, among which there were no significant differences; pneumonia, which received an intermediate rating of severity, was perceived as significantly more severe than gastroenteritis. Leukemia and coronary heart disease were also judged to be significantly more threatening than the other illnesses, among which only pneumonia and gastroenteritis differed ($\alpha_{EW} = .05$ for the comparisons for each item).

Finally, pneumonia had distinctive effects on the ratings of weak-strong and not-contagious-contagious. Pneumonia was perceived as a significantly more weak than leukemia; there were no significant differences between pneumonia or leukemia and the other four illnesses. Pneumonia was also judged to be significantly more contagious than each of the other illnesses, among which there were no differences.

For experimental-control group comparisons, again several different patterns emerged. There were no significant differences in the ratings of health and of illness on the dimensions of controllable-uncontrollable and not embarrassing-embarrassing. For seven of the dimensions,

ratings of each of the illnesses differed significantly from the ratings of health made by respondents in the no-illness control condition. Compared to health, each of the illnesses was perceived to be significantly more severe, painful, internal, bad, threatening, uncomfortable, and unfair ($p_s < .01$ by Dunnett's tests). In addition, each of the acute illnesses was perceived to be significantly less long and less clean than health ($p_s < .01$). For ratings of slow-fast, common-rare, and uninteresting-interesting, leukemia was the only illness for which ratings differed significantly from the control: Leukemia was perceived to be significantly less fast, more rare, and more interesting than health ($p < .01$). Finally, pneumonia was judged to be more weak ($p < .01$) and less persistent ($p < .05$) than health, whereas diabetes ($p < .01$) and coronary heart disease ($p < .05$) were perceived to be more persistent than health.

Belief in a Just World

The average within-cell correlations between scores on the Belief in a Just World Scale and the primary dependent measures were very low in magnitude. BJW scores were not related to the mean person rating ($r = .028$), general attitude toward the person ($r = -.060$), perceived personal similarity to the person ($r = -.066$), blame ($r = -.054$), or responsibility attributed to the person ($r = -.002$). There were, however, weak negative correlations between BJW scores and respondents' estimates of the likelihood that they themselves ($r = -.203$) and the average person ($r = -.194$) would

develop the illness. A median split of BJW scores revealed a slight tendency ($t(229) = 1.87, p = .062$) for respondents in the high BJW group to perceive themselves as less similar to the stimulus person ($M = 3.23$), compared to respondents in the low BJW group ($M = 3.67$). However, there were no differences between respondents with low and high BJW scores on the overall rating of the person, general attitude, blame, and attributions of responsibility to the person.

Summary

The major findings of the present study may be summarized as follows:

1) The experimental manipulations appeared to be very effective, although the manipulations of Duration and Severity were not completely orthogonal in respondents' perceptions of the illnesses. The observed "ceiling" effects in ratings of state of health, severity, chronicity, and curability are consistent with Herzlich's (1973) observation that the seriousness of an illness is not a specific attribute but a "super" attribute which represents an accentuation of features of the illness such as painfulness, chronicity, and prognosis.

2) Although the mean ratings of the person and general attitude were generally in the direction predicted by the just world hypothesis (i.e., more negative than the control), there was only weak evidence of victim derogation in respondents' evaluation of the sick person. Moreover, there was consistent evidence of aggrandizement of the leukemia victim.

3) Neither the presence of an illness nor the characteristics of the illness (viz., duration and severity) affected respondents' perceptions of personal similarity to the stimulus person. In terms of situational similarity (i.e., common fate), respondents perceived themselves to be less likely to develop a chronic than an acute illness, and perceived themselves to be much less likely than the average person to develop any of the illnesses. The perceived likelihood of oneself developing an illness was positively related to attributions of responsibility to the environment, and negatively related to attributions of responsibility to heredity.

4) According to their open-ended explanations, the respondents generally believe kidney infections to be caused by external agents (e.g., germs) and/or eating habits, pneumonia to be caused by lack of resistance and/or a failure to take care of oneself, gastroenteritis to be caused by stress and/or eating habits, diabetes to be caused by heredity and/or eating habits, coronary heart disease to be caused by stress and/or eating or exercise habits, and leukemia to be caused by heredity.

5) Attributions regarding person and general responsibility were not affected by the severity of the illness, and there appeared to be no effect of Duration, Severity, or Illness on attributions of responsibility to chance. With respect to Duration, the person with a chronic illness was perceived to be less able to have prevented the illness and less blameworthy than the person with an acute illness. In addition, heredity, God, and fate were judged to be more responsible

for chronic than acute illness, whereas character, behavior, lifestyle, the environment, and the person were perceived to be less responsible. Attributions of responsibility to heredity, chance, God, and fate were negatively related to blame, while attributions to character, behavior, lifestyle, the environment, the person, and other people were positively related to blame.

6) Among the six illnesses, the attributions of responsibility for leukemia were especially distinctive. The person with leukemia was generally perceived to be less careless, less able to have prevented the illness, and less blameworthy than the person with any of the other five illnesses. In addition, heredity, God, and fate were judged to be more responsible for leukemia than the other illnesses, and the person and character were perceived to be less responsible. In contrast, the person with coronary heart disease, about whom judgments frequently differed from judgments regarding the person with diabetes or leukemia, was perceived to be more careless, more able to have prevented the illness, and more blameworthy; lifestyle and the environment were blamed more, and chance less, compared to most of the other illnesses.

7) The sick person, compared to the healthy person, was perceived to have been more careless about his/her health prior to developing the illness. The blame attributed to the sick person for the illness, however, was less than the responsibility with which the healthy person was credited for his or her own good health. For individual illnesses, the degree of blame attributed to the person with pneumonia,

gastroenteritis, and coronary heart disease did not differ from the degree of responsibility with which the healthy person was credited. Health resembled acute illness in that character, behavior, lifestyle, the environment, and the person were perceived to be more responsible than for chronic illness. Health was similar to chronic illness in that heredity was perceived to be more responsible than for acute illness.

8) Perceptions of illness were affected by both Duration and Severity, as well as the particular illness. Chronic illness was perceived to more severe, long, strong, incurable, bad, chronic, interesting, threatening, unfair, and persistent, and less painful, fast, uncomfortable, contagious, and dirty than acute illness. Severe illness, compared to mild illness, was perceived to be more severe, long, painful, fast, strong, bad, threatening, and uncomfortable. The effects of Duration and Severity on perceptions of illness diverged on three dimensions: Chronic illness was perceived as less painful, fast, and uncomfortable than acute illness, and severe illness was perceived as more painful, fast, and uncomfortable than mild illness.

9) Distinctive perceptions of individual illnesses occurred primarily for the chronic illnesses. Leukemia was generally regarded as less fast and less common, and more unfair and uncomfortable than the other illnesses. Leukemia and diabetes were perceived to be more interesting than the other illnesses, and leukemia and coronary heart disease were judged to be more severe and threatening than the other illnesses. In addition, diabetes was perceived to be less painful, more comfortable, and more clean than the other illnesses.

CHAPTER IV

DISCUSSION

The introduction to the present study described social psychological models of reactions to victimization, and discussed issues pertaining to morality and responsibility in social judgments regarding victims of physical illness. The just world hypothesis, which provided the conceptual foundation for the present study, and other psychological and sociological perspectives on reactions to victimization were presented. In the following discussion, the just world hypothesis and other theoretical perspectives will be considered in light of the present findings, and the implications of the results regarding observers' perceptions of the sick person, their attributions of responsibility for illness, and their perceptions of illness will be discussed. Finally, methodological issues will be considered, as well as potential directions for future research.

Perceptions of the Person

The just world hypothesis that the sick person would either be derogated or blamed for the illness was not supported by the results of the present study. In fact, the reverse was true: The person perceived as the most unfortunate and the least responsible for the illness--the leukemia victim--was evaluated more positively than both the healthy person and the person described as having another illness. For the person with a kidney infection, pneumonia, gastroenteritis,

diabetes, or coronary heart disease, there was a very weak effect of the presence of illness on the overall perception of a person's attributes, but virtually no effect on the perception of specific attributes, or as a function of the duration or severity of the illness. Apparently, in most cases, knowledge that a person is ill, even chronically ill, does not influence observers' general perceptions of the person, or perceptions of the person's specific attributes. However, knowledge that a person has leukemia does appear to engender a more positive perception of the person. This enhanced attractiveness of the leukemia victim is difficult to interpret, inasmuch as none of the theoretical perspectives previously discussed predicts, or can account for, more positive perceptions of a person's attributes as a result of illness. The perception of the person with leukemia as more mature, courageous, clean, unfortunate, and strong, and the perception of leukemia itself as more severe, threatening, rare, interesting, unfair, etc., appears to represent more than simply a response of compassion toward the leukemia victim.

One explanation for this effect may be the conception of the sick person as a martyr, or one who has achieved an "exceptional personality" through great or constant suffering (cf. Herzlich, 1973). This explanation is a clear contradiction of the just world hypothesis, which explicitly predicts that rejection will be strongest when the victim is perceived as a martyr, although "martyr" was operationalized by Lerner and his colleagues as a victim who suffers for the sake of others (Lerner, 1970; Lerner & Simmons, 1966). The just world

hypothesis notwithstanding, it seems plausible that people perceived to be innocently and unfairly victimized by a serious, life-threatening misfortune may be romanticized and perceived to have special or exceptional personal qualities. Sontag (1978), referring to leukemia as the "'white' or TB-like form" of cancer, noted that despite the divergence in the popular mythologies of TB and cancer, leukemia has succeeded TB in contemporary fiction as the "romantic disease which cuts off young life" (p. 18). The leukemia victim, unlike the victims of other cancers, seems especially likely to be regarded "romantically." Leukemia is the "pure" form of cancer that does not involve any growth or tumor, and thus, for which there is no mutilating surgical cure. Moreover, in contrast to other cancers, leukemia is generally regarded as a disease for which the person is not to blame. This probably true because leukemia has not been linked to any personal behaviors or habits, such as smoking, and leukemia is the predominant form of childhood cancer, accounting for almost half of all childhood deaths to cancer.

Although none of the existing theories of reactions to victims can account for the enhanced attractiveness of the leukemia victim observed in the present study, the fact that the leukemia victim's behavior and character were not blamed could be explained by Shaver's (1970) "defensive attribution" hypothesis and a delimiting condition to just world effects (Lerner & Miller, 1978): the perception of a common fate. However, in the present study, respondents perceived themselves to be very unlikely to develop leukemia, and significantly less likely to develop this disease than the average person. Moreover, Shaver

(1970) argued that the anticipation of a common fate will lead to attributions to chance, particularly in the face of severe misfortunes, but in the present study, there was no relationship between the perceived likelihood of developing an illness and attributions of responsibility to chance, and no effect of the presence, or the duration or severity of illness, on attributions of responsibility to chance.

Thus, the just world hypothesis may be more limited in its generalizability than previously supposed. According to the just world hypothesis, only when an observer cannot attribute some misdeed or blameworthy behavior to the victim will he or she decide that the suffering is deserved because the victim is an undesirable, bad person. Conversely, if the victim's character is beyond reproach, the observer will prefer to blame the person's actions rather than character (Lerner & Miller, 1978). But how will observers react to a victim whose character and behavior are beyond reproach, such as a person with leukemia? Under these circumstances, observers' attributions are clearly constrained by the reality of the situation, a reality which would have to be severely distorted in an effort to maintain a belief in a just world by blaming a victims' character or behavior. If the injustice of undeserved suffering cannot be denied, the observer may attempt to make sense of the event within a broader framework of meaning, for example, by attributing the misfortune to God or fate. This appeared to be the case in the present study; God and fate were perceived to be more responsible for leukemia than for health or the other illnesses, and leukemia was the only illness for which God and fate were spontaneously

mentioned in the open-ended explanations of illness. Attributions to God and fate, while they may render misfortunes meaningful and explain the selective occurrence of misfortune, do not clearly support an observer's belief in a just or controllable world, except perhaps in some ultimate scheme of things.

Perceptions of Vulnerability

It is interesting to note that observers' perceptions of vulnerability support Parsons (1951) assertion that people are motivated to underestimate the likelihood of their becoming ill, especially seriously ill. The data indicate that, relative to their estimates for the "average person," people do underestimate their own chances of developing an illness, although it is impossible to determine from these data whether observers' estimates are biased by motivational factors, as Parsons (1951) suggested, or by cognitive factors, such as informational or perceptual differences. The relationship between familiarity with an illness and observers' estimates of both their own and the average person's likelihood of developing an illness does suggest, however, that at least one cognitive heuristic--availability--may affect observers' judgments regarding the probability of an illness, although it does not appear to affect differentially judgments regarding oneself and another person.

