PSYCHOSOCIAL STRESSORS AND
MAJOR DEPRESSION, SCHIZOPHRENIA, AND
SCHIZOPHRENIFORM DISORDER

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ABSTRACT

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JANET B.W. WILLIAMS

This study explored the relationship between the se-
verity and types of psychosocial stressors and three major
mental disorders. The data were derived from the field
trials of the third edition of the American Psychiatric
Association's Diagnostic and Statistical Manual of Mental
Disorders (DSM-III), in which over 12,000 patients from
all over the country were evaluated by over 500 clinicians.
Two hundred forty-seven patients with Major Depression and
247 with Schizophrenia were randomly selected for this
study, along with all 112 patients given the diagnosis of
Schizophreniform Disorder, a disorder similar to Schizo-
phrenia except for its brief duration.

The number of psychosocial stressors recorded by the
evaluating clinician for each subject was examined, and each
stressor was classified according to whether it represented
an entrance into or exit from the social field of the sub-
ject, whether or not it was desirable, whether or not its
occurrence had been under the control of the subject, the
number of Life Change Units it entailed, and what area of

the subject's life it affected. These variables were then compared across diagnostic groups, for individuals with and without associated Personality Disorders. In addition, for each diagnostic group, the relationship between the subjects' highest mean level of adaptive functioning and the mean severity of their psychosocial stressors was examined, using the multiaxial system of DSM-III.

Major findings that replicated those reported in the literature include that a greater proportion of individuals with Major Depression were reported to have experienced a greater number of stressors, undesirable events, entrances, and uncontrollable events, than individuals with Schizophrenia. Significant new findings include that, for Schizophrenia, the highest level of adaptive functioning in the past year and level of severity of stressors experienced prior to episode onset are positively correlated, while for Major Depression these variables are negatively correlated. The results for Schizophreniform Disorder are equivocal, with similar results to Major Depression for some stressor dimensions, and midway between the other two groups on others.

The implications for social work practice of these findings and further study of life events are great, for primary, secondary, and tertiary prevention of mental illness.

TABLE OF CONTENTS

i

LIST OF TABLES

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CHAPTER I

THE RESEARCH PROBLEM

Background

Every social work student's notebooks are filled with references to the important influences of the environment on social work clients. From the beginning, every social worker is taught to pay the highest regard to the total life situation of his or her clients. Indeed, this broad perspective on the problems our clients bring us forms the basis of virtually all social work theory and practice. This emphasis also distinguishes social work as a profession from the other mental health "helping" professions, such as psychology and psychiatry.

A reaffirmation of the commitment of the social work profession to the importance of the environment is reflected in the newest movements in social work practice, such as the "life model" approach.[1,2] The focus of this approach,

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[1]Carel B. Germain, "An Ecological Perspective in Casework Practice," Social Casework, 54 (June 1973), pp. 323-330.

[2]Carel B. Germain and Alex Gitterman, The Life Model of Social Work Practice (New York: Columbia University Press, 1980).

described as an "ecological" approach to practice, emphasizes the "person-in-situation," and, as Dr. Germain states, "incorporates a great deal of what social workers have been doing for years."[1] Social work services must be located "where life-cycle events intersect with institutional or environmental processes; examples include first-time parenthood, initial school entry, departure for college, first job, migration, marriage, retirement, bereavement, and catastrophic illness."[2] Therefore, social workers must learn more about the effects of these types of "processes" on their clients.

Anyone working in the field of mental health who has interviewed individuals suffering from mental disturbances can't help but be impressed by the role of these "institutional or environmental processes," or stressful life events, in seemingly causing or exacerbating episodes of mental disorder. There are many definitions of "stress" in the literature, ranging from very general definitions to extremely specific definitions of an organism's physiologic response. For the purposes of this study, a general definition has been adopted from Gerald Caplan, who defines "stress" as "a condition in which there is a marked discrepancy between the demands made on an organism and the

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[1] Germain, op. cit., p. 326.

[2] Ibid., p. 330.

organism's capability to respond."[1]

As everyone knows personally, the experience of a stressful event can leave one feeling troubled, exhausted, or confused. In cases in which the events are particularly severe, or in which the individual has a vulnerability that is due to other factors (e.g., lack of social supports), the weakness that one feels following stress can sometimes take on a life of its own in the form of illness.

The relationship between stressful life events and physical and mental illness has become an important area of research. The work of Hans Selye, one of the first to study this relationship, has pioneered an explosion of studies in the last ten years on the influence of life events on various kinds of illness. Much of this work has focused on the relationship between stressful life events and physical illness, such as myocardial infarction[2] and diabetes[3]. In most of these studies, a positive relation-

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[1]Gerald Caplan, "Mastery of Stress: Psychosocial Aspects," American Journal of Psychiatry, 138 (April 1981), p. 414.

[2]Töres Theorell, "Life Events Before and After the Onset of a Premature Myocardial Infarction," in Barbara S. Dohrenwend and Bruce P. Dohrenwend, eds., Stressful Life Events: Their Nature and Effects (New York: John Wiley & Sons, 1974), pp. 101-117.

[3]Chase P. Kimball, "Emotional and Psychosocial Aspects of Diabetes Mellitus," Medical Clinics of North America, 55 (July 1971), pp. 1007-1018.

ship has been found. More recently, attention has become more focused on life events and mental illness.[1]

Stressful Life Events and Mental Health

The study of the relationship of psychosocial stressors to mental health is an area of research of particular relevance to social workers, since they represent that faction of mental health practitioners most concerned with the relationship between the environment and people. As Helen Harris Perlman long ago stated,

> The person who comes as client to a
> social agency is always under stress. What-
> ever the nature of his problem -- whether
> it is due to failures or pressures in his
> environment, to warfare within him, to frus-
> trations in carrying some valued social role,
> to obstacles which have intruded themselves
> between his drives and his goals -- the client
> is under stress. The client's stress is two-
> fold: the problem itself is _felt_ by him (not
> merely recognized) as a threat or an actual
> attack, and his inability to cope with it
> increases his tension.[2]

The task of a social worker is to help the client cope with his or her problems or life stresses.

During the 1960s, an emphasis on the prevention of mental illness developed as part of the community mental health movement. A greater knowledge about life events

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[1] Judith G. Rabkin and Elmer L. Struening, "Life Events, Stress, and Illness," _Science_, 194 (December 1976), pp. 1013-1020.

[2] Helen Harris Perlman, _Social Casework: A Problem-Solving Process_ (Chicago: Chicago Press, 1957).

and their relationship to mental illness was timely because, as mental health workers moved into the community, they were more able to do something about some of the environmental circumstances that seemed related to mental illness.

In the next decade, Dr. Jerome Frank used the term "demoralization" to describe a syndrome in which a person "finds that he cannot meet the demands placed on him by his environment, and cannot extricate himself from his predicament."[1] Frank describes this syndrome and its effects on people in more detail:

> Dictionaries define "to demoralize" as "to deprive a person of spirit, courage, to dishearten, bewilder, to throw him into disorder or confusion." [Individuals with demoralization] are conscious of having failed to meet their own expectations or those of others, or of being unable to cope with some pressing problem. They feel powerless to change the situation or themselves. In severe cases they fear that they cannot even control their own feelings, giving rise to the fear of going crazy which is so characteristic of those seeking psychotherapeutic help. Their life space is constricted both in space and time. Thus they cling to a small round of habitual activities, avoid novelty and challenge, and are reluctant to make long-term plans. . . the demoralized person feels isolated, hopeless, and helpless, and is preoccupied with merely trying to survive. . . . Environmental stresses may overtax a person's adaptive capacity for reasons beyond his control. . . . Through unfortunate past experiences, a

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[1]Jerome Frank, Persuasion and Healing (Baltimore: Johns Hopkins University Press, 1973), p.316.

person may have learned faulty ways of per-
ceiving and dealing with life's stresses.[1]

Thus, Frank attributes the etiology of demoralization,
at least in some cases, to an overwhelming press of envir-
onmental stressors. Dr. Bruce Dohrenwend, a pioneer in
the field of life events research, discusses the possibil-
ity that situationally-induced demoralization may be a fore-
runner of mental illness in predisposed persons, and states
that "if this is so, it would carry implications for pre-
vention, since demoralization is thought to be extremely
responsive to social support."[2]

This syndrome of demoralization may well be appropri-
ate to describe the emotional state of individual members
of "multi-problem families." Since these families general-
ly experience a great deal of stress, and since social work-
ers are the primary professionals dealing with these types
of families, it is especially important for social workers
to be aware of the impact of stressful events on the lives
of these family members.

Stressful Life Events and Social Work

The expertise of a psychiatric social worker lies in
the knowledge and experience that he or she has in

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[1]Ibid., pp. 315-317.

[2]Bruce P. Dohrenwend and Gladys Egri, "Recent Stress-
ful Life Events and Episodes of Schizophrenia," Schizophrenia
Bulletin, 7 (1981), p. 20.

recognizing what stresses are affecting an individual who seeks treatment, what effects these stresses are likely to have on that individual, and how best to help the individual cope with these stresses through social casework, psychotherapy, or referral for medical management. Therefore, the identification of these stressors and their relationship to specific mental disorders is highly relevant to the field of social work. The greater our knowledge of the relationship between psychosocial stressors and mental disorder, the better our position to develop techniques to help our clients learn better ways to cope with stress, to alleviate the stressors themselves, and ultimately to work toward the prevention of these stress-induced disorders.

Because of the acknowledged importance of stress within the field of social work itself, one would assume that social workers would be very involved in research in this area. So much of our work is directed toward helping our clients deal with stressful environmental circumstances and events, that it would behoove our profession and the welfare of our clients to learn more about stressful events. However, only two reports of research in this area in the literature so far have been authored by social workers.[1,2]

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[1]Kathleen Hall, David L. Dunner, Gary Zeller, and Ronald R. Fieve, "Bipolar Illness: A Prospective Study of Life Events," Comprehensive Psychiatry, 18 (September/October 1977), pp. 497-502.

[2]Melitta J. Leff, John F. Roatch, and William E. Bunney, Jr., "Environmental Factors Preceding the Onset of Severe Depression," Psychiatry, 33 (August 1970) pp. 293-311.

Doubtless, social workers have participated as interview-
ers in the research studies that have been reported, but
so far very little initiative has been taken within the
social work profession in exploring this area of such rel-
evance.

In a recent article in <u>Social Work</u>, Dr. Michael Roskin
emphasized the importance for primary prevention, of under-
standing the effect of stressful events on mental health.
He first discussed the importance of primary prevention
itself and stated that "the overall objectives of primary
prevention are (1) to reduce the incidence of new cases
of emotional distress or disturbance and (2) to promote
emotional health." Primary prevention

> focuses on the conditions for healthy, suc-
> cessful living and includes the identifica-
> tion of (1) current harmful influences in
> the environment, (2) the forces that support
> individuals in resisting them, and (3) en-
> vironmental forces that influence the resis-
> tance of a population to future disturbances.
> Thus primary prevention requires identifica-
> tion before a problem or disease manifests
> itself and effective intervention to reduce
> its incidence in population groups.[1]

Later, in discussing the most effective strategies for social
workers to adopt in the name of primary prevention, he stated
that "research dealing with life changes and social and ec-
onomic environments, specifically, life changes involving
significant stress and ensuing illness, is one promising

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[1]Michael Roskin, "Integration of Primary Prevention
into Social Work Practice," <u>Social Work</u>, 25 (May 1980), pp.
192-196.

approach . . . Perhaps an 'early warning' approach for primary intervention in social work can be based on multiple indicators of life changes."[1] Roskin described several programs around the country that do run "stress seminars" and other types of programs to prevent the development of mental disorder in persons who have recently undergone multiple life changes. These generally take the form of education about what stress is, the effects of stress, and the warning signs of pathological effects of stress.

Mental health professionals are also beginning to recognize the relevance of an understanding of a client's life events to treatment. For example, in one approach[2] the specific goals of the therapy center around decreasing unpleasant events and increasing pleasant ones.

Clearly, then, social workers have a stake in exploring this area of research. As Mary Richmond said, prevention is ". . . one of the end results of a series of processes which include research, individual treatment, public education [and] legislation."[3] Once the research is well underway, we can begin to pay attention to the other

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[1]Ibid.

[2]Peter M. Lewinsohn, J. Michael Sullivan, and Sally J. Grosscup, "Changing Reinforcing Events: An Approach to the Treatment of Depression," Psychotherapy: Theory, Research and Practice, 17 (Fall 1980), pp. 322-334.

[3]Mary Richmond, The Long View (New York: Russell Sage Foundation, 1930), p. 587.

phases of this process.

This research project represents one social worker's attempt to contribute to research in the field of stressful life events by studying the interaction of psychosocial stressors and mental disorders, incorporating some notions of individual vulnerability.

CHAPTER II

THE LITERATURE, OBJECTIVES, AND HYPOTHESES

The Literature

Introduction. Since depression and schizophrenia are
two of the most serious and disabling mental disorders,
and since most of the research into the relationship be-
tween psychosocial stressors and mental disorder has focus-
ed on these two illnesses, the current study is limited
to these two major categories (with Schizophreniform Disor-
der being considered equivalent to the concept of "acute
Schizophrenia"). The following literature review, then,
is limited to studies focused on these diagnostic groups.

Each of the studies to be reviewed has looked at par-
ticular characteristics of life stressors, and their spec-
ificity with regard to diagnosis and course of illness.
Although the studies differ from each other in the length
of the interval of time in each subject's life that was
studied, many of the studies examined similar characteris-
tics of the stressors. Most of the studies have looked
at the number of life events experienced by the subjects
in each diagnostic group. Other stressor characteristics
studied include whether they represent entrances or exits

in a person's life, whether they are <u>socially desirable or undesirable</u>, what <u>areas of life</u> functioning they affect, and whether they are <u>independent</u> of the subject's control. As might be expected, given the differences in diagnostic criteria, time periods covered, and methodology used, the results of these studies, taken altogether, do not provide conclusive evidence of the diagnostic-specific effects of life events. In general, however, it is possible to say that the results are suggestive of a role of life events in causing or exacerbating these clinical syndromes.

This literature review offers a look at the most important studies in which the role of life events in depression and schizophrenia is examined.[1] The reader is also referred to three recently published review articles.[2,3,4]

<u>Stressful Life Events and Depression</u>. Four major studies, two done with patients with depression matched with

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[1] Because of the limited scope of the current study, this literature review only includes studies of recent life events. The only exception is the study by Hudgens et al, in which recent as well as remote events were examined.

[2] Camille Lloyd, "Life Events and Depressive Disorder Reviewed: I. Events as Precipitating Factors," <u>Archives of General Psychiatry</u>, 37 (May 1980), pp. 541-548.

[3] Camille Lloyd, "Life Events and Depressive Disorder Reviewed: II. Events as Predisposing Factors," <u>Archives of General Psychiatry</u>, 37 (May 1980), pp. 529-535.

[4] Judith Godwin Rabkin, "Stressful LIfe Events and Schizophrenia: A Review of the Research Literature," <u>Psychological Bulletin</u>, 87 (March 1980), pp. 408-425.

control subjects, one comparing depressed patients with

a control group selected at random from the general popula-

tion, and one done prospectively with patients with bipolar

affective disorder, offer investigations into this area.

Hudgens, Morrison, and Barchha[1] tried to determine

if patients with affective disorder have a special suscep-

tibility to life events, such that episodes of affective

illness coincide in time with stressful life events. They

selected 34 depressed and 6 manic patients who met the fol-

lowing criteria for either depression or mania:

Depression: 1. An onset, whether rapid or gradual,
                 after which the patient is different
                 from his usual self.

             2. The difference from usual self is
                 characterized by a persistent or re-
                 current mood of depression.

             3. At least three of the following symp-
                 toms represent changes from the pa-
                 tient's normal state: loss of energy,
                 loss of interest, sleep disturbance,
                 anorexia, loss of libido, retardation
                 in speech or action, diurnal mood

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[1]Richard W. Hudgens, James R. Morrison, and Ramnik
G. Barchha, "Life Events and Onset of Primary Affective
Disorders," Archives of General Psychiatry, 16 (February
1967), pp. 134-145.

variation, social withdrawal, physical agitation, obsessional worrying, marked irritability, and delusions (of poverty, sinfulness, or disease).

4. No disturbance of consciousness.

5. No psychiatric diagnosis other than depression likely.

Mania: 1. An onset, whether rapid or gradual, after which the patient is different from his usual self.

2. The difference from usual self is characterized by a persistent or recurrent mood of elation or grandiosity, with increased energy and increased speed of thought or action.

3. At least one of the following, representing a change from the usual state: impatience, irritability, mood lability, or short attention span.

4. No disturbance of consciousness.

5. No psychiatric diagnosis other than mania likely.[1]

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[1]Ibid.

Diagnostic information was elicited by a standardized interview. This interview also included information about specific life events in the following areas that had occurred ever during the patients' lifetimes:

Birth, death, and illness of family members

Educational history and school performance

Legal history

Military history

Marital history

Occupational and financial history of patient and spouse

History of recent change of residence

List of all persons living with the patient in the past year

Trips away from home in the past year

Formation or dissolution of close personal attachment in the past year

Interpersonal conflict at home, school, or job[1]

and the patient's spontaneous assessment of any other important or stressful occurrences preceding or during his or her illness. Available relatives were interviewed, and medical records were consulted when there was any doubt as to the patient's general reliability.

The authors then (retrospectively) looked at the temporal relationship between life events and episodes of

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[1]Ibid., p. 135.

affective illness, each dated by the year in which they oc-
curred, over the lifetimes of their subjects. (Unfortun-
ately, the data analysis did not include separate examina-
tion of the group of patients with unipolar depression.)
No significant relationship was found between years in which
there were stressful life events and years in which there
was onset of affective disorder, nor between any one year
in which there was stress, and onset of illness the follow-
ing year. The authors concluded that the time of onset of
affective disorder is random with respect to stressful life
events.

These investigators also compared their sample of manic
and depressed patients to a group of 40 control subjects
(without mental disorder, but admitted to a nonpsychiatric
hospital service), with respect to the lifetime occurrence
of various specific life events. They found no difference
between the groups with respect to the number of "loss ex-
periences," either recent or past. In addition, both groups
had similar histories of hospitalization for nonpsychiatric
illnesses, and similar degrees of job stability. There was,
however, a significant difference in the frequency of sui-
cide of relatives as well as a history of mental illness
in first degree relatives, with the patients having more
of each. This is suggestive of a genetic inheritance of
depression, rather than situationally-induced depression.
In addition, the authors found a significant increase in
the patient group in the frequency of interpersonal

conflict and change of domicile as compared to the control group. However, both of these variables were significant for the year prior to admission only, so the authors speculate that the subjects in the patient group were probably already ill during that time.

Paykel et al[1] in another controlled study also investigated the relationship of specific life events to the onset of depression. The subjects in this study were 185 psychiatric patients who met the following criteria for depression:

> ". . . presence of psychiatric disorder in which the central feature was abnormal, persistent depressed affect characterized by feelings of depression, sadness, or a tendency to cry, which might be accompanied by guilt, worthlessness, hopelessness, suicidal feelings, or appearance of depression at interview. The illness was at least of one week's duration and sufficiently severe for the overall illness to be rated 2 (mild) or more on a global severity of illness scale of 0 to 6.[2]

An equal number of control subjects were selected from a community sample and matched with the patients for sex, age (within a decade), race, marital status, and social class. All subjects were given the same semi-structured

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[1]Eugene S. Paykel, Jerome K. Myers, Marcia N. Dienelt, Gerald L. Klerman, Jacob J. Lindenthal, and Max P. Pepper, "Life Events and Depression: A Controlled Study," Archives of General Psychiatry, 21 (December 1969), pp. 753-760.

[2]Ibid., p. 754.

interview that included questions about the following 33

specific life events (adapted from the Holmes and Rahe

scale):

* increase in arguments with spouse	demotion
* marital separation	change schools
* start new type of work	child engaged
* change in work conditions	** promotion
* serious personal illness	fired
* death of immediate family member	** leave school
* serious illness of family member	marriage
* family member leaves home	child married
move	jail
new person in home	son drafted
major financial problems	** birth of child
pregnancy	(for father)
unemployed	divorce
court appearance	business failure
childbirth	stillbirth
lawsuit	pregnancy of wife
** engagement	retirement[1]

 * Patients > controls

** Controls > patients

The patients were interviewed only after their symptoms

had substantially improved, and were asked about these life

events during the six months prior to the onset of the de-

pressive episode. Control subjects were asked about the

six months that immediately preceded the interview.

The relative frequency of individual events in each

group of subjects was examined first. Overall, the patients

with depression reported experiencing three times the total

number of events that the controls did; nearly every event

was reported as having occurred more frequently in the pa-

tient group.

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[1]Ibid., p. 755.

The authors speculate that, although the differences between groups do not necessarily indicate a causal relationship between number of life events and depression, nevertheless that "seems at least a partial and very likely explanation."[1] Since care was taken to eliminate events that may have been the consequence of developing pathology, or those that may have been reported because of greater probing in the interview with the patients versus the control subjects, the authors conclude that "the most plausible explanation of the excess of events reported by the depressed patients is that, by and large, they do have a causative relationship to the depression."[2]

In addition, the first eight specific events on the above list had occurred significantly more frequently in the patient group than in the control group. Four events, indicated on the list with a double asterisk, had occurred with significantly greater frequency in the control group. A quick inspection of these two lists reveals that the events that occurred more frequently in the control group are all socially desirable, as compared to the events of the depressed group, most of which are clearly undesirable. This is suggestive of a role of undesirable events in

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[1]Ibid., p. 758.

[2]Ibid.

precipitating or contributing to the development of an episode of depression.

The authors further examined the relative frequencies of the various events, grouped into different mutually exclusive categories. When they looked at those events that represented exits from the social field of the subject as opposed to entrances, they found that the patients with depression reported more exits than the control subjects. No difference was found between the two groups regarding entrances. When the list of events was divided into those events that are considered socially desirable and those that are socially undesirable, they found that the former type occurred more often in the control subjects, although the difference between groups was not statistically significant. However, the patients with depression reported a significantly greater frequency of undesirable events within the six month time period. Finally, the investigators assigned the various events to categories representing each of five areas of activity: employment, family, marital, health, and legal. The depressed patients were found to have experienced at least twice as many events in each category as the control subjects. Thus, this last categorization did not yield a way of discriminating between the groups, as had the other two categorizations. In every area of activity, the patients reported a greater number of events than the control subjects.

More recently, Hall et al[1] reported the results of a prospective study of patients with bipolar affective disorder. A Schedule of Life Events that included 86 events was administered at each visit to 38 individuals with bipolar affective disorder who reported regularly to a "lithium clinic." Diagnoses were made according to the "Feighner criteria,"[2] a set of research diagnostic criteria known to have adequate reliability and some validity evidence as well.

Data analysis included calculating the frequency per patient visit of each of the individual events listed. In addition, when the events were grouped according to areas of activity, the frequency of each event group per patient visit was calculated. Finally, a one-way ANOVA was done on the frequencies of the different groups of events per patient visit.

