

PHYSICAL ILLNESS, THE INDIVIDUAL AND THE COPING PROCESSES

Z. J. Lipowski, M.B., B.Ch.*

*Royal Victoria Hospital
Montreal, Canada*

ABSTRACT—Growing interest in the psychological and social aspects of physical illness and disability has extended to all facets of the behavior of patients. The ways in which people cope with the stress and challenges of disease is the subject of this paper. The writer presents a tentative framework for conceptualization of this aspect of illness behavior. A brief discussion of the major determinants of coping is given. The latter include intrapersonal, disease-related and environmental variables. Coping behavior is a resultant of multiple factors reflecting a patient's specific dispositions as well as characteristics of his total situation during a given episode of illness and its different phases. The way in which the patient copes with his illness spells the difference between optimum recovery or psychological invalidism. It is the doctor's task to recognize his patient's mode of coping and help him employ the most adaptive and effective coping strategies.

In response to complex social pressures, organized medicine is undergoing a searching self-reappraisal with the participation of behavioral scientists, including psychiatrists. Recent expansion of psychiatric consultation services to all areas of medical practice is one tangible proof of the new trends in medicine. This development has facilitated access to patients and observations of their psychological responses to physical illness, hospitalization and medical procedures, on a scale unparalleled in the history of medicine (Lipowski, 1967, 1968). A whole area of human experience is now open to systematic psychological inquiry. This new opportunity, and the demands for practically useful guidelines for action that go with it, has brought about a significant shift of emphasis in the field of psychosomatic medicine. The latter has striven to identify those psychological variables which contribute to the development of bodily disease. The predominant focus in psychosomatic research and theory has been on pathogenic causal relationships, that is, on etiology. Franz Alexander (1939) claimed that the mind ruled the body. This surprisingly dualistic statement by an avowed monist has permeated much of psychosomatic thinking of the past three decades. One result has been the relative neglect by psychosomatic investigators of those aspects of the human condition which highlight the limitations of the "mind's rule." The study of experience and behavior of people already sick has been regarded as unworthy of the effort of those probing the "mysterious leap from

*Associate Professor, Department of Psychiatry, McGill University, Montreal, Quebec, Canada and Chief, Psychiatric Consultation Service, Royal Victoria Hospital and Montreal Neurological Hospital.

the mind to the body." The search for the mechanisms whereby specific kinds of psychosocial stresses may result in disordered physiological functioning and disease continues. At the same time, one notes a striking increase in research on psychological and social factors which influence the experience, course and outcome of any episode of disease, regardless of its etiology. A truly dynamic conception of disease is gaining ground, one which stresses ceaseless interaction of biological, psychological and social factors and acknowledges the ubiquity of feedback mechanisms in human biology. This conception has blurred the distinction between etiological and "reactive" factors and has made obsolete the concepts of psychogenicity of organic disease as well as of the dichotomy between "psychosomatic" and "somatopsychic" causal sequences.

One of the major inquiries about the state of being sick is how the individual copes with it, as well as the causes and consequences of his failure to cope. This problem is the main subject of this paper and a sequel to the author's recent article on the psychological and social aspects of physical illness (Lipowski, 1969).

The Concept of Coping

The meaning of the term "coping" is ambiguous. Two representative definitions of it, one by a psychologist and the other by a sociologist, illustrate this. Psychologist Lazarus (1966) in his thorough discussion of the coping process says, "When we use the term 'coping' we are referring to strategies for dealing with threat." Approaching the subject from a sociological perspective, Mechanic (1968) refers to coping as the "instrumental behavior and problem-solving capacities of persons in meeting life demands and goals. It involves the application of skills, techniques, and knowledge that a person has acquired."

These two definitions differ in their emphasis; they represent what I believe are two basic views of human life. One, viewing man as a besieged fortress with a fifth column active within, might be called a beleaguered view, stressing strife, conflict, threat, danger signals and defenses. The other might be called an adaptational view, emphasizing tasks and challenges which man attempts to master by the application of his psychological resources. The stress on dangers to be defended against is lacking in the adaptation position. This writer sees these two views as mutually complementary and not incompatible. Our concern in this paper is with the physically ill and disabled. Physical illness or disability can be conceived of as a form of psychological stress involving threat of suffering and losses. But it is just as cogent to view them as giving rise to a set of adaptational tasks, challenges and goals to be mastered or attained, where success may result in psychological growth. Illness has one crucial characteristic; the primary source of psychological stress lies within and not outside the person's body boundaries. Thus, it both imposes tasks to be dealt with and impairs in some degree the subject's capacity to meet life's demands and follow his goals. Coping in this case must include both aspects, on the one hand dealing with, say, pain, paralysis or aphasia and on the other with the tasks and goals of one's life.