There was no relationship between perceived vulnerability (i.e., common fate) and attributions of blame to the victim, but there was a weak negative relationship between the perceived likelihood of develop-

ing an illness and attributions of responsibility to heredity. Again, leukemia was distinctive, in that heredity was the causal factor to which leukemia was almost exclusively attributed, in both the open-ended explanations and the responsibility ratings. Among the causes of misfortunes previously examined in studies of reactions to victimization, heredity is a cause unique to illness. While heredity seems to be an important and plausible cause of illness, particularly 'mysterious' illnesses for which there are no known environmental or behavioral causes, it does not seem to serve any of the motives posited to underlie observers' reactions to victims: Belief in a just world (Lerner, 1970, 1971; Lerner & Miller, 1978), belief in a controllable world (Walster, 1966), and self-esteem or self-protection from blame (Shaver, 1970). The person has no control over his or her heredity and can hardly be considered to "deserve" its negative effects, although, as the present study suggests, the perception of heredity as the cause of illness may protect the person from blame. However, if observers do not anticipate a similar fate, the motive for self-protection from possible future blame is presumably not aroused. Thus, if attributions to heredity have any motivational basis in the present study, the motive would appear to be the perception of one's own invulnerability to a similar fate. That is, unlike attributions of responsibility to behavior, the environment, etc., the attribution of responsibility to the victim's genetic makeup implies that the observer, with a different genetic makeup, is unlikely to develop the illness. This interpretation is supported by the data from the present study; heredity was the only factor for which

attributions of responsibility were negatively related to the perceived likelihood of oneself developing the illness.

Attributions of Responsibility for Illness

The sick person, compared to the healthy person, was perceived to have been more careless about his or her health prior to developing the illness. Without additional evidence, there is little reason to believe that a person who becomes ill was more careless about his or her health than a person who does not, but the knowledge that a person is ill is apparently used by observers to infer greater carelessness. While not providing direct support, these data are consistent with Fischhoff's (1975; Fischhoff & Beyth, 1975) "creeping determinism" hypothesis that observers, in hindsight, will tend to perceive an outcome as having been almost inevitable. There were no differences in perceived carelessness as a function of the duration or severity of the illness, but there were differences among particular illnesses, most notably, the perception of the person with coronary heart disease as having been the most careless, and the perception of the person with leukemia as having been the least careless.

Contrary to the hypothesis, there was no effect of Severity on attributions of responsibility, and there was a reversal for Duration: The person with a chronic illness was perceived to have been less able to have prevented the illness, and less blameworthy, than the person with a less serious, acute illness. However, in terms of specific illnesses, the person with leukemia, as previously noted, was perceived

to have been the least able to have prevented the illness and the least blameworthy, followed by the person with diabetes or kidney infection; the person with pneumonia, gastroenteritis, or coronary heart disease was perceived to have been more able to have prevented the illness and more blameworthy.

These data also indicate that, although the sick role model (Parsons, 1951) may accurately describe general social expectations, it does not seem to apply to judgments regarding the blameworthiness of an individual sick person. Illness, in many cases, does not seem to be regarded as an event which simply happens to people, and for which they are exempted from responsibility. Rather, the sick person is sometimes perceived to have failed in his or her obligation to maintain good health, and to be responsible for an illness which results. Interestingly, at the individual level of analysis, the sick role model appears to more accurately describe reactions to chronic illness, than the acute illnesses to which it theoretically applies.

In terms of the specific factors to which respondents attributed responsibility for illness, heredity, God, and fate were perceived to have been more responsible for chronic than acute illness, and were negatively related to blame. In contrast, character, behavior, lifestyle, the environment, and the person were perceived to have been more responsible for acute illness, and were positively related to blame. Thus, the more serious, chronic illnesses did not lead respondents to attribute responsibility to the person's character or behavior, as the just world hypothesis predicts, to the most controllable factors, as

Walster (1966) predicts, or to chance, as Shaver's (1970) defensive attribution hypothesis predicts. While attributions to heredity, God, and fate for chronic illness do not appear to restore justice or enhance the observer's sense of control, attributions to heredity may, as previously suggested, reduce the observer's sense of personal vulnerability, while attributions to God and fate may serve to explain the selective and seemingly random occurrence of a serious illness in a particular individual.

It is interesting to note that the attribution of chronic illness to heredity, God, and fate is consistent with Nisbett and Wilson's (1977) hypothesis that causes are selected to explain events based on the correspondence or fit between the magnitude of the cause and the effect. That is, chronic illness is a "larger" event than a short-term acute illness, and heredity, God, and fate seem to be relatively "large" causes compared to viruses or the victim's behavior. The open-ended explanations also confirm the suggestion in the introduction that people may find it difficult to believe that a relatively "small" cause such as a virus could cause a life-threatening or disabling illness. Viruses were not mentioned as a cause of chronic illnesses by any respondents, although some cancers, including leukemia, have tentatively been linked to viral infections. Similarly, causal attributions for illness may be based on properties other than magnitude common to the perceived cause and the event. For example, heredity, like chronic illness, is relatively constant and enduring--a permanent characteristic of the person. Heredity does not seem a likely cause of a short-term, non-

recurring illness, except inasmuch as it may be perceived to influence a person's general resistance to disease.

Data from the control group allowed for some interesting comparisons of attributions of responsibility for health versus illness. Ross and DiTecco (1975) have suggested that there may be an asymmetry in the assignment of credit and blame, because morally good behavior is often perceived to have external determinants in that it is dictated by a socially shared ought standard. Thus, blame may often be attributed for failure to adhere to an ought standard, but adherence may receive little praise. Ought standards for health were clearly evident in the open-ended responses regarding the causes and prevention of illness, and were quite pronounced for pneumonia, which was most frequently described as a result of failure to take care of oneself, to do the things one ought to do, like eating properly and dressing appropriately for inclement weather. Moreover, health is often taken as a given, the normal, natural state of the individual which he or she is supposed to maintain, while illness is regarded as biologically and socially disvalued or deviant (cf. Herzlich, 1973; Parsons, 1951). Thus, it might be expected that people would be held responsible or blamed for their illnesses, but not praised or given credit for good health.

The data from the present study, however, suggest that people are credited for their good health. In general, assuming similar scale properties, the blame attributed to the sick person for illness was less than the responsibility with which the health person was credited for his/her good health. For individual illnesses, the degree of blame

attributed to the person with pneumonia, gastroenteritis, or coronary heart disease did not differ from the degree of responsibility with which the healthy person was credited, whereas the blame attributed to the person with a kidney infection, diabetes, or leukemia was less than the responsibility attributed to the healthy person. The person with any of the latter three illnesses was also perceived to have been less able to have prevented the illness than the person with pneumonia, gastroenteritis, or coronary heart disease. These data could be interpreted to mean that a person is perceived to be accountable for his or her state of health, whether sick or healthy, unless the person develops an illness which he or she is perceived to have been unable to have prevented, in which case the person's responsibility is diminished.

In terms of the specific factors to which health and illness were attributed, heredity, character, behavior, lifestyle, the environment, and the person were all perceived to be responsible for health, whereas in explanations of illness, respondents distinguished heredity, on the one hand, and character, behavior, lifestyle, the environment, and the person, on the other. Thus, health resembled acute illness, in that character, behavior, lifestyle, the environment, and the person were perceived to be more responsible than for chronic illness, and was similar to chronic illness, in that heredity was perceived to be more responsible than for acute illness. There was no difference in the perceived responsibility of chance, God, and fate for health versus illness, although, as previously noted, God and fate were perceived to be more responsible for chronic than acute illness, largely because

of the perceived role of these factors in the occurrence of leukemia. Thus, all of these factors were perceived to be responsible for a person's health, but were distinguished in terms of their contribution to specific kinds of departures from health, namely, acute versus chronic illness, or a particular illness.

Although the responsibility ratings provide a quantitative basis for comparisons across experimental conditions, the data they yield are deceptively simple; the open-ended responses regarding perceived causality revealed much more complex perceptions of disease causation. Although there were many simple, straightforward responses such as "genetics" or "virus," there were also numerous responses which discussed the interaction of two or more factors, or a chain of causes in the etiology of illness. There were references to the individual's constitution, prior and current physical state, emotional states, and health habits, as well as contemporaneous causes. In addition, some responses implied distinctions between necessary and sufficient causes, or direct and indirect causes. One of the more prominent examples is the concept of "resistance"; it was not uncommon, for instance, for respondents to imply that both an external agent (e.g., virus) and "lack of resistance" were necessary for an illness such as pneumonia to occur (cf. Kelley, 1972).

Finally, despite data from the responsibility ratings and the open-ended responses, the perceived role of the individual in the etiology of illness is not entirely clear. Attribution researchers have noted the difficulties and ambiguities inherent in attempts to distinguish

explanations on the basis of internal versus external, or person versus environment factors, and these ambiguities are quite apparent in the present data. Perhaps the most extreme example in the present study is the positive relationship between attributions of responsibility to the environment and the perceived blameworthiness of the person.

Similarly, when respondents identified "eating the wrong foods" as the cause of an illness, it is not clear whether they perceive as the cause of the illness the person and his or her eating habits, or the food, or both.

Herzlich (1973), describing the causal conceptions held by her respondents, a sample of middle-class and professional people in France, classified the causes into two major categories: the "way of life" and individual factors. The individual factors, considered to have a secondary, passive role in the occurrence of illness (viz., resistance), included predispositions, constitution, temperament, nature of the individual, capacity for resistance, etc. The "way of life," however, which included the environment and everyday forms of behavior (e.g., eating, work and leisure activities, etc.), was considered to be largely external to the person, and to be the principal and active determinant of disease. The way of life was conceived by Herzlich's respondents as the modern, urban way of life, and was experienced as something unhealthy and constraining, and uniformly undesirable in its impact; city of life was almost unanimously perceived to produce "a world of fatigue and nervous tension" (p. 20). In the present study, however, the respondents seemed to regard lifestyle, the concept

most similar to "way of life," as more internal to the person, or at least as something for which the individual is to blame. This difference may be attributable to social or cultural differences, such as the increasing emphasis on personal responsibility for health in this country (e.g., Crawford, 1977; Gustaitis, 1978; Knowles, 1977), or perceived mobility and ability to escape urban life. Still, there are numerous ambiguities in the perceived role of the individual in the etiology of illness via behavior, lifestyle, and environmental influences.

Perceptions of Illness

Although there was considerable homogeneity in the open-ended explanations for each illness, the range of responses across the six illnesses revealed rather complex "theories" of disease. For example, despite numerous references to "not taking care of oneself" as a cause contributing to illness (especially acute illness), the notion of "resistance" was largely limited to explanations of the occurrence of pneumonia. It is not clear why resistance is not perceived to play a role in the occurrence of other illnesses, such as kidney infections, except that people report being more familiar with pneumonia, and many have probably read or been told that if they become "rundown" and neglect a cold, they will be susceptible to pneumonia. Still, it is interesting that resistance was not perceived to play a prominent role in the etiology of chronic illness and acute illnesses other than pneumonia.

Many of the responses seem to reflect a blend of common sense and popular conceptions or beliefs about a particular illness. For example, the explanations of coronary heart disease present a stereotypic picture of the person with coronary heart disease similar to the media image of the stressed, overworked, and overweight executive. Even more interesting were the explanations of gastroenteritis, a condition with which most respondents were not familiar. The open-ended responses suggested that respondents used peptic ulcers as a prototype of gastrointestinal disorders. Perhaps based on the popular view of ulcers as a psychogenic disorder, the person with gastroenteritis was depicted as a nervous or anxious kind of person, or a person under considerable stress, who eats the wrong foods. In fact, gastroenteritis can be caused by a number of different factors, including food and chemical poisoning, viruses, intestinal flu, infections, and food allergies, and is not considered to be psychological or emotional in origin. Since gastroenteritis was the only gastrointestinal illness presented in this study, it is impossible to determine the extent to which other GI disorders would be assimilated to ulcers, although it does appear that well-known illnesses, including ulcers, may serve as prototypes in lay understanding and explanation of unfamiliar illnesses.

The existence of popular conceptions of individual illnesses is relatively clear from the homogeneity of responses for each illness. From the open-ended explanations of each illness emerges a fairly distinct picture of who develops the illness, and how or why the illness occurs. However, what is not evident from these data is whether these

conceptions are illness-specific, or whether they are derived from broader, more general lay "theories" of disease, theories which might be organized in terms of anatomy (e.g., heart conditions versus GI disorders), transmission (e.g., contagious versus not contagious), type of person affected (e.g., children, elderly, women, inactive people, etc.), origin (e.g., psychological versus physical), or prognosis (e.g., acute versus chronic, curable versus incurable, non-fatal versus fatal). Although the illness ratings revealed perceptions which were unique to specific illnesses, the open-ended responses provide some evidence of broader "theories" of illness. For example, consistent with the responsibility ratings, heredity was almost exclusively cited as a cause of chronic illnesses, and bacterial or viral infections were confined to explanations of the acute illnesses.

There were also several references to an infection or cold "settling" in some part of the person's body, such as the kidneys. These references may reflect what Davis (1963) described as the "layman's migratory theory of pathology," the notion of an illness, frequently a "cold," moving through the body and "settling," almost arbitrarily, in some part of the body. As a simplification of medical concepts such as residual inflammation and referred pain, Davis (1963) suggested that this "migratory theory" provides a "ready-made rule-of-thumb explanation" for many transient pains not considered serious enough to warrant medical attention. The unanswered question, posed by Davis (1963), is the extent to which such a theory derives from popularized modern developments in virology, or from primitive notions of disease etiology

involving, for example, the ingestion of symbolically evil substances.