At the end of the ten months of the study, the patients fell into four diagnostic groups: 21 who had remained euthymic (normal mood) throughout the study, 8 who had become depressed, 6 who had become hypomanic or manic, and 3 who had been both hypomanic and depressed at various times

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[1]Hall, loc. cit.

[2]John Feighner, Eli Robins, Samuel B. Guze, Robert A. Woodruff, Jr., George Winokur, and Rodrigo Munoz, "Diagnostic Criteria for Use in Psychiatric Research," Archives of General Psychiatry, 26 (January 1972), pp. 57-63.

during the study. By and large, the patients who had re-
mained euthymic throughout reported pleasurable events and
few, if any, bad ones, as compared to those patients who
had become symptomatic. For those patients who had become
ill, the mean frequency of events per patient visit was
approximately equal in the month before they became ill to
the other months of the study, arguing against a hypothesis
of a build-up or clustering of life events precipitating an
episode. In general, across all subjects, the frequency
and types of events reported did not differ significantly
between the patients who relapsed and those who did not.
When the life events were grouped into areas of activity,
a one-way ANOVA revealed a significant difference between
subjects who remained euthymic and those who had relapsed,
but only for the frequency of events related to employment
that were reported in the month prior to relapse.

In a discussion of methodologic problems in this un-
controlled prospective study, the authors note that because
all subjects in the study were on chronic lithium therapy,
any affective episodes that did occur were undoubtedly mild-
er than would have occurred in an untreated sample. There-
fore, it could be hypothesized that some exacerbations
(following life events or not) might have been "masked."
This, then, could have resulted in spurious findings of no
differences between groups.

By far the most carefully done and extensively described
of all the life events studies was a study by Brown and

Harris[1] in which they compared a sample of 114 depressed female patients with 382 randomly-selected community controls.

In- and outpatients were gathered from screenings of records of hospital admissions and outpatient clinics in the Camberwell area of London. All patients included in the study had a diagnosis of primary depression, uncomplicated by any underlying condition such as alcoholism. All patients had undergone a clear change in their condition in the 12 months prior to hospital or clinic admission.

The control group was also sampled from the Camberwell area, and subjects were drawn from households selected at random from local tax records. Because of need for comparability with the patient sample, West Indian subjects and those who had not lived in the United Kingdom or Eire for at least 15 years were excluded. Also excluded from the normal comparison group were subjects drawn from the general population who were suffering from depression. (This excluded subgroup was then used to cross-validate findings from the patient sample.)

The study was limited to women for several reasons. Most importantly, since women comprise about two-thirds of

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[1]George W. Brown and Tirril Harris, Social Origins of Depression: A Study of Psychiatric Disorder in Women (New York: The Free Press, 1978).

the population of depressed individuals, fewer subjects would have had to be screened in order to obtain the requisite number of depressed subjects than if men were included. In addition, the authors guessed, correctly it seems, that women were more likely to be home during the day, and were more likely to be willing and available for the several hours of intensive interviewing required by the project.

All subjects were interviewed using the Present State Examination of Wing et al,[1] and diagnoses were made when appropriate. After the onset of the depression was carefully determined, all patients were interviewed about the year prior to the depression onset. Control subjects were asked about the year prior to the interview.

Detailed questions were asked about the following types of life events:

Health

Role changes

Leisure and interaction

Employment

Housing

Money

Crises (emergencies)

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[1] John K. Wing, John E. Cooper, and Norman Sartorius, The Measurement and Classification of Psychiatric Symptoms: An Instruction Manual for the Present State Examination and CATEGO Programme (London: Cambridge University Press, 1974).

Forecasts

Marital

Interaction with parents

General (other)

Any subject who responded positively to one or more of these areas was asked for a basic description of the event, including where and to whom it had happened, how long it had been planned, how she felt about it, how it affected her future plans, and if it made her feel differently about herself. Then she was questioned about her preparation for the event, including what warnings, if any, she had had of the event's likely occurrence, and if there had been anything she could have done to prevent the event from happening. She was also asked about her immediate reaction to the event, the implications for her of the event, and what help she got to cope with the event. Finally, all subjects were interviewed about any major or minor "difficulties" they have had to cope with (such as poor housing conditions, chronic financial problems).

This interview had a formal structure, with specified probes used to clarify each aspect of the subject's situation, but interviewers were encouraged to explore freely any other leads. Other parameters of the stressful events were also rated. These included the interviewers' assessments of the degree of "contextual threat" or "unpleasantness" to the subject based on "a judgment about the likely meaning of the event for the average person in such

circumstances without considering her personal reaction
to the event."[1] In addition, ratings based on what the
woman reported she felt were made. Each of these ratings
was made for events involving "short-term threat" (i.e.,
on the day the event occurred or shortly thereafter) and
"long-term threat" (i.e., one week or more after the
event's occurrence).

The results of this massive study are reported in a
book that comprehensively discusses previous theories, the
development of the investigators' methodology, their results,
and the significance of the results. One of the major con-
clusions drawn is that life events that are rated as severe
on a long-term threat scale are capable of provoking onset
of depression in a formative, rather than triggering way;
that is, the data suggest that many of the depressed sub-
jects may never have suffered an onset of depression at all
had it not been for these severe life events. (This is in
contrast to the results of a reanalysis of Brown and Birley's
earlier study on schizophrenia[2] that suggested a triggering

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[1]George W. Brown and Tirril Harris, Social Origins of
Depression: A Study of Psychiatric Disorder in Women (New
York: The Free Press, 1978), p. 90.

[2]George W. Brown and James L. T. Birley, "Crises and
Life Changes and the Onset of Schizophrenia," Journal of
Health and Social Behavior, 9 (September 1968), pp. 203-
214.

role of life events in the onset of a schizophrenic episode.[1] Another major finding reported in this book is that "it is loss and disappointment rather than change as such that is important" in initiating depression. This result casts a dark shadow on Holmes and Rahe's approach to measuring the impact of life events in terms of the degree of life change entailed.

Although the authors were more convinced of the importance of rating the degree of "threat" entailed by life events, this study also includes some analyses along the lines of stressor dimensions that others have studied. For instance, in terms of the overall frequency of events, Brown and Harris found that patients experienced about three times as many severe events throughout the year prior to depression onset than normal controls, and this difference increased dramatically in the three-to-six weeks prior to depression onset. As far as independent versus non-independent events, the patients with depression had significantly more independent (with or without "possibly independent" events included) events than did the normal controls. The authors did not focus on different areas of stressors (housing, money, etc.) independent of social class, so for those

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[1]George W. Brown and Tirril Harris, Social Origins of Depression: A Study of Psychiatric Disorder in Women (New York: The Free Press, 1978).

different areas of life, not much can be said except that
health difficulties were not related to depression.

When the authors looked at losses, a dimension that
is surely a close equivalent of "exits," they found that
a significantly higher proportion of patients than control
subjects had experienced severe events that involved "loss."
Although the authors did not specifically examine the events
by whether or not they were undesirable, the losses they
described as being severe were all clearly not desirable.

Stressful Life Events and Schizophrenia. Michaux et
al,[1] interested in the problem of measuring environmental
stress, developed a set of eight questions that probed for
the recent occurrence of life events. Their aim was to de-
velop a brief interview that would gather information that
could be used in assessing the predictive validity of re-
cent life events with regards to the course of mental dis-
order. In addition to two general questions as to whether
anything "very good" or "very bad" had recently happened
to the subject, six items focused on specific areas describ-
ing "possible contexts of experiences that an adult patient
might perceive as stressful or threatening."[2] These areas

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[1]William W. Michaux, Kathleen H. Gansereit, Oliver L.
McCabe, and Albert A. Kurland, "The Psychopathology and
Measurement of Environmental Stress," Community Mental
Health Journal, 3 (Winter 1967), pp. 358-372.

[2]Ibid., p. 365.

were: interpersonal, marital and sexual, economic and
domestic, occupational, social and recreational, and phy-
sical health.

One hundred and thirty-nine newly-discharged patients
with state hospital diagnoses of "functional" illness, most
with schizophrenia, were interviewed monthly from time of
discharge from the hospital to six months post-discharge.
Subjects were then considered either "relapsers" or "non-
relapsers," depending on whether or not they were rehospit-
alized during the six-month period. At the end of the six
months, ten of the relapsers were matched with ten non-re-
lapsers for age, sex, marital status and final hospital di-
agnosis, and their reported stresses compared. The inves-
tigators had hypothesized that the relapsers would have re-
ported an increase in stress (that is, a positive response
to a greater number of specific stress items) just before
rehospitalization as compared with the non-relapsers, and
indeed, a statistically significant difference in that di-
rection was found.

When the authors analyzed responses to whether or not
each of the specific areas had been stressful, they found
that the area of "physical health" elicited the greatest
number of "stress responses," and the areas "marital and
sexual" and "social and recreational" seemed the least sen-
sitive to stress. When all of the areas were examined for
relapse-prediction validity, physical health, marital and
sexual, and social and recreational were found to have the

least predictive validity; that is, there were no consistent trends in the relationship between percentage of subjects who relapsed and percentage of subjects who reported these areas as stressful. The most predictive areas were "interpersonal," and responses to the general questions about whether anything "very good" or "very bad" had recently happened to the subject.

Brown and Birley[1] retrospectively studied the life events that occurred in the three months preceding the onset of symptoms in 50 patients hospitalized with schizophrenia, and compared these to the retrospectively-reported life events during a three-month time period in 325 individuals selected from a general population sample. Diagnoses were based on a standardized interview, a forerunner of the Present State Examination of Wing,[2] administered by a psychiatrist, and known to have adequate reliability. Criteria for the diagnosis of schizophrenia were not specifically enumerated, but stated to be "conventional Kraepelinian ones," and diagnoses were based on the CATEGO program of the Present State Examination.[3] Thus, we can assume

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[1]George W. Brown and James L. T. Birley, "Crises and Life Changes and the Onset of Schizophrenia," Journal of Health and Social Behavior, 9 (September 1968), pp. 203-214.

[2]Wing, loc. cit.

[3]Ibid.

that these diagnoses were based on a cross-sectional pic-
ture of psychotic symptoms. Patients were included in this
study only if the onset of their schizophrenia had occur-
red within 13 weeks of admission to hospital. Therefore,
this study focused on cases of acute onset schizophrenia.

The specific life event items inquired about included:

i)   Role change for the subject -- such
     as leaving school and changing job.
     (Changes in opposite-sex friends were
     asked about for the unmarried and
     treated separately.)

ii) Role change for close relatives or
     household members -- such as a hus-
     band staying off work because of a
     strike, or a son's marriage.

iii) Major health change in the subject,
     including admissions to hospital and
     the development of an illness suspect-
     ed to be serious; and also

iv) Similar changes in close relatives
     or household members, including death.
     (Loss of certain family pets was also
     included.)

v)   Residence change directly involving
     the subject and any marked change in
     his amount of contact with close rel-
     atives or household members.

vi) Forecast of change for the subject --
     such as being told that his firm is
     to move to another town.

vii) Valued goal fulfillment or disappoint-
     ment for the subject -- such as being
     offered a house to rent at a price
     he can afford.

viii) Other dramatic events -- termed "crises"
     -- in which the subject was the focus
     of the incident, in which a household
     member or close relative was involved
     in a major incident, or in which the
     subject witnesses a particularly

> disturbing incident occurring to a
> more distant relative or to a
> stranger. For example, unexpected
> contact with the police, learning of
> the arrest of a brother, and witnes-
> sing a serious road accident were all
> classed as "crises."[1]

These investigators looked separately at the life events that had occurred in the three weeks immediately preceding symptom onset (Time 1), and in several three-week intervals preceding Time 1 (Time 2, Time 3, and Time 4). Events were classified according to whether or not they were "independent" or "possibly independent," with an independent event being defined as one that occurred outside of the patient's control, was planned ahead of time, or had a predetermined date. The main hypothesis that the patients would have experienced a greater frequency of "independent" events in Time 1 than in any of the other time periods was confirmed by the fact that 46% of the patients had had at least one independent event in Time 1 as compared to only 12% of controls who had an event in any of the time periods (p < .001).

Events were then classified as "unexpected" or not. Although patients and controls overall reported the same proportion of "unexpected" events, in the patient group a

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[1]George W. Brown and James L. T. Birley, "Crises and Life Changes and the Onset of Schizophrenia," Journal of Health and Social Behavior, 9 (September 1968), p. 204.

much larger proportion of events in Time 1 was "unexpected" as compared with the other time periods. This was not the case for control subjects.

Overall, the patients reported nearly twice the number of events as the controls, although this difference could be almost entirely attributed to a great difference between the groups in Time 1; in Times 2, 3, and 4, the number of events was approximately the same in both groups.

Using a semistructured interview schedule that included a list of 58 "reasonably discrete and recognizable experiences," Jacobs and Myers[1] explored the recent life stresses in 62 patients with schizophrenia who were admitted to hospital for the first time. Diagnostic criteria that broadly defined schizophrenia were developed from a checklist that included "ideas of influence, feelings of telepathy, thought disorder, inappropriate or flat affect, catatonic disturbances, persecutory delusions, grandiose delusions, and other types of delusions and hallucinations that were not depressive in quality or secondary to drugs. The clear presence of two or more of these features that was not attributable to other conditions was sufficient for diagnosis."[2]

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[1]Selby Jacobs and Jerome Myers, "Recent Life Events and Acute Schizophrenic Psychosis: A Controlled Study," Journal of Nervous and Mental Disease, 2 (February 1976), pp. 75-87.

[2]Ibid., p. 77.

These patients were compared with 62 subjects from a general population survey, matched to the patients with respect to age, sex, race, marital status, and socioeconomic status. The investigators explored whether or not there was a difference between patients with schizophrenia and normal control subjects in their overall reporting of life events, and, in a search for etiologic clues, whether the two groups differed in reported events classified according to various characteristics. The event list was derived from schedules already in the literature (from Holmes and Rahe, Paykel et al, etc.), and was compiled so as to be limited to "reasonably discrete and recognizable experiences" in order to minimize the reporting of poorly-recalled events.

Patients were interviewed about the one-year period immediately preceding the onset of their illness, and controls were interviewed about the one-year period immediately preceding the interview. Because individual events were not dated, these data could not yield information about a possible increase in events just prior to disorder onset in the patient group.

As far as the frequencies of reported events, the individuals with schizophrenia reported an approximately 50% greater number of events than the control subjects; this difference was statistically significant. Only six individual events were reported significantly more often by the patient group: death of a pet, court appearance, troubles with a boss, new family member in the home, being arrested,

and move to a similar neighborhood. For most of the events, there was no clear difference in frequency between the two groups.

The patients reported a small increase over that reported by normals with respect to events that were classified as "independent of a person's ability to influence them," although this difference disappeared if one omitted the stressor "death of a pet." When events were classified as to the "area of social activity" involved, the patients reported a greater frequency of events in all areas but finance and work events, i.e., in the areas of education, relocation, marriage, family, interpersonal relations, health, and legal difficulties. This difference reached statistical significance for events related to the family and relocation. When events were examined for whether they represented entrances or exits in a person's life, it was found that the individuals with schizophrenia reported more events in both areas, although the difference in number between the groups was small for entrances. In addition, "death of a pet" accounted for most of the difference in number of exits. It was also found that the patient group reported significantly more undesirable events, as "determined by generally accepted American social values" as judged by the research team.

Finally, the investigators found that the group with schizophrenia reported significantly more role transitions, events that caused a moderate amount of upset, and events

requiring little adjustment, in the six months preceding the onset of their symptoms.

Stressful Life Events, Depression and Schizophrenia. A few investigators have compared the relationship between stressful life events and depression with that between stressful life events and schizophrenia to see if there is specificity in the relationship between stressors and diagnosis. Four important studies comprise the majority of work in this area.

In 1971 Eisler and Polak[1] looked at specific life events reported by 172 inpatients of a crisis service. The patient group included individuals with the following DSM-I diagnoses: schizophrenic reaction, neurotic depressive reaction, personality disorders, and transient situational personality disorders. Unfortunately, no specified diagnostic criteria were used other than the very brief and general descriptions of the diagnostic categories included in the DSM-I manual, although the diagnostic reliability was reported as high (88% agreement). A classification of Social System Stressors (SSS) was constructed from events noted in 500 case records in which "social" or "community" events were judged to have been instrumental in leading to

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[1] Richard M. Eisler and Paul R. Polak, "Social Stress and Psychiatric Disorder," Journal of Nervous and Mental Disease, 153 (October 1971), pp. 227-233.

the admission to hospital. The 15 Social System Stressor categories were the following: marital, work, migration, medical, financial, separation, death, sexual, pregnancy, legal, school, family, child and adolescent, aging, and interpersonal relationships.

Each subject was interviewed by a staff member who was to identify "significant events that had occurred in that patient's social system two years prior to his present psychiatric admission."[1] The events were then rated as Social System Stressors if they "led to examples of disturbed or maladaptive behavior."[2] Percent agreement about the number of SSS categories recorded for each subject was quite good: 72.6%.

No significant differences were found among any of the diagnostic groups in the average number of stressors noted, or in the specific types of stressors. Although some minor differences were found in the percentage of stressors recorded by sex, there was no interaction between percentage of stressors, diagnosis, and sex.

A crisis intervention service also provided the setting for a study by Beck and Worthen,[3] who looked at the life

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[1]Ibid., p. 230

[2]Ibid.

[3]James C. Beck and Kathy Worthen, "Precipitating Stress, Crisis Theory, and Hospitalization in Schizophrenia and Depression," Archives of General Psychiatry, 26 (February 1972), pp. 123-129.

events reported by 50 patients. The patients were diagnosed by a senior staff psychiatrist whose diagnoses were "based solely on formal criteria of mental status examination," but the actual diagnostic criteria are not stated in the article. The patients fell into three diagnostic groups: 15 with schizophrenia, 21 with neurotic depression and "marked character pathology," and 13 with "other" diagnoses. Patients were interviewed 48 hours after admission to the crisis center, again at discharge, and finally at two fol- low-up periods post-discharge (six weeks and three months). Each patient was asked open-ended questions about changes in their mental status, living and working arrangements, and general post-hospitalization course.

The resulting descriptions of life situations and events were then presented to 100 persons in the waiting room of the hospital who were asked to rate each situation with respect to how "upsetting" it would be for them, on a scale of 1 to 5. The authors present these ratings as judgments of the extent to which these situations are con- sidered "hazardous." They report "high agreement" among the judges in all cases as to the amount of hazard rated.

These ratings of "hazard" were then examined for each diagnostic group. Patients in the depressive group had a statistically significantly higher hazard score than the patients with schizophrenia. Further, none of the people in the schizophrenia group were judged to have experienced life situations rated as either "4" or "5" on the hazard

scale.

The authors examined the extent to which a clear precipitant could be identified for each patient. In only half of the schizophrenia group could a clear precipitant be identified, as opposed to 95% of the depression group. (The "other" diagnostic group, being very heterogeneous, fell somewhere in between.) When scores were derived for both groups from the Holmes and Rahe Social Readjustment Rating Scale, the mean number of Life Change Units was significantly higher for the depression group than for the schizophrenia group. In terms of "exit" events, 27% of the schizophrenia group reported an exit, as did 38% of the depression group.

Jacobs, Prusoff, and Paykel in a later study[1] administered a semistructured interview containing a list of 59 life events to 50 individuals with depression and 50 with schizophrenia. Individuals with depression were selected according to the criteria used by Paykel et al,[2] and the criteria for schizophrenia were very similar to those used

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[1]Selby Jacobs, Brigitte A. Prusoff, and Eugene S. Paykel, "Recent Life Events in Schizophrenia and Depression," Psychological Medicine, 4 (November 1975), pp. 444-453.

[2]Eugene S. Paykel, Jerome K. Myers, Marcia N. Dienelt, Gerald L. Klerman, Jacob J. Lindenthal, and Max P. Pepper, "Life Events and Depression: A Controlled Study," Archives of General Psychiatry, 21 (December 1969), pp. 753-760.

by Jacobs and Myers.[1] The groups were matched with each other for age, sex, marital status, race, and social class. The depressive group included inpatients and outpatients, with the median length of illness being six months. The group with schizophrenia consisted of patients who were all admitted to the hospital for the first time, and whose median length of illness was six months. All patients were questioned about the life events they had experienced during the six months immediately prior to the onset of their illness.

Two questions were asked: Did the diagnostic groups differ in their experience of life events in the six months before the onset of their illness, and did any differences involve all events or only events of certain types? Overall, the group of patients with depression reported 50% more events than did the patients with schizophrenia; for two events, serious arguments with family members not resident in their own household and with members of the opposite sex with whom they had close relationships, the patients with depression reported a significantly greater frequency. When events were categorized according to whether or not they were socially desirable, it was found

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[1]Selby Jacobs and Jerome Myers, "Recent Life Events and Acute Schizophrenia Psychosis: A Controlled Study," Journal of Nervous and Mental Disease, 2 (February 1976), pp. 75-87.

that a significantly greater number of patients with depression had experienced an undesirable event than had patients with schizophrenia. No significant difference was found for desirable events. In addition, patients with depression were found to have experienced twice as many events that represented exits from their immediate social field as had the patients with schziophrenia. No significant difference was found for entrances, although they tended to have occurred more often in the schizophrenic group.

Events recorded in the following areas of activity were examined: financial, health, marital, children, social relationships with the opposite sex, work, education, moves, deaths, and legal. For events related to the areas of finance and health, the patients with depression reported a significantly higher frequency of events than did the patients with schizophrenia. In the areas of marriage, children, and social relationships with members of the opposite sex, more events were reported by the patients with depression, although not significantly more. For events recorded in the areas of work, moves, education, and deaths, the frequencies in both groups seemed equivalent. However, the patients with schizophrenia reported a non-significantly higher frequency of events in the area of legal issues. Finally, when those events that involved interpersonal arguments were tallied, the patients with depression scored significantly higher than the patients with schizophrenia. There seemed to be no differences between the two groups

when the investigators looked at those events that charac-
terized major steps in human development, such as marriage,
birth of child, or retirement.

The fourth study involving patients with both depres-
sion and schizophrenia was reported by Lahniers and White.[1]
In this study, the Social Readjustment Rating Scale of
Holmes and Rahe[2] was administered to 116 inpatients each
with a DSM-II diagnosis of schizophrenia, depressive neu-
rosis, or alcohol addiction. Events that occurred during
the year prior to admission were recorded. The number of
stressful life events recorded did not differ by diagnos-
tic group, nor did the SRRS score differ by diagnosis or
by whether the patient was a first admission or a readmis-
sion to the hospital. No differences were found in the
amount of stress reported by diagnosis, by admission his-
tory, or by the interaction of diagnosis and admission his-
tory.

Discussion. Table 1 summarizes some of the results
of these studies. Findings for which there were significant

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[1]C. Edward Lahniers and Kim White, "Changes in Envir-
onmental Life Events and Their Relationship to Psychiatric
Hospital Admissions," Journal of Nervous and Mental Disease,
163 (September 1976), pp. 154-158.