The latter, of course, may be modified or postponed by the disability.

We define coping as all *cognitive and motor activities which a sick person employs to preserve his bodily and psychic integrity, to recover reversibly impaired function and compensate to the limit for any irreversible impairment*. It is useful to distinguish coping styles and strategies. *Coping style* refers to an individual's enduring disposition to deal with challenges and stresses with a specific constellation of techniques. This aspect includes both the tendency to the predominant use of certain defense mechanisms as well as manifestations of the individual's cognitive and perceptual styles. *Coping strategies* are the techniques actually used by the sick person to deal with his illness and its consequences. They are an expression of both his coping style and of his attempts to try new approaches to the specific challenges posed by the illness.

Coping may be evaluated as *adaptive* or *maladaptive* depending on its appropriateness to the patient's age and situation as well as its effectiveness in achieving maximum possible functional recovery or compensation. Thus, regression is a common strategy used by children in coping with illness but, as Langford (1961) points out, it is a "strategic withdrawal for regrouping of strengths" rather than a pathological development. Denial of illness or passive surrender to it may be adaptive techniques during the acute phase of a severe illness but are generally maladaptive in its later stages when recognition of facts and active coping are called for.

Before discussing in more detail coping styles and strategies, it is germane to consider briefly the determinants of coping.

The Determinants of Coping

How a person copes with a given episode of illness or with permanent disability depends on a large number of factors. They are generally the same as those which determine a patient's psychological reaction to physical illness. The writer has discussed them in more detail elsewhere (Lipowski, 1969). They may be grouped into those inherent in the patient, his illness and his environment.

The *intrapersonal* factors include the patient's age, personality, intelligence, specific skills, values, beliefs, and his emotional state and cognitive capacity at the onset of illness and throughout its duration. A person's ability and mode of coping depends on the timing of the illness in his life cycle. Illness in childhood has special significance not only because of the relatively limited repertoire of coping strategies available to the child, but also because the quality of experiences with illness at an early age and of the response to it of significant adults help establish an enduring pattern of response to and coping with illness in later life. Langford (1961) in his comprehensive survey of children's reactions to physical illness points out that most children cope with illness surprisingly well and that some come out of it with increased maturity and vigor.

Physical illness during adolescence (Little, 1960) imposes an additional stress at a time when the tasks of gaining independence from the parents, establishing personal identity and a stable body image provide taxing challenges. An adolescent readily interprets his illness as a punishment for sexual and aggressive feelings and activities. Thus physical illness during adolescence is particularly liable to engender intense anxiety and conflicts. A common response of an adoles-

cent patient is to deny his illness and reject therapeutic regimen and restrictions. A classical example of this is provided by the juvenile diabetic who omits or overdoses his insulin injections and disregards dietary restrictions (Stearns, 1959). At the other extreme of age, the high frequency of some degree of brain damage in people over 65-years of age leads to the common occurrence of cognitive disorganization in response to physical illness and this impairs coping capacity (Epstein and Simon, 1967).

The intrapersonal factors listed above contribute to the subjective *meaning* which every illness has for the individual (Lipowski, 1969) and this in turn helps determine the coping strategies.

Disease-Related Factors

The type, location, rate of onset and progression, degree of reversibility, and other aspects of the pathological process and functional impairment are biological variables which co-determine the effectiveness of coping. These factors not only influence the magnitude and character of the tasks imposed by the illness but also affect the latter's meaning, conscious or unconscious, for the patient. The more the impaired body part or function involves the individual's values, conflicts and sources of gratification, the more it challenges his coping resources.

Environmental Factors

Both the social and non-human environments of the sick person influence his mode of coping with illness. The latter is not only more likely to occur at a time of life crisis (Rahe, 1969) such as bereavement (Maddison and Viola, 1968), but its course is influenced by the patient's emotional state which is partly determined by the quality of his current interpersonal relationships. The more the latter are disrupted the greater the patient's proneness to depression and surrender to disease.