Methodological Issues

This study raises several methodological issues for social psychological research on reactions to victimization and social judgments regarding illness. One of the more important issues is the uniformity of observers' reactions to victims of different misfortunes, and the necessity of studying reactions to different kinds of misfortune. The data from the present study suggest that observers' reactions to victims of physical illness may differ substantially from reactions to victims of electric shock (e.g., Lerner & Matthews, 1967; Lerner & Simmons, 1966) or rape (e.g., Calhoun, Selby, Warring, 1976; Jones & Aronson, 1973; Smith, Keating, Hester, & Mitchell, 1976), for example. While there may, in fact, be cognitive or motivational processes which underlie observers' reactions to victims of any serious misfortune, the present study indicates that the nature of the misfortune, and observers' prior beliefs about the causes of that class of events, may also be important determinants of reactions to victimization, and may restrict the generalizability of these processes. Although observers in the present study did blame the victims of some illnesses, particularly acute illnesses and illnesses popularly believed to have behavioral causes, there was little evidence of derogation, and the leukemia victim was regarded more positively than the healthy person, despite observers' belief that the leukemia victim was the most unfortunate and the least blameworthy.

Moreover, there is little reason to believe that illness as a misfortune departs in crucial ways from the events addressed by theory and research on reactions to victimization. Illness is a serious and often life-threatening event with which everyone has had experience, and to which everyone is vulnerable. Illness often involves considerable suffering, and seems to single out individuals in an arbitrary and unjust manner. Although "just world" effects should be strongest when the victim is perceived to have suffered a serious misfortune and to be genuinely innocent, these were precisely the conditions which produced a reversal of the just world hypothesis in the present study. This suggests that the reality of the situation may impose strong limits on the motivations and perceptions of observers, and on the "counterintuitive" hypotheses of social psychologists. It seems unlikely that many people would have such a strong motivation to maintain a belief in a just or controllable world that they would derogate or blame a victim of leukemia.

In addition to issues regarding the limits of the just world hypothesis, there are questions regarding the generalizability of the present results to other illnesses and contexts, particularly situations involving actual contact with a victim of physical illness. It is clear from the present study that for any set of illnesses, there will be variability unique to each illness. It is also evident that leukemia is somewhat unique in the reactions it elicits from observers, and it seems unlikely that many illnesses, including other cancers, would evoke similar reactions. However, apart from illnesses that carry a

strong social stigma (e.g., venereal diseases), which were excluded from the present study, there is no reason to suspect that the results for illness duration and severity would not generalize to other illnesses.

Although the use of written reports may maximize control of experimental variables, there are a number of additional factors introduced when an observer interacts with a victim of physical illness, and these factors can be expected to restrict the generalizability of the present results. For example, the observer is probably less likely to blame a sick friend or family member, than an acquaintance or stranger, since beliefs about the person's attributes are likely to be more stable, and the observer will have greater knowledge of the person's actual health-related behavior. Similarly, actual contact with a sick person, or exposure to visible suffering, may tend to elicit sympathy or compassion or, conversely, may evoke physical aversion. Moreover, actual behavior toward the sick person is likely to be more strongly governed by social norms than a person's private beliefs and attitudes toward the sick person. In short, the present results may be limited in their generalizability by additional factors which determine an observer's feelings about the sick person and his or her illness, and beliefs regarding appropriate behavior toward the sick person (Wortman & Dunkel-Schetter, 1979), as well as processes which may influence the relationship between the observer's behavior and attitudes (e.g., Bem, 1972).

A second methodological issue concerns the attributional options provided subjects in just world research. Typically, the subject is asked only whether, or to what extent, the victim's character or

behavior is to blame for the misfortune, although questions about the responsibility of chance or a perpetrator are sometimes included. However, researchers rarely confirm their own notions regarding the possible causes of events, such as misfortunes, by asking open-ended questions about subjects' explanations of the event. Without such "untutored" causal explanations (cf. Harrè & Secord, 1973; Orvis, Kelley, & Butler, 1976) or at least a larger array of attributional options (e.g., fate, God, society, other people), respondents' opportunities to make sense of the event via attributions to causes other than the victim's behavior or character are severely restricted. Moreover, potentially complex attributional analyses, which may identify multiple causes or distinguish necessary and sufficient factors, are reduced to several independent ratings of factors specified by the researcher.

A related methodological issue concerns the ambiguity inherent in attempts to classify attributions in terms of their focus on factors internal or external to the person, and the importance of clearly distinguishing between attributions of causality and attributions of responsibility. In the present study, for example, attributions of causality to the person's genetic makeup were negatively associated with attributions of responsibility to the person,, whereas attributions of causality to the person's lifestyle or the environment were positively related to attributions of responsibility to the person. Thus, at

least for illness, the perception that something about the person caused the illness does not necessarily mean that the person will be blamed or held responsible for the illness. Similarly, the person may be held responsible when more external factors, such as their lifestyle and the environment, are perceived to have caused the illness. If similar distinctions are made by the sick person him or herself, some of the evidence of self-blame by victims of physical illness in the clinical literature may, in fact, be based on attributions of causality which have no relationship, or a negative relationship, to blame. Thus, measurement instruments which are conceptually and technically more precise may be necessary to elucidate the perceived role of the individual in the etiology of illness, or in the occurrence of other misfortunes.

Finally, the study raises issues regarding the appropriate control or baseline against which to evaluate victim derogation, attributions of responsibility, and the assignment of credit or blame. In the present study, comparisons among the experimental groups of ratings of the person would have indicated a relatively positive impression of the leukemia victim, but would not have revealed the enhanced perception of the person with leukemia, compared to the person with no illness. Similarly, comparisons of attributions of responsibility and blame among the experimental conditions, without reference to the ratings by the no-illness control group, would have led to the conclusion that people are blamed by others for their illnesses. Comparisons with the control group, however, suggested that people are held responsible for their state of health, whether sick or healthy, that they are not blamed

simply because they have an illness, and that, for some illnesses, their perceived responsibility for their state of health is diminished by illness. Although there is no corresponding control condition for most misfortunes used in previous research on reactions to victimization, it may be possible to construct conditions which permit comparisons of the assignment of credit as well as blame, or which provide a baseline against which to evaluate the absolute amount of blame or derogation of the victim.

Future Directions

The present experiment suggests a number of different directions for future research. One of the most interesting findings which requires further investigation is the enhanced attractiveness of the leukemia victim. What are the characteristics of illnesses which elicit such a reaction, and what are the mechanisms by which an illness leads to more positive impressions of a person? For example, is this effect based on assumptions about the kind of person who is likely to develop the illness, or the kind of person who could endure such a serious illness? Do other forms of cancer evoke a similar reaction by observers, or is this a media-created "Love Story" effect?

Second, a major theoretical issue remains regarding the motivational processes, if any, which underlie reactions to victims of misfortune. Even in studies which provide support for the just world hypothesis, it is not clear that a desire to maintain a belief in a just world motivates the attributions made. The perceived restoration of justice is

not the only possible motive served by attributions of responsibility to the victim's character or behavior, and there is little direct evidence that observers who attribute responsibility for a misfortune to the victim actually believe that the victim deserved the misfortune because of his or her character or behavior. Given the limited range of attributional options typically provided subjects in just world studies (e.g., the victim's character, behavior, and perhaps chance), attributions to the victim may simply represent an attempt to make sense of the event, or to reduce a sense of vulnerability created by knowledge of a serious, seemingly random and unpredictable misfortune.

Further, very little attention has been focused on the role of cognitive processes in reactions to victimization. For example, if knowledge of an event tends to increase the postdicted likelihood that the event would occur (Fischhoff, 1975; Fischhoff & Beyth, 1975), are the victims and observers of misfortune likely to perceive the misfortune, in retrospect, as having been somewhat inevitable, given the circumstances, the victim's behavior, etc., even if no one could have anticipated the misfortune? Similarly, if given a broader range of possible responses, or allowed to provide open-ended explanations, will respondents tend to select as causes those factors which are similar to the misfortune, in terms of magnitude or some other property?

Fourth, why do people perceive themselves to be less likely than others to develop an illness, and does this discrepancy exist for perceived vulnerability to other negative life events? Is the underestimation of one's own vulnerability, relative to others, based on

cognitive processes or "heuristics," such as informational or perceptual differences (cf. Jones & Nisbett, 1971) or availability (Tversky & Kahneman, 1974), or is it the result of a process such as denial or optimism? Are there important behavioral implications of a tendency to perceive oneself as less vulnerable to illness or other misfortunes? For example, are people less likely to seek medical attention for a potentially serious illness, or more willing to take health-related risks, such as smoking? Is the perceived likelihood of oneself developing an illness affected by perceived similarity (e.g., age, sex, lifestyle, etc.) to a known victim (cf. Mechanic, 1972)?

Fifth, would victims of physical illness perceive themselves and their illness in a manner similar to observers? For example, would persons with pneumonia or coronary heart disease blame themselves to the extent that they are blamed by observers? Would they identify the same causes of their illness? Research on actor-observer differences in attribution (e.g., Jones & Nisbett, 1971) would suggest that the sick person, with greater knowledge of his or her own health habits, may tend to attribute the illness to more external factors, such as a virus or a stressful environment, than to themselves. Conversely, the evidence from the clinical literature of self-blame by cancer victims contrasts sharply with the reactions of observers to the leukemia victim in the present study.

Finally, there are many unanswered questions concerning lay concepts and explanations of disease. Is the layperson's knowledge of disease largely limited to illness-specific beliefs, or does the

layperson have more general "theories" of disease? How well integrated are lay beliefs regarding illness, and to what extent do they overlap with current medical beliefs? What are the socially and psychologically important dimensions of illness, and how do they affect the social perception of illness and its victims? For example, is the medical distinction between acute and chronic illness important only inasmuch as it expresses the extent to which the illness can be cured? What are the essential features of an illness which define its perceived seriousness?

In conclusion, the present study indicates that, in contrast to the medical model that defines illness as a natural event beyond the individual's control, people are held responsible for their health and illnesses, unless the illness is perceived to be something which the individual could not have prevented. In contrast to the sick role model (Parsons, 1951), the sick person is not always exempted from responsibility for an illness; for those illnesses which are perceived to be preventable, the sick person is blamed. Although having an illness is sometimes viewed by others as a personal failure, the presence of an illness does not seem to negatively affect perceptions of the person, and, in some cases, may even enhance observers' impressions of the person, contrary to the just world hypothesis (Lerner, 1970, 1971; Lerner & Miller, 1978). Thus, individuals may be held responsible for illness, but illness does not appear to "spoil" the individual's identity.

REFERENCES

- Abrams, R. D. & Finesinger, J. E. Guilt reactions in patients with cancer. Cancer, 1953, 6, 474-482.
- Ackerknecht, E. H. Natural diseases and rational treatment in primitive medicine. Bulletin of the History of Medicine, 1946, 19, 467-497.
- Aderman, D., Brehm, S. S., & Katz, L. B. Empathic observations of an innocent victim: The just world revisited. Journal of Personality and Social Psychology, 1974, 29, 342-347.
- Ajzen, I. Intuitive theories of events and effects of base-rate information on prediction. Journal of Personality and Social Psychology, 1977, 35, 303-314.
- Asch, S. E. Social Psychology. New York: Prentice-Hall, 1952.
- Bakan, D. Disease, pain, and sacrifice: Toward a psychology of suffering. Boston: Beacon Press, 1968.
- Balint, M. The doctor, his patient, and the illness. London: Pitman, 1957.
- Bard, M. & Dyk, R. B. The psychodynamic significance of beliefs regarding the cause of serious illness. Psychoanalytic Review, 1956, 43, 146-162.
- Bard, M. & Sutherland, A. M. Psychological impact of cancer and its treatment. IV. Adaptation to radical mastectomy. Cancer, 1955, 8, 656-672.
- Bem, D. J. Self-perception theory. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 6). New York: Academic Press, 1972.
- Berkanovic, E. Lay conceptions of the sick role. Social Forces, 1972, 51, 53-64.
- Branson, R. The secularization of American medicine. Hastings Center Studies, 1973, 1, 17-28.
- Brown, G. W. Social causes of disease. In D. Tuckett (Ed.), An introduction to medical sociology. London: Tavistock, 1976.
- Bulman, R. J. & Wortman, C. B. Attributions of blame and coping in the "real world": Severe accident victims react to their lot. Journal of Personality and Social Psychology, 1977, 35, 351-363.

- Bynder, H. & New, P. K. M. Time for a change: From micro- to macro-sociological concepts in disability research. Journal of Health and Social Behavior, 1976, 17, 45-52.
- Calhoun, L. G., Selby, J. W., & Warring, L. J. Social perception of the victim's causal role in rape: An exploratory examination of four factors. Human Relations, 1976, 29, 517-526.
- Caplan, N. & Nelson, S. D. On being useful: The nature and consequences of psychological research on social problems. American Psychologist, 1973, 28, 199-211.
- Caudill, W. Applied anthropology in medicine. In A. L. Kroeber (Ed.), Anthropology today. Chicago: University of Chicago Press, 1953. Pp. 771-806.
- Centers, L. & Centers, R. Peer group attitudes toward the amputee child. Journal of Social Psychology, 1963, 61, 127-132.
- Chaiken, A. L. & Darley, J. M. Victim or perpetrator? Defensive attribution of responsibility and the need for order and justice. Journal of Personality and Social Psychology, 1973, 25, 268-275.
- Chesler, M. Ethnocentrism and attitudes toward the physically disabled. Journal of Personality and Social Psychology, 1965, 2, 877-892.
- Chodoff, P., Friedman, S. B., & Hamburg, D. A. Stress, defenses, and coping behavior: Observations in parents of children with malignant diseases. American Journal of Psychiatry, 1964, 120, 743-749.
- Clore, G. L. & Jeffrey, J. M. Emotional role playing, attitude change, and attraction toward a disabled person. Journal of Personality and Social Psychology, 1972, 23, 105-111.
- Coates, D. & Wortman, C. B. Control, social interaction, and depression maintenance. In A. Baum, J. Singer, & Y. Epstein (Eds.), Advances in environmental psychology (Vol. 2). Hillsdale, NJ: Lawrence Erlbaum Associates, in press.
- Coates, D., Wortman, C. B., & Abbey, A. Reactions to victimization: A social psychological analysis. In I. Frieze, D. Bar-Tel, & J. Carroll (Eds.), Applications in attribution theory. New York: Jossey-Bass, in press.
- Coe, R. M. Sociology in medicine. New York: McGraw-Hill, 1970.
- Cohen, A. K. Deviance and control. Englewood Cliffs, NJ: Prentice-Hall, 1966.