[2]Thomas H. Holmes and Richard H. Rahe, "The Social
Readjustment Rating Scale," Journal of Psychosomatic Re-
search, 11 (November 1967), pp. 213-218.

differences between groups are circled. For most of the stressor dimensions studied and raw frequencies of events, the results are equivocal, with an approximately equal number of studies finding significant differences, as not. It should be noted, however, that in general, the studies that revealed significant differences among diagnostic groups obtained results in the same direction. Other studies did not show any significant results, but none evidenced strong results in the opposite direction. This fact cannot be ignored, and certainly suggests that there are some significant trends that have been replicated; perhaps with better methodology these will be elucidated and understood even further.

The dimension of desirability/undesirability seems to discriminate diagnostic groups in all three studies in which it was examined. In each of the studies that looked at depression, individuals with depression were found likely to have experienced a significantly greater number of undesirable life events prior to the onset of their symptoms, than did either the control subjects or subjects with schizophrenia. In a study that considered only patients with schizophrenia, patients in that group also reported a greater number of undesirable events than did controls.

Each of the studies included in this review used differing diagnostic criteria for defining the groups of

Table 1:   Summary of Studies of Life Events

STUDY	DIAGNOSTIC GROUP	N	TIME PERIOD CONSIDERED	NUMBER EVENTS	ENTS./ EXITS	STRESSOR DIMENSIONS UNDESIR./ DESIRABLE	AREA OF ACTIVITY	NON-INDEP./ INDEPENDENT
Hudgens et al 1967	Depression or Mania	40	Yearly over lifetime		X			
	Controls	40						
Paykel et al 1969	Depression	185	6 months PTE*	(X)**	(X)	(X)	X	
	Controls	185						
Hall et al 1977	Bipolar Affective	38	Per visit	X			(X)	
Brown & Harris 1978	Depression	114	1 year PTE	(X)	(X)			(X)
	Controls	382						
Michaux et al 1967	Mixed, mostly Schizophrenia	139	Monthly for 6 months post-dis-charge				X	
Brown & Birley 1968	Schizophrenia	50	3-week inter-vals to 3 months PTE	(X)				(X)
	Controls	325						
Jacobs & Myers 1976	Schizophrenia	62	6 months PTE	(X)	X	(X)	(X)	X
	Controls	62						

STUDY	DIAGNOSTIC GROUP	N	TIME PERIOD CONSIDERED	NUMBER EVENTS	STRESSOR DIMENSIONS			
					ENTS./ EXITS	UNDESIR./ DESIRABLE	AREA OF ACTIVITY	NON-INDEP./ INDEPENDENT
Eisler & Polak	Schizophrenia Neurotic Dep. Personality Disorder Transient Sit. Pers. Distb.	172	2 years PTE	X			X	
Beck & Worthen 1972	Schizophrenia Neurotic Depr. "Other"	15 21 13	On admission, at discharge, 16 weeks and 3 months post-discharge		X			
Jacobs et al 1974	Schizophrenia Depression	50 50	6 months PTE	(X)	X	(X)	(X)	
Lahniers et al 1976	Schizophrenia Depressive Neurosis Alcoholism	116	1 year PTA[+]	X				

*PTE – prior to episode

[+]PTA – prior to hospital admission

**(X) – indicates statistically significant findings

interest. Since recent research[1] has indicated that for many individuals previously diagnosed as having schizophrenia a more accurate diagnosis would be an affective disorder, it is entirely possible that many of the subjects included in these studies as having schizophrenia, actually had an affective disorder instead. In order to maximize any true differences in the reported life events in these two diagnostic groups, it would be necessary to "purify" the samples by using standardized and accepted diagnostic criteria. Perhaps then, more differences would be found in the relationship of stressful life events to each of these diagnostic groups.

Methodologic Considerations. Given the relative infancy of research into the relationship between stressful life events and mental disorder, and the fact that the interaction between human beings and their environment is not always predictable, virtually every study done in this field of research so far has been beset by methodologic difficulties that vary in number and in significance. The current study is certainly no exception. However, with the benefit of this literature review and a critical look at

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[1]Harrison G. Pope, Jr., and Joseph Lipinski, "Diagnosis in Schizophrenia and Manic-Depressive Illness: A Reassessment of the Specificity of 'Schizophrenic' Symptoms in the Light of Current Research," Archives of General Psychiatry, 34 (July 1978), pp. 811-828.

studies that have been done, a number of potential methodologic flaws were avoided. The following is a discussion of methodologic problems that frequent the literature.

Diagnostic Specificity and Reliability. One of the most common problems that cuts across many of these studies is the lack of homogeneous subject groups whose characteristics have been clearly defined. A number of studies attempted to use some diagnostic guidelines in selecting groups for study, but either the criteria for diagnosis were not specific enough to eliminate a large degree of heterogeneity, no diagnostic reliability was achieved or at least reported, or the criteria used were so idiosyncratic that many investigators would not agree with the diagnostic definition. The reason for this dilemma is clear: until 1972, when the "Feighner criteria"[1] were published, there were no generally agreed-upon specified diagnostic criteria for the major mental disorders. Even after 1972, however, many investigators continued to use DSM-II and other inadequately specified sets of diagnostic guidelines.

Diagnostic specificity is particularly important when one considers, for example, the distinction between "acute"

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[1]John Feighner, Eli Robins, Samuel B. Guze, Robert A. Woodruff, Jr., George Winokur, and Rodrigo Munoz, "Diagnostic Criteria for Use in Psychiatric Research," Archives of General Psychiatry, 26 (January 1972), pp. 57-63.

and "chronic" schizophrenia. In the past, these two categories have been lumped together under the single heading of schizophrenia. By now, however, there is enough accumulated evidence to demonstrate that this distinction is a very valid one: these two categories seem to represent different disorders.

Dating the Onset of the Disorder. In order to test the etiologic role of life events in precipitating mental disorder, one must be able to date the onset of the disorder with as much accuracy as possible. In the case of schizophrenia, this task is especially difficult, given the frequency with which the easily recognizable, psychotic phase of the illness is preceded by a more subtle, insidiously developing phase (prodromal phase). In studies using diagnostic distinctions that do not include a consideration of chronicity, clinicians may not pay as close attention to dating onset as they perhaps should. Instead, diagnoses may be made based on cross-sectional psychopathology, and this may contribute to an unfortunate heterogeneity of diagnostic groups. Even in the Brown and Harris study,[1] the most methodologically rigorous of all the life events

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[1]George W. Brown and Tirril Harris, Social Origins of Depression: A Study of Psychiatric Disorder in Women (New York: The Free Press, 1978).

studies, the authors could only say that "considerable effort was made to date onset accurately -- if at all possible to within a period of one week." This indicates some leeway still, and after all, the dating of onset in the end was up to the skill of the interviewer. But no one else yet has designed a more accurate way of dating onset in retrospective studies.

Who's Judgment of Stress? There has been much controversy in life events research over the measurement of the stress of each event, and who is the best person to make that measurement. Some have used the subject's assessment of the amount of "stress" involved. Brown et al, however, questioned the wisdom of this approach, arguing that "patients . . . may, in recalling the past, exaggerate the significance of events as a means of coming to terms with the illness."[1] This has often been referred to as "effort after meaning," a phrase coined by Bartlett.[2] For this reason, Brown and his group moved away from using the subject's definition of what had been stressful and began to

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[1]George W. Brown, F. Sklair, Tirril O. Harris, and James L. T. Birley, "Life-events and Psychiatric Disorders. Part I: Some Methodological Issues," Psychological Medicine, 3 (February 1973), p. 76.

[2]Sir Frederick Bartlett, Remembering: A Study of Experimental and Social Psychology (London: Cambridge University Press, 1932).

use their own criteria, applied by professional raters. (In the later Brown and Harris study[1] this method was also applied, although the authors in addition looked at the results using the subject's report of severity.)

This approach has been adopted in the present study by asking the clinician evaluators to rate their assessment of the stress involved. However, related to this issue is the problem of the subject's life situation at the time of occurrence of the event. The death of a sibling to whom one is very close may be more stressful than the death of a sibling who is much older than the subject, and who hasn't recently been a part of the subject's life. Thus, Brown et al state that one must, as much as possible, take into account the "particular circumstances" surrounding the life event, or its "contextual meaning."[2]

The Limitations of Event Checklists. In the research reported so far, by far the most common method of collecting data from which to analyze consequential and causal life events is a checklist of life events that the investigator

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[1]George W. Brown and Tirril Harris, Social Origins of Depression: A Study of Psychiatric Disorder in Women (New York: The Free Press, 1978).

[2]George W. Brown, "Meaning, Measurement, and Stress of Life Events," in Barbara S. Dohrenwend and Bruce P. Dohrenwend, eds., Stressful Life Events: Their Nature and Effects (New York: John Wiley & Sons, 1974), pp. 217-243.

deems applicable to the population he or she is studying.
Most of the checklists that have been used most widely have
been modeled on the original Holmes and Rahe list. This
list has been criticized for a number of reasons, among
them the fact that it contains so few items and that many
of them are often symptoms of an already developing illness
rather than precedent to it.[1] Actually, the Holmes and
Rahe list was compiled by culling events "observed to clus-
ter at the time of disease onset" recorded in the charts of
a large sample of medical patients.[2] Aside from the obvious
problem of noting events that developed as a result of psy-
chopathology, the method also depended on the incidental
recording of significant life events by the clinicians who
evaluated the patients, without their being asked to be sure
to note significant events. (It is well-known that this in-
formation is all too often not gathered during routine clin-
ical evaluations.) Finally, as large as the patient sam-
ple was, all of the patients were from one area of the coun-
try, and undoubtedly experienced events that are not common

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[1]Richard W. Hudgens, "Personal Catastrophe and Depres-
sion: A Consideration of the Subject With Respect to Medical-
ly Ill Adolescents, and a Requiem for Retrospective Life-
Event Studies," in Barbara S. Dohrenwend and Bruce P.
Dohrenwend, eds., Stressful Life Events: Their Nature and
Effects (New York: John Wiley & Sons, 1974), pp. 119-134.

[2]Thomas H. Holmes and Richard H. Rahe, "The Social Re-
Adjustment Rating Scale," Journal of Psychosomatic Research,
11 (November 1967), pp. 213-218.

outside that geographic area, as well as not experiencing events that are common and significant in other parts of the country.

As Dohrenwend pointed out in 1974, "there are no accounts in the literature of event nominations, made independently of the researcher-constructed lists themselves, by samples of subjects drawn from the general population."[1] The event lists used may have been applicable for some groups of subjects and not for others, since "there are important events that are specific and meaningful to some groups of subjects and not to others."[2]

Dohrenwend was the first to use an open-ended question to inquire about life events, and record whatever the subject volunteered. He asked each subject to name "the last major event in your life that, for better or worse, interrupted or changed your usual activities."[3] If a further probe was needed to stimulate the subject, the interviewer suggested: "For example, events affecting your occupation, your physical health, your living arragements, your relations with other family members, your friends, or your

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[1]Bruce P. Dohrenwend, "Problems in Defining and Sampling the Relevant Population of Stressful Life Events," in Barbara S. Dohrenwend and Bruce P. Dohrenwend, eds., Stressful Life Events: Their Nature and Effects (New York: John Wiley & Sons, 1974), pp. 276.

[2]Ibid.

[3]Ibid., p. 281.

personal values or beliefs." By administering these questions to groups of psychiatric patients, convicts, general community members and community leaders, Dohrenwend was able to demonstrate that there were many events that each group reported as "major" that were not included on a standard list of life events. This finding emphasizes the need for a more comprehensive list of life events than those that have been used in previous studies.

The Dohrenwends have tackled this need with the development of the Psychiatric Epidemiology Research Interview (PERI) Life Event List.[1] Using previous lists, the researchers' own experiences, and the results of two epidemiologic surveys in the Washington Heights section of Manhattan, in which the above open-ended questions were asked, a life events list of 102 items was constructed. Each event is classified according to whether it "probably occurs independently of any particular setting, or is likely to be limited to some types of sociocultural setting," and also "whether it is a gain, a loss, or ambiguous in this respect."[2] Finally, each event is also classified according to "whether

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[1] Barbara S. Dohrenwend, Larry Krasnoff, Alexander R. Askenasy, and Bruce P. Dohrenwend, "Exemplification of a Method for Scaling Life Events: The PERI Life Events Scale," Journal of Health and Social Behavior, 19 (June 1978), pp. 205-229.

[2] Ibid., p. 210.

it is a possible consequence of the psychological condition of the subject who reports it, an indicator of physical illness or injury, or occurs independently of either the subject's physical or psychological condition."[1] Since the PERI was developed from and is designed to be used with a particular sociocultural group (generally urban lower-class, black, Puerto Rican, and white), samples of judges were selected from this target population to rate the magnitude of "change" entailed by each life event.

The Dohrenwends have contributed greatly to the developing methodology so sorely needed in this field. Their PERI utilizes a refined and well-thought-out approach to the measurement of stressful life events that builds appropriately on past experience, their own and others'.

Having been fairly recently developed, the PERI awaits further testing and use in a variety of studies, but the instrument surely represents a significant methodologic advance. A systematic validation study of the PERI is currently underway.

Retrospective Analysis. Because of all the confounding factors mentioned above, it would obviously be most useful to plot the course of life events in a subject's life prospectively. This would eliminate, in particular,

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[1]Ibid.

the difficulty dating disorder onset, the danger of "effort after meaning," and the problem of memory. Unfortunately, because of the difficulties of maintaining close contact with a large cohort of subjects over a long period of time, nearly all of the studies done in this area have been re-trospective.[1] Prospective studies hold great promise for the study of the possible etiologic role of life events in mental disorder.

Objectives of This Study

This study seeks to bring a social work perspective to an area of research that is especially relevant to social work practice, but which has by and large been ignored in social work research. The approach to psychosocial stres-sors in this study incorporates traditional social work values of the importance of environmental events in various areas of a client's life situation, the adaptive function-ing that a client is able to sustain, and one aspect of a client's vulnerability to psychosocial stressors, distur-bance in his or her personality functioning.

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[1] Actually, however, unless a subject can be observed every minute of every day, the reporting of all life events is in effect always retrospective. Even if subjects are screened every month for life events, their reporting at that time is still retrospective with regard to the past month.

The major objectives of this study are:

1. To examine diagnostic-specific differences in the psychosocial stressors recently experienced by individuals with Major Depression, Schizophrenia, and Schizophreniform Disorder as reported by their clinical evaluators. Different dimensions of the stressors will be examined, such as their severity, whether or not they are desirable events, under the client's control, whether they represent entrances into or exits from the client's social field, the relative amounts of change they caused in the client's life, and what specific areas of the client's life were affected by the stressors.

2. To compare the findings to other studies reported in the literature to see if previous findings are replicated.

3. To develop a research instrument that includes an expanded classification of life events that can be used to study the relationship between these stressors and these specific mental disorders.

4. To analyze the usefulness of the new stressor classification.

5. To examine the relationship between highest level of adaptive functioning and level of severity of stressors in individuals with each of the mental disorders under study.

6. To examine the level of severity and types of

stressors in individuals with and without associated Personality Disorders.

It is hoped that this study will provide information on the relationship of psychosocial stressors to mental disorders that will be useful to social work practice, both in treating individuals with these disorders and in working toward the prevention or amelioration of these mental disorders.

Specific Hypotheses To Be Tested

This study will involve analysis of data collected during a National Institute of Mental Health-sponsored nationwide field trial of a new diagnostic manual. The data will be analyzed to test some specific hypotheses related to the objectives described above. In some cases these hypotheses derive rather directly from the stressful life events literature, and in some cases from the author's own clinical and research work.

As mentioned above, several dimensions of psychosocial stressors have been identified by others' research, and will be examined with this data set. Specific hypotheses to be tested include:

1. Individuals who develop Major Depression will have recently experienced a greater number of stressors than individuals who have Schizophrenia.

2. Individuals who develop Major Depression have

recently experienced stressors that, globally
rated, are more severe than those of individuals
with Schizophrenia.

3. There is no appreciable difference in the propor-
    tion of individuals in each of these three diagnos-
    tic groups who have recently experienced desirable
    stressors, but a greater proportion of individuals
    who have developed Major Depression will have re-
    cently experienced more undesirable events than
    individuals with Schizophrenia.

4. There is no appreciable difference in the propor-
    tion of individuals in each of these three diagnos-
    tic groups who have recently experienced entrances
    into their social fields, but a greater proportion
    of individuals with Major Depression will have re-
    cently experienced more exits from their social
    fields than individuals with Schizophrenia.

5. Individuals with Major Depression will have recent-
    ly experienced a greater number of Life Change
    Units than individuals with Schizophrenia.

6. There are differences in the major areas of life
    activity that have been recently affected by stres-
    sors in individuals with each of these diagnoses;
    one difference is that a greater proportion of
    individuals with Major Depression have recently
    experienced health-related stressors than indi-
    viduals with Schizophrenia.

7. With respect to severity and type, stressors recently experienced by individuals with Schizophreniform Disorder are similar to those of individuals with Major Depression, or somewhere in between those of individuals with Major Depression and individuals with Schizophrenia.

8. Within each diagnostic group, there is a positive correlation between highest level of adaptive functioning in the past year and level of severity of stressors; i.e., individuals who in the past year have functioned at a relatively high level will report having experienced more severe stressors than individuals who in the past year functioned only marginally.

CHAPTER III

STUDY DESIGN AND METHOD

Since the data for this study were derived from data collected as part of a larger study, that "parent" study will first be described, followed by an explication of the design and method of this current study.

The Larger Study: The DSM-III Field Trial

DSM-III. Since 1952 the American Psychiatric Association (APA) has assumed the responsibility for developing standard manuals used for the diagnosis of mental disorders. Code numbers, diagnostic terms, and descriptions of the disorders are provided in each edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM). Diagnostic categories assigned by clinicians are provided as input data to mental health record-keeping systems, and form the basis for many of the statistics compiled in the field of mental health. The first edition of the DSM was published in 1952, followed in 1968 by DSM-II. Finally, in February of 1980, DSM-III[1] was made available, and since then has

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[1]Diagnostic and Statistical Manual of Mental Disorders, third edition (DSM-III) (Washington, D.C.: American Psychiatric Association, 1980).

largely been adopted as the official diagnostic manual in mental health facilities in this country.

Unlike its predecessors, DSM-III incorporates several extremely innovative features in the evaluation process.[1,2,3] The two new features especially relevant to this study are the adoption of a multiaxial approach to evaluation, and the provision of specified diagnostic criteria for each of the specific mental disorders.

A Multiaxial Approach to Evaluation. DSM-III recommends that a multiaxial framework be used whenever possible for a complete evaluation. Five axes are provided in the manual, and it is suggested that each individual receive an evaluation on each axis. The five axes are:

Axis I   Clinical Syndromes and Other Conditions

Axis II   Personality Disorders (usually diagnosed
           in adults) and Specific Developmental Dis-
           orders (usually diagnosed in children)

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[1]Robert L. Spitzer, Janet B. W. Williams, and Andrew E. Skodol, "DSM-III: The Major Achievements and an Overview," American Journal of Psychiatry, 137 (February 1980), pp. 151-164.

[2]Robert L. Spitzer and Janet B. W. Williams, "Classification of Mental Disorders and DSM-III," in Harold Kaplan, Alfred Freedman, and Benjamin Sadock, eds., Comprehensive Textbook of Psychiatry, third edition (New York: Williams & Wilkins, 1980), pp. 1035-1072.

[3]Janet B. W. Williams, "DSM-III: A Comprehensive Approach to Diagnosis," Social Work, 26 (March 1981), pp. 101-106.

Axis III   Physical Disorders and Conditions

Axis IV   Severity of Psychosocial Stressors

Axis V   Highest Level of Adaptive Functioning Past
           Year

Axes I and II comprise the entire classification of mental disorders as well as some conditions not attributable to a mental disorder that are, nevertheless, a focus of attention or treatment (e.g., Marital Problem, Other Life Circumstance Problem). The separation of Axes I and II is made to ensure that consideration is given to the possible presence of certain stable, usually long-term disturbances that are frequently overlooked when attention is directed toward the Axis I mental disorder that usually presents with more florid symptomatology. For example, in a person with a psychotic depression, it is likely that the clinician may overlook an associated long-standing personality disturbance. In many instances, an individual will have disorders on both Axis I and Axis II.

Axis III permits the clinician to indicate any current physical disorder that is potentially relevant to the understanding or management of the individual.

Axis IV permits the clinician to indicate: 1) psychosocial stressors that are judged to be significant contributors to the development or exacerbation of the current Axis I and/or Axis II disorder, and 2) a rating of the overall severity of stress that an "average" person in similar socioeconomic and cultural circumstances would experience.

This rating is made on a seven-point Likert-type scale that ranges from "None" to "Catastrophic."

Finally, on Axis V, the clinician indicates his or her judgment of the individual's highest level of adaptive functioning during the past year. A six-point scale ranging from "Superior" to "Grossly Impaired," is provided.[1]

Two examples of the recorded results of complete multiaxial evaluations follow:

Example 1

Axis I: 296.24   Major Depression, single episode,

                                with psychotic features

Axis II: 301.40   Compulsive Personality Disorder

Axis III: Chronic hypertension

Axis IV: Psychosocial stressor: marital separation

                  5 - Severe

Axis V: 3 - Good

Example 2

Axis I: 295.40   Schizophreniform Disorder

Axis II: V71.09   No Diagnosis on Axis II

Axis III: No physical disorder

Axis IV: Psychosocial stressor: began new job

                  4 - Moderate

Axis V: 3 - Good

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[1]Although the draft of DSM-III that was used in this study included a six-point scale, in the final version of DSM-III this scale was expanded at the lower end to provide seven scale points.

This new multiaxial system is of special relevance to social workers, as discussed elsewhere.[1] It not only provides clinicians with an official way to indicate environmental factors that are judged relevant to the psychological disturbance, but also provides a way, on Axis V, to indicate a person's strengths or highest adaptive functioning. Both Axis IV and Axis V provide information that is relevant to prognosis, since both severe psychosocial stressors and a high premorbid level of adaptive functioning tend to correlate with good prognosis. Likewise, both domains of information are potentially important for prevention of mental illness, since both ratings may yield clues to ways to reduce or eliminate the impact of specific stressors, and how to enhance an individual's adaptive functioning. In addition, the specific encouragement to clinicians (by having a separate Axis II) to evaluate the presence of Personality Disorders provides better data for studying the extent to which maladaptive long-term personality functioning affects susceptibility to Axis I mental disorders.