This brief outline of determinants of coping aims at emphasizing the complex multifactorial nature of a patient's psychological response to his illness or disability. There is suggestive clinical evidence that the quality of such response influences to some extent the course and outcome of every episode of disease.

We may turn now to a discussion of the styles and strategies of coping.

COPING STYLES

The term "style", as used in psychology, refers to a relatively enduring mode of functioning which can be identified in a person through a range of his specific attitudes and acts (Shapiro, 1965). Cognitive style, for example, characterizes the individual's cognitive functioning and is discernible in both his perceptual and intellectual activities (Witkin and Oltman, 1967). When we talk of coping styles in the present context, we assume that individuals tend to display their characteristic ways of perceiving, thinking, problem-solving and acting when they develop organic disease. The latter combines the elements of threat and, often, of novelty; that is, it confronts the individual with tasks not encountered by him before. One may postulate that coping with physical illness and disability will reflect the patient's habitual modes of dealing with threatening and novel

situations in general. In the absence of data, however, it is impossible to relate cognitive styles evolved from laboratory experiments to clinical observations. The style of field-dependence-independence is a case in point. It has been stated (Witkin and Oltman, 1967) that field-independent persons tend to use the defenses of isolation and intellectualization, while field-dependent ones employ "massive repression and primitive denial." These statements tell us little, however, about whether these two cognitive styles influence predictably a patient's coping with a variety of physical illnesses and disabilities. Such a possibility exists but awaits systematic studies.

Lazarus (Lazarus *et al.*, 1969) distinguishes two main modes of coping: direct actions and intrapsychic processes. The former involve active preparation against harm. The latter include attention deployment, defensive reappraisal, and wish-fulfilling fantasy; that is, attempts to ignore or withdraw attention from the threat, minimize it and seek relief in fantasy, respectively. There is little doubt that the same individual may employ these three modes of coping at different times in the same illness episode.

It may be best policy at present to avoid tying clinical observations to laboratory-derived, cognitive-perceptual styles. Instead, we will describe several categories of cognitive and behavioral coping styles derived from clinical experience. They may serve as a conceptual framework for relevant clinical research and be modified as data accumulate.

Cognitive coping styles

Under this heading will be described two fundamentally different ways of cognitive functioning related to bodily disease or injury. They are (1) minimization and (2) vigilant focusing.

- (1) *Minimization.* This style is characterized by a tendency to ignore, deny or rationalize personal significance of information input related to one's illness and its consequences. It ranges from delusional denial of illness, or anosognosia, to selective misinterpretation of facts to reduce their threatening aspects. The actual extent of minimization may vary from individual to individual and at different stages of an illness in the same person. The main argument here is that some people employ minimization as their *preferred*—if not deliberately chosen—mode of cognitive response to illness. This preferential mode, or style, is displayed by the same person regardless of the nature and severity of his illness and other incidental factors.

Delusional denial seems to be manifested only in the presence of brain disease, reversible or irreversible. The common accompanying affects are bland equanimity or euphoria, depending on whether denial is explicit or implicit (Weinstein and Kahn, 1955). An interesting and instructive personal account of anosognosia followed by progressively milder forms of denial as sequelae of severe head injury has appeared recently (LaBaw, 1969).

The concept of denial as applied to a mode of coping with physical illness has been given disproportionate emphasis in the literature. Janis (1958) rightly points out the ambiguity of this term related to its misuse as an overinclusive

concept covering widely different aspects of psychotic, neurotic, and normal thought processes. The latter have only one feature in common, that is, attempts by the subject to reduce unpleasant affect by minimizing some undesirable aspect of his predicament. Janis distinguishes instances when the person ignores ambiguous signs of threat from those in which he disregards clear-cut evidence of danger or loss (pathological denial). The present writer prefers the more neutral term "minimization" to that of denial, since the former is free from ambiguity and value judgments. It must be clear that minimization implies a *continuum* of cognitive disposition, ranging from total denial to reasonable doubt. An example of an intermediate degree of minimization of threat is provided by a study of patients suffering from myocardial infarction who mislabeled their illness as "stomach trouble" to avoid the emotional impact of the proper label (Olin and Hackett, 1964).