- Crawford, R. You are dangerous to your health: The ideology and politics of victim-blaming. International Journal of Health Services, 1977, 7, 663-680.
- Davis, F. Passage through crisis: Polio victims and their families. Indianapolis, IN: Bobbs-Merrill, 1963.
- Dembo, R., Ladieu-Leviton, G., & Wright, B. A. Adjustment to misfortune: A problem of social psychological rehabilitation. Artificial Limbs, 1956, 3, 4-62.
- Dodge, D. L. & Martin, W. T. Social stress and chronic illness. Notre Dame, IN: University of Notre Dame Press, 1970.
- Dubos, R. Mirage of health. New York: Harper, 1971.
- Dunn, O. J. Multiple comparisons among means. Journal of the American Statistical Association, 1961, 56, 52-64.
- Fabrega, H., Jr. Disease and social behavior: An interdisciplinary perspective. Cambridge, MA: MIT Press, 1974.
- Fabrega, H., Jr. & Manning, P. K. Disease, illness, and deviant behavior. In R. A. Scott & J. D. Douglas (Eds.), Theoretical perspectives on deviance. New York: Basic Books, 1972.
- Field, D. The social definition of illness. In D. Tuckett (Ed.), An introduction to medical sociology. London: Tavistock, 1976.
- Fischhoff, B. Hindsight \neq foresight: The effect of outcome knowledge on judgment under uncertainty. Journal of Experimental Psychology: Human Perception and Performance, 1975, 1, 288-299.
- Fischhoff, B. & Beyth, R. "I knew it would happen": Remembered probabilities of once-future things. Organizational Behavior and Human Performance, 1975, 13, 1-16.
- Freidson, E. Patients' views of medical practice. New York: Russell Sage, 1961.
- Freidson, E. Profession of medicine: A study of the sociology of applied knowledge. New York: Dodd, Mead, 1970.
- Goffman, E. Stigma: Notes on the management of spoiled identity. Englewood Cliffs, NJ: Prentice-Hall, 1963.
- Golden, D. A. & Davis, J. G. Counseling parents after the birth of an infant with Down's Syndrome. In R. H. Moos (Ed.), Coping with physical illness. New York: Plenum Medical Book Company, 1977.

- Gordon, G. Role theory and illness: A sociological analysis. New Haven: College & University Press, 1966.
- Graham, S. Social factors in relation to the chronic illnesses. In H. Freeman, S. Levine, & L. G. Reeder (Eds.), Handbook of medical sociology. Englewood Cliffs, NJ: Prentice-Hall, 1963.
- Greene, W. A. The psychosocial setting of the development of leukemia and lymphoma. Annals of the New York Academy of Sciences, 1966, 125, 794-801.
- Gustaitis, R. Sickness as sin--Heal thyself strategy led astray. Health Law Project Bulletin, 1978, 3 (12), 22-24.
- Hamburg, D. A. & Adams, J. E. A perspective on coping behavior: Seeking and utilizing information in major transitions. Archives of General Psychiatry, 1967, 17, 277-284.
- Harrè, R. & Secord, P. F. The explanation of social behavior. Totowa, NJ: Littlefield, Adams, & Company, 1973.
- Harvey, M. D. & Rule, B. G. Moral evaluations and judgments of responsibility. Personality and Social Psychology Bulletin, 1978, 4, 583-588.
- Heider, F. Social perception and phenomenal causality. Psychological Review, 1944, 51, 358-374.
- Heider, F. The psychology of interpersonal relations. New York: Wiley, 1958.
- Herzlich, C. Health and illness: A social psychological analysis. In H. Tajfel (Ed.), European Monographs in Social Psychology (Vol. 5). New York: Academic Press, 1973.
- Hinkle, L. E., Jr., Pinsky, R. H., Bross, I. D. J., & Plummer, N. The distribution of sickness disability in a homogeneous group of 'healthy adult men.' American Journal of Hygiene, 1956, 64, 220-242.
- Hinkle, L. E., Jr. & Wolff, H. G. Health and the social environment: Experimental investigations. In A. Leighton, J. A. Clausen, & R. N. Wilson (Eds.), Explorations in social psychiatry. New York: Basic Books, 1957.
- Hinton, J. Bearing cancer. In R. H. Moos (Ed.), Coping with physical illness. New York: Plenum Medical Book Company, 1977.

- Hunt, P. (Ed.). Stigma: The experience of disability. London: Chapman, 1966.
- Illich, I. Medical nemesis: The expropriation of health. New York: Bantam, 1976.
- Ingwell, R. H., Thoresen, R. W., & Smits, S. J. Accuracy of social perception of physically handicapped and non-handicapped persons. Journal of Social Psychology, 1967, 72, 107-116.
- Jaco, E. G. (Ed). Patients, physicians, and illness (2nd ed.). New York: Free Press, 1972.
- Janoff-Bulman, R. Causality: Psychological and philosophical perspectives. Unpublished doctoral dissertation, Northwestern University, 1977.
- Jenkins, C. D. Group differences in perception: A study of community beliefs and feelings about tuberculosis. American Journal of Sociology, 1966, 71, 417-429.
- Jenkins, C. D. & Zyzanski, S. J. Dimensions of beliefs and feelings concerning three diseases--Poliomyelitis, cancer, and mental illness: A factor analytic study. Behavioral Science, 1968, 13, 372-381.
- Jones, C. & Aronson, E. Attribution of fault to a rape victim as a function of respectability of the victim. Journal of Personality and Social Psychology, 1973, 26, 415-419.
- Jones, E. E. & Davis, K. E. From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 2). New York: Academic Press, 1965.
- Jones, E. E., Kanouse, D. E., Kelley, H. H., Nisbett, R. E., Valins, S., & Weiner, B. Attribution: Perceiving the causes of behavior. Morristown, NJ: General Learning Press, 1972.
- Jones, E. E. & Nisbett, R. E. The actor and the observer: Divergent Perceptions of the causes of behavior. Morristown, NJ: General Learning Press, 1971.
- Jordan, S. The disadvantaged group: A concept applicable to the handicapped. Journal of Psychology, 1963, 55, 313-322.
- Kassebaum, G. G. & Baumann, B. O. Dimensions of the sick role in chronic illness. Journal of Health and Human Behavior, 1965, 6, 16-27.

- Kelley, H. H. Attribution theory in social psychology. In D. Levine (Ed.), Nebraska Symposium on Motivation (Vol. 15). Lincoln: University of Nebraska Press, 1969.
- Kelley, H. H. Attribution in social interaction. Morristown, NJ: General Learning Press, 1971.
- Kelley, H. H. Moral evaluation. American Psychologist, 1971, 26, 293-300.
- Kelley, H. H. Causal schemata and the attribution process. Morristown, NJ: General Learning Press, 1972.
- Kelman, S. The social nature of the definition problem in health. International Journal of Health Services, 1975, 5, 625-642.
- King, S. H. Perceptions of illness and medical practice. New York: Russell Sage, 1962.
- Kirk, R. E. Experimental design: Procedures for the behavioral sciences. Belmont, CA: Brooks/Cole, 1968.
- Kitsuse, J. I. Societal reaction to deviant behavior: Problems of theory and method. Social Problems, 1962, 9, 247-256.
- Kleck, R. Emotional arousal in interactions with stigmatized persons. Psychological Reports, 1966, 19, 1226.
- Kleck, R. Physical stigma and task-oriented interaction. Human Relations, 1969, 22, 53-60.
- Kleck, R., Ono, H., & Hastorf, A. H. Effects of physical deviance upon face-to-face interaction. Human Relations, 1966, 19, 425-436.
- Knowles, J. The responsibility of the individual. In J. Knowles (Ed.), Doing better and feeling worse: Health in the United States. New York: Norton, 1977.
- Korsch, B. & Negrete, V. F. Doctor-patient communication. Scientific American, 1972, 227, 66-69.
- Kübler-Ross, E. On death and dying. New York: MacMillan, 1969.
- Lambert, V. A. & Lambert, C. E., Jr. The impact of physical illness. Englewood Cliffs, NJ: Prentice-Hall, 1979.
- Lemert, E. M. Social structure, social control, and deviation. In M. B. Clinard (Ed.), Anomie and deviant behavior. New York: Free Press, 1964.

- Lemert, E. M. The concept of secondary deviance. In E. M. Lemert (Ed.), Human deviance, social problems, and social control. Englewood Cliffs, NJ: Prentice-Hall, 1967.
- Lerner, M. J. The effect of responsibility and choice on a partner's attractiveness following failure. Journal of Personality, 1965, 33, 178-187.
- Lerner, M. J. The desire for justice and reactions to victims. In J. Macauley & L. Berkowitz (Eds.), Altruism and helping behavior. New York: Academic Press, 1970.
- Lerner, M. J. Observers' evaluation of a victim: Justice, guilt, or veridical perception. Journal of Personality and Social Psychology, 1971, 20, 127-135.
- Lerner, M. J. Social psychology of justice and interpersonal attraction. In T. Houston (Ed.), Foundations of interpersonal attraction. New York: Academic Press, 1974.
- Lerner, M. J. & Matthews, G. Reactions to suffering of others under conditions of indirect responsibility. Journal of Personality and Social Psychology, 1967, 5, 319-325.
- Lerner, M. J. & Miller, D. T. Just world research and the attribution process: Looking back and ahead. Psychological Bulletin, 1978, 85, 1030-1051.
- Lerner, M. J. & Simmons, C. H. Observers' reactions to the "innocent victim": Compassion or rejection? Journal of Personality and Social Psychology, 1966, 4, 203-210.
- LeShan, L. An emotional life history pattern associated with neoplastic disease. Annals of the New York Academy of Sciences, 1966, 125, 780-793.
- Levine, G. N. Anxiety about illness: Psychological and social bases. Journal of Health and Human Behavior, 1962, 3, 30-34.
- Levine, S. & Kozloff, M. A. The sick role: Assessment and overview. Annual Review of Sociology, 1978, 4, 317-343.
- Macgregor, F. C. Some psycho-social problems associated with facial deformities. American Sociological Review, 1951, 16, 629-638.
- Mattsson, A. Long-term physical illness in childhood: A challenge to psychosocial adaptation. In R. H. Moos (Ed.), Coping with physical illness. New York: Plenum Medical Book Company, 1977.

- Mechanic, D. Medical sociology: A selective view. New York: Free Press, 1968.
- Mechanic, D. Social psychologic factors affecting the presentation of bodily complaints. New England Journal of Medicine, 1972, 286, 1132-1139.
- Mechanic, D. Medical sociology: A comprehensive text (2nd ed.). New York: Free Press, 1978.
- Montiero, L. A. After the heart attack: Behavioral expectations and the cardiac. Social Science and Medicine, 1973, 7, 555-565.
- Moos, R. H. & Tsu, V. D. The crisis of physical illness: An overview. In R. H. Moos (Ed.), Coping with physical illness. New York: Plenum Medical Book Company, 1977.
- Moses, R. & Cividali, M. Differential levels of awareness of illness: Their relation to some salient features in cancer patients. Annals of the New York Academy of Sciences, 1966, 125, 984-994.
- Myers, J. L. Fundamentals of experimental design (2nd ed.). Boston: Allyn and Bacon, 1972.
- Nisbett, R. E. & Wilson, T. D. Telling more than we can know: Verbal reports on mental processes. Psychological Review, 1977, 84, 231-259.
- Orvis, B. R., Kelley, H. H., & Butler, D. Attributional conflict in young couples. In J. H. Harvey, W. J. Ickes, & R. F. Kidd (Eds.), New directions in attribution research (Vol. 1). Hillsdale, NJ: Lawrence Erlbaum Associates, 1976.
- Paloucek, F. P. & Graham, J. B. The influence of psychosocial factors on the prognosis of cancer of the cervix. Annals of the New York Academy of Sciences, 1966, 125, 814-816.
- Parsons, T. The social system. New York: Free Press, 1951.
- Parsons, T. Definitions of health and illness in the light of American values and social structure. In E. Jaco (Ed.), Patients, physicians, and illness. Glencoe, IL: Free Press, 1958.
- Pepitone, A. Social psychological perspectives on crime and punishment. Journal of Social Issues, 1975, 31, 197-216.
- Pflanz, M. & Keupp, H. A sociological perspective on concepts of disease. International Social Science Journal, 1977, 29, 386-396.