Specified Diagnostic Criteria. Although each respective edition of the DSM provided some description of each

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[1]Janet B. W. Williams, "DSM-III: A Comprehensive Approach to Diagnosis," Social Work, 26 (March 1981), pp. 101-106.

of the mental disorders, even the previous edition, DSM-II, contained only vague listings of symptoms for each diagnosis, without being precise as to exactly which were required, or for how long. For example, the DSM-III description of Manic-Depressive Illness, Depressed Type, a major mental disorder, is presented below:

> 296.2 Manic-depressive illness, depressed type
>
> This disorder consists exclusively of depressive episodes. These episodes are characterized by severely depressed mood and by mental and motor retardation progressing occasionally to stupor. Uneasiness, apprehension, perplexity and agitation may also be present. When illusions, hallucinations, and delusions (usually of guilt or of hypochondriacal or paranoid ideas) occur, they are attributable to the dominant mood disorder. Because it is a primary mood disorder, this psychosis differs from the *Psychotic depressive reaction*, which is more easily attributable to precipitating stress.[1]

Because of these non-specific descriptions, the reliability with which clinicians using these definitions could make diagnostic judgments was quite low. Table 2 presents mean reliabilities, summarizing several reliability studies using DSM-I and DSM-II.[2] For the major disorders in particular, e.g., Schizophrenia, Neurosis, Affective

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[1] Diagnostic and Statistical Manual of Mental Disorders, second edition (DSM-II) (Washington, D.C.: American Psychiatric Association, 1968), pp. 36-37.

[2] Robert L. Spitzer and Joseph L. Fleiss, "A Re-analysis of the Reliability of Psychiatric Diagnosis," British Journal of Psychiatry, 125 (October 1974), pp. 341-347.

Table 2

Mean Kappa Coefficients of Agreement on Broad and Specific
Categories (Summarized from Six Studies
Using DSM-I and DSM-II)[1]

Diagnostic Category	Mean Kappa
Mental deficiency	.72
Organic Brain Syndrome	.77
Alcoholism	.71
Psychosis	.55
Schizophrenia	.57
Affective Disorder	.41
Neurotic depression	.26
Psychotic depression	.24
Manic-depressive	.33
Involutional depression	.30
Personality Disorder or Neurosis	.44
Neurosis	.40
Anxiety Reaction	.45

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[1]Robert L. Spitzer and Joseph L. Fleiss, "A Re-analysis
of the Reliability of Psychiatric Diagnosis," British Journal
of Psychiatry, 125 (October 1974), pp. 314-347.

Disorders, etc., the reliability is very low. Reliability is calculated in terms of kappa, a statistic indexing agreement among clinicians that corrects for chance agreement.[1]

Because of the limitations of these rather general descriptions of mental disorders, researchers in the late '60s and early '70s felt a need for more specific descriptions so that the various disorders could be reliably diagnosed. Finally, in 1972, the first set of specified diagnostic criteria, in which the rules for diagnosis were clearly spelled out for 16 major mental disorders, was published.[2] This was followed by the Research Diagnostic Criteria (RDC)[3] for 21 major mental disorders, and finally DSM-III completes this lineage. DSM-III provides specified diagnostic criteria for over 150 specific mental disorders.

Unlike the Feighner criteria and the RDC, the diagnostic criteria in DSM-III were designed to be used as diagnostic guidelines by clinicians. It has become clear,

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[1]Joseph L. Fleiss, Robert L. Spitzer, Jean Endicott, and Jacob Cohen, "Quantification of Agreement in Multiple Psychiatric Diagnosis," Archives of General Psychiatry, 26 (February 1972), pp. 168-171.

[2]John Feighner, Eli Robins, Samuel B. Guze, Robert A. Woodruff, Jr., George Winokur, and Rodrigo Munoz, "Diagnostic Criteria for Use in Psychiatric Research," Archives of General Psychiatry, 26 (January 1972), pp. 57-63.

[3]Robert L. Spitzer, Jean Endicott, and Eli Robins, "Research Diagnostic Criteria: Rationale and Reliability," Archives of General Psychiatry, 35 (June 1978), pp. 773-782.

however, since the diagnostic criteria by and large repre-
sent the state-of-the-art in descriptive phenomenology,
that they are also being widely used by researchers. The
DSM-III diagnostic criteria for the three major mental dis-
orders included in this study are presented in Appendix
A.[1]

Because of the far greater specificity of these cri-
teria, as opposed to the general clinical guidelines of
DSM-I and -II, the reliability with which these diagnoses
can be made has increased dramatically. Table 3 presents
the inter-clinician reliability obtained in a study of 670
adult patients.[2] For the three diagnostic categories con-
sidered in this study, the reliability is vastly improved
over that obtained using DSM-II.

The Field Trial. An important stage in the develop-
ment of DSM-III was extensive field testing of the proposed
manual prior to its official adoption. A nationwide study
of the use of DSM-III in the field was funded as a two-year

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[1]NOTE: These criteria have been changed somewhat in
the final version of DSM-III. However, since the 1/15/78
draft of DSM-III was used in this study, these criteria are
provided instead of the final criteria. The reader wishing
to consult the final criteria is directed to DSM-III.

[2]Janet B. W. Williams and Robert L. Spitzer, "DSM-III
Field Trials: Interrater Reliability and List of Project
Staff and Participants," Appendix F in Diagnostic and Sta-
tistical Manual of Mental Disorders, third edition (DSM-
III) (Washington, D.C.: American Psychiatric Association,
1980), pp. 467-481.

Table 3

KAPPA COEFFICIENTS OF AGREEMENT FOR AXES I AND II DSM-III DIAGNOSTIC CLASSES FOR ADULTS (18 AND OLDER) *

	Phase One (N = 339)		% of Sample	Phase Two (N = 331)		% of Sample
AXIS I						
DISORDERS USUALLY FIRST EVIDENT IN INFANCY, CHILDHOOD OR ADOLESCENCE	.65		5.3%	.73		3.6%
Mental Retardation		.80	1.8%		.83	2.1%
Attention Deficit Disorder		..			—.003	0.6%
Conduct Disorder		..			—.003	0.6%
Other Disorders of Infancy, Childhood or Adolescence		.66	1.2%		.002	0.3%
Eating Disorders		.59	2.1%		..	
Stereotyped Movement Disorders		—.001	0.3%		..	
Other Disorders with Physical Manifestations		..			1.00	0.6%
ORGANIC MENTAL DISORDERS	.79		11.8%	.76		10.0%
Dementias arising in the senium and presenium		.85	2.4%		.91	1.8%
Substance-induced		.63	7.4%		.58	3.6%
OBS of Other or Unknown Etiology		.66	4.1%		.65	5.4%
SUBSTANCE USE DISORDERS	.86		21.2%	.80		21.2%
SCHIZOPHRENIC DISORDERS	.81		17.7%	.81		23.3%
PARANOID DISORDERS	.66		1.2%	.75		1.5%
PSYCHOTIC DISORDERS NOT ELSEWHERE CLASSIFIED	.64		11.2%	.69		6.7%
AFFECTIVE DISORDERS	.69		43.1%	.83		38.7%
Major Affective Disorders		.68	28.9%		.80	26.9%
Other Specific Affective Disorders		.49	18.3%		.69	12.4%
Atypical Affective Disorders		.29	3.2%		.49	3.6%
ANXIETY DISORDERS	.63		9.1%	.72		8.8%
SOMATOFORM DISORDERS	.54		3.8%	.42		3.3%
DISSOCIATIVE DISORDERS	.80		0.9%	—.003		0.6%
PSYCHOSEXUAL DISORDERS	.92		2.1%	.75		1.5%
Gender Identity Disorders		—.001	0.3%		—.002	0.3%
Paraphilias		1.0	0.6%		..	
Psychosexual Dysfunctions		1.0	1.5%		.86	1.2%
FACTITIOUS DISORDERS	.66		1.2%	—.005		0.9%
DISORDERS OF IMPULSE CONTROL NOT ELSEWHERE CLASSIFIED	.28		1.8%	.80		1.8%
ADJUSTMENT DISORDER	.67		12.1%	.68		8.5%
PSYCHOLOGICAL FACTORS AFFECTING PHYSICAL CONDITION	.62		3.2%	.44		2.1%
V CODES	.56		3.0%	.66		3.0%
ADDITIONAL CODES	—.003		0.6%	.28		1.8%
OVERALL KAPPA FOR AXIS I	.68			.72		
AXIS II						
Specific Developmental Disorders		..			.40	1.2%
PERSONALITY DISORDERS	.56		59.9%	.65		49.8%
OVERALL KAPPA FOR AXIS II	.56			.64		

*Taken from Appendix F, "DSM-III Field Trials: Inter-rater Reliability and List of Project Staff and Participants," in Diagnostic and Statistical Manual of Mental Disorders, third edition (DSM-III)(Washington, D.C.: American Psychiatric Association, 1980), p. 470.

project by the Division of Biometry and Epidemiology of the National Institute of Mental Health (Contract #278-77-0022 DB). The author of this dissertation was Co-principal Investigator of the NIMH grant and Project Coordinator of the entire field trial project. The research questions posed in this study will be addressed by examination of data collected during this project.

Clinicians were invited to participate in the field trial by word of mouth, participation in previous pilot field trials, and notices placed in professional publications. Virtually all of the 1000 clinicians who indicated an interest and willingness to participate were accepted. Each clinician was entered in the project as a member of a group of participants at one facility, or as a private practitioner. About three-quarters of the participants were psychiatrists, 8% social workers, about 10% psychologists, and the rest were other mental health professionals.

The Field Trial was divided into two phases: Phase One ran from January 1, 1978, to December 31, 1978; Phase Two from January 1, 1979, to March 19, 1979. This study utilizes data collected during Phase One.

Phase One included a Diagnostic Study and a Reliability Study. In the Diagnostic Study, each clinician was asked to evaluate 20 patients using the DSM-III diagnostic criteria and the multiaxial approach described in the 1/15/78 draft of DSM-III. Since all of the clinicians were practicing in mental health treatment settings, technically

speaking, all of the individuals included in this study were "patients." Clinicians were asked to select patients as consecutive admissions to their service or practice, or on a catch-as-catch-can basis. Detailed instructions were given to the clinicians to avoid possible biases in selection of patients. For example, the clinicians were cautioned not to choose cases on the basis of any clinical characteristics, such as being young, attractive, verbal, intelligent, or successful, or on the basis of a particular symptom picture. (Of course, some facilities that specialize in the treatment of particular diagnostic problems only have patients with certain characteristics, such as in a sexual dysfunction clinic.) In addition, clinicians were asked to select, whenever possible, patients who were receiving an initial diagnostic evaluation, rather than patients already in treatment.

Although in most cases the DSM-III diagnosis could be made without any change in the clinician's usual diagnostic evaluation, in some cases it was necessary to obtain more specific information than the clinician was accustomed. Clinicians were encouraged to use all sources of information that they ordinarily would make use of, such as family members, referral notes, etc. It was expected that prior to recording the results of a multiaxial evaluation each clinician would consult the criteria, and, in the case of Axes IV and V, the rating scales. The results of each full multiaxial evaluation were recorded on a Diagnostic Report

form (DIRE) (Appendix B).

Of the 20 patients evaluated by each clinician in the Diagnostic Study, two of the evaluations were to be done with another clinician as part of a Reliability Study. These two cases were to be done after each clinician had already had experience using the DSM-III draft to evaluate at least 15 patients. Both clinicians were to have access to the same material, such as case records, letters of referral, nursing notes, and family informants. If one clinician had such information (e.g., spoke to a family member), he or she was to inform the other clinician of the additional information, while at the same time avoiding communication of his or her diagnostic impression. Clinicians could either be present at the same evaluation interview (joint) or, if this were inconvenient, separate evaluations could be done, as close together in time as possible (test-retest). Each clinician recorded the results of his or her examination using the DSM-III multiaxial system. This reliability study is the source of the data presented in Tables 3 and 4. Table 4 presents kappa for the three diagnostic categories included in this study; the individual kappas are an indication of the reliability with which clinicians were able to differentiate each of these categories from all other diagnoses.

Diagnoses recorded on Axes I and II. Subjects included in this study were given a diagnosis on Axis I of either

Table 4

DSM-III Kappa Coefficients of Agreement
For Adults (18 and Older)

Diagnostic Group	Kappa
Major Depression	.65
N = 126	
Schizophrenia	.81
N = 137	
Schizophreniform Disorder	.66
N = 25	

Major Depression, Schizophrenia, or Schizophreniform Disor-
der, according to the diagnostic criteria in Appendix A.
On Axis II some patients were diagnosed as having a Person-
ality Disorder, diagnosed according to the criteria for the
various Personality Disorders included in the 1/15/78 draft
of DSM-III.

The Rating on Axis IV: Severity of Psychosocial Stres-
sors. Clinicians were told that the rating of psychosocial
stressors should be based on the clinician's assessment of
the stress that an average person with similar sociocultur-
al values and circumstances would experience from the psy-
chosocial stressor(s). This judgment, they were instruc-
ted, involved consideration of the following: "the amount
of change in the individual's life due to the stressor, the
degree to which the event is desired and under the individ-
ual's control, and the number of stressors." The individ-
ual's idiosyncratic vulnerability or reaction to the stres-
sor, the instructions stated, should not influence the se-
verity rating. Appendix C presents the complete text from
the DSM-III manual explaining the use of Axis IV.

Examples appropriate for adults and children and ado-
lescents were provided in order to help guide the clini-
cian's judgment. The severity rating was to reflect the
summed effect of all of the psychosocial stressors that
are listed, and the following codes and terms were used:

Code	Term	Adult Examples	Child or Adolescent Examples
1	None	No apparent psycho-social stressor	No apparent psycho-social stressor
2	Minimal	Minor violation of the law, small bank loan	Vacation with family
3	Mild	Argument with neighbor, change in work hours	Change in school teacher, new school year
4	Moderate	New job, death of close friend, pregnancy	Parental fighting, change to new school, illness of close relative, birth of sibling
5	Severe	Major illness in self or family, bankruptcy, marital separation, birth of child	Death of peer, divorce of parents, arrest
6	Extreme	Death of close relative, divorce, jail term	Death of parent or sibling
7	Catastrophic	Concentration camp experience, devastating natural disaster	Multiple family deaths
0	Unspecified	No information or not applicable	No information or not applicable[1]

The clinician then noted the actual stressors that had occurred. Clinicians were told that in most instances, the psychosocial stressor(s) will have occurred within a year prior to the current disorder. Agreement among field

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[1]Diagnostic and Statistical Manual of Mental Disorders, third edition (DSM-III) (Washington, D.C.: American Psychiatric Association, 1/15/78 DRAFT).

trial clinicians on Axis IV ratings was satisfactory (Table 5), with an intraclass reliability coefficient of 0.63 for ratings of 601 adults.[1]

The Rating on Axis V: Highest Level of Adaptive Functioning During the Past Year. On this Axis, clinicians were instructed to rate the highest level of adaptive functioning that the individual they were evaluating had been able to sustain for at least a few months during the past year. In making this judgment, three important areas of functioning were to be taken into account. The first, the breadth and quality of one's social relationships, was to be given the greatest weight because of its high prognostic significance. Important consideration was also to be given to the quality and complexity of occupational functioning. Finally, although only relevant in those individuals who had maintained a relatively high level of functioning, the range and depth of their leisure time activities, with consideration of the amount of pleasure derived from them, was to be included. The entire DSM-III text describing Axis V is presented in Appendix D. As for Axis IV, examples were provided to help guide the ratings for adults

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[1]Janet B. W. Williams and Robert L. Spitzer, "DSM-III Field Trials: Interrater Reliability and List of Project Staff and Participants," Appendix F in Diagnostic and Statistical Manual of Mental Disorder, third edition (DSM-III) (Washington, D.C.: American Psychiatric Association, 1980).

Table 5

Reliability of Ratings on Axes IV and V
For Adults (18 and Older)

	Intraclass R
Axis IV	.63
N = 601	
Axis V	.77
N = 637	

and for children and adolescents. The following codes and terms were then used to record the final judgment.

Levels	Adult Examples	Child or Adolescent Examples
1 SUPERIOR Unusually effective functioning in social relations, occupational functioning and use of leisure time.	Housewife takes excellent care of children and home, has warm relations with family and many close friends and is effectively involved in several community activities.	12-year-old girl is getting superior grades in school, is extremely popular among her peers and excels in many sports.
2 VERY GOOD Better than average functioning in social relations, occupational functioning and use of leisure time.	A 65-year-old retired widower does some volunteer work, often sees old friends and pursues many life-long hobbies.	An adolescent boy is getting average grades, works part-time, has several close friends and plays banjo in jazz band.
3 GOOD No more than slight impairment in either social or occupational functioning.	A man functions extremely well at a difficult job, but has only one or two good friends.	An 8-year-old boy is doing well in school, has several friends but bullies younger children.
4 FAIR Moderate impairment in either social relations or occupational functioning, OR some impairment in both.	A female lawyer has trouble carrying through assignments, has several acquaintances but hardly any close friends.	A 10-year-old girl is doing poorly in school but has adequate peer and family relations.

5 POOR

Marked impair-ment in either social relations or occupational functioning OR moderate impair-ment in both.	A man with one or two friends has trouble keeping a job for more than a few weeks.	A 14-year-old boy is almost failing in school and has trouble getting along with his peers.

6 GROSSLY IMPAIRED

Marked impairment in both social re-lations and occu-pational function-ing.	A woman is unable to do any of her housework, and has violent outbursts towards family and neighbors.	A 6-year-old girl needs special help in all subjects and has virtually no peer relation-ships.

0 UNSPECIFIED

	No information.	No information.[1]

Agreement among field trial clinicians on Axis V rat-ings was quite good (Table 5), with an intraclass R of 0.77 for ratings made on 637 adults.[2]

Demographic Variables. Although the extent to which the field trial subjects were characterized demographically was limited, several important characteristics were noted. In addition to age and sex, each subject was identified as

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[1]Diagnostic and Statistical Manual of Mental Disorders, third edition (DSM-III) (Washington, D.C.: American Psychi-atric Association, 1/15/78 DRAFT).

[2]Janet B. W. Williams and Robert L. Spitzer, "DSM-III Field Trials: Interrater Reliability and List of Project Staff and Participants," Appendix F in Diagnostic and Sta-tistical Manual of Mental Disorders, third edition (DSM-III) (Washington, D.C.: American Psychiatric Association, 1980), pp. 467-481.

to his or her ethnic-racial background. Unfortunately, because of the nature of the project, a rather crude categorization of ethnic-racial background had to be used on the DIREs:

1 - American Indian or Alaskan native

2 - Asian or Pacific Island

3 - Black, not of Hispanic origin

4 - Hispanic

5 - White, not of Hispanic origin

This classification is the official NIMH scale. However inadequate, it does allow the clinician to indicate some important ethnic-racial distinctions.

It is very unfortunate, because of the hypothesized relationships between stressful life events and certain sociodemographic variables such as marital status and social class, that these data were not collected for the field trial subjects. For this reason, of course, the results of this study must be analyzed bearing in mind that associations between these variables and life events may be responsible for some of the findings, and that this must be tested in future research.

Summary. In all, in Phase One of the field trial, 8812 subjects were evaluated. Of this total group, a subsample of subjects given diagnoses of Major Depression, Schizophrenia, and Schizophreniform Disorder will be examined in this study.

The Sample

Although in the field trial of DSM-III, subjects were diagnosed as having one or more of over 150 different mental disorders, this study will examine only those who received one of three major diagnoses: Major Depression, Schizophrenia, and Schizophreniform Disorder. The major diagnostic characteristics of each of these groups are described below. The complete diagnostic criteria from DSM-III for each disorder are presented in Appendix A.

Major Depression. This diagnosis requires a period of illness lasting at least two weeks, characterized by a dysphoric mood or pervasive loss of interest or pleasure, as well as at least four associated symptoms. This is conceptualized as an episodic depressive disorder, as distinguished from a chronic depressive disorder (in DSM-III called Dysthymic Disorder). There may or may not be a precipitating stress.

Schizophrenia and Schizophreniform Disorder. The category of Schizophrenia, as traditionally defined, includes psychotic conditions that may be either acute or chronic. As defined in DSM-III, the category of Schizophrenia is limited to disturbances lasting at least six months, which may include prodromal or residual symptoms as well as the required "active" psychotic signs of the illness.

Most individuals who in the past would have been given a diagnosis of acute schizophrenia, would, according to

DSM-III, be given a diagnosis of Schizophreniform Disorder.
This diagnosis includes illnesses of more than one week but
less than six months' duration, that otherwise have the same
phenomenologic picture (including the active phase, and
sometimes the prodromal and residual phases) of Schizophre-
nia. The diagnostic distinction between Schizophrenia and
Schizophreniform Disorder is justified because of the ac-
cumulated evidence suggesting that the two disorders have
different external correlates, such as differing prognoses,
different modes of onset and resolution, different likeli-
hoods of recovery to premorbid levels of functioning, and
different familial patterns. The six-month criterion was
chosen because several studies[1,2,3] have indicated that
this particular delineation is the most powerful known sin-
gle way of differentiating these two disorders to maximize
the difference in their external correlates.

Although a few investigators have compared the occur-
rence of life events in individuals with Schizophrenia who

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[1]Christian Astrup and Kjell Noreik, Functional Psy-
choses: Diagnostic and Prognostic Models (Illinois: Charles
C. Thomas, 1966).

[2]Norman Sartorius, Assen Jablensky, and Robert Shapiro,
"Cross-cultural Differences in the Short Term Prognosis of
Schizophrenic Psychoses," Schizophrenia Bulletin, 4 (1978),
pp. 102-113.

[3]Ming T. Tsuang, Glenn M. Dempsey, and Frederick
Rauscher, "A Study of 'Atypical Schizophrenia,' " Archives
of General Psychiatry, 33 (October 1976), pp. 1157-1160.

have had recurrent episodes, no one has yet looked at the differences in stressful life events between individuals with "chronic" schizophrenia and "acute" schizophrenia. Some believe that "acute" schizophrenia, because of its better prognosis and tendency towards acute onset and resolution, belongs in the spectrum of Affective Disorders rather than Schizophrenic Disorders. In this study the severity and types of psychosocial stressors reported by individuals diagnosed as having Schizophreniform Disorder ("acute schizophrenia") will be compared with those of individuals diagnosed as having Schizophrenia ("chronic schizophrenia"). If the stressors in the former group more closely resemble those reported by individuals diagnosed as having Major Depression (an Affective Disorder) than those of individuals with Schizophrenia, this would lend support to the hypothesis of the relationship between Schizophreniform Disorder and Affective Disorder. In addition, it would further support the validity of the separation in DSM-III of Schizophreniform Disorder and Schizophrenia into separate diagnostic categories.

Sample Selection. Sample selection, as a potential source of bias in any study, deserves the keenest consideration. In both the areas of stress and diagnosis, age and sex are important variables. It is well-recognized that certain types of psychosocial stressors only occur or are more likely to occur at certain phases of the life cycle,

e.g., marriage and childbearing. Likewise, many mental disorders have typical "ages at onset," that is, an age at which the disorder usually first appears. For example, Schizophrenia usually first appears during adolescence or early adult life. Therefore, in any study involving stressors and diagnosis, the age distribution of the sample must be taken into account. Similarly, members of each sex are vulnerable to certain stressors that are unique to that sex, such as stressors related to becoming a mother, or fathering. In addition, most mental disorders tend to occur more commonly in one sex or the other. Thus, the sex distribution of the sample is also important.