Talking of denial one should distinguish its various forms. One may deny facts, true meaning of information received and/or its likely future consequences, or one's emotional state. Evaluation of denial must always include a consideration of what is denied, in what situation and by whom. Clinical studies indicate that denial of illness or its significance is common in the early phases of sudden severe illness such as poliomyelitis (Visotsky *et al.*, 1961) or in cancer (Feder, 1966). In the case of acute illness such denial may be an adaptive emergency mechanism (Hamburg *et al.*, 1953). It appears, however, that some individuals apply minimization of threat as an *habitual mode of coping* and not just a transient response to calamity.

- (2) *Vigilant focusing.* This style connotes a brisk response to perceived signals of danger and persistent attempts to reduce uncertainty and ambiguity about all aspects of illness. This mode of coping is characteristically seen in obsessional, alert, anxiety-prone and intellectualizing individuals. For them perceptual clarity and ability to explain both internal and external information inputs are necessary conditions for security. When ill, such individuals must know what is happening to them, what the implications of their illness are, why certain diagnostic or therapeutic procedures are used, and so forth. Such patients seek all relevant information and try consistently to make sense out of their experience. This style too is viewed as a continuum, ranging from hypervigilance and exaggeration of all threats to bodily integrity at one end, to realistic recognition of threats and tasks and related rational planning at the other. Between these endpoints one may place obsessional collecting, arranging and rearranging of all bits of illness-related information, anxious ruminations about illness, etc.

Behavioral coping styles

Under this heading will be described habitual modes of *acting* in response to illness shown by different individuals. It must be stressed that we are talking of predominant action tendencies which may be modified by factors inherent in the patient's current psychological state and by other situational variables.

- (1) *Tackling*. This style implies a disposition to adopt an active attitude towards challenges and tasks posed by illness or disability. At one extreme of this style one encounters a tendency to "fight" illness at any cost. This may take the form, for example, of using the diseased part of the body as if it were intact. A good illustration of this is the tendency of some patients with rheumatoid arthritis to continue full activity in disregard of symptoms and with resulting destructive changes in the joints (Editorial, 1969). At the other end of this behavioral spectrum we may place rationally modulated activity related to the current demands of illness as well as actions aimed at prompt recovery from illness or compensation for residual disability.
- (2) *Capitulating*. This mode of coping is characterized by passivity and either withdrawal from or dependent clinging to others. Individuals displaying such behaviors show little observable initiative or action to combat illness and achieve maximum possible recovery. This disposition is not to be confused with willing acceptance of periods of relative inactivity in the service of recovery. A degree of passive giving in is usually the most adaptive form of behavior during acute stage of every serious illness.
- (3) *Avoiding*. This behavioral style pertains to active attempts to get away from the exigencies of illness. One might call it attempted flight into health. This behavior is most often observed among individuals for whom acceptance of the sick role signifies a severe threat to their self-image as independent, masculine or invulnerable. It is a common behavioral concomitant of marked minimization or denial of illness.

COPING STRATEGIES

How an individual copes at any stage of any given episode of illness is a resultant of both his coping style and current situational variables. The latter include the whole constellation of intra- and inter-personal factors at a given point in time. Thus, coping strategies are necessarily more varied, numerous and changeable than the coping styles. To list all possible coping techniques would be both pedantic and pointless. The purpose of identifying the more common patterns of coping with physical illness is a practical one. It may enable the clinician to recognize which particular strategy his patient is using, assess its efficacy, and either endorse it or encourage development of a more desirable strategy. The importance of this aspect of medical management is obvious for psychological, social and economic reasons. The aim is to help reduce the total burden and cost of delayed recovery and psychological invalidism.

The term "coping strategies" refers to intrapsychic activities as well as to communications and actions of the sick persons aimed at reduction of distress and suffering caused by the disease. Such strategies are adaptive when they contribute to prompt recovery of premorbid functioning or personally satisfying and socially acceptable compensation for the permanently impaired or lost functions. A large variety of coping techniques have been described, particularly in relation to chronic illness and disability (Garrett and Levine, 1962; Wright, 1960; Janis, 1958; Cruickshank, 1963; Visotsky et al., 1961). In an attempt to organize

the large mass of relevant observations the writer will describe the more commonly encountered *patterns* of coping strategies, rather than present a dreary list of the latter.