- Pratt, L. How do patients learn about disease? Social Problems, 1956, 4, 29-40.
- Read, M. Culture, health, and disease. London: Tavistock, 1966.
- Reynolds, R. E. & Bice, T. W. Attitudes of medical interns toward patients and health professionals. Journal of Health and Social Behavior, 1971, 12, 307-311.
- Robinson, D. The process of becoming ill. London: Routledge & Kegan Paul, 1971.
- Robinson, D. Patients, practitioners, and medical care: Aspects of medical sociology. London: William Heinemann Medical Books, 1973.
- Ross, L. The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 10). New York: Academic Press, 1977.
- Ross, M. & DiTecco, D. An attributional analysis of moral judgments. Journal of Social Issues, 1975, 31, 91-109.
- Roth, J. A. Timetables: Structuring the passage of time in hospital treatment and other careers. Indianapolis: Bobbs-Merrill, 1963.
- Rubin, Z. & Peplau, A. Who believes in a just world? Journal of Social Issues, 1975, 31, 65-89.
- Ryan, W. Blaming the victim. New York: Pantheon, 1971.
- Safilios-Rothschild, C. The sociology and social psychology of disability and rehabilitation. New York: Random House, 1970.
- Schamale, A. & Iker, H. The psychological setting of uterine cervical cancer. Annals of the New York Academy of Sciences, 1966, 125, 807-813.
- Schoenberg, B. & Senescu, R. A. The patient's reaction to fatal illness. In B. Schoenberg, A. C. Carr, D. Peretz, & A. H. Kutscher (Eds.), Loss and grief: Psychological management in medical practice. New York: Columbia University Press, 1970.
- Schur, E. M. Labeling deviant behavior: Its sociological implications. New York: Harper, 1971.
- Sedgwick, P. Illness, mental and otherwise: All illnesses express a social judgment. Hastings Center Studies, 1973, 1, 19-40.

- Segall, A. The sick role concept: Understanding of illness behavior. Journal of Health and Social Behavior, 1976, 17, 163-170.
- Shaver, K. G. Defensive attribution: Effects of severity and relevance on the responsibility assigned for an accident. Journal of Personality and Social Psychology, 1970, 14, 101-113.
- Shaver, K. G. An introduction to attribution processes. Cambridge, MA: Winthrop Publishers, 1975.
- Shontz, F. C. The psychological aspects of physical illness and disability. New York: MacMillan, 1975.
- Siegler, M. & Osmond, H. The 'sick role' revisited. Hastings Center Studies, 1973, 1, 41-58.
- Sigerist, H. E. Civilization and disease. Ithaca, NY: Columbia University Press, 1945.
- Slovic, P., Fischhoff, B., & Lichtenstein, S. Behavioral decision theory, Annual Review of Psychology, 1977, 28, 1-39.
- Smith, R. E., Keating, J. P., Hester, R. K., & Mitchell, H. E. Role and justice considerations in the attribution of responsibility to a rape victim. Journal of Research in Personality, 1976, 10, 346-357.
- Sontag, S. Illness as metaphor. New York: Farrar, Straus & Giroux, 1978.
- Sorrentino, R. M. & Boutellier, R. G. Evaluation of a victim as a function of fate similarity/dissimilarity. Journal of Experimental Social Psychology, 1974, 10, 84-93.
- Susser, M. W. & Watson, W. Sociology in medicine (2nd ed.), London: Oxford University Press, 1971.
- Szasz, T. Medical metaphorology. American Psychologist, 1975, 30, 859-861.
- Szasz, T. The theology of medicine. New York: Harper, 1977.
- Taylor, S. E. A developing role for social psychology in medicine and medical practice. Personality and Social Psychology Bulletin, 1978, 4, 515-523.
- Taylor, S. E. & Levin, S. The psychological impact of breast cancer: Theory and practice. In A. Enelow (Ed.), Psychological aspects of breast cancer. San Francisco: West Coast Cancer Foundation, 1976.

- Titley, R. W. Imaginations about the disabled. Social Science and Medicine, 1969, 3, 29-38.
- Tuckett, D. Becoming a patient. In D. Tuckett (Ed.), An introduction to medical sociology. London: Tavistock, 1976.
- Tversky, A. & Kahneman, D. Judgment under uncertainty: Heuristics and biases. Science, 1974, 185, 1124-1131.
- Twaddle, A. C. Health decisions and sick role variations: An exploration. Journal of Health and Social Behavior, 1969, 10, 105-115.
- Ulrich, R. E., Stachnik, T. J., & Stainton, N. R. Student acceptance of generalized personality interpretations. Psychological Reports, 1963, 13, 831-834.
- Veatch, R. M. The medical model: Its nature and problems. Hastings Center Studies, 1973, 1, 59-76.
- Wadsworth, M. E. J. Illness behavior and the study of communications between doctors and patients. Journal of Psychosomatic Research, 1976, 20, 317-322.
- Walster, E. Assignment of responsibility for an accident. Journal of Personality and Social Psychology, 1966, 3, 73-79.
- Williams, J. I. Disease as deviance. Social Science and Medicine, 1971, 5, 219-226.
- Wilson, R. N. The sociology of health: An introduction. New York: Random House, 1970.
- Wolfenstein, M. Disaster: A psychological essay. Glencoe, IL: Free Press, 1957.
- Wolff, H. G. Stress and disease. Springfield, IL: Charles C. Thomas, 1953.
- Wortman, C. B. Causal attributions and personal control. In J. Harvey W. Ickes, & R. F. Kidd (Eds.), New directions in attribution research (Vol. 1). Hillsdale, NJ: Lawrence Erlbaum Associates, 1976.
- Wortman, C. B. & Dunkel-Schetter, C. Interpersonal relationships in cancer: A theoretical analysis. Journal of Social Issues, 1979, 35, 120-155.

Wright, B. Spread in adjustment to disability. Bulletin of the Menninger Clinic, 1964, 28, 198-208.

Zola, I. K. Medicine as an institution of social control. The Sociological Review, 1972, 20, 487-504.

APPENDIX A
Stimulus Materials

APPENDIX A.1
Stimulus Materials for
Experimental Conditions

APPLICATION FORM

To all applicants: Please type or print clearly. This application and all supporting materials (letters of reference, medical authorization form) must be received by this office no later than August 10, 1978. Interviews will be scheduled within a week of receipt of your application.

PERSONAL

Last Name	First Name	M.I.	Phone
Keller	David	G.	(413) 256-6882
Address			
26 Pelham Road			
City	State	Zip	
Shutesbury	MA	01072	
Citizenship		Date of Birth	
U.S.		June 30, 1940	
Social Security #		Marital Status	
527-38-7244		single	

EDUCATIONAL HISTORY

School	Address	Major	Degree	Date
Jordan High School	Long Beach, CA		H.S. Diploma	June, 1958
Univ. of Mass.	Amherst, MA	History	B.S.	June, 1963

EMPLOYMENT HISTORY

Position	Firm	Dates	Reference
Sales Representative	ADI Business, Inc.	8/63-4/66	Mr. G. Williamson
Asst. Sales Manager	Hamden Office Supply	5/66-6/71	Mr. Robert Snyder
Sales Manager	Friedman & Sons	7/71-present	Mr. L. Friedman

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	
() excellent	() good (x) fair () poor
Have you been hospitalized within the past year?	() yes (x) no
If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.	
I am currently recovering from a mild kidney infection, which I developed two weeks ago. Otherwise, I am in generally good health.	

Signature

David G. Keller

Date

August 8, 1978

INTERVIEW/PERSONALITY TEST

(For office use only)

Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.

Interviewer

JK

Date August 18, 1978

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	<input type="checkbox"/> excellent <input type="checkbox"/> good <input checked="" type="checkbox"/> fair <input type="checkbox"/> poor
Have you been hospitalized within the past year?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
<p>If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.</p> <p>I am currently recovering from a severe kidney infection, which I developed two weeks ago. Because of serious complications, a high fever, and considerable pain, I had to be hospitalized for several days for observation and treatment. Otherwise, I am in generally good health.</p>	

Signature

David G. Keller

Date

August 8, 1978

INTERVIEW/PERSONALITY TEST

(For office use only)

<p>Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.</p>	
Interviewer	<p><u>GH</u></p>
Date	<p><u>August 18, 1978</u></p>

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	<input type="checkbox"/> excellent <input type="checkbox"/> good <input checked="" type="checkbox"/> fair <input type="checkbox"/> poor
Have you been hospitalized within the past year?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
<p>If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.</p> <p>I am currently recovering from a mild case of pneumonia, which I developed two weeks ago. Otherwise, I am in generally good health.</p>	

Signature David G. Keller Date August 8, 1978

INTERVIEW/PERSONALITY TEST (For office use only)

<p>Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.</p>	
Interviewer	<u>GH</u> Date <u>August 18, 1978</u>

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	
() excellent	() good (x) fair () poor
Have you been hospitalized within the past year?	(x) yes () no
If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.	
I am currently recovering from a severe case of pneumonia, which I developed two weeks ago. Because of serious complications, a high fever, and considerable pain, I had to be hospitalized for several days for observation and treatment. Otherwise, I am in generally good health.	

Signature David G. Keller Date August 8, 1978

INTERVIEW/PERSONALITY TEST (For office use only)

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Interviewer <u>GH</u>	Date <u>August 18, 1978</u>

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	
Dr. Paul A. Harris	
How would you rate your <u>present</u> health?	
() excellent	() good (x) fair () poor
Have you been hospitalized within the past year? () yes (x) no	
If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.	
I am currently recovering from a mild case of gastroenteritis (inflammation of the stomach and intestinal lining), which I developed two weeks ago. Otherwise, I am in generally good health.	

Signature David G. Keller Date August 8, 1978

INTERVIEW/PERSONALITY TEST (For office use only)

Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.	
Interviewer <u>GH</u>	Date <u>August 18, 1978</u>

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	
() excellent	() good (x) fair () poor
Have you been hospitalized within the past year?	(x) yes () no
<p>If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.</p> <p>I am currently recovering from a severe case of gastroenteritis (inflammation of the stomach and intestinal lining), which I developed two weeks ago. Because of serious complications, a high fever, and considerable pain, I had to be hospitalized for several days for observation and treatment. Otherwise, I am in generally good health.</p>	

Signature

David G. Keller

Date

August 8, 1978

INTERVIEW/PERSONALITY TEST

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<p>Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.</p>	
Interviewer	<u>GH</u>
Date	<u>August 18, 1978</u>

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	<input type="checkbox"/> excellent <input type="checkbox"/> good <input checked="" type="checkbox"/> fair <input type="checkbox"/> poor
Have you been hospitalized within the past year?	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
<p>If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.</p> <p>During an examination two years ago, my doctor detected a mild form of diabetes, and recommended a program of diet, exercise, and occasional medication to manage the condition.</p>	

Signature

David G. Keller

Date

August 8, 1978

INTERVIEW/PERSONALITY TEST

(For office use only)

<p>Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.</p>	
Interviewer.	<p><u>GH</u></p>
Date	<p><u>August 18, 1978</u></p>

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	
<input type="checkbox"/> excellent	<input type="checkbox"/> good <input checked="" type="checkbox"/> fair <input type="checkbox"/> poor
Have you been hospitalized within the past year?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.	
<p>I was hospitalized two years ago with diabetes after suffering a diabetic coma. Since then, I have been following a prescribed program of diet, exercise, and insulin therapy to reduce the possibility of hypoglycemia, insulin shock, or the chronic complications commonly associated with diabetes.</p>	

Signature

David G. Keller

Date

August 8, 1978

INTERVIEW/PERSONALITY TEST

(For office use only)

<p>Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.</p>	
Interviewer	<u>GH</u>
Date	<u>August 18, 1978</u>

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	
() excellent	() good
(x) fair	() poor
Have you been hospitalized within the past year?	() yes (x) no
If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.	
During an examination two years ago, my doctor detected signs of coronary heart disease, and recommended a diet and exercise program to minimize the possibility of a heart attack.	

Signature David G. Keller Date August 8, 1978

INTERVIEW/PERSONALITY TEST (For office use only)

Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.	
Interviewer <u>GH</u>	Date <u>August 18, 1978</u>

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	<input type="checkbox"/> excellent <input type="checkbox"/> good <input checked="" type="checkbox"/> fair <input type="checkbox"/> poor
Have you been hospitalized within the past year?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
<p>If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.</p> <p>I was hospitalized two years ago with coronary heart disease after suffering a major heart attack. Since then, I have been following a prescribed program of diet, exercise, and medication to reduce the possibility of another heart attack, although I still suffer occasionally from shortness of breath and chest pain.</p>	

Signature David G. Keller Date August 8, 1978

INTERVIEW/PERSONALITY TEST (For office use only)

<p>Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.</p>	
Interviewer	<u>GH</u> Date <u>August 18, 1978</u>

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	
() excellent	() good (x) fair () poor
Have you been hospitalized within the past year?	() yes (x) no
<p>If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.</p> <p>During an examination two years ago, I was diagnosed as having leukemia (a cancer which results from the uncontrolled production of abnormal white blood cells). I underwent short-term treatment, with positive results. Most of the symptoms are gone, my doctors are optimistic that the disease will continue in remission, and I am leading a fairly normal life.</p>	

Signature David G. Keller Date August 8, 1978

INTERVIEW/PERSONALITY TEST (For office use only)

Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.