In the present study the age-sex distribution of the entire field trial sample was examined (Table 6) for those subjects for whom Axis IV was completed. The distributions for Major Depression and Schizophrenia in this field trial are fairly representative of the corresponding distributions obtained in other studies. It is well-known that the age and sex distributions of patients with Major Depression and Schizophrenia differ from each other, and this difference is reflected in the age-sex distributions of these two categories in the field trial sample. The Major Depression group has more females than males and is distributed more evenly over the age range than is the Schizophrenia group. The latter group has a higher percentage of males, and has a much higher percentage of younger patients than the Major Depression group.

Table 6

Age-Sex Frequency Distribution of the Entire Field Trial Sample
(Phase One) for Major Depression and Schizophrenia

Diagnostic Group		Not Coded	18-29	30-39	40-49	50-59	60-69	70+	Total N
Major Depression	M	47	81	63	48	61	36	17	353
N = 866	F	41	140	92	75	74	48	31	501
	Not Coded	4	4	1	2	0	1	0	12
Schizophrenia	M	68	353	159	70	34	13	2	699
N = 1093	F	27	132	83	68	40	19	4	373
	Not Coded	5	10	3	3	0	0	0	21

For the current study there were at least three choices: one was to select each of the samples so as to approximate their respective age-sex distributions; i.e., to select the depression sample with proportional allocation to each of the age-sex categories so that the final frequency distribution was the same as the field trial population of patients with Major Depression, and to do likewise for Schizophrenia. Unfortunately, this would have resulted in two completely different age-sex distributions for these two categories so that, in later comparisons, there would not be comparability in their age and sex distributions. Another possibility included selecting the final sample for Major Depression and Schizophrenia to approximate one or the other of these categories' field trial distributions. This would mean selecting both diagnostic samples with age-sex distributions to approximate that of Major Depression or of Schizophrenia. The unfortunate consequence of this approach is of course that only one of the two categories would have its age-sex distribution accurately represented.

The third choice, and the one finally selected for this study, was to select each of the diagnostic group samples so as to approximate the age-sex distribution of the entire field trial sample with these diagnoses altogether. Although this seemed the most equitable solution, it is not without sacrifices. Selecting the study sample in this way resulted in relative oversampling of young male subjects with Major

Depression, and older female subjects with Schizophrenia.
This must be kept in mind when one examines the results of
this study.

A sample of 247 subjects diagnosed as having Major
Depression was thus randomly selected by computer from the
entire field trial sample, and 247 for the Schizophrenia
group. Again, these samples were stratified by age and sex
so as to approximate the age-sex distribution of the entire
field trial sample. Unfortunately, this same sample size
could not be selected for the Schizophreniform Disorder
group because of the rarity with which this diagnosis was
given in the field trial. Therefore, all of the subjects
given this diagnosis were selected for this study, to yield
a total of 112 subjects. The final age and sex distribu-
tion for each diagnostic category is presented in Table 7.
Ratings for all of these subjects were used to analyze the
relative levels of severity of stressors and levels of ad-
aptive functioning for the three diagnostic groups.

Selecting and Defining the Stressor Dimensions

Although many hypotheses exist, no one really knows
what aspect of stressful life events has the greatest po-
tential for increasing the likelihood of a mental disorder
developing. A number of different aspects or dimensions of
stressors have been studied and reported in the literature;
the five selected for this study have been the most widely

Table 7

Age-Sex Distributions by Diagnostic Group of Study Subjects

Diagnostic Group		Age					
		18-29	30-39	40-49	50-59	60-69	70+
Major Depression	M	63	31	15	13	7	3
N = 247	F	38	26	21	16	9	5
Schizophrenia	M	63	31	16	13	7	2
N = 247	F	39	26	21	16	9	4
Schizophreniform Disorder	M	64	9	2	0	0	1
	F	21	11	1	2	0	1
N = 112							

researched and seem to hold the most promise for understand-
ing the effects of stressors on mental health.[1] The five
dimensions of stressors selected for inclusion in this
study are:

1. whether or not the stressor is desirable

2. whether the stressor represents an entrance into
    or an exit from the social field of the individual

3. whether or not the occurrence of the stressor is
    under the control of the person

4. the area of life affected by the stressor

5. the number of Life Change Units associated with
    each stressor

Each of these aspects is described in greater detail below.

Desirable/Undesirable. Among the first to focus on
this potentially important dimension of life events were
Paykel et al,[2] at the time working at Yale. In a study of
life events and depression, the authors classified stres-
sors identified in their patient group along several dimen-
sions, one of which involved the "social desirability" of

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[1]Another dimension, that of "threat" as defined by
Brown and his group in England, was not utilized in this
study because much more information than was available
about the stressors, and the contexts of the subjects' lives,
is needed in order to judge the amount of threat involved.

[2]Eugene S. Paykel, Jerome K. Myers, Marcia N. Dienelt,
Gerald L. Klerman, Jacob J. Lindenthal, and Max P. Pepper,
"Life Events and Depression: A Controlled Study," Archives
of General Psychiatry, 21 (December 1969), pp. 753-760.

the event. As they report in the results of their study:
"In terms of the currently shared values of American soci-
ety, one group of events was clearly desirable, including
such events as promotion, engagement, and marriage. A sec-
ond and larger group of events was clearly undesirable, in-
cluding such events as demotion, being fired, death of a
family member, separation, major financial problems, and
others."[1] This same distinction was also examined in stud-
ies of Schizophrenia by Jacobs et al[2] and Jacobs and Myers[3]
(see literature review), with some significant differences
among diagnostic groups being found.

The definition of "desirable" stressors used in this
study is taken from Paykel et al:

> In terms of the currently shared values
> of American society . . . clearly desirable,
> including such events as promotion, engagement,
> and marriage.[4]

The definition of "undesirable" events, as taken from Paykel
et al, is events that are:

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[1]Ibid., p. 757.

[2]Selby Jacobs, Brigitte A. Prusoff, and Eugene S.
Paykel, "Recent Life Events in Schizophrenia and Depres-
sion," Psychological Medicine, 4 (November 1974), pp. 444-
453.

[3]Selby Jacobs and Jerome Myers, "Recent Life Events
and Acute Schizophrenic Psychosis: A Controlled Study,"
Journal of Nervous and Mental Disease, 2 (February 1976),
pp. 75-87.

[4]Paykel, loc. cit.

Clearly undesirable, including such
events as demotion, being fired, death of
a family member, separation, major financial
problems.[1]

Entrances/Exits. The distinction between life events
that represent entrances and those that represent exits
from the social field of an individual was one of the earli-
est dimensions identified, and is probably the most widely
studied. Hudgens et al,[2] in a study of life events and pri-
mary affective disorder, examined the relative number of
"loss" events reported by patients and control (well) sub-
jects, although no significant difference was found. In-
cluded in this analysis were events such as death of a par-
ent, spouse, sibling, or child, and separation from a par-
ent or a spouse. As stated in the literature review, Brown
and Harris's[3] data reveal that loss (and disappointment)
is a major etiologic factor in the onset of depression.

Paykel et al[4] refined this dimension, identifying two
classes of events that involved "changes in the immediate

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[1] Ibid.

[2] Richard W. Hudgens, James R. Morrison, and Ramnik G.
Barchha, "Life Events and Onset of Primary Affective Dis-
orders," Archives of General Psychiatry, 16 (February 1967),
pp. 134-145.

[3] George W. Brown and Tirril Harris, Social Origins of
Depression: A Study of Psychiatric Disorder in Women (New
York: The Free Press, 1978).

[4] Paykel, op. cit.

social field of the subject." As defined by this group,
and as used in the present study, "entrances" include:

> Those events which clearly involve the
> introduction of a new person into the immedi-
> ate social field of the subject.[1]

"Exits," then, were defined by Paykel et al, and are iden-
tified in this study as:

> Events which clearly involve departures
> from the social field of the subject.[2]

Examples given of entrances include engagement, marriage,
birth of a child, and a new person in the home. Examples
of exits are given as death of a close family member, sep-
aration, divorce, family member leaves home, child married,
and son drafted.

Controllable/Uncontrollable. Several investigators
have used a variety of descriptors to identify a categori-
zation of stressors that can be generally described as
whether or not the occurrence of specific stressors was un-
der the control of the individual. Although there is no
precise definition in the literature of this dimension,
the following description was used to guide the ratings
in this study.

Controllable: Those stressors whose occurrences
                 were under the control of the subject.

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[1]Ibid., p. 756.

[2]Ibid.

An example whould be quitting one's
job.

Uncontrollable: Those stressors whose occurrences
were not under the control of the
subject. An example would be the
death of a family member.

It should be noted that this dimension is close to
Brown et al's concept of "independent" and "possibly inde-
pendent" events.[1] They define an independent event as one
that "on logical grounds [is] very unlikely to have been
brought about by [a person's] psychiatric disorder." Pos-
sibly independent events are those "for which the same claim
cannot be made, although there is no evidence whatsoever of
any relationship with the disorder."[2] In this way the in-
vestigators screened out events "when there [was] any sug-
gestion that they were produced by the disorder itself."[3]

Areas of Life. This aspect of stressors, sometimes
referred to as the "area of activity,"[4] has also been widely

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[1] George W. Brown, F. Sklair, Tirril O. Harris, and
James L. T. Birley, "Life-events and Psychiatric Disorders.
Part I: Some Methodological Issues," Psychological Medi-
cine, 3 (February 1973), pp. 74-87.

[2] Ibid., p. 78.

[3] Ibid.

[4] Paykel, op. cit.

studied. In some studies these categories of life are pre-determined, that is, defined before the data are collect-ed; in others, the stressors reported are listed, and the categorization of areas of life is made on the basis of what seems to be more or less a natural clustering of the stres-sors reported. In any case, nearly every investigator in this area of research has included some categorization of stressors into different life areas. Unfortunately, in nearly every research study reported, the specific categor-ization differs. For example, Paykel et al[1] derived five "areas of social activity": employment, family, marital, health and legal. Dohrenwend et al[2] include in the PERI Life Event List, 11 different areas of stressors: school, work, love and marriage, having children, family, residence, crime and legal matters, finances, social activities, mis-cellaneous and health. In these two, as in most of the other event lists, the examples included under each cate-gory vary, so there can be little comparability unless the specific stressors included in each class are specified.

Because of this, and the fact that, as mentioned pre-viously, all of the life event lists seem to this writer

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[1]Ibid.

[2]Barbara S. Dohrenwend, Larry Krasnoff, Alexander R. Askenasy, and Bruce P. Dohrenwend, "Exemplification of a Method for Scaling Life Events: The PERI Life Events Scale," Journal of Health and Social Behavior, 19 (June 1978), pp. 205-229.

to be too limited in the specific events they include, a new area of life scale was developed as part of this study.

Life Change Units. In the rush of enthusiasm in the 1960s to study life stress, the first instrument developed for its measurement to come into widespread use was the Social Readjustment Rating Scale (SRRS) developed by Thomas Holmes and Richard Rahe.[1] Prior to the development of this instrument, studies of stressful life events had included only measurements of the numbers and types of events that were hypothesized to be related to illness onset. The SRRS was developed as an attempt to measure the magnitude of stressful life events that would hopefully shed new light on the relationship between stress and illness.

Much of the research prior to the mid-60s had concluded that there seemed to be a cluster of life events that oc-curred in the social sphere of functioning, in that they pertained to an individual's life style or events occurring around him or her, whose occurrences were temporarily asso-ciated with the onset of illness. This effect seemed to be related to the fact that these events required a signif-icant amount of change in the individual's "life adjustment."

Holmes and Rahe listed what they considered to be the

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[1]Thomas H. Holmes and Richard H. Rahe, "The Social Readjustment Rating Scale," Journal of Psychosomatic Research, 11 (November 1967), pp. 213-218.

43 most salient events, and associated each of them with
a rating that reflected the amount of "social readjustment"
each entailed; that is, "the amount and duration of change
in one's accustomed pattern of life resulting from [each
life event]. As defined, social readjustment measures the
intensity and length of time necessary to accommodate to
a life event, *regardless of the desirability of this event.*"[1]
The scores assigned to each event were derived from the rat-
ings of 394 people in a sample of convenience who were asked
to rate the life events in the list according to the "rel-
ative degrees of necessary readjustment" that each entailed.
The event of "marriage" was arbitrarily assigned the median
weighting, and all of the other events were rated relative
to the amount of readjustment entailed by marriage. The
final ratings range from 11 to 100, and are presented with
the complete scale in Table 8.

Since its development, the Social Readjustment Rating
Scale has been used in many studies, most of them of phys-
ical illnesses. Holmes and Rahe and others have used it
in several studies of the relationship of these stressful
life events and onset of physical illness in samples of
men enlisted in the Navy.[2] In general, the summed total

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[1]Ibid., p. 213.

[2]Richard H. Rahe, Jack L. Mahan, and Ransom J. Arthur,
"Prediction of Near-future Health Change from Subjects'
Preceding Life Changes," Journal of Psychosomatic Research,
14 (December 1970), pp. 401-406.

Table 8

Social Readjustment Rating Scale[1]

Rank	Life Event	Mean Value
1	Death of spouse	100
2	Divorce	73
3	Marital separation	65
4	Jail term	63
5	Death of close family member	63
6	Personal injury or illness	53
7	Marriage	50
8	Fired at work	47
9	Marital reconciliation	45
10	Retirement	45
11	Change in health of family member	44
12	Pregnancy	40
13	Sex difficulties	39
14	Gain of new family member	39
15	Business readjustment	39
16	Change in financial state	38
17	Death of close friend	37
18	Change to different line of work	36
19	Change in number of arguments with spouse	35
20	Mortgage over $10,000	31
21	Foreclosure of mortgage or loan	30
22	Change in responsibilities at work	29
23	Son or daughter leaving home	29

Table 8 (Continued)

Social Readjustment Rating Scale[1]

Rank	Life Event	Mean Value
24	Trouble with in-laws	29
25	Outstanding personal achievement	28
26	Wife begin or stop work	26
27	Begin or end school	26
28	Change in living conditions	25
29	Revision of personal habits	24
30	Trouble with boss	23
31	Change in work hours or conditions	20
32	Change in residence	20
33	Change in schools	20
34	Change in recreation	19
35	Change in church activities	19
36	Change in social activities	18
37	Mortgage or loan less than $10,000	17
38	Change in sleeping habits	16
39	Change in number of family get-togethers	15
40	Change in eating habits	15
41	Vacation	13
42	Christmas	12
43	Minor violations of the law	11

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[1]Thomas H. Holmes and Richard H. Rahe, "The Social Readjustment Rating Scale," Journal of Psychosomatic Research, 11 (November 1967), pp. 213-218.

numbers of Life Change Units recorded for individuals in a sample have been found to be somewhat predictive of later physical illness onset.[1]

The Holmes and Rahe scale is limited to 43 specific life events, each assigned a number of Life Change Units (LCU). Because of this limitation in the number of events covered by the SRRS, for the purposes of this study it was desirable, in a separate rating, to "judge" how many Life Change Units other stressors would have been assigned if they had been included in the Schedule of Recent Events. With thorough familiarity of the Holmes and Rahe scale, one begins to get a feeling for the relative weights assigned the various stressors, and it is possible to make "Holmes and Rahe Judgment" (HRJ) ratings on all of the stressors not originally rated by Holmes and Rahe. For example, if "change in number of arguments with spouse" is assigned 35 LCU and "marital separation" is assigned 65 LCU according to Holmes and Rahe, it would not seem unreasonable to assign 40 LCU to a stressor described as "husband's infidelity." Likewise, "becoming engaged," also not included in the Holmes and Rahe scale, could reasonably be assigned 36 LCU.

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[1]Richard H. Rahe, "Life-change Measurement as a Predictor of Illness," Proceedings of the Royal Society of Medicine, 61 (November 1968), pp. 1124-1128.

Construction of the Area of Life Scale (ALS)

The Area of Life Scale (ALS) was constructed in an effort to develop a scale of life events that was more comprehensive than others reported in the literature, and therefore more suitable for use in analyses of the relationship between specific types of life events and diagnosis.

Item Generation. In order to generate a comprehensive list that would be useful for subjects with diagnoses in the three categories examined in this study, the evaluation records (DIREs) of all study subjects were examined and a large list of all psychosocial stressors noted was compiled. In a very few cases, stressors had been recorded that had only cognitive content (e.g., "wants to date men, but fears rejection") or were clearly symptoms of mental disorder (e.g., "drug dependence or remission"), and these were eliminated from the list. As the list grew in length, more and more stressors listed were noted to be redundant; that is, had already been listed for several subjects (even though those subjects had been evaluated by different clinicians). This suggests that the domain of applicable stressors was fairly comprehensively sampled. The final list comprised 165 specific psychosocial stressors.

Class Generation. A survey of the completed inventory of items suggested that the items lent themselves to categorization into the following 14 major classes or groups

of stressors: health, marital, family, occupational, school,
nonfamily romantic relationships, nonfamily platonic (social
and occupational) relationships, financial, legal, religion,
environmental, developmental, migration and leisure. Final-
ly, a residual class ("other") was added to include five
stressors that did not seem to fall within one of the spe-
cific groupings. Many of these classes have been tradition-
ally included in the area of life-type instruments developed
for use in research in this area.

The Coding System. Each major class was assigned a
two-digit code number (01, 02, 03, . . . 15). Each of the
specific stressors was then classified into one of these
classes, so that each class was mutually exclusive; that
is, no stressor was listed in more than one class. For ex-
ample, "trouble with boss" was included under "occupational"
stressors, and not also under "nonfamily platonic relation-
ships." The largest category, occupational, included 33
specific stressors, and the smallest, religion, included
just one specific event.

Each of the specific stressors was then assigned a
two-digit code number, beginning with "01" in each class.
By prefixing to each of these the code number of the major
category, each stressor could then be uniquely identified
with four digits (e.g., 0401 for "occupational -- began
new job").

Finally, a fifth digit for each stressor was reserved

for coding whether the specific stressor happened to the identified subject or whether it described something that happened to someone within the social field of the subject. A "1" in the fifth digit of any stressor indicated that the event happened to the subject him or herself, a "9" indicated that it happened to a significant other, and a "0" indicated that the judgment was not applicable, or could not be made. Thus, a code number of 01161 indicated that the subject himself (fifth digit) experienced a stressor in the life area of "occupational" stressors (first two digits), which was "changing jobs" (third and fourth digits). Similarly, a code of 14019 indicates that the subject recently experienced her therapist's going off on vacation.

Once all the stressors from the list had been classified and coded (by the author), the ALS was considered complete. The entire Area of Life Scale, with code numbers, is presented in Appendix E.

It should be made clear that the ALS was developed from stressors noted for subjects who were evaluated in this particular project. Because this sample was randomly selected from a nationwide group of all sexes, ages, and ethnic-racial backgrounds, and because there was a fair amount of duplication among the stressors themselves, one would hope that the stressors listed are fairly representative for these diagnostic groups. However, this notion remains to be tested in the future application of this instrument to other subject groups.

How does the ALS relate to the Holmes and Rahe scale?
Many of the events included in the Holmes and Rahe Schedule
of Recent Events are also included in the ALS because they
were noted for this subject group. However, a few of the
Holmes and Rahe events, "mortgage over $10,000," foreclo-
sure of mortgage or loan," "outstanding personal achieve-
ment," "revision of personal habits," "change in recreation,"
"mortgage or loan less than $10,000," "change in sleeping
habits," and "change in eating habits" were not recorded
for this group and therefore do not appear in the ALS.

Coding the Stressors

Once the ALS was completed, coding sheets were devel-
oped to rate each of the specific stressors reported for
each subject, according to each of the different dimensions
of stressors discussed above. Column 1 of the coding sheet
provided a place to code whether each stressor was consider-
ed socially desirable or not. If it were socially desira-
ble, a "2" was recorded in column 1; if socially undesir-
able, a "1" was recorded; and if the judgment could not be
made, a "0" was recorded for that stressor. An example of
a socially desirable stressor was "birth of child," an un-
desirable stressor was "death of father," and one for which
the judgment could not be made was "change in residence"
when the circumstances were not more specifically described
as to whether, for instance, the move was forced or made by

the subject's choice. A judgment had to be made about each stressor based solely on its description by the evaluating clinician as recorded on the DIRE. Therefore, since there was no knowledge about how the subject viewed the stressor, that is, as desirable or not, the rating had to be done according to how each stressor, on the face of it, was likely to have been perceived or experienced. "Birth of a child," for example, is generally regarded as a desirable event; it is recognized, however, that for some subjects (presumably a minority) it could be undesirable.

Column 2 was reserved for noting whether each stressor represented an entrance into the subject's social field, coded as a "2"; an exit, coded as "1"; or if the rating could not be made, a "0" was recorded. "Birth of a child" was an example of an entrance, "death of a brother" was coded as an exit and "serious financial problems" could not be judged along this dimension, so was assigned "0."

In column 3 stressors were scored as either under the control of the subject (code "2") or not (code "1"), or not scorable (code "0"). A stressor considered under the control of the subject was "birth of a child"; one considered not under the subject's control was "therapist went on vacation"; and one for which the judgment could not be made was "breakup with boyfriend," when it was not clear whether the breakup was the subject's choice or whether she was jilted. In general, a judgment was avoided when it was not fairly clear how the stressor should be coded.

Column 4 on the coding sheet was used to code each stressor according to the five-digit coding system of the ALS.

Column 5 was for assigning the appropriate number of Life Change Units to each stressor that appears in the Holmes and Rahe Schedule of Recent Events. Very few of the stressors noted for subjects in this study were actually listed in the Holmes and Rahe Schedule, so many of them, such as "breakup with boyfriend," could not be assigned a number of Life Change Units in this column, and had to be coded "0."

Column 6 of the coding sheets was reserved for a rating of the number of Life Change Units that the rater judged would have been assigned to the stressor had it been included in the original Schedule of Recent Events.

Interestingly, in columns 1, 2, and 3, for "desirability," "entrances/exits," and "controllability," respectively, many stressors received a rating of "0." The percentages of stressors for each dimension of stressors that were given the various ratings are presented in Table 9.

Each specific stressor could, of course, be categorized according to the ALS, since that scale was developed from the listings of the stressors themselves. Likewise, since column 6 included a rating for each stressor not covered by the Holmes and Rahe scale, each stressor was assigned a number of LCU, either from the published scale, or by rater's best judgment. Columns 5 and 6 combined, then, provide a

Table 9

Percentages of Stressors Given Various Ratings
Within Each Stressor Dimension
(Total N of Stressors = 786)

<u>Ratings</u>

Stressor Dimension	Desirable Entrance Controllable 2	Undesirable Exit Uncontrollable 1	? 0
DESIRABILITY	6% (N = 45)	80 (632)	14 (109)
ENTRANCES/EXITS	3 (23)	21 (166)	76 (597)
CONTROLLABILITY	13 (104)	20 (161)	66 (521)

number of LCUs assigned for each stressor reported by the
sample.