It is the writer's thesis that coping strategies are directly related to the individual's personal meaning of and attitude towards his illness, injury or disability. Clinical observations and relevant literature allow us to distinguish several common categories of meaning of disease to the affected individuals. Such meanings reflect past personal experiences, knowledge, cultural background and beliefs of the sick people. The given meaning may be predominantly conscious or not, but it is usually both. It functions as a cognitive nucleus which influences emotional and motivational responses to illness and thus the coping strategies. The following meanings of illness seem to be most prevalent in our culture.

- (1) *Illness as challenge.* This common view of illness inspires active and generally adaptive coping strategies. Disease or disability is seen as any other life situation which imposes specific demands and tasks to be mastered and which is accomplished by any means available. The related attitudes and coping patterns tend to be flexible and rational. They reflect what Chodoff calls "insightful acceptance" of illness (1962). Timely seeking of medical advice, cooperation, information-seeking (Hamburg and Adams, 1967), rationally modulated activity and passivity, finding substitute gratifications—these are some of the related and desirable coping strategies.
- (2) *Illness as enemy.* Disease is viewed as an invasion by inimical forces, internal or external. Our language clearly reflects this attitude when we talk of "combating" illness or "conquest" of disease. The usual emotional concomitants of this meaning are anxiety, fear and/or anger. These feelings inspire the readiness to flight or fight or helpless surrender, depending on the current appraisal by the subject of his capacity to resist. In its extreme pathological form this attitude may be frankly paranoid and others may be blamed for having caused or aggravated the illness (Orbach and Bieber, 1957). Free-floating anxiety or hostility may appear. Coping strategies reflect this attitude and take various forms of defense against danger and attack. Some degree of denial and projection are common, although regressive dependency and passivity may express a sense of helplessness and readiness to surrender. Patients displaying these coping patterns often create problems for themselves and their physicians. It is possible, however, that a fighting attitude may at times prolong life. It has been reported, for example, that in a group of women suffering from cancer those with best outcome had strong "hostile drives" (Stavraky *et al.*, 1968).
- (3) *Illness as punishment.* This common meaning of illness has several variants. The punishment may be regarded by the patient as just or unjust and as allowing atonement and redemption or not. Emotional concomitants and coping strategies are influenced by this. Anxiety, depression and anger are common affective responses. If the patient regards his illness as punish-

ment both just and final, he may offer little resistance and adopt a passive stance. The idea that disease provides a chance for atonement may lead to elation and sense of new beginning and optimism. Some patients may show considerable personality change upon recovery and display initiative and vigor which were lacking before the onset of illness. They feel that they have been punished, atoned, and given a new lien on life. If the patient views his illness as unjust punishment, his depression and aggrieved feelings may be marked. A patient of mine, a devout old woman, developed leukemia and expressed her protest in the tormenting recurrent obsessive thought "bloody Jesus Christ."

- (4) *Illness as weakness.* Some patients view their illness as a failing, a sign of loss of control with negative moral implications. There is usually some affective response of shame involved. This attitude may lead to attempts to escape from illness by denying it, to conceal it by trying to appear healthy, or to rehabilitate oneself by being a model patient bent on recovery.
- (5) *Illness as relief.* For some patients being ill means a welcome respite from demands and responsibilities of being well or from some current interpersonal crisis or economic problem. On a deeper level, illness may provide a solution to intrapsychic conflicts by justifying avoidance of conflictual situations or reducing the intensity of disavowed impulses. In such cases there is always the danger that the patient will cling to the sick role beyond physiological recovery. Conscious as well as unconscious strategies may be used to this end. They include malingering, conversion, hypochondriacal complaints, overuse of medical facilities and other strategies aimed at prolonging disability.
- (6) *Illness as strategy.* Related to Item 5 is the meaning and use of illness as a coping strategy in interpersonal relations. Being sick and disabled is then used as a technique to secure attention, support and compliance from others. A commonly seen example of this strategy is provided by parents who tie their children to them by effectively playing up the sick role. Other patients may derive satisfaction and enhanced self-esteem from suffering an unusual illness which attracts curiosity of doctors or puzzles them. For such patients coping with illness amounts to maintaining it at any cost and displaying it prominently.
- (7) *Illness as irreparable loss or damage.* For some individuals even minor loss of function, particularly one having high personal value, may signify overwhelming loss and damage which nothing can replace. This attitude is particularly liable to lead to depression, hostility, and resistance to rehabilitative measures, even to suicide. Early recognition of this attitude and related coping strategies is essential if successful psychotherapeutic intervention is to modify it.
- (8) *Illness as value.* Heraclitus, the Greek philosopher of 500 B.C., is believed to have said, "It is not good for men to get all they wish to get.