Interviewer JH Date August 18, 1978

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	<input type="radio"/> excellent <input type="radio"/> good <input checked="" type="radio"/> fair <input type="radio"/> poor
Have you been hospitalized within the past year?	<input checked="" type="radio"/> yes <input type="radio"/> no
<p>If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.</p> <p>I was hospitalized two years ago for leukemia (a cancer which results from the uncontrolled production of abnormal white blood cells). I underwent long-term chemotherapy and radiation treatments, with mixed results. I am currently leading a fairly normal life, but some of the symptoms and side effects from treatment remain, and I occasionally experience considerable fatigue and pain.</p>	

Signature David G. Keller Date August 8, 1978

INTERVIEW/PERSONALITY TEST (For office use only)

<p>Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.</p>	
Interviewer	<u>GH</u> Date <u>August 18, 1978</u>

APPENDIX A.2
Stimulus Materials for
the Control Condition

APPLICATION FORM

To all applicants: Please type or print clearly. This application and all supporting materials (letters of reference, medical authorization form) must be received by this office no later than August 10, 1978. Interviews will be scheduled within a week of receipt of your application.

PERSONAL

Last Name	First Name	M.I.	Phone
Keller	David	G.	(413) 256-6882
Address			
26 Pelham Road			
City	State	Zip	
Shutesbury	MA	01072	
Citizenship	Date of Birth		
U.S.	June 30, 1940		
Social Security #	Marital Status		
527-38-7244	single		

EDUCATIONAL HISTORY

School	Address	Major	Degree	Date
Jordan High School	Long Beach, CA		H.S. Diploma	June, 1958
Univ. of Mass.	Amherst, MA	History	B.S.	June, 1963

EMPLOYMENT HISTORY

Position	Firm	Dates	Reference
Sales Representative	ADI Business, Inc.	8/63-4/66	Mr. G. Williamson
Asst. Sales Manager	Hamden Office Supply	5/66-6/71	Mr. Robert Snyder
Sales Manager	Friedman & Sons	7/71-present	Mr. L. Friedman

(NOTE: All applicants must submit the medical authorization form completed by a physician. Medical information is strictly confidential.)

MEDICAL HISTORY

Physician's Name	Dr. Paul A. Harris
How would you rate your <u>present</u> health?	
(x) excellent	() good () fair () poor
Have you been hospitalized within the past year?	() yes (x) no
If you checked fair or poor health, or if you have been hospitalized within the past year, please elaborate in the space provided.	

Signature David G. Keller Date August 8, 1978

INTERVIEW/PERSONALITY TEST (For office use only)

Summary: David prides himself as being an independent thinker and does not accept others' opinions without satisfactory proof. He has a great deal of unused capacity which he has not turned to his advantage. David has a tendency to be critical of himself. He has a strong need for other people to like and admire him. At times he has serious doubts as to whether he has made the right decision or done the right thing. Disciplined and controlled on the outside, he tends to be worrisome and insecure on the inside. David has found it unwise to be too frank in revealing himself to others. He prefers a certain amount of change and variety and becomes dissatisfied when hemmed in by restrictions and limitations. While he has some personality weaknesses, he is generally able to compensate for them.

Interviewer GH Date August 18, 1978

APPENDIX B

Experimental and Control Group Questionnaires

APPENDIX B.1
Experimental Group Questionnaire

This is a study of how people are perceived by others. In most previous research on person perception, people have been asked to rate a hypothetical person described by the experimenter. In this study, we would like to get your impressions of real people. There are many situations in everyday life where we only briefly encounter people, or where we have only limited written information about a person (e.g., applications for school, jobs, loans, etc.).

We have collected a variety of forms in which people have provided some information about themselves, such as applications actually submitted to schools, firms, or agencies in the local area. We have omitted the names of the agencies or schools, and have changed the names of the applicants to preserve anonymity and confidentiality.

We would like you to read one of these applications, and to fill out a questionnaire about your impressions of the person. Since a questionnaire asking more detailed questions about your perceptions of the person's medical, educational, or employment background would be too long and time-consuming, we are asking everyone some questions about their general impression of the person, and more detailed questions about a specific aspect of the person. Some people may be asked questions about their impressions of the individual's personal or educational background, while others may be asked questions about the person's employment or medical history. As you answer the questions, feel free to refer back to the application at any time.

We are interested only in your impressions--there are no right or wrong answers, and your answers are completely anonymous and confidential. We realize that first impressions are sometimes vague, and some questions may be more difficult to answer than others, but please try to answer every question. If you have any comments or questions about this research, or if you want to elaborate on a question, please include this information on the back of the questionnaire.

THANK YOU VERY MUCH FOR YOUR PARTICIPATION!

P.S. In another study we are conducting, we are developing a questionnaire about people's beliefs. This questionnaire is very short and has been added after the last page of the questionnaire for this study (this is referred to as "piggy-backing" one study with another). We would really appreciate it if you would also answer this questionnaire after you complete the questions for this study. Thanks.

Age: _____

Sex: F M

1. What is your impression of this person? Please rate this person on the following scales by circling the number which best represents your impression of the person:

intelligent	1	2	3	4	5	6	7	unintelligent
selfish	1	2	3	4	5	6	7	unselfish
courageous	1	2	3	4	5	6	7	cowardly
valuable	1	2	3	4	5	6	7	worthless
immature	1	2	3	4	5	6	7	mature
happy	1	2	3	4	5	6	7	sad
clean	1	2	3	4	5	6	7	dirty
dishonest	1	2	3	4	5	6	7	honest
imaginative	1	2	3	4	5	6	7	unimaginative
active	1	2	3	4	5	6	7	passive
fortunate	1	2	3	4	5	6	7	unfortunate
cold	1	2	3	4	5	6	7	warm
friendly	1	2	3	4	5	6	7	unfriendly
responsible	1	2	3	4	5	6	7	irresponsible
bad	1	2	3	4	5	6	7	good
strong	1	2	3	4	5	6	7	weak

2. How similar do you think you are to this person?

very similar	1	2	3	4	5	6	7	very dissimilar
--------------	---	---	---	---	---	---	---	-----------------

3. How do you personally feel about this person?

very positive	1	2	3	4	5	6	7	very negative
------------------	---	---	---	---	---	---	---	------------------

The next series of questions refer to the information provided by the person in the medical history.

4. Please list the illnesses or health problems reported by the person, if any:

5. How would you rate this person's state of health?

well 1 2 3 4 5 6 7 ill

6. How permanent do you think this person's illness or condition is?

temporary	1	2	3	4	5	6	7	permanent
-----------	---	---	---	---	---	---	---	-----------

7. Have you, a very close friend, or a member of your family ever had this illness or condition?

yes no

8. How likely do you think it is that you will develop this illness or condition at some time in your life?

very likely	1	2	3	4	5	6	7	very unlikely
----------------	---	---	---	---	---	---	---	------------------

9. How likely do you think it is that the average person in this country will develop this illness or condition at some time in their life?

very likely	1	2	3	4	5	6	7	very unlikely
----------------	---	---	---	---	---	---	---	------------------

10. Why do you think people get this illness or develop this condition?
That is, what do you believe are the causes of this particular illness?

11. What do you think people can do to prevent developing this illness?

12. Before developing this illness, how careful do you think this person was about his/her health?

very careful	1	2	3	4	5	6	7	very careless
-----------------	---	---	---	---	---	---	---	------------------

13. To what extent do you think this person could have done something to prevent the illness?

could have prevented	1	2	3	4	5	6	7	could not have prevented
-------------------------	---	---	---	---	---	---	---	-----------------------------

14. How much is this person to blame for his/her illness?

completely to blame	1	2	3	4	5	6	7	not at all to blame
------------------------	---	---	---	---	---	---	---	------------------------

15. To what extent do you think this person's genetic makeup (i.e., inherited characteristics) is responsible for his/her illness?

completely responsible	1	2	3	4	5	6	7	not at all responsible
---------------------------	---	---	---	---	---	---	---	---------------------------

16. To what extent do you think this person's character or personality is responsible for his/her illness?

completely responsible	1	2	3	4	5	6	7	not at all responsible
---------------------------	---	---	---	---	---	---	---	---------------------------

17. To what extent do you think this person's behavior (i.e., something the person did or did not do) is responsible for his/her illness?

completely										not at all
responsible	1	2	3	4	5	6	7			responsible

18. To what extent do you think this person's lifestyle or personal habits are responsible for his/her illness?

completely										not at all
responsible	1	2	3	4	5	6	7			responsible

19. On the following items, please rate how responsible you believe each factor is for the person's illness.

ENVIRONMENT

completely										not at all
responsible	1	2	3	4	5	6	7			responsible

THE PERSON

completely										not at all
responsible	1	2	3	4	5	6	7			responsible

OTHER PEOPLE

completely										not at all
responsible	1	2	3	4	5	6	7			responsible

CHANCE

completely										not at all
responsible	1	2	3	4	5	6	7			responsible

GOD

completely										not at all
responsible	1	2	3	4	5	6	7			responsible

FATE

completely										not at all
responsible	1	2	3	4	5	6	7			responsible

OTHER (specify) _____

completely										not at all
responsible	1	2	3	4	5	6	7			responsible

20. Please rate the person's illness or condition on the following scales:

mild	1	2	3	4	5	6	7	severe
long	1	2	3	4	5	6	7	short
painful	1	2	3	4	5	6	7	painless
fast	1	2	3	4	5	6	7	slow
internal	1	2	3	4	5	6	7	external
common	1	2	3	4	5	6	7	rare
weak	1	2	3	4	5	6	7	strong
curable	1	2	3	4	5	6	7	incurable
good	1	2	3	4	5	6	7	bad
acute	1	2	3	4	5	6	7	chronic
uncontrollable	1	2	3	4	5	6	7	controllable
interesting	1	2	3	4	5	6	7	uninteresting
threatening	1	2	3	4	5	6	7	non-threatening
comfortable	1	2	3	4	5	6	7	uncomfortable
embarrassing	1	2	3	4	5	6	7	not embarrassing
contagious	1	2	3	4	5	6	7	not contagious
fair	1	2	3	4	5	6	7	unfair
short-lived	1	2	3	4	5	6	7	persistent
clean	1	2	3	4	5	6	7	dirty
active	1	2	3	4	5	6	7	passive

Questionnaire #2

Please place the appropriate letter beside each statement below.

- A - I agree very much
- B - I agree on the whole
- C - I agree a little
- D - I disagree on the whole
- E - I disagree very much

- _____ Good deeds often go unnoticed or unrewarded.
- _____ When parents punish their children, it is almost always for a good reason.
- _____ It is rare for an innocent man to be wrongly sent to jail.
- _____ People who get "lucky breaks" have usually earned their good fortune.
- _____ Students almost always deserve the grades they receive in school.
- _____ It is often impossible for a person to receive a fair trial in this country.
- _____ Careful drivers are just as likely to get hurt in traffic accidents as careless ones.
- _____ Men who keep in shape have little chance of suffering a heart attack.
- _____ Crime doesn't pay.
- _____ In professional sports, many fouls and infractions never get called by the referee.
- _____ Although evil men may hold political power for a while, in the general course of history good wins out.
- _____ People who meet with misfortune often have brought it on themselves.
- _____ Basically, the world is a just place.
- _____ I've found that a person rarely deserves the reputation he has.
- _____ The political candidate who sticks up for his principles rarely gets elected.
- _____ By and large, people deserve what they get.
- _____ Parents tend to overlook the things most to be admired in their children.
- _____ In any business or profession, people who do their job rise to the top.
- _____ Many people suffer through absolutely no fault of their own.
- _____ It is a common occurrence for a guilty person to get off free in American courts.

APPENDIX B.2
Control Group Questionnaire

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P.S. In another study we are conducting, we are developing a questionnaire about people's beliefs. This questionnaire is very short and has been added after the last page of the questionnaire for this study (this is referred to as "piggy-backing" one study with another). We would really appreciate it if you would also answer this questionnaire after you complete the questions for this study. Thanks.

Age: _____

Sex: F M

1. What is your impression of this person? Please rate this person on the following scales by circling the number which best represents your impression of the person:

intelligent 1 2 3 4 5 6 7 unintelligent

selfish 1 2 3 4 5 6 7 unselfish

courageous 1 2 3 4 5 6 7 cowardly

valuable 1 2 3 4 5 6 7 worthless

immature 1 2 3 4 5 6 7 mature

happy 1 2 3 4 5 6 7 sad

clean 1 2 3 4 5 6 7 dirty

dishonest 1 2 3 4 5 6 7 honest

imaginative 1 2 3 4 5 6 7 unimaginative

active 1 2 3 4 5 6 7 passive

fortunate 1 2 3 4 5 6 7 unfortunate

cold 1 2 3 4 5 6 7 warm

friendly 1 2 3 4 5 6 7 unfriendly

responsible 1 2 3 4 5 6 7 irresponsible

bad 1 2 3 4 5 6 7 good

strong 1 2 3 4 5 6 7 weak

2. How similar do you think you are to this person?

very										very
similar	1	2	3	4	5	6	7			dissimilar

3. How do you personally feel about this person?

very									very
positive	1	2	3	4	5	6	7		negative

The next series of questions refer to the information provided by the person in the medical history.

4. How would you rate this person's state of health?

well	1	2	3	4	5	6	7	ill
------	---	---	---	---	---	---	---	-----

5. How careful do you think this person is about his/her health?

very									very
careful	1	2	3	4	5	6	7		careless

6. If the person is in good health, to what extent do you think the person is responsible for his/her own good health?

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

7. To what extent do you think this person's genetic makeup (i.e., inherited characteristics) is responsible for his/her health?