Although the stressors for each subject were kept to-
gether, the diagnostic group membership of each subject was
not recorded on the coding sheets. Further, the coding
sheets were randomly sorted so that the rater(s) would be
blind to diagnosis. This was necessary to avoid biased rat-
ings that might result from rater preconceptions about the
relationship of certain types of psychosocial stressors to
specific diagnoses. It should be noted, however, that the
clinician who made the diagnosis in the first place was also
responsible for making the Axis IV severity rating and elic-
iting and recording the stressors that were listed on Axis
IV for each subject. Of course, then, this clinician could
not make Axis IV designations while being blind to diagnosis.
This aspect of the Axis IV ratings, and its possible contam-
ination effect on the data utilized in this study, is dis-
cussed later.

Reliability of the Ratings

In order to determine the reliability with which the
coding of the dimensions of the stressors could be made,
a small reliability study was done. The DIRE of approxi-
mately every sixth person included in the study sample was
selected out for inclusion in this mini-study. A colleague,
a research social worker for many years (Miriam Gibbon,

M.S.W.), was asked to participate as the co-rater.

This other rater was provided with the sample of DIRE records entered onto a coding sheet that included the verbatim listing of all stressors recorded for each study subject. She was instructed to code each individual stressor according to each of the five stressor dimensions: desirability, entrances/exits, controllability, ALS, LCU and HRJ. She was provided with definitions from the literature for each of these dimensions if such existed. The definitions of social desirability and entrances and exits were quoted from the article by Paykel et al.[1] There is no accepted definition of controllability, but the rater was told that "it is determined by whether or not you think the occurrence of the stressor was under the control of the patient. For example, if someone quit their job, presumably that was under their control, as opposed to someone who gets fired." For the categorization according to the ALS, she was provided with the entire instrument, and a description of how each five-digit code is determined (see Appendix E). Finally, for the assignment of Life Change Units, and a judgment of such (HRJ), the reliability rater was provided with a copy of the Social Readjustment

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[1]Eugene S. Paykel, Jerome K. Myers, Marcia N. Dienelt, Gerald L. Klerman, Jacob J. Lindenthal, and Max P. Pepper, "Life Events and Depression: A Controlled Study," Archives of General Psychiatry, 21 (December 1969), pp. 753-760.

Rating Scale, and told to "use her judgment" in deciding how many Life Change Units a stressor that is not included in the SRRS entails, and to rate it accordingly. This rater was blind to the author's ratings, as well as to the diagnosis of each subject.

In all, the stressors of 94 study subjects were selected for inclusion in the reliability study (41 with Major Depression, 17 with Schizophreniform Disorder, and 36 with Schizophrenia). These 94 subjects had a total of 146 stressors. The results of this study, for the desirability, entrances/exits, and controllability dimensions, are presented in Tables 10, 11, and 12. Agreement between the two sets of ratings is indexed by kappa, a statistic that corrects for chance agreement.[1]

For the desirability dimension, agreement between the two raters was fair (kappa = 0.56). For 15% of the stressors (N = 22/146) there was not perfect agreement. However, it should be noted that all of the disagreements involved one rater indicating desirability or undesirability and the other rater indicating "unspecified," meaning that she felt she could not make a judgment as to whether a particular stressor was desirable or not. There was no case in which

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[1]Jacob Cohen, "A Coefficient of Agreement for Nominal Scales," Educational and Psychological Measurement, 20 (Spring 1960), pp. 37-46.

one rater judged a stressor to be desirable and the other rater judged it to be undesirable.

Agreement was higher (kappa = 0.78) for the entrances/exits dimension. For this dimension, however, there were two stressors that the raters rated in opposite directions: that is, one judged it to be an entrance, and the other judged it to represent an exit. Both these stressors were recorded for the same subject, and were: "breakup with girl friend" and "separation from children." When the reliability rater was later asked why she rated these as "entrances," she recognized that she had simply made coding errors, and that they should have been rated as exits. All of the other ten disagreements, then, reflected one rater recording uncertainty or inability to judge (code of 0) and the other rater recording an entrance or an exit.

Finally, as expected, agreement on whether or not a stressor was controllable was low (kappa = 0.49). There were disagreements on nearly one-third (30%, N = 44) of the stressors. Since the vast majority of these disagreements, however, reflected a "0" rating by one rater and a judgment of controllable or uncontrollable by the other rater, the extent of the disagreement is not as serious as it might first appear. On only five of the stressors did one rater record "controllable" and the other "uncontrollable." These stressors were: "birth of child," "post-op surgery," "facing college finals," "sent to jail for shoplifting," and "trial and small fine." Since the rating of this dimension

was perhaps not as reliable as it could be, it should be defined more clearly before using it in another study.

Excellent agreement (kappa = 0.93) was obtained on assignment to class of stressors (first two digits of the ALS code). On only 6% (N = 9) of the stressors was there disagreement. Of course, relatively high agreement was to be expected, since the classes were constructed from the list of stressors submitted for these subjects. However, it is reassuring to have data attesting to the fact that another person, without any particular training, can take the ALS listing and codes and assign the proper categories with a high degree of reliability.

On 15% (N = 23) of the stressors, although agreement was perfect as to stressor class coded, there was disagreement about the specific stressor to be coded within that class. The majority of disagreements were in four stressor classes: occupational (disagreement on six stressors), migration (five stressors), and financial and health (each four stressors). The classes of marriage, family, romantic relationships, and leisure stressors each had disagreement on one stressor.

Finally, for nine stressors there was disagreement about class and specific codes. Further, on three of these there was disagreement about the most appropriate fifth-digit code; that is, whether the stressor happened to the subject him- or herself, or happened to someone close to them. This last observation indicates that these stressors

were probably not written clearly enough for the judgments
to be reliably made. These three stressors were: "close
friend moved away," "parents' divorce," and "mother to work."
These are all things that other people close to the subject
did, but since they affect the subject as well, it is not
clear how they would be best regarded, and hence whether one
should code a "1" or a "9" in the fifth digit.

Interrater reliability was also determined for both
assignment of Life Change Units (LCU) to each stressor and
for assignment of a combination of LCU and a judgment of the
number of LCU that would be associated with any stressor
were it included in the Holmes and Rahe scale ("LCU + HRJ").
The Pearson product-moment correlation coefficient for num-
ber of LCU assigned to each stressor by both raters was 0.73,
indicating a very adequate level of agreement. The cor-
responding figure for the LCU + HRJ ratings was 0.69, also
reflecting satisfactory reliability. (There was no statis-
tically significant difference between these two correlation
coefficients.) These results suggest that there is no spe-
cial advantage, with respect to interrater agreement in this
case, to using the more complete method of assigning Life
Change Units to all stressors (LCU + HRJ method), over the
Schedule of Recent Events alone (LCU).

Table 10

Agreement and Disagreement on Desirability
Of Stressors (Reliability Study)

		RATER: MG		
		Unspecified	Undesirable	Desirable
		0	1	2
	0	12	2	3
RATER: JW	1	14	108	0
	2	3	0	4

Kappa = 0.56

Table 11

Agreement and Disagreement on Entrances/ Exits Dimension (Reliability Study)

RATER: MG

		Unspecified	Exit	Entrance
		0	1	2
	0	106	7	2
RATER: JW	1	1	24	2
	2	0	0	4

Kappa = 0.78

Table 12

Agreement and Disagreement on Controllability
Dimension (Reliability Study)

RATER: MG

		Unspecified	Uncontrollable	Controllable
		0	1	2
	0	58	30	2
RATER: JW	1	0	36	1
	2	7	4	8

Kappa = 0.49

CHAPTER IV

DATA ANALYSIS

Introduction

The reader will recall from Chapter II that the hypotheses tested in this study concern the differential relationships between different aspects of psychosocial stressors (such as their frequency and severity, whether or not they could be classified as entrances or exits, desirable or undesirable, and controllable or uncontrollable, what areas of the subjects' lives they affected, and their description in terms of Life Change Units), and the major diagnostic categories of Major Depression, Schizophrenia, and Schizophreniform Disorder. Further, hypotheses about the relationship between highest level of adaptive functioning in the past year and severity of psychosocial stressors within each diagnostic category were tested. It should be clear, then, that the major dependent variables in this study are the diagnostic categories, and the independent variables the psychosocial stressors, however classifed.

The Subjects

Age and Sex Distributions. As described above, 606

subjects were selected from the field trial study by random sampling techniques, stratified for age and sex within Major Depression and Schizophrenia according to the entire distribution of the field trial subjects with these diagnoses. All subjects given the diagnosis of Schizophreniform Disorder were included because there were so few. The final age and sex distributions obtained for the study sample as a result of these procedures were presented in Table 7 (and are repeated here for the reader's convenience):

Diagnostic Group		18-29	30-39	Age 40-49	50-59	60-69	70+
Major Depression	M	63	31	15	13	7	3
N = 247	F	38	26	21	16	9	5
Schizophrenia	M	63	31	16	13	7	2
N = 247	F	39	26	21	16	9	4
Schizophreniform Disorder	M	64	9	2	0	0	1
	F	21	11	1	2	0	1
N = 112							

For the analyses comparing the types of stressors among the three diagnostic groups it was necessary to exclude a few cases in which the clinican had indicated some severity of stress, but had not recorded the specific stressors. Therefore, for these analyses the subjects included have a slightly different age/sex distribution:

Diagnostic Group		Age					
		18-29	30-39	40-49	50-59	60-69	70+
Major Depression	M	57	28	13	11	5	3
N = 217	F	36	21	18	12	8	5
Schizophrenia	M	59	28	15	12	4	2
N = 228	F	37	23	20	15	9	4
Schizophreniform Disorder	M	58	9	2	0	0	1
N = 101	F	20	8	0	2	0	1

The effect of this selection factor on any one cell size seems no more than trivial.

Ethnic-racial Background. Using the official NIMH breakdown of ethnic-racial categories described above, Table 13 represents the sample of subjects in this study.

Clinical Settings. Table 14 presents the distribution, for each diagnostic group, of subjects by the clinical settings in which they were evaluated. The list of settings is arranged hierarchically, so that a patient seen in a "specialty" setting such as a college mental health service would be coded as having been seen in that setting, rather than "general adult inpatient" or "outpatient." Approximately three-quarters of the subjects in each diagnostic group were seen in a general inpatient or outpatient setting. As might be expected, since not all individuals with a Major Depression have symptoms severe enough to be considered

Table 13

Ethnic-racial Background Distribution of Study Subjects

Ethnic-racial Background

Diagnostic Group	White	Black, not of Hispanic origin	Hispanic	Other	No Information	Total
Major Depression	82% (203)	8 (20)	5 (12)	4 (11)	.4 (1)	100% (247)
N = 247						
Schizophrenia	63 (155)	26 (65)	7 (17)	3 (8)	1 (2)	100% (247)
N = 247						
Schizophreniform Disorder	62 (69)	27 (30)	5 (6)	4 (5)	2 (2)	100% (112)
N = 112						

Table 14

Distribution of Study Subjects by Clinical Setting

Diagnostic Group

Clinical Setting	Major Depression N = 247		Schizophrenia N = 247		Schizophreniform Disorder N = 112	
Liaison Evaluation	6%	(N = 15)	5%	(N = 12)	3%	(N = 3)
Forensic Evaluation	1	(3)	2	(5)	3	(3)
Disability Evaluation	0		½	(1)	0	
College Mental Health	4	(10)	½	(1)	6	(7)
Child & Adolescent Inpatient	½	(1)	1	(2)	0	
Child & Adolescent Outpatient	½	(1)	0		1	(1)
Geriatric Inpatient	2	(5)	1	(3)	0	
Psychoanalytic Clinic	1	(2)	0		0	
Drug or Alcohol Program	2	(5)	1	(3)	1	(1)
General Adult Inpatient	25	(62)	48	(119)	63	(71)
Partial Hospitalization	1	(2)	8	(19)	3	(3)
General Adult Outpatient	46	(114)	29	(71)	19	(21)
Private Practice	11	(27)	5	(11)	2	(2)

psychotic, a smaller proportion of subjects in this group
were seen in an inpatient setting, relative to the corre-
sponding proportion for each of the other two diagnostic
groups.

The Clinicians

Although the characteristics of the individual clini-
cians who evaluated the specific patients selected as sub-
jects for this study were not examined, there is no reason
to suspect that they represent a group unrepresentative of
the entire group of Field Trial clinicians. Therefore, the
characteristics of the entire group of clinicians who par-
ticipated in the field trial will be presented.

Of the total group of clinicians, approximately three-
quarters were psychiatrists, 10% were master's or doctoral-
level psychologists, and 8% social workers (with and with-
out doctorates). Another 2% were psychiatric nurses, and
the remaining, other mental health professionals. Over
half of the entire group had ten years or more of direct
patient experience. Over three-quarters of the group, dur-
ing the field trial project, stated that they spent most of
their time in patient evaluation and/or care. Another 6%
were mainly involved in teaching, 6% in research, and 6%
in administration. Therefore, on the whole, this group of
clinicians represents a great deal of past and present clin-
ical experience.

Presented with the same NIMH classification of ethnic-

racial backgrounds, nearly 90% of the clinicians identified themselves as "white, not of Hispanic origin," nearly 6% as "Asian or Pacific Island," 3½% as "Hispanic," and 1½% as "black, not of Hispanic origin." There were no clinicians who identified themselves as "American Indian or Alaskan native." It is unfortunate that there was not a higher percentage of minority clinicians, enough to mirror the ethnic-racial make-up of the field trial sample of patients. However, in reality, there is a recognized relative shortage of minority clinicians throughout the mental health field. It is unknown to what extent the ethnic-racial identification of a clinician affects his or her diagnostic judgment and multiaxial evaluation.

Nearly half of all the clinicians described their treatment orientation as predominantly "psychoanalytically oriented psychotherapy or psychoanalysis (with or without supplemental use of drugs)." Nearly a fifth of the clinicians described themselves as predominantly oriented toward "somatic therapy (drugs, ECT), with or without psychotherapeutic management." Another 14% identified themselves as oriented toward "short-term non-psychoanalytically and non-behaviorally oriented psychotherapy (including crisis intervention, with or without supplemental use of drugs)." Finally, 7% described their predominant treatment orientation as "behaviorally oriented psychotherapy (including cognitive therapy, with or without supplemental use of drugs)," and 9% as "other" psychotherapy.

In order to determine if this distribution of theoretical orientation was fairly representative of American psychiatrists, a survey was done of a randomly-selected sample of members of the American Psychiatric Association, asking them to indicate their orientation. The results indicated that the distribution of the field trial participants very closely approximated the distribution of American psychiatrists at large.[1]

Although it is difficult to say how representative this group of clinicians is of those in general practice "in the field," at least in terms of degree of clinical involvement, ethnicity, and the very important variable of theoretical orientation, it seems as if the Field Trial clinicians were a fairly representative group.

Axis IV: Severity of Psychosocial Stressors

Table 15 presents the distribution of severity ratings of psychosocial stressors for all three diagnostic groups. The mean severity rating for Major Depression is at the "moderate" level, that for Schizophreniform Disorder slightly less than "moderate," and for Schizophrenia, the lowest level of severity, slightly above "mild." A one-way ANOVA

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[1]Janet B. W. Williams, Final Report of the NIMH-Sponsored DSM-III Field Trials (unpublished monograph prepared for the Division of Biometry and Epidemiology of the National Institute of Mental Health, 1980.)

confirms the fact that these three means differ significant-
ly from each other (F = 28.82; p < .0001). Pairwise t-tests
for independent measures indicate that there is no statis-
tically significant difference between the mean stressor
severity for the groups with Major Depression and Schizo-
phreniform Disorder (t = 1.41). On the other hand, the mean
severity rating for the group with Schizophrenia differs
significantly from both the Major Depression and the Schizo-
phreniform Disorder groups (t = 6.63 and 4.28, respectively;
two-tailed p < .0001 in each case).

Therefore, it appears that individuals with Schizo-
phrenia have less severe stressors, on the average, associ-
ated with the development or exacerbation of their illness
than individuals with either Major Depression or Schizophren-
iform Disorder. Furthermore, individuals with either of
these latter two diagnoses do not differ significantly from
each other in the severity of stressors that preceded their
illness episodes.

In order to assess the amount of variance in Axis IV
ratings that can be accounted for by diagnosis, a multiple
regression analysis was done of diagnosis on Axis IV. This
amount of variance was found to be 7.4% (multiple R = 0.273),
indicating that a significant amount of the variance in
Axis IV ratings can be accounted for by diagnosis.

Table 15

Percentage of Subjects in Each Diagnostic Group
Receiving Each Axis IV Severity Rating

Axis IV Severity Ratings

Diagnostic Group	1 None	2 Minimal	3 Mild	4 Moderate	5 Severe	6 Extreme	7 Catastrophic
Major Depression	8.1% (N = 20)	6.5 (16)	12.6 (31)	32.8 (81)	30.0 (74)	9.3 (23)	0.8 (2)
N = 247							
$\bar{x}$ = 4.01							
s = 1.37							
Schizophrenia	25.9 (64)	8.1 (20)	19.0 (47)	25.9 (64)	15.8 (39)	5.3 (13)	0
N = 247							
$\bar{x}$ = 3.13							
s = 1.57							
Schizophreniform Disorder	5.4 (6)	8.9 (10)	20.5 (23)	42.0 (47)	12.5 (14)	9.8 (11)	0.9 (1)
N = 112							
$\bar{x}$ = 3.80							
s = 1.27							

Axis V: Highest Level of Adaptive Functioning Past Year

The distributions of highest levels of adaptive func-
tioning that the study subjects were able to sustain for
at least a few months during the year prior to evaluation,
for each diagnostic group, are presented in Table 16.
Out of the total sample of 606 subjects, ratings were not
completed for 5 subjects.

It is immediately striking that no subjects with Schizo-
phrenia were rated as having functioned on a "superior" lev-
el in the past year, as contrasted to five subjects in the
Major Depression group and one subject in the Schizophreni-
form Disorder group. Similarly, only one subject with
Schizophrenia was rated as having had "very good" function-
ing, as opposed to 36 subjects in the other two groups com-
bined. This obviously suggests a greater tendency toward
impaired functioning in subjects with Schizophrenia than
in the other two groups.

A one-way ANOVA confirms the fact that the mean lev-
els of functioning in the three groups differ ($F = 70.07$,
$p < .0001$). Pairwise t-tests for independent samples in-
dicate that there is no statistically significant difference
between the mean levels of adaptive functioning for the
groups with Major Depression and Schizophreniform Disorder
($t = 0.19$). However, the mean level of functioning for the
group with Schizophrenia differs significantly from both
the Major Depression and the Schizophreniform Disorder

Table 16

Percentage of Subjects in Each Diagnostic Group
Receiving Each Axis V Level

Axis V Levels of Adaptive Functioning

Diagnostic Group	0 No Information	1 Superior	2 Very Good	3 Good	4 Fair	5 Poor	6 Grossly Impaired
Major Depression	0.4% (N = 1)	2.0 (5)	10.5 (26)	27.1 (67)	34.0 (84)	19.4 (48)	6.5 (16)
$N = 247$							
$\overline{x} = 3.78$							
$s = 1.14$							
Schizophrenia	0.8 (2)	0	0.4 (1)	6.9 (17)	22.7 (56)	40.9 (101)	28.3 (70)
$N = 247$							
$\overline{x} = 4.91$							
$s = 0.91$							
Schizophreniform Disorder	1.8 (2)	0.9 (1)	8.9 (10)	25.0 (28)	40.2 (45)	19.6 (22)	3.6 (4)
$N = 112$							
$\overline{x} = 3.81$							
$s = 1.01$							

groups (t = 11.28 and 9.09 respectively; two-tailed p < .0001 in each case).

A multiple regression analysis was done to determine the amount of variance in Axis V ratings that is accounted for by diagnostic group membership. This analysis revealed that fully 20% of the variance in Axis V scores is accounted for by diagnosis (multiple R = 0.448). This suggests that there is a very significant relationship between level of adaptive functioning and diagnosis, at least with regards to these three diagnostic groups.

Axis IV and Axis V

In order to test the hypothesis that individuals with higher (i.e., better) levels of premorbid functioning would report a higher level of stress, the correlation between Axes IV and V was examined for the subjects in each diagnostic category. A finding of a negative correlation between the two Axes would support the hypothesis, in that the lower the score on Axis V (and therefore the higher the level of functioning), the higher would be the score on Axis IV (indicating a higher severity of stress). The following schematic diagram illustrates this:

AXIS IV: 1 ⟶ 7

     Low stress   High stress

AXIS V: 1 ⟵ 6

  High functioning   Low functioning

Table 17 presents the Pearson product-moment correlation coefficients, the corresponding levels of significance, and r^2 for each diagnostic group. A statistically significant correlation was found within each group of subjects between Axes IV and V. However, only for the group with Schizophrenia was this correlation in the hypothesized negative direction.

For subjects with Major Depression and Schizophreniform Disorder, then, a higher level of functioning is associated with lower levels of severity of stress, and vice versa. For subjects with Schizophrenia, on the other hand, the higher the level of functioning, the higher the level of severity of stress.

Thus for Schizophrenia, these data suggest that, as hypothesized, the better the individual has functioned in the past year, the greater the stress that preceded their current episode. Interestingly, this hypothesis was not supported for either of the other two diagnostic groups. Thus for individuals with Major Depression or Schizophreniform Disorder, these data suggest that the better the functioning in the past year, the less severity of stress that preceded the current episode. These somewhat puzzling

Table 17

Pearson Product-moment Correlation Coefficients
And Their Levels of Significance for Axis IV
And Axis V for Each Diagnostic Group

Diagnostic Group	Pearson's R	P	R^2
Major Depression	0.26	.00001	0.068
(N = 247)			
Schizophrenia	-0.12	.02	0.014
(N = 247)			
Schizophreniform Disorder	0.15	.05	0.023
(N = 112)			

findings will be discussed in Chapter V ("Discussion").

Although the correlation between Axes IV and V for each group was statistically significant, the amount of variance in each Axis that was accounted for by the other is not appreciable, with the exception of the Major Depression group. For Schizophrenia and Schizophreniform Disorder, the amounts of variance were 1.4% and 2.3% respectively. However, for Major Depression, the amount of variance in Axis IV accounted for by Axis V, and vice versa, was nearly 7%, which most would agree is an appreciable proportion in this type of research.

Number of Stressors

Since clinicians were told to record multiple stressors if appropriate, although generally not more than four per patient, many of the subjects had more than one stressor listed. Table 18 presents the percentage of subjects in each diagnostic group who experienced zero to five stressors. As can be seen, among subjects who had no stressors recorded, individuals with Schizophrenia far outnumber subjects in either of the other two groups. Over one-quarter of the Schizophrenia subjects reported no stressor, as opposed to less than 10% in each of the other two groups. For virtually all of the other numbers of stressors, then, subjects with Schizophrenia are outnumbered by subjects in both of the other two groups.

Table 18

Number of Stressors Recorded for Subjects in Each Diagnostic Group

Diagnostic Group	Number of Stressors					
	0	1	2	3	4	5
Major Depression (N = 217)	9% (20)	44 (96)	30 (64)	13 (28)	3 (6)	1 (3)
Schizophrenia (N = 228)	28 (63)	41 (94)	21 (48)	7 (16)	2 (5)	1 (2)
Schizophreniform Disorder (N = 101)	6 (6)	46 (46)	26 (26)	19 (19)	4 (4)	0

The mean number of stressors listed for the subjects in each diagnostic group is presented in Table 19. Two-tailed t-tests for independent samples done on the diagnostic groups revealed that there is no statistically significant difference in the mean number of stressors reported by subjects with Major Depression and Schizophreniform Disorder. However, the mean number reported by each of these groups did differ significantly (p < .001) from the mean number of stressors reported by the Schizophrenia group, subjects in the latter group having fewer stressors than subjects in either of the other two groups.

Desirability of Stressors

For most of the subjects in each diagnostic group, a judgment could be made as to whether each stressor is likely to have been experienced as either desirable or undesirable. In order to determine if there is an association between diagnostic group membership and type of stressor, the number of subjects who experienced one or more desirable stressors and those who experienced one or more undesirable stressors were compared across diagnoses. This is presented in Table 20.

As can be seen, many more subjects in each group experienced undesirable stressors as compared to desirable ones. For only a very few subjects in each group (six in Major Depression, two in Schizophrenia, and five in Schizophreniform Disorder) were both types of stressor recorded.

Table 19

Mean Number of Psychosocial Stressors
Reported by Each Diagnostic Group

Diagnostic Group	Mean Number of Stressors Reported
Major Depression	1.60
(N = 217)	
Schizophrenia	1.18*
(N = 228)	
Schizophreniform Disorder	1.69
(N = 101)	

*p < .001

Desirable stressors, as might be expected, are noted quite rarely, although most commonly among subjects with Schizophreniform Disorder. There is no statistically significant difference among the groups as to the proportion of subjects who experienced desirable stressors (Chi sq. = 5.85, N.S.). That is, desirable stressors are not significantly more commonly associated with one diagnostic group or another.

Undesirable stressors, on the other hand, are far more common, occurring in over half of the subjects in each group. Further, the diagnoses of Major Depression and Schizophreniform Disorder are associated with significantly more undesirable stressors than Schizophrenia. This finding for Major Depression supports the hypothesis derived from the work of Jacobs, Prusoff and Paykel[1] that people who are depressed are more likely to have had an undesirable stressor than people with Schizophrenia. It is interesting to note that the percentage of subjects with Schizophreniform Disorder who have had undesirable stressors is not significantly different from and in fact is very close to that of subjects with Major Depression. In this regard, then, Schizophreniform Disorder is closer to Major Depression than to Schizophrenia.

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[1]Selby Jacobs, Brigitte A. Prusoff, and Eugene S. Paykel, "Recent Life Events in Schizophrenia and Depression," Psychological Medicine, 4 (November 1974), pp. 444-453.

Table 20

Number of Subjects in Each Diagnostic Group
Experiencing Desirable and/or Undesirable Stressors

Diagnostic Group	Subjects with one Or More Desirable Stressors*	Subjects with One Or More Undesirable Stressors**
Major Depression (N = 217)	7.4% (N = 16)	79.8 (174)
Schizophrenia (N = 228)	5.3 (12)	58.8 (134)
Schizophreniform Disorder (N = 101)	12.9 (13)	76.2 (77)
	Chi sq. = 5.85 (N.S.)	Chi sq. = 26.48 (p < .001) Contingency coefficient = 0.215

*with or without undesirable stressors as well

**with or without desirable stressors as well

Of the 786 stressors noted for the total of 546 sub-
jects who had stressors listed (all three groups together),
only 109 (14%) of the stressors could not be categorized
as either desirable or undesirable. Stressors classified
according to the ALS as "occupational" and those having to
do with "migration" were most often noted as unable to be
judged as to their desirability.

Of those 677 stressors that could be judged, 45 (7%)
were judged as "desirable," and 632 (93%) as "undesirable."
Thus, many fewer stressors are desirable than undesirable;
the desirable stressors are listed in Table 21. Those stres-
sors that were most frequently judged undesirable include
difficulties with relatives (noted 53 times), physical ill-
ness (noted 49 times), and death of a person and arguments
with spouse (each noted 36 times). Most of the undesirable
ratings were given to stressors classified as related to
either "health" or "occupation."

The most commonly noted desirable stressors include
childbirth (noted 11 times) and graduation (noted 5 times).
Most of the stressors judged to be desirable fell into the
classes of "family" and "school" stressors.

In order to examine the consistency with which the
judgment of desirability was made across all the stressors
rated, the total number of times each stressor was rated
as "desirable" was compared with the number of times it
was judged to be "undesirable." There was only one instance
of a discrepancy, in which a stressor, usually noted as

Table 21   138

ALS Categories Rated as Desirable

HEALTH

    Discharge from hospital

    Medication changed (lowered)

MARITAL

    Anticipated marriage

FAMILY

    Childbirth

    Difficulties with relatives ("overprotective family")

OCCUPATIONAL

    Began new job

    Changed work responsibilities (e.g., new responsibilities
        in academic work)

    Anticipated job search (e.g., following graduation)

    Impending job change (e.g., discharge from Air Force and
        entry into private law firm)

SCHOOL

    Began at higher level

    End of school term

    Graduation

    Resumption of school year

    Classes began

    School pressure (e.g., being a pre-med student)

    Impending graduation

ROMANTIC RELATIONSHIPS

    Engagement

    Began new relationship

    Began having sex

MIGRATION

    Change of residence

    Being away from home

LEISURE

    Vacation

undesirable, was for one subject rated as desirable. For

this subject the stressor, classified using the ALS under

"difficulties with relatives" was judged to be desirable,

whereas for all other subjects it was considered undesir-

able. The clinician's original data sheet (DIRE) for this

subject, however, specified that this particular subject

was having difficulties because she had a "protective fam-

ily." It was in this context, then, that this stressor

had been judged desirable.

Entrances/Exits

Perhaps the most commonly studied stressor dimension

is whether or not particular stressors represent entrances

into or exits from the social field of a subject. Table

22 presents the percentage of subjects in each diagnostic

group who experienced one or more entrances, and those who

experienced one or more exits.

Among all the subjects for whom such a judgement could

be made, it was much more common to have had an exit from

one's social field than an entrance into it. In fact, en-

trance stressors are even less common than desirable stres-

sors, and were experienced by no more than 6% of any group.

Exits, on the other hand, while only about half as common

in each group as undesirable stressors, were experienced

by from 17 to 37% of the subjects in each diagnostic group.

Only two subjects in the Major Depression group and one

subject in the Schizophreniform Disorder group had experienced both entrances and exits.

Jacobs, Prusoff, and Paykel's hypothesis that entrances would be equally common in groups of subjects with depression and schizophrenia was tested on these data. There were no statistically significant differences among the three groups as to the proportion of subjects who had experienced entrances (Chi sq. = 1.03, N.S.), thus supporting Jacobs et al's hypothesis. However, there was a highly statistically significant association between group membership and having experienced exits. Subjects with Major Depression much more commonly experienced exits than subjects with Schizophrenia. In this analysis, subjects with Schizophreniform Disorder were mid-way between the other two groups as far as the percentage who had experienced exits, but not statistically significantly different from either group.

Unfortunately, for over half of the subjects in each group, it was impossible to rate any of their stressors as either entrances or exits. Likewise, 76% of the total number of stressors could not be classified along this dimension. Examples of frequently noted stressors that could not be classified include: physical illness, arguments with spouse, and difficulties with relatives. These stressors were rated as "0" for unclassifiable.

Of those stressors that could be classified, 166, or 88% of those that could be classified, were classified as

Table 22

Number of Subjects in Each Diagnostic Group
Experiencing Entrances and Exits

Diagnostic Group	Subjects with One Or More Entrances*	Subjects with One Or More Exits**
Major Depression (N = 217)	4.1% (N = 9)	36.9 (80)
Schizophrenia (N = 228)	3.5 (8)	17.5 (40)
Schizophreniform Disorder (N = 101)	5.9 (6)	26.7 (27)
	Chi sq. = 1.03 (N.S.)	Chi sq. = 21.10 (p $<$ .001)
		Contingency coefficient = 0.193

*with or without exits as well
**with or without entrances as well

"exits," and 23, or 12%, were classified as "entrances."
Thus, an exceedingly small number of stressors reported in
this study represented entrances into the subjects' social
fields. Of those stressors judged to be exits, the four
most common were: death of a person (noted 35 times),
breakup with a romantic partner (noted 29 times), marital
separation (22 times), and divorce (18 times). The ALS
stressor classes of "marital" and "health" constituted over
half of the exit events noted. All other exits were noted
seven or fewer times.

Of stressors judged as entrances, childbirth, noted
11 times, equaled nearly half of the number given, so that
the ALS class that included most of the entrance stressors
was "family." All of the other entrances that occurred in
the lives of these subjects were experienced by only one or
two subjects: discharge from hospital to home, marriage,
anticipated marriage, relative moved into the home, rela-
tive visiting, changed work conditions (new boss), engage-
ment, began new relationship, began having sex, new thera-
pist, and returned home. In all, 31 ALS categories were
judged to be "exits," and 12 were judged "entrances." These
are listed in Table 23.

A careful review of the ratings confirmed that they
were done consistently; that is, no one stressor was judged
to constitute an entrance in one case and an exit in another.

Table 23

ALS Categories Rated as Exits and Entrances

<u>Exits</u>

HEALTH

Death of person

Hospitalization

Death of pet

Anticipated

MARITAL

Separation

Divorce

Arguments with spouse

Infidelity (of spouse)

Impending divorce

FAMILY

Thrown out of family home

Difficulties with relatives

Denied right to see children

Lack of parental support

Parent away

Separation from loved ones

Alienated by family

OCCUPATIONAL

ROMANTIC RELATIONSHIPS

Broken engagement

Breakup with partner

Rejection of advances

<u>Entrances</u>

HEALTH

Discharge from hospital (moved in with her brother)

MARITAL

Marriage

Anticpated marriage

FAMILY

Childbirth

Relative moved into home

Relative visiting

OCCUPATIONAL

Changed work conditions (new boss)

ROMANTIC RELATIONSHIPS

Engagement

Began new relationship

Began having sex

Table 23 (Continued)

ALS Categories Rated as Exits and Entrances

Exits	Entrances
PLATONIC RELATIONSHIPS	PLATONIC RELATIONSHIPS
Lives alone (since daughter went away to college)	New therapist
Therapist moves away	
Loss of roommate	
Rejection by friend	
Loss of halfway house "parent"	
Loss of contact with friend	
MIGRATION	MIGRATION
Change of residence	Returning home
(Being) away from home (daughter, husband)	
Ran away from home	
LEISURE	LEISURE
Vacation (of therapist)	
OTHER	OTHER
Anniversary reaction (to death of close relative	

Controllability of Stressors

This stressor dimension is especially important because it affords the best opportunity to separate those stressors that could possibly have been a consequence of the developing or worsening mental disorder, that is, an early manifestation of psychopathology (and therefore "controllable") from those that were most likely to be independent, that is, to precede the development of a mental disorder (and hence rated "uncontrollable").

The numbers of subjects in each diagnostic group who experienced one or more controllable events, and those who experienced one or more uncontrollable events, are presented in Table 24.

For both the Major Depression and Schizophrenia groups, the number of subjects who experienced one or more controllable stressors is relatively small, indicating that, for these subjects, clinicians were fairly accurately recording stressors that preceded the development or exacerbation of psychopathology, rather than those that were due to psychopathology already developing. For the Schizophreniform Disorder group, however, nearly a third of the subjects had experienced controllable events, a statistically significantly higher proportion than in either of the other two groups. Since the only difference between a diagnosis of Schizophrenia and one of Schizophreniform Disorder is the duration during which the symptoms of the illness have persisted, this

Table 24

Number of Subjects in Each Diagnostic Group Experiencing
Controllable and/or Uncontrollable Stressors

Diagnostic Group	Subjects With One Or More Controllable Stressors*	Subjects with One or More Uncontrollable Stressors**
Major Depression (N = 217)	13.4% (N = 29)	35.5 (77)
Schizophrenia (N = 228)	12.2 (28)	16.2 (37)
Schizophreniform Disorder (N = 101)	32.7 (33)	22.8 (23)
	Chi sq. = 23.69 (p < .001) Contingency coefficient = 0.204	Chi sq. = 22.29 (p < .001) Contingency coefficient = 0.198

*with or without uncontrollable stressors as well

**with or without controllable stressors as well

differential diagnosis depends on the clinician's dating of
the onset of the illness. If it has lasted less than six
months, the diagnosis of Schizophreniform Disorder is giv-
en; if longer than six months, the diagnosis is Schizophren-
ia. The fact that subjects with Schizophreniform Disorder
have significantly more often experienced controllable
events prior to the onset of an episode of illness (by judg-
ment of the clinician) may be due to clinicians' difficul-
ties recognizing the prodrome of Schizophrenia and dating
its onset. In other words, clinicians may not be as sen-
sitive as they should be to the fact that some subjects who
now have the symptom picture characteristic of Schizophrenia
may have had symptoms suggestive of the illness for a very
long time, and actually should have been diagnosed as hav-
ing Schizophrenia.

Group membership is also significantly associated with
having uncontrollable stressors such that subjects with Ma-
jor Depression were reported to have experienced more uncon-
trollable stressors than subjects with Schizophrenia. The
percentage of subjects with Schizophreniform Disorder, while
in between the other two diagnostic groups, is actually
closer to Schizophrenia than to Major Depression, lending
further support to the above hypothesis.

Again, a few subjects in each diagnostic group (five
in Major Depression, three in Schizophrenia, and six in
Schizophreniform Disorder) experienced both controllable
and uncontrollable stressors. For one-half to three-quarters

of the subjects in each group, stressors reported could not
be classified as either controllable or uncontrollable.

_ Of the total of 786 stressors noted for the total
group of subjects included in the study (N = 546), it was
not possible to categorize 523 (66%) of the stressors as
either controllable or uncontrollable. This rather high
figure is reflected in Table 24, and the fact that 44% to
45% of subjects in each diagnostic group had one or more
stressors that were not classifiable according to this di-
mension. This figure is much higher than the corresponding
figure for the desirability dimension, but not as high as
the entrances/exits dimension. The difficulty in classify-
ing according to this dimension was undoubtedly due to the
fact that the stressor listings were generally brief, and
frequently lacked enough information to make the determina-
tion between controllability and uncontrollability. Unlike
the other dimensions, such as entrances/exits and desirable/
undesirable that "on the face of it" can often be classified,
a judgment of the controllability of a stressor often is a
function of a subject's life circumstances, which one needs
to know in order to make the rating.

Stressors classified according to the ALS as "occupa-
tional," "family," and "marital" comprised most of those
that could not be classified as controllable or uncontrol-
lable. Of those 265 stressors that could be judged, 162
(61%) were judged uncontrollable, and 104 (39%) as control-
lable. These percentages are not as disparate from each

other as those of stressors judged to be desirable (7%) and undesirable (93%).

Those stressors that were most frequently judged as uncontrollable included physical illness (noted 43 times) and death of a person (noted 35 times). Fully 61% of the uncontrollable stressors were stressors in the area of "health." The stressors most commonly judged controllable were change of residence (noted 12 times), childbirth (noted 11 times), began new job (9 times), and arrest (7 times). Most of the controllable stressors were categorized according to the ALS as "occupational" and "school" stressors. There were no instances in which the same stressor was judged to be controllable for one subject and uncontrollable for another.

Life Change Units

The Holmes and Rahe Social Readjustment Rating Scale (SRRS)[1] includes only 43 stressful life events. Given the fact that 207 different stressors were reported for this subsample of subjects, it is obvious that the Holmes and Rahe scale is inadequate to characterize this sample in terms of Life Change Units (LCU). In fact, for 186 (34%)

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[1]Thomas H. Holmes and Richard H. Rahe, "The Social Readjustment Rating Scale," Journal of Psychosomatic Research, 11 (November 1967), pp. 213-218.

of the subjects in this 546-subject sample, no Life Change
Units (LCU) could be assigned to any of their reported stres-
sors. Another 145 subjects (26%) had one or more stressors
listed that were not included in the Holmes and Rahe scale
and therefore could not be assigned LCU according to that
instrument. Thus, the majority of subjects in this study
(60%) had some reported stressors that could not be assigned
LCU. Some of these stressors were: remarriage of father,
husband's infidelity, parents getting divorced, failure to
find work, litigation over late husband's estate, 18th birth-
day, job dissatisfaction, auto accident, and refused access
to child by ex-spouse. The mean number of LCU that could
be assigned to subjects' stressors for each diagnostic group
is presented in Table 25.

Since only those stressors that were included in the
Holmes and Rahe scale had been assigned LCU, and so relative-
ly few of the stressors recorded could be characterized in
this way, it was thought that a reasonable extension of
this scale could be achieved by judging how many LCU would
have been assigned to various other stressors, had they or-
iginally been included in the Holmes and Rahe scale. The
concept is fairly straightforward: the ratings are based
on the "average relative degrees of necessary social read-
justment," based on the arbitrary rating of marriage as 50.
Of course, the actual ratings used for scoring of the SRRS
were based on the judgments of over 5000 patients. However,
for the practical purposes of this study, the ratings of

Table 25

Mean Number of Life Change Units
For Each Diagnostic Group

Diagnostic Group	Mean Number of Life Change Units	
	SRRS Alone	SRRS Plus Judgments
Major Depression	44	59
(N = 217)		
Schizophrenia	23	40
(N = 228)		
Schizophreniform Disorder	31	49
(N = 101)		
	$F = 22.24$	$F = 18.70$
	$p < .001$	$p < .001$

stressors not included in the SRRS were done by the author
and are to be viewed as a pilot attempt to apply this method.
(As noted above, the interrater reliability of these judg-
ments was quite good.) These ratings will be referred to
as "judgments."

Using the method of "judgments," then, all stressors
not scorable by the SRRS were assigned a number of Life
Change Units, based on the estimation of the author. Com-
bining these ratings with SRRS-assignable ratings, every
stressor was rated. The mean number of LCU assigned in
this study, using the combined SRRS and judgment methods,
for each diagnostic group, is presented in Table 25. As
expected, since using the combined method provides a rating
for every stressor, the absolute mean number of LCUs using
this method is somewhat higher than using the SRRS alone.

Using the SRRS alone, the group of subjects with Major
Depression have the highest mean number of LCUs, followed
by the group with Schizophreniform Disorder, with the group
with Schizophrenia having the lowest mean number of LCUs.
When the combined ratings are made, this trend remains un-
changed. Since the mean number of LCUs for the Schizophreni-
form Disorder group is so close to exactly in between the
means for the other two groups, using either rating method,
it is not possible to say that that group is closer to Major
Depression or Schizophrenia, on the basis of Life Change
Units.

Table 26 presents the percentage of subjects in each

diagnostic group that experienced various levels of LCU, using each scoring method.

Area of Life Scale

Each stressor noted for any subject was also classified using the five-digit code of the Area of Life Scale (ALS). The number of subjects in each diagnostic group with stressors in each of the ALS categories is presented in Table 27. As indicated in the table, there are some significant differences among diagnostic groups for several of the ALS categories.

The ALS categories that are most highly differentiating among the three diagnostic groups are the major classes of "health," "occupational," and "financial." For each of these three classes, the chi sq. was highly significant (p < .001), indicating a significant association between diagnosis and these areas of stressors. The group with Major Depression had the largest percentage of subjects with health stressors (30%) and with financial stressors (9%). This finding supports the finding of Jacobs, Prusoff, and Paykel[1] that a greater proportion of individuals with Major Depression will have recently experienced both health and

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[1]Selby Jacobs, Brigitte A. Prusoff, and Eugene S. Paykel, "Recent Life Events in Schizophrenia and Depression," Psychological Medicine, 4 (November 1974), pp. 444-453.

Table 26

Percentage of Subjects in Each Diagnostic Group
Experiencing Various Levels of Life Change Units

Diagnostic Group	Number of Life Change Units (SRRS Alone)			
	0-49	50-99	100-149	150+
Major Depression (N = 217)	61% (N = 132)	28 (60)	10 (22)	1 (3)
Schizophrenia (N = 228)	79 (180)	18 (40)	4 (8)	0
Schizophreniform Disorder (N = 101)	77 (78)	18 (18)	5 (5)	0

Chi sq. = 24.40 (p < .001); Contingency coefficent = 0.207

	Number of Life Change Units (SRRS Plus Judgments)			
	0-49	50-99	100-149	150+
Major Depression (N = 217)	47% (N = 101)	36 (78)	14 (31)	3 (7)
Schizophrenia (N = 228)	68 (155)	28 (63)	2 (4)	3 (6)
Schizophreniform Disorder (N = 101)	52 (53)	39 (39)	9 (9)	0

Chi sq. = 37.81 (p < .001); Contingency coefficient = 0.254

financial stressors than individuals with Schizophrenia. For occupational stressors, however, nearly half of the group with Schizophreniform Disorder had stressors in this category, as opposed to 26% of the group with Major Depression, and only 17% of the group with Schizophrenia.

Also highly significant were diagnostic differences for marital and school stressors, and stressors involving nonfamily romantic relationships. Only for marital stressors was there a higher percentage of subjects with Major Depression than with Schizophreniform Disorder. A higher percentage of subjects with the latter diagnosis had both school and romantic relationship stressors than subjects with Major Depression. For all three of these stressor areas, the smallest percentage of subjects was in the Schizophrenia group.

Other ALS classes that did differentiate significantly among diagnostic classes were "legal," "nonfamily platonic relationships," and "environmental." Most of the legal stressors, proportionately, were reported for subjects with Schizophreniform Disorder. Most of these legal stressors were due to "jail" and "arrest," both of which would be rated as "controllable" stressors. In the area of platonic relationships, the group with the highest percentage of subjects who had these was the Schizophrenia group. Finally, subjects in the Schizophrenia group were the only ones to have recorded environmental stressors; these all had to do with inadequate living quarters.

Table 27

Number of Subjects in Each Diagnostic Group
With Stressors in Each ALS Category

	Major Depression N = 217		Schizophrenia N = 228	Schizophreniform Disorder N = 101
HEALTH****	30%	(N = 66)	15 (35)	21 (21)
MARITAL***	24	(53)	12 (28)	14 (14)
FAMILY	18	(38)	21 (48)	17 (17)
OCCUPATIONAL****	26	(57)	17 (38)	45 (45)
SCHOOL***	6	(12)	4 (9)	14 (14)
ROMANTIC RELATIONSHIPS***	12	(27)	5 (12)	18 (18)
PLATONIC RELATIONSHIPS*	9	(20)	16 (36)	7 (7)
FINANCIAL****	9	(20)	7 (15)	3 (3)
LEGAL**	6	(12)	5 (11)	13 (13)
RELIGIOUS	0		0	1 (1)
ENVIRONMENTAL*	0		2 (5)	0
DEVELOPMENTAL	4	(8)	1 (2)	1 (1)
MIGRATION	8	(18)	8 (18)	14 (14)
LEISURE	2	(5)	2 (5)	0
OTHER	2	(5)	1 (3)	3 (3)

*p < .05

**.p < .02

***.p < .005

****p < .001

Personality Disorders

· Within each of the diagnostic samples of subjects selected for this study, a sizeable proportion of subjects were also diagnosed as having a Personality Disorder. These proportions are presented in Table 28. In DSM-III personality traits are defined as "enduring patterns of perceiving, relating to, and thinking about the environment and oneself, and are exhibited in a wide range of important social and personal contexts."[1] It is only when personality traits are inflexible and maladaptive and cause either significant impairment in social or occupational functioning or subjective distress that they constitute Personality Disorders. In order to meet the diagnostic criteria for any of the Personality Disorders in DSM-III, any maladaptive traits must be "characteristic of the individual's current and long-term functioning, not limited to episodes of illness, and cause either significant impairment in social or occupational functioning or subjective distress."[2]

It is not surprising that subjects with Major Depression were more frequently diagnosed as having a Personality Disorder than subjects with Schizophrenia. Since Major

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[1] Diagnostic and Statistical Manual of Mental Disorders, third edition (DSM-III) (Washington, D.C.: American Psychiatric Association, 1980, p. 305.

[2] Ibid.

Table 28

Proportion of Subjects in Each Diagnostic Group
Also Diagnosed as Having a Personality Disorder

Diagnostic Group	With Personality Disorder	Without Personality Disorder
Major Depression	47% (116)	53 (131)
(N = 247)		
Schizophrenia	24 (59)	76 (188)
(N = 247)		
Schizophreniform Disorder	36 (40)	64 (72)
(N = 112)		

Depression tends to be an episodic illness, it is easier
for a clinician to assess the quality of a patient's func-
tioning between episodes of depression. On the other hand,
since Schizophrenia is a chronic illness, and since by def-
inition the individual does not return to premorbid func-
tioning in between exacerbations, long-term functioning
tends to be impaired due to the Schizophrenia. Thus it is
more difficult to make a diagnosis of an independent Person-
ality Disorder. Schizophreniform Disorder, closer to Major
Depression in its tendency to episodicity, also has a high-
er proportion of subjects with Personality Disorders than
Schizophrenia.

Since Axis V is designed to be a measure of an indi-
vidual's adaptive functioning, and since a diagnosis of a
Personality Disorder indicates some degree of maladaptive
long-term functioning, one would expect ratings on Axis V
to be higher for individuals with Personality Disorders than
for individuals without Personality Disorders. Table 29
presents the mean ratings on Axis V for both types of sub-
jects in each diagnostic class. As expected, mean Axis V
ratings are significantly higher for individuals with Per-
sonality Disorders than without, indicating that individ-
uals with Personality Disorders have a <u>lower</u> level of adap-
tive functioning during the past year than individuals with-
out Personality Disorders. (The exception is the Schizo-
phrenia group, whose mean Axis V rating is approximately
the same for individuals with and without Personality

Table 29

Mean Axis V Ratings for Subjects With and Without Personality Disorders in Each Diagnostic Group

Diagnostic Group	With Personality Disorder	Without Personality Disorder	
Major Depression	3.98 (N = 116)	3.60 (130*)	t = 2.65** p < .01
Schizophrenia	4.95 (59)	4.89 (186)	t = 0.44 N.S.
Schizophreniform Disorder	4.23 (40)	3.57 (70)	t = 3.47 p < .001

*Differences in Ns from this Table reflect missing ratings on Axis V

**Two-tailed t-tests for independent samples

Disorders.)

Table 30 presents the mean Axis IV ratings for individuals with and without Personality Disorders in each of the diagnostic groups. There is no within-group difference for the Major Depression and Schizophreniform Disorder groups, but in the Schizophrenia group, individuals with a Personality Disorder report a statistically significantly higher severity of stress than individuals without Personality Disorders. This finding is in keeping with the previous finding that individuals in the Schizophrenia group with poorer adaptive functioning also have reported a higher level of stress severity.

When the difference between individuals with and without Personality Disorders (in each diagnostic group) is examined vis à vis different types of stressors, the following is found. Tables 31, 32, and 33 present the numbers of subjects in each diagnostic group that experienced stressors of each of the different types. The different types of stressors were "purified" (e.g., to only desirable or only undesirable) in order to maximize any possible diagnostic differences. In nearly every comparison, there is no statistically significant association between type of stressor and presence or absence of Personality Disorder within each diagnostic group. Only for Major Depression was there a weakly positive association ($\emptyset$ = 0.152, p < .05)

Table 30

Mean Axis IV Ratings for Subjects With and Without Personality
Disorders in Each Diagnostic Group

Diagnostic Group	With Personality Disorder	Without Personality Disorder	
Major Depression	4.03 (N = 116)	3.99 (131)	t = 0.23 N.S.
Schizophrenia	3.51 (59)	3.02 (188)	t = 2.12 $p < .05$
Schizophreniform Disorder	4.10 (40)	3.64 (72)	t = 1.85 N.S.

*Two-tailed t-tests for independent samples

Table 31

Number of Subjects in Each Diagnostic Group With and Without Personality
Disorders, With Only Desirable and Only Undesirable Events

Diagnostic Group	With Personality Disorder	Without Personality Disorder	
Major Depression			Chi sq. = 4.12*
Desirable	1	9	p < .05
Undesirable	81	87	Ø = 0.152
Schizophrenia			
Desirable	3	7	Chi sq. = 0.00*
Undesirable	39	93	N.S.
Schizophreniform Disorder			
Desirable	5	3	Chi sq. = 0.56*
Undesirable	30	42	N.S.

*with Yates's correction

Table 32

Number of Subjects in Each Diagnostic Group With and Without Personality
Disorders, With Only Entrances and With Only Exits

Diagnostic Group	With Personality Disorder	Without Personality Disorder	
Major Depression			
Entrances	2	5	Chi. sq. = 0.57*
Exits	40	38	N.S.
Schizophrenia			
Entrances	2	6	Chi. sq. = 0.02*
Exits	14	26	N.S.
Schizophreniform			
Entrances	3	2	Chi. sq. = 0.55*
Exits	8	18	N.S.

*with Yates's correction

Table 33

Number of Subjects in Each Diagnostic Group With and Without Personality Disorders,
With Only Controllable and With Only Uncontrollable Stressors

Diagnostic Group	With Personality Disorder	Without Personality Disorder	
Major Depression			
Controllable	9	15	Chi. sq. = 0.06*
Uncontrollable	31	41	N.S.
Schizophrenia			
Controllable	2	23	Chi. sq. = 2.86*
Uncontrollable	10	24	N.S.
Schizophreniform Disorder			
Controllable	12	15	Chi. sq. = 0.08*
Uncontrollable	6	11	N.S.

*with Yates's correction

165

between desirability of stressors and presence or absence of Personality Disorder. When the stressors are examined as "mixed" types (e.g., comparing the number of subjects with any desirable stressors, whether or not they also experienced undesirable stressors, and the number of subjects with undesirable stressors, whether or not they also experienced desirable ones), there were no significant associations, even for subjects with Major Depression and desirable (plus undesirable) stressors.

CHAPTER V

DISCUSSION

The data collected in this study have suggested many findings - some confirmatory of others in the literature, and some new findings, not easily explainable. This chapter will begin with a discussion of these findings, and will conclude with a review of the strengths and weaknesses of this study.

Study Findings That Replicate Previous Research

The aspect of stressful life events that is the most simple to examine is the number of them that have occurred. In the literature either no differences among diagnostic groups were found as to the number of stressors that the subjects reported, or each diagnostic group reported a greater number than control subjects, and in one study, subjects with depression reported a greater number of stressors than subjects with Schizophrenia. In the current study, also, it was found that individuals with Major Depression reported a significantly greater number of stressors than subjects with Schizophrenia, many of whom reported no stressors prior to their current episode of illness.

When one begins to look at specific dimensions of the

stressors themselves, the issues become somewhat more complicated. Perhaps the most frequently examined stressor dimension is that of desirability. When this aspect of life events is dichotomized into desirable and undesirable, stressors falling into each category can be examined for diagnostic-specific differences. In general, no difference has been reported in the literature regarding desirable stressors in different diagnostic groups. This was also the case in the current study, which found no significant differences for desirable events among the three diagnostic groups studied.

When one looks at undesirable stressors, however, significant differences have emerged. All of the studies included in the literature review found that a significantly greater number of both subjects with depression and subjects with Schizophrenia than control subjects reported undesirable events. In addition, a greater proportion of subjects with depression reported undesirable events than subjects with Schizophrenia. These results were replicated in the current study.

Another dimension of stressful life events that is commonly considered is whether they represent entrances into one's social field, or exits. Previous findings indicate that there may be no diagnostic differences with respect to entrances, that more individuals with Schizophrenia tend to report entrances than control subjects, and that essentially the same proportion of individuals with Major Depression

and Schizophrenia report entrances. This finding was also replicated in this study. It must be realized, however, that the number of subjects with entrances was very small in all three groups, and with a larger sample, differences may be found.

With respect to exits, however, a different picture emerges.- Previous studies suggest that, for the most part, a greater proportion of individuals with either depression or Schizophrenia reported exits from their social fields than controls (although one study[1] showed no significant association), and that more individuals with depression report exits than individuals with Schizophrenia. In the current study, this latter finding was also true, in that a statistically significantly higher proportion of subjects with Major Depression reported psychosocial stressors that were exits, than subjects with Schizophrenia.

Among studies comparing subjects with depression and Schizophrenia, the study by Jacobs et al[2] was the only one to report significant diagnostic differences in the areas of life affected by stressors prior to illness onset. In their study, subjects with depression had a significantly greater number of stressors than subjects with Schizophrenia in the areas of health and financial stressors.

In the current study, the same associations were found,

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[1]Jacobs and Myers, op. cit.

[2]Jacobs et al., op. cit.

to a highly significant degree (p < .001). With regards to financial stressors, since subjects with depression are more likely to be of higher socioeconomic status than subjects with Schizophrenia, one might speculate that individuals with depression have more financial resources, and therefore have more to lose in adversity, than individuals with Schizophrenia, and this explains the reason for this finding. However, in the Jacobs et al study the diagnostic groups were matched for social class, and therefore, this explanation cannot account for the difference found.

As for stressors in the area of health, the finding is quite interesting, especially in the light of Brown and Harris' conclusion that health stressors are not related to the development of depression[1]. However, a closer look at the ALS data confirm that many of the "health" related stressors were the death of someone. One could argue that, strictly speaking, that is not really a stressor having to do with "health," and in any case, does not have to do with the subject's health. In fact, Jacobs et al classified deaths separately from "health" stressors. If the number of subjects who experienced someone's death is removed from this category in the ALS data, the significant difference between the number of subjects with Major Depression and with Schizophrenia disappears, and the findings of the

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[1]George W. Brown and Tirril Harris, Social Origins of Depression: A Study of Psychiatric Disorder in Women (New York: The Free Press, 1978).

current study are at variance with those of Jacobs et al.
Therefore, we can only conclude that all the evidence on
this matter is not yet in, and further research must set-
tle this discrepancy.

A significant association (p < .001) was also found
between the diagnostic groups and whether or not the sub-
jects had experienced occupational stressors, with the
group with Schizophreniform Disorder being the most highly
associated, and Schizophrenia the least. This finding is
also in support of the greater similarity between subjects
with Schizophreniform Disorder and Major Depression than
Schizophrenia.

In the Jacobs et al study, subjects with depression
had more, but not significantly more, stressors in the
categories of marriage, children, and relationships with
members of the opposite sex. In the current study the same
findings were statistically significant for marital and
"romantic" stressors (p < .005), but not for "family" stres-
sors, the group that would include children. In addition,
in the current study there was a significant association
between school stressors and diagnosis, such that more sub-
jects in the group with Schizophreniform Disorder were re-
ported to have stressors related to school than in the other
two groups. This finding might well be due to the fact
that the group with Schizophreniform Disorder that couldn't
be stratified by age and sex because of lack of subjects
with that diagnosis was the youngest of the three diagnostic

groups, with 77% of the subjects being between the ages of 18 and 29, as compared with 42% and 43% of the other two groups. Clearly, further research must be done, looking again at associations between specific types of stressors and these diagnoses, controlling for age and sex.

In the Jacobs et al study, more but not signficantly more subjects were reported to have legal stressors in the Schizophrenia group than the depression group. In the current study, the same finding was statistically significant (p < .02).

In addition, in the current study, environmental stressors and stressors involving platonic nonfamily relationships were also found to be significantly associated with diagnosis (p < .05). For the former type of stressor, only individuals with Schizophrenia were reported to have experienced them, and for the latter, individuals with Schizophrenia were more apt to have experienced platonic relationship stressors.

New Findings

A unique area of analysis in this study involves the relationship between diagnosis and Axes IV and V. Analysis of the global severity of stressors assigned by the clinicians for each subject on Axis IV reveals that the Major Depression group was significantly higher than the Schizophrenia group. Furthermore, diagnosis accounted for

approximately 7% of the variance in Axis IV ratings. This indicates that it is the more acute disorder, Major Depression, that is associated with a significantly greater severity of stressors than the Schizophrenia group. This was as hypothesized.

The Major Depression group also tended to be associated with better premorbid functioning, as rated on Axis V, Highest Level of Adaptive Functioning Past Year, than the Schizophrenia group. Diagnosis accounted for fully 20% of the variance in ratings on this Axis, indicating that there is a very significant association between these two variables. This is as one might expect.

Axes IV and V were significantly correlated with each other for each diagnostic group, although for Major Depression in the opposite direction than that hypothesized. Thus, for Major Depression, a higher level of previous functioning was associated with a lower severity of stressors; likewise, more impaired previous functioning was associated with a greater severity of stressors. In the Schizophrenia group, just the opposite was found: the better the previous functioning, the greater the severity of stressors, and vice versa.

These findings are difficult to interpret. For the group with Schizophrenia, one might speculate that those individuals who were rated high on functioning and high on stress are determined to remain out in society despite the struggle of coping with a terrible disease. These people

may steel themselves against the harsh realities of the world as much as possible, their illness helping them to deny and repress real problems. However, eventually enough stresses have occurred and not been coped with adequately that the organism breaks down, and an episode of psychosis erupts. Thus, these people, who until the bitter end are maintaining their lives -- their jobs and interpersonal contacts -- as best they can, would be rated as having relatively high functioning, but eventually breaking down as the result of rather severe stressors that just become too much.

At the other end of the spectrum of individuals with Schizophrenia might be people who choose to avoid stress by giving up their claim to life in the outside world, and become socially and occupationally nonfunctional and withdrawn. These individuals, then, who perhaps have the more virulent form of the illness, would surely be rated as having very poor functioning on Axis V. And, since this type of person is not generally available to experience stressors of a wide variety of severity, he or she "succumbs" (that is, develops an episode of illness) in response to relatively minor stressors, hence rated not too severe on Axis IV.

For the Major Depression group, a number of hypotheses can be formulated. Perhaps for Major Depression other factors in precipitating an episode of illness are more important than severity of stressors for individuals who have

been functioning well. In other words, someone with a high level of functioning has probably achieved that level of functioning despite fairly severe stressors, since they do occur to nearly all of us, so that when they do get sick, it is because of other factors, perhaps biologic. Individuals with lower levels of functioning, then, cannot withstand severe stressors, and often develop severe psychopathology in response.

An alternative hypothesis is suggested by the fact that in some individuals the onset of depression is associated with relatively low functioning in the past year, and a relatively high degree of stress. Since Major Depression tends to be an episodic disorder, we can assume that prior to depression onset most of the subjects were working and involved in their usual interpersonal relationships. However, in some people the disorder develops insidiously; perhaps their functioning begins to deteriorate with the onset of the depression, and all the other things in their lives may fall apart as a consequence. For example, a sizeable number of subjects with depression reported that they were unemployed or had lost their job -- this could have occurred because, on account of their depression, they had trouble concentrating on the job and their functioning generally deteriorated, until finally they were let go. Other stressors reported frequently for this group were "difficulties with relatives" and "breakup with (romantic) partner." Both of these could easily have occurred as the result of

a developing depression. It is easy to imagine many areas of their usually adequate lives being affected by the (in this case) insidious onset of depression such that, when they finally come for help, they report a fairly high severity of stress. This hypothesis can account for this relationship between level of functioning and level of stress, if we assume that for these cases the clinician did not date the onset of the depression accurately. If he or she had dated it correctly, stressors would be listed only if they occurred prior to depression onset. This hypothesis could, presumably, be tested by examining the stressors of these individuals with low functioning and high stress. The hypothesis would be supported if a relatively high proportion of their stressors were rated as "controllable."

The other end of the spectrum for Major Depression includes individuals with high functioning and a low severity of stressors, which can only be explained by some kind of vulnerability that does not impair adaptive functioning, but that lowers the individual's threshold for succumbing to stress. The adaptive functioning may, in fact, only be high for these individuals at great intrapsychic cost, leaving them little strength for coping with stressors of any kind. Thus, on Axis V, their highest functioning in the past year would be rated as fairly high, and the level of severity of their stressors, relatively low.

Another explanation for this finding may be that the individuals with Major Depression who are rated fairly high

on Axis V may be people whose everyday lives are not that demanding, and that because they function in generally low-stress settings, their adaptive functioning can be maintained at a relatively high level. However, if even the minor stresses begin to build up, these individuals decompensate and depression ensues.

Since Axis V is one indicator of individual vulnerability, its relationship to the severity of stress that preceded the development of a major mental disorder is of utmost importance in understanding the etiologic role of stressful life events in mental disorder. These hypotheses for accounting for the findings of this study regarding the relationship between Axes IV and V are testable, and future research should be directed towards this.

A dimension of stressful life events that has not been thoroughly studied but is now beginning to attract more interest is that of "controllability" or "independence." This latter notion has been studied in at least three studies, as indicated in the literature review. Both studies of Schizophrenia found that more individuals with Schizophrenia than individuals in a control group reported events that could be classified as independent, rather than non-independent. The one study of depression, also, found a significant difference between patients and control subjects. Unfortunately, none of these studies compared a group of subjects with depression and one with Schizophrenia.

In the current study, the dimension of controllability

was studied, with controllable stressors being roughly
equivalent to nonindependent stressors. With regards to
the latter, it was found that significantly more individu-
als in the Major Depression group than in the Schizophrenia
group reported uncontrollable stressors. When controllable
events were examined in this study, there was no signifi-
cant difference in the proportion of subjects with Major
Depression and those with Schizophrenia who reported con-
trollable events.

A relationship between the experience of uncontrollable
events and depression has been hypothesized and studied by
Seligman[1] and others. Martin Seligman, the formulator of
the concept of "learned helplessness," states simply that
"an event is uncontrollable when we can't do anything about
it, when nothing we do matters."[2] It is in the face of
this type of event that many individuals feel helpless:
there is no response to the event that they can make that
can control the outcome of an uncontrollable event. This,
Seligman believes, contributes to the development of depres-
sion. The finding in the current study of a relationship
between uncontrollable stressors and Major Depression sup-
ports this theory.

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[1]Martin E. P. Seligman, Helplessness: On Depression,
Development, and Death (San Francisco: W. H. Freeman and
Company, 1975).

[2]Ibid., p. 9.

In terms of Life Change Units, it was found that subjects with Major Depression have a greater number of LCUs than subjects with Schizophrenia, prior to episode onset. Although the number of events included in the Holmes and Rahe Schedule of Recent Experience is limited, and many of them were not reported for this group of subjects, when one compares the results using LCUs assigned by Holmes and Rahe in their studies and those assigned to additional stressors by "judgment," they are relatively the same.

This suggests that the events that precede depression onset generally involve more "social readjustment" than those that precede an episode of Schizophrenia. This may be related to some of the hypotheses discussed previously. Individuals who develop Major Depression in general are functioning adequately out in the world prior to the depression onset. Therefore, their lifestyles make them more available for stressful life events to occur, and all of these require some life adjustment. Individuals with Schizophrenia or who are developing Schizophrenia, on the other hand, tend to be more isolated from many types of stressful life events, particularly those involving social relationships and work.

In general, according to the Holmes and Rahe scale, stressors that involve one's spouse, one's family, or one's work are assigned the highest numbers of LCUs. Examples include death of spouse (100 LCU), divorce (73 LCU), marriage (65 LCU), death of close family member (63 LCU),

major change in health of family (44 LCU), being fired from
work (47 LCU), and retirement from work (45 LCU). Thus,
one might expect individuals with Schizophrenia to have
a smaller mean number of LCUs, since they are less likely
to be involved in marital relationships and occupations in
which the types of stressors that are assigned the highest
LCUs are experienced. (Note that since this is a compari-
son of mean numbers of LCUs, the fact that the group with
Schizophrenia had overall a smaller number of stressors
could not account for this finding.)

For each of the ALS major classes of health, marital,
and occupational stressors, the group with Schizophrenia
was reported to have fewer stressors than the group with
Major Depression. For each of these specific stressors,
too, the same trend was clear.

Ordinarily, when the SRRS is applied to people who
develop physical disorders, the greater the number of LCUs
the more severe the illness. Therefore, one might expect
subjects with Schizophrenia to report a higher mean LCU
score than subjects with Major Depression, since Schizo-
phrenia is by and large acknowledged to be a more serious
mental disorder than Major Depression, in terms of chro-
nicity, treatment response, and impairment in social and
occupational functioning. However, this was not the case.

Brown and Harris,[1] who are convinced that Life Change

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[1]Brown and Harris, op. cit.

Units do not correlate as well with depression onset as degree of "threat" in the stressors experienced, point out that the report of a high number of LCUs could be due to the "effort after meaning" phenomenon influencing the subject to describe the events as more stressful than they actually were, or that the LCU rater is influenced by the emotional state of the subject at the time of the interview, or that the same (unknown) factor that causes the mental illness to develop may cause the subject to experience the stressful events as more stressful than they ordinarily would, and this would be reflected in the subject's description of the events. Although these arguments seem persuasive in the context of a study in which a rater assigns LCU to each event after an interview with a subject, they could not explain the results in the current study, in which the LCU ratings were made without the raters having ever seen the subject, and without knowing the subject's diagnosis.

Schizophreniform Disorder. For the first time in a study of life events, an equivalent of "acute Schizophrenia" has been studied as a separate group from "chronic Schizophrenia." In DSM-III this acute form is termed Schizophreniform Disorder, and Schizophrenia, by definition, has a degree of chronicity (at least six months). Since, as stated previously, many have suggested that Schizophreniform Disorder is actually a form of Affective Disorder, it was especially useful to be able to compare the results for this

category with those of Major Depression as well as Schizo-
phrenia.

The results of this study show that, as far as high-
est level of functioning (Axis V) and severity of psycho-
social stressors (Axis IV), individuals with Schizophreni-
form Disorder do not differ significantly from those with
Major Depression, and both of these diagnostic groups do
differ significantly from individuals with Schizophrenia.
In addition, all of the explanations hypothesized for the
relationship between Axes IV and V could apply to Schizo-
phreniform Disorder as well, and should also be explored
in an experimental study for this group.

What about the dimensions of the stressors themselves?
With regards to both the number of stressors recorded and
whether or not the stressors recorded were rated as desir-
able, the group of individuals with Schizophreniform Disor-
der did not differ significantly