It is sickness that makes health pleasant" (Burnet, 1958). This bland statement represents an attitude still encountered today that illness and suffering have an intrinsic value. This belief is not prevalent in our hedonistic society. On the contrary, illness tends to have a negative value and everything is done to counteract it. Yet one still meets individuals who believe that illness may help expand personality no less effectively than drug-induced psychedelic bliss. A classical fictional account of such a development is found in Thomas Mann's novel *The Magic Mountain*. It illustrates how the experience of illness may lead to a more intense spiritual life and a new awareness of aesthetic and intellectual values. Sigerist, the medical historian, describes how his chronic cardiovascular illness helped increase his sensitiveness to aesthetic experience (Pinner and Miller, 1952). Another physician-patient, Pinner, says that one should aim at making one's life more productive during the period of physical disability than ever before (Pinner and Miller, 1952). The lives of famous men provide many examples of this superior mode of coping (Fabricant, 1960). The blind Bach dictating a chorale for organ; Beethoven, stone-deaf and ill, writing his quartet in A minor; the asthmatic Proust working feverishly to complete his monumental novel before his death. Proust wrote that illness saved him from idleness.

It is an open question whether these creative efforts were facilitated by illness and suffering or attained in spite of them. One thing seems beyond question; the experience of illness may enhance the intensity and depth of the experience of living and this can be reflected in thought, feeling and action. Is there a higher mode of coping available to man?

DISCUSSION

Medicine, like our civilization of which it is an outgrowth, is in a state of flux. A great debate is going on about its prevalent assumptions, goals and practices. There is a growing concern with the *quality* of human experience both in health and disease. The issues of prevention and treatment of disease, of safeguarding survival, continue, of course, to be physicians' main preoccupations. But to these traditional goals of medicine something new is being added, a humanistic concern about the individual and his mode of being healthy, sick or dying. Perhaps what is new is not these concerns as such but the extent to which they influence current medical thought and training. This is reflected in the recent discussions of the place of behavioral sciences in the teaching of medicine, in the outpouring of books on the experience of dying, and the interest in the psychological and social aspects of physical illness (Lipowski, 1969). These new trends, to be sure, are most readily discernible in affluent societies. It is in them that increasing numbers of people are not satisfied with just surviving or with mere tolerance of existence. They, especially the young, clamor for more pleasure, intensity and meaningfulness in living. These demands are extended to medical practice which is challenged to provide not only universally available services but also individualized care of high quality. People want to have not

only their physical suffering alleviated but also their anxieties allayed and their capacity for satisfactory living maximally restored or compensated for. A complex society demands of its constituents continuing inventiveness and adaptability for coping with the vicissitudes of life.

SUMMARY

Coping styles are relatively enduring dispositions related to cognitive and motor modes of coping. *Coping strategies* are techniques of dealing with the exigencies of illness. They are an outcome of both the individual coping style and the given constellation of situational factors. It is proposed that these strategies are significantly influenced by the specific *meaning* which the given illness has for the individual. Eight major categories of such meaning are described and their effect on the coping strategies is pointed out. The practical importance of the study of coping with physical illness is emphasized.