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

8. To what extent do you think this person's character or personality is responsible for his/her health?

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

9. To what extent do you think this person's behavior (i.e., something the person did or did not do) is responsible for his/her health?

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

10. To what extent do you think this person's lifestyle or personal habits are responsible for his/her health?

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

11. On the following items, please rate how responsible you believe each factor is for the person's health.

ENVIRONMENT

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

THE PERSON

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

OTHER PEOPLE

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

CHANCE

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

GOD

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

FATE

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

OTHER (specify) _____

completely									not at all
responsible	1	2	3	4	5	6	7		responsible

12. Please rate the person's health on the following scales:

mild	1	2	3	4	5	6	7	severe
long	1	2	3	4	5	6	7	short
painful	1	2	3	4	5	6	7	painless
fast	1	2	3	4	5	6	7	slow
internal	1	2	3	4	5	6	7	external
common	1	2	3	4	5	6	7	rare
weak	1	2	3	4	5	6	7	strong
good	1	2	3	4	5	6	7	bad
uncontrollable	1	2	3	4	5	6	7	controllable
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embarrassing	1	2	3	4	5	6	7	not embarrassing
fair	1	2	3	4	5	6	7	unfair
short-lived	1	2	3	4	5	6	7	persistent
clean	1	2	3	4	5	6	7	dirty
active	1	2	3	4	5	6	7	passive

Questionnaire #2

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- _____ Good deeds often go unnoticed or unrewarded.
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- _____ It is often impossible for a person to receive a fair trial in this country.
- _____ Careful drivers are just as likely to get hurt in traffic accidents as careless ones.
- _____ Men who keep in shape have little chance of suffering a heart attack.
- _____ Crime doesn't pay.
- _____ In professional sports, many fouls and infractions never get called by the referee.
- _____ Although evil men may hold political power for a while, in the general course of history good wins out.
- _____ People who meet with misfortune often have brought it on themselves.
- _____ Basically, the world is a just place.
- _____ I've found that a person rarely deserves the reputation he has.
- _____ The political candidate who sticks up for his principles rarely gets elected.
- _____ By and large, people deserve what they get.
- _____ Parents tend to overlook the things most to be admired in their children.
- _____ In any business or profession, people who do their job rise to the top.
- _____ Many people suffer through absolutely no fault of their own.
- _____ It is a common occurrence for a guilty person to get off free in American courts.

APPENDIX C

Open-ended Responses

Perceived Causes and Prevention of Illness: Open-ended Responses

Why do you think people get this illness or develop this condition? That is, what do you believe are the causes of this particular illness?

What do you think people can do to prevent developing this illness?

Kidney Infection

Causes

Prevention

- I have no idea.
- This illness may be hereditary.
- I imagine that stress probably has something to do with the ailment. Other than this, I would have absolutely no idea what causes kidney infections.
- Improper eating habits.
- Virus.
- I don't know, the causes are usually from bacteria in the body which the person can do nothing about.
- Not taking care of oneself. Follows a bad diet.
- Drinking
- Failure of kidney to function properly.
- I have absolutely no idea.

- I have no idea.
- Going to the doctor's for treatment.
- Take care of their kidneys! One must (?) be fairly calm & mellow. Not much stress!
- Eat properly.
- I don't think you can except by trying to stay healthy.
- Try to eat the right foods and keep their body healthy.
- Take periodical rests, eat the right foods.
- Stop drinking
- Visit a physician regularly.
- Having a regular checkup.

Causes

Obviously, it is a bacterial infection. It could be caused by improper diet.

I don't know. Seeing as it is an infection, the kidney must have been irritated. It probably is from bacteria.

Many sources of the illness, most likely bacteria.

The causes are from having weak kidneys, a cold in the kidney. Basically, it's just something one develops.

Could be genetic or contracted.

Impurities in kidney

Not using sanitary conditions in the home or outside; not taking proper care of yourself, so that you get rundown and are a likely candidate to contract it.

?

I would say that the problem might be of a hereditary nature. If it were another type of illness, I might say nerves.

Weak kidneys, probably since childhood.

I don't know what the causes of kidney infection are.

I do not know, nor could I guess what the causes of kidney infection are.

Prevention

Regularly scheduled checkups and common sense about taking care of themselves.

Drink plenty of cranberry juice-- it cleans you out.

Not much to prevent it.

I have had many kidney infections and two operations. To my knowledge, there is no way to prevent them.

Drink plenty of fluids and see a doctor once in awhile.

Keep clean

Get a well-balanced diet and enough sleep. Be careful of the cleanliness of your bathroom.

?

Probably nothing.

Take extra care of yourself, otherwise, there is nothing you can do.

Whatever you're supposed to do to prevent kidney infections.

What they should do for anything. Take good care of themselves by exercising and eating the right foods.

<u>Causes</u>	<u>Prevention</u>
Infection in blood through wound, bad blood flow through, possibly from drinking in excess.	Certain kind of diet.
No idea.	No idea.
They probably get this illness from all the matter that is being filtered through, some infectious germ gets into lining or something.	I don't know--drink plenty of water?
Just a viral infection, perhaps brought on by overwork or poor eating.	Not much--maybe watch eating habits. I really have no knowledge of this illness.
Bad function of the kidney, probably due to diet or habits, i.e., lack of sleep, poor exercise habits.	By eating better foods, take care of health, being more conscious of body.
I have no idea.	Eating properly, I'd say, is the only reasonable deterrent I could think of.
I don't know.	Take care of oneself.
Poor diet.	Keep up vitamins & food intake.
Drinking, not eating properly.	Take care of themselves.
No idea.	Nothing.
No idea.	No idea.
Drinking.	Self-control.
A virus.	Nothing.
Not taking proper physical care of his body.	Make proper usage of their daily life schedules to allow for recreation activities be they physical or passive. Take time to relax during the day.

Causes

I would say that it is a virus, weakness of antibodies to fight it off.

I believe the causes of this illness are from foods.

No response (n=3)

Prevention

Try to eat right, exercise.

To prevent kidney infection, one possible way is to eat right, and clean foods.

No response (n=3)

Pneumonia

Causes

Their resistance to sickness goes down and at some point they are infected by conditions which lead to pneumonia. I feel it is totally chancey at getting this illness if you take good care of your body.

Catching a cold, not taking care of a cold, body not able to fight the illness.

(1) Genetic makeup of person's defense system against viruses or (2) exposure to damp, cold environment for too long of time

A cold that gets neglected and worsens, or some type of lung problem which leads to infection.

I don't think there is a specific cause of pneumonia--perhaps not taking very good care of oneself would make a person susceptible to it.

Not quite sure.

Prevention

Eat properly, exercise regularly, and take general good care of your body.

Take care of themselves and eat the right food. Nutrition plays a big part in what illness one receives.

(1) Nothing (2) Dress warmly

Take good care of themselves when they have a cold

Eat balanced meals, get enough sleep.

I don't know. I'm not a doctor.

Causes

Not dressing properly in cold weather or not taking care of themselves when slight symptoms arise.

Overconfidence (as far as health goes), vanity (not dressing for weather).

Contact with the disease, improper care of physical well-being

Lack of sleep, not eating properly, not enough exercise, over-exertion

Rundown from too much work, worry, etc. A bad cold or flu gets the best of them and progressively worsens.

Germs

Cold

Not taking care of himself

If you are tired or susceptible to the germ, you will get sick. If you have a cold & don't get rest & get better & continue with normal activities and get really wet in cold temperature, you might get it.

Not enough rest, poor diet, high fever from a cold.

Rundown people, stress, carelessness to watch out for one's health

Overworked, not enough rest. Don't take (have) the time to take care of themselves.

Prevention

Take care of themselves--plan dress appropriately.

Increase self-awareness (take good care of oneself).

Better care of themselves to prevent illness

Take care of themselves, eat well, sleep proper hours, exercise

As soon as they feel sick, should stop everything and tend to their health--forget about work, worries; etc. (hard to do. . .)

?

Keeping warm

Stay in shape, keep healthy

Take care of themselves, rest well & take care if you have a cold.

Staying in bed when not feeling well, getting enough rest & proper food. Also, contact a doctor if you're not feeling well.

Take better caution & watch out for signs of being overworked, weak

Take better care of themselves when a cold or illness comes on.

Causes

Contact with a certain virus

Stupidity

Not enough proper rest or diet.
Not being conditioned to various
types of weather conditions.

Stress, or it may be complicated
by this. Run down of body, not
taking care of your health.

Germ from other people, staying
out in cold weather, not being
responsible enough to take care
of a cold, thereby letting it
worsen to pneumonia.

Weather--carelessness, lack of
protection

He just happened to get a cold
that developed into pneumonia.
I had it as a child also. One
doesn't bring it on by oneself.
It happens.

Not taking care of themselves

Not caring for your health.
Poor sleep.

It is from over exhaustion,
without enough rest.

A virus is picked up and is not
checked by a doctor as conditions
of the cold or cough get worse
and pneumonia settles in the
lungs. It may come when a person
is rundown.

Cold virus and low resistance at
particular time worsen to become
pneumonia.

Prevention

Take penicillin

Think about how they dress

Proper rest, healthful diet (four
food groups), outdoor activity as
well as inside.

Take better care of their body--
sleep, eating, etc.

Be more responsible and take care
of a cold or flu.

Guard against the elements

Never catch a cold.

Get enough sleep, warmth, nutrition

Rest & relaxation

Get rest

Keep an eye on their health
conditions.

Take care of yourself when you have
a cold.

<u>Causes</u>	<u>Prevention</u>
Overworked, rundown, which makes you very susceptible to pneumonia.	Get lots of sleep, take vitamins.
Getting rundown, sick	Not very much, but when a person catches a cold, take care of it. And do not keep running around, and take care of yourself.
Not enough sleep over a long period of time. Breakdown of germ-killing mechanisms.	Get enough sleep, eat balanced meals, exercise.
A virus--it's a disease	Eat well and keep themselves healthy (sleep well, etc.)
Overindulgence, overwork, exposure to dampness and/or coldness. Possibly lack of exercise and upkeep of the body. Any or all of the above.	Exercise, keep warm in cold/rainy weather. Don't overindulge--drugs or alcohol
They are rundown.	They can <u>try</u> --Eat the right foods, stay active, get rest.
Stress, tension, not enough sleep, not eating properly	Eat right, get enough sleep, and not let things worry you too much
Overwork, lowering defenses causing a low level of tolerance for bacterial infection	Stay in good health, diet, exercise. But even that cannot prevent a person from contracting it.
Pneumonia is generally developed by carelessness in watching your health. In some cases a simple cold left unattended (or ignored) may develop into this.	By watching their health better and, if they do come down with anything, by limiting their activities so they won't get any sicker.
No response (n=1)	No response (n=1)

Gastroenteritis

<u>Causes</u>	<u>Prevention</u>
Virus	Plenty of rest, don't eat spicy foods, lots of liquids
Bad eating habits and/or high degree of occupational pressures	Eat well-balanced diets, become unemployed
Smoking, lack of exercise, high cholesterol diet, over-working, worrying	Relax, eat well, exercise, see a doctor regularly
Stress, poor eating	Eat better, be more relaxed, don't drink
Eating spicy or fried foods, stress, anxiety	Watch what you eat, try to relax
Poor diet, too nervous	Eat better, worry less
This person is very fat	Go on a diet
Heredity, not eating right food, nerves	Watch their diet
Not being careful and not living properly	Take care of themselves and eat properly
Nervous stress	Recognize tendency to be overly emotionally intense
Worry too much and probably didn't eat the right amount of good food, causing something like an ulcer	Ask doctor what foods are o.k. to eat, tell them not to get so involved in their work that they worry
Diet, nervous, tensions	Relax, take better care of themselves, eat better
Nerves, improper eating habits	Follow balanced diet, try not to get too upset
From nerves & wrong diet	Probably calm down & change diet

Causes

Overwork, too much self-control,
not enough "letting off steam"

Inflammation of the linings is
caused by eating too spicy a food
& worrying a bit. It also can be
contracted just from an illness.

Sounds like he ate something that
was not clean, or stale or old, or
maybe he caught some sort of germ
from somewhere

Nerve tension, poor eating habits,
anxiety

Bad alimentation habits

It could just be a virus caused
by bacteria

It's a viral infection like the
flu and can be caught at any time

Because of nerves, nervous tension
& competition

Nerves, tension, pressures

I think it is caused by some type
of nervousness, similar to an
ulcer

I'm not really sure

Worry, wrong foods

They could get it from nerves &
tension.

Prevention

More honest self-expression when
appropriate

Medication. Nothing really.

Live in an absolutely sterile
environment where they would have
no fun to absolutely insure pre-
vention of this illness

Relax, form better eating habits

Eat better

Nothing much if it's a virus, just
be careful everywhere you go, be
sure anything you eat is clean and
cooked properly.

The only protection from virus is
to stay in good health (plenty of
sleep, good eating) and you are
still susceptible.

Relax, try to think positive, take
better care of himself

Relax, have more confidence in
oneself

Don't worry quite so much about
things, cut down on fried foods

Stop worrying, stop eating junk

Probably not much. Take things
more easily.

Causes

Worrying too much, not eating very well, not in good physical shape

Nerves, tension

Possibly drinking or eating the wrong foods--acidic foods. Worrying too much about certain things--work, sex, etc.

Too fast eating, eating the wrong foods, worrying too much, being nervous & high strung

People experience unnecessary anxiety which can be brought on by day-to-day pressure, something from your childhood, etc.

Being nervous and eating the wrong types of food (junk food, deep fried, etc.)

It could be stress like an ulcer or a bad diet.

Stress, worry

Maybe nerves? Just a malfunction of the body. It may not be related to anything he's done.

Prevention

Exercise, eat well balanced meals, cut down on any harsh foods, relax more

Change society. The competitive nature of corporate capitalism as it exists in Western society is destructive to human nature. The sickness of a society in constant anxious competition is caused by the profit motive. As long as a society neglects putting human need in front of profit, we will have sick people (physiologically sick to various degrees).

Care more about what they eat and relax.

Calm down--lower their blood pressure, take life one step at a time, make an effort to sit down & eat good meals rather than grabbing something here or there.

Work at developing an accurate perception of yourself and what makes you tick.

Relax and eat a good balance of food.

Eat right & don't get hyper

Do not put so much emphasis on success

Possibly relax more. Maybe nothing.

Causes

Eating the wrong kinds of food.

No response (n=1)

Prevention

They can make sure they eat the right foods.

No response (n=1)

Diabetes

Causes

Diet, heredity

Because they don't look out for themselves. Their diet is totally wrong for them. Another could be depression and loneliness.

I feel that diabetes is hereditary and it is caused by the sugar level in someone's blood stream.

There are hereditary factors. An improper diet and being overweight can also contribute to the development of diabetes.

Genetics

Some people are born with it, others contract it later in life. It has to do with the amount of insulin in the body and the ability to metabolize sucrose. (Also, stress, overeating)

Not enough sugar in the blood

Poor diet

Poor diet

Prevention

Get checkups, watch diet

See a doctor and possibly a psychologist.

Eating a proper diet would help to prevent this illness.

Maintain a reasonable weight, get enough exercise. But if a person is genetically inclined toward diabetes, there really isn't much he can do.

Nothing

Careful diet and exercise help. But if there is a strong history of it in your family, you are pretty much stuck.

Not anything really, but maybe eat the right foods & exercise

Eat properly

Eat better

Causes are probably too much
income of sugar and the body
couldn't take it; bad diet.
Don't really know.

Eat right

I think that mostly diabetes
is hereditary

?

Poor diet, poor exercise

Start eating better and exercising
more

Blood difficulties

?

Not enough knowledge on the
subject to find a good cure

Good diets and exercise

Have no idea. Don't know whether
it's physical or psychological.

Take care of yourself (i.e., proper
diet, exercise, etc.)

The glucose in the blood system
is either high or low. It depends
upon what type of diabetic this
person is. Some people are more
susceptible to it than others
since it is hereditary.

A control diet can prevent this.
To maintain your blood level you
cannot have too much or too little
glucose, therefore a balanced diet
is the best.

Getting diabetes in middle age is
very common. There are many con-
tributing factors, overweight, for
example. But the real reason for
middle age diabetes is a
in something. I forgot the name
of it. However, this is not as
detrimental as juvenile diabetes.

Stay in shape. Don't get overweight.
Eat a proper diet.

Body not producing enough sugar.
Kidneys aren't working properly.

Nothing

Eating improperly (i.e., too much
sugar, etc.) and generally not
working it off, due to keeping to
the office too much, pressure.
And just not being aware of what
he was doing wrong.

Exercise, eat a better balanced diet,
and get some activity to keep him
out of the office for awhile.

Inherited (genetics)

Nothing

<u>Causes</u>	<u>Prevention</u>
When the body does not turn the body sugars into insulin. Overweight, poor diet.	Yearly physicals, good diet, exercise
Too much sugar consumed at early ages, hereditary through genes	
It is a disease caused by the malfunction of a gland that is responsible for the amount of glucose in the blood stream.	Nothing can be done to prevent it, but once a person knows he or she has it, it helps to reduce sugar in the diet.
I don't know.	I don't know.
Latently genetic, but there is no known cause.	There is no cure.
I don't know, probably something wrong with the blood sugar level	?
High blood sugar levels	Watch diets, exercise, regular checkups
Heredity	Watch diet, remain active, follow program developed by a good doctor
Overconsumption of sugar, and heredity	Cut down on sugar
I think it is hereditary, and it has something to do with the blood	See a doctor and eat a balanced diet
Heredity	Control blood sugar level
It seems to be passed on by genes of the parents. Too much sugar in the blood.	Careful diet
Heredity	Not much
Heredity	Nothing
Wrong foods, too many sweets	Eat right

Causes

Either you are born with it, and it doesn't show up until later, or you get old-age diabetes, which usually develops after the age of 55-60. (Maybe from too much intake of sugar?)

Genetic

Heredity, bad pancreas, munching too many candy bars

Prevention

Eat well-balanced meals (using natural sugars rather than processed sugar) and exercise daily.

Not much

Don't eat too many candy bars

Coronary Heart Disease

Causes

Possibly stress, obesity, heredity

Stress, pressures from work

I think that one cause may be not enough exercise. I mean many people overeat and they don't do anything to compensate for it.

This could be an inherited disease.

Not taking good care of themselves, or just a weak heart slowly breaking down. Smoking, not enough sleep

Not enough exercise, or good feelings about himself

Overweight, extreme pressures, not eating right foods

People develop this illness from birth, it is a defective part of the body.

Prevention

Exercise, relax

They can probably take more pride in themselves by dieting and exercising a little bit.

Go on the diet that the doctor recommended and exercise program. And don't get upset about things and take life as it comes.

Stop smoking, sleep at least eight hours, stop everyday stress and worrying

Exercise, eat right, feel good about oneself

Exercise regularly, don't overwork yourself, eat right

Nothing

Causes

Diet, stress

I think this illness is caused by stress and not enough exercise

I think that it could be due to heredity traits and also due to a person's diet and exercise practices

Putting too much pressure (unnecessarily) on themselves

Stress, worry, anxiety

Stress and how it is handled by an individual, heredity, diet

Overwork, stress

Non-active life, weak (poor) heart in general, eat the wrong foods, genetics, worrying

Overweight, inactive people are very susceptible to this. People with high blood pressure are also prone.

High blood pressure

Not enough exercise and poor diet

High cholesterol levels, lack of exercise, stress, bad diets, bad exercise patterns

High carbohydrate intake & lack of exercise

Prevention

By not being concerned about what others think, proper diet, less meat

Don't hold things inside of you. If there's something wrong, talk about it. Don't eat too much, and get some type of exercise.

People can try to eat right and get some type of exercise and also regularly get checked by doctors

Stay active and don't smoke

Relax more and have more confidence

Proper exercise and diet, and avoid overreaction to stress

Stay at appropriate weight, do not overwork yourself

Exercise, eat well regularly

People must exercise, eat properly--their diet must be low in starches and cholesterol

Proper diet and exercise

Exercise and eat sensibly

Better diets--less cholesterol, better exercise programs, less stress

Watch diet and exercise

<u>Causes</u>	<u>Prevention</u>
Smoking, lack of exercise	Not smoke, exercise
I believe he may have been overweight, and also had quite a bit of stress of his mind	Diet, get more exercise, less stress from job
Smoking, obesity, hypertension	Stop smoking, eat sensibly, see a doctor, take medication
Nervousness, diet possibly because of nervousness	Loosen up, don't worry about what people will think so much
Smoking, drinking, no exercise, etc.	Stop smoking, drinking, etc. Keep in shape.
Diet and exercise (lack of)	Watch their diet and exercise
Diet, stress	Have more well-balanced meals with less cholesterol. Try to decrease intensity of stressful situations by reducing anxiety.
Possibly overweight, perhaps it's hereditary	Keep their bodies in good physical condition (i.e., eating right, exercise). Perhaps sometimes the illness is unavoidable.
Smoking, inherited, overweight, high blood pressure, high cholesterol	Stop whatever they're doing to increase the risk. If inherited, see a physician regularly.
Stress, too much work, family problem, smoking	Don't get so worked up over jobs. Don't smoke. Try and take things that hurt you easier.
Stress and strain, improper diet, tension, unfavorable working conditions, smoking	Don't overwork, relax and enjoy life, proper diet. Have an annual health checkup.
Some people get it from smoking or not exercising to stay healthy. Not eating the right kinds of foods.	(1) Jog at least twice a week (2) Cut down on smoking (3) Eat the proper kinds of foods
Weak, fear, worry too much	To stay cool

Causes

Stress in work situations, unhealthy eating and exercise habits, usually one who keeps major emotional feelings to himself instead of confiding with one who may help or whom the feelings involve (wife, etc.), disappointment in own self

Hereditary, not taking proper care of themselves

Heredity, genetics, and possibly diet to some extent

Overindulgence of fatty foods, not enough exercise, to some extent hereditary

Do not know

Stress, anxiety, bad diet, little exercise, overweight, inherited

No response (n=1)

Prevention

Earlier in life people should become aware of their own physical tendencies toward this disease & hopefully do their best to either alter or change these conditions (exercise, eat correctly)

Take care of themselves, see a doctor & take his advice

If they know that they are prone to the disease, be careful--physical fitness lessens the risk of heart attack

Exercise, cut back on fatty foods

Do not know

Eat properly and moderately exercise, be calmer, avoid stress

No response (n=1)

LeukemiaCauses

I don't know

Hereditary causes

I really don't know, genetic possibly

Heredity, fate, luck

No idea

Prevention

I don't know

I have no idea

See a doctor

<u>Causes</u>	<u>Prevention</u>
I think that the causes for this illness are not clearly known yet. But perhaps it may be hereditary.	Nothing in particular--this usually strikes suddenly even if someone is leading a fairly "normal" life
There is nothing you can do to stop it. It has to do with the count in blood cells, some people's become lower.	Nothing
It could be from smoking or from chemicals in food or it might just be an abnormality in the body	I have no idea
This illness is due to an uncontrolled production of white blood cells and can also be hereditary	I feel that a person will either get this disease or not.
Probably has something to do with genetics. I don't know. It may be an indiscriminate disease.	I don't think too much can be done to prevent this disease.
Don't know	Don't know
Born with cancer cells	Nothing
Caused by overproduction of white blood cells, could be hereditary. I'm not sure.	Get regular checkups to see if they have the disease in an early stage.
It's unknown what causes it.	Nothing
?	?
It could be hereditary. If doctors knew the cause then they could probably diagnose the illness.	It is a form of cancer. There really isn't anything you can do except maybe by not smoking or staying away from Hiroshima. After the bomb was dropped people developed leukemia & it was inherited by innocent children.
I don't know, and it's my impression that medical science is uncertain also.	As the cause is presumably unknown, not too much.

Causes

God's fate--to my knowledge, don't know causes

Genetic factors

The extra production of white blood cells

Unknown cause so far. Something is wrong with the blood system of the person.

No cure, an excess of white blood cells (which act as an agent against illness or foreign substances in body)

I don't know. I believe anyone can get it. It just happens, so I suppose chances are 50/50.

?

The causes of leukemia are not entirely known. It is believed to be due to some genetic malfunction.

I have no idea.

Do not know.

A malfunction in the center where white blood cells are produced

The causes are genetic. I don't think that any one thing can make you get it. It's the individual's body.

Prevention

Nothing except pray

Nothing--cancer of the blood can't be prevented or cured

They don't know why people get this, so it's impossible to do anything to prevent it

Best thing is to have a good balanced diet and watch blood sugar level (if it helps)

Eating properly, taking care of your emotional state of mind. If you are under a lot of stress, you often put your body through hell--it might be a way your body reacts.

Stay in shape, have regular checkups, etc.

Research

Without knowing the causes, it is pretty difficult to prevent this disease.

No idea.

Possibly abstain from as many carcinogens as possible

Keep themselves as healthy as possible

If a person keeps his body in condition, they can put up a better fight against the illness, but there is really nothing you can do to prevent getting this illness--it just happens.

Causes

God's will.

I think it has to do with the habits, personality, nature of the person, background with family. Basically, I think it is a freak thing caused by many factors.

Maybe this condition is genetic in nature. The true cause is not known. Possibly the intake of materials not naturally found in the body or radiation exposure.

Heredity

Leukemia is a cancer of the blood which attacks white blood cells. It can be caused by exposure to cancer-causing agents (radiation, asbestos) or inherited genetically

From excessive smoking, genetic injuries

They get it through heredity.

This is a chance, some people get it & some don't. If it's in the family, you're more likely to get it. (Fate)

Genetics--I believe the trait is inherited

No response (n=1)

Prevention

Donate money to leukemia research.

Nothing really, but I try to just watch what I eat. Basically, I don't know.

Not much! If it's genetic, there's nothing to do. If not, avoid the harmful materials. But--what are they?

Not much--maybe frequent complete physicals

Short-term: Watch for leukemia traits in a spouse if you have them yourself. Avoid excessive exposure to cancer-producing agents. Long-term: Encourage research to determine the origin of blood cancer. Find a cure, not just an arresting treatment like is now available.

Don't smoke, eat right, take good care of yourself. Keep in good physical condition.

There is no prevention.

You can't do anything about it once you have it, but to prevent it, your best bet is to take good care of yourself (eat properly, exercise, go to doctors often for checkups).

Really not too much

No response (n=1)