REFERENCES

- Alexander, F., Psychological aspects of medicine. *Psychosom. Med.*, **1**, 7-18, 1939.
- Burnet, J., *Early Greek Philosophy*. Black, London, 1958, p. 140.
- Chodoff, P., Understanding and management of the chronically ill patient. *Amer. Practitioner*, **13**, 2, 136-44, 1962.
- Cruickshank, W. M., (Ed.), *Psychology of Exceptional Children and Youth*. Prentice-Hall, Englewood Cliffs, N.J., 1963.
- Editorial, Mental problems in rheumatoid arthritis. *Brit. Med. J.*, **4**, 319, 1969.
- Epstein, L. J., and Simon, A., Organic brain syndrome in the elderly. *Geriatrics*, **22**, 145-50, 1967.
- Fabricant, N. D., *Thirteen Famous Patients*. Chilton, Philadelphia, 1960.
- Feder, S. L., Psychological considerations in the care of patients with cancer. *Ann. N.Y. Acad. Sci.*, **125**, 3, 1020-7, 1966.
- Garrett, J. F., and Levine, E. S., (Ed.), *Psychological practices with the physically disabled*. Columbia Univ. Press, N. Y., 1962.
- Hamburg, D. A., and Adams, J. E., A perspective on coping behavior. *Arch. Gen. Psychiat.*, **17**, 277-84, 1967.
- Hamburg, D. A., Hamburg, B., and de Goza, S., Adaptive problems and mechanisms in severely burned patients. *Psychiat.*, **16**, 1, 1-20, 1953.
- Janis, I. L., *Psychological Stress*. Wiley, N.Y., 1958.
- LaBaw, W. L., Denial inside out: Subjective experience with anosognosia in closed head injury. *Psychiat.*, **32**, 2, 174-91, 1969.
- Langford, W. S., The child in the pediatric hospital: Adaptation to illness and hospitalization. *Amer. J. Orthopsychiat.*, **31**, 4, 667-84, 1961.
- Lazarus, R. S., *Psychological Stress and the Coping Process*. McGraw-Hill, N.Y., 1966.
- Lazarus, R. S., Averill, J. R. and Opton, E. M., *The psychology of coping: Issues of research and assessment*. Paper given at a conference entitled "Coping and Adaptation," Stanford Univ., Dept. of Psychiatry, Palo Alto, California, March 20-22, 1969.
- Lipowski, Z. J., Psychosocial aspects of disease. *Ann. Intern. Med.*, **71**, 6, 1197-206, 1969.
- , Review of consultation psychiatry and psychosomatic medicine. *Psychom. Med.*, **29**, 2, 153-71, 1967.
- , Review of consultation psychiatry and psychosomatic medicine. *Psychosom. Med.*, **29**, 3, 201-24, 1967.
- , Review of consultation psychiatry and psychosomatic medicine. *Psychosom. Med.*, **30**, 4, 395-422, 1968.
- Little, S., Psychology of physical illness in adolescents. *Ped. Clin. N. Amer.*, **7**, 1, 85-96, 1960.

- Maddison, D. and Viola A., The health of widows in the year following bereavement. *J. Psychosom. Res.*, 12, 297-306, 1968.
- Mechanic, D., *Medical Sociology*, Free Press, N.Y., 1968.
- Olin, H. S. and Hackett, T. P., The denial of chest pain in 32 patients with acute myocardial infarction. *JAMA*, 190, 977-81, 1964.
- Orbach, C. E., and Bieber, I., Depressive and paranoid reactions. *A.M.A. Arch. Neurol. Psychiat.*, 78, 301-11, 1957.
- Pinner, M., and Miller, B. F., (Ed.), *When Doctors are Patients*, Norton, N.Y., 1952.
- Rahe, R. H., Life crisis and health change, in May, P.R.A. and Wittenborn, J.R., *Psychotropic Drug Response: Advances in Prediction*, Thomas, Springfield, Ill., 1969.
- Shapiro, D., *Neurotic Styles*, Basic Books, N.Y., 1965.
- Stavraki, K. M., Buck, C. W., Lott, S. J., and Wanklin, J. M., Psychological factors in the outcome of human cancer. *J. Psychosom. Res.* 12, 251-9, 1968.
- Stearns, S., Self-destructive behavior in young patients with diabetes mellitus. *Diabetes*, 8, 5, 379-82, 1959.
- Visotsky, H. M., Hamburg, D. A., Gross, M. E., and Lebovits, B. Z., Coping behavior under extreme stress. *Arch. Gen. Psychiat.*, 5, 423-48, 1961.
- Weinstein, E. A., and Kahn, R. L., *Denial of Illness*, Thomas, Springfield, Ill., 1955.
- Witkin, H. A. and Oltman, P. K., Cognitive style. *Internat. J. Neurol.*, 6, 2, 119-37, 1967.
- Wright, B., *Physical Disability, a Psychological Approach*, Harper, N.Y., 1960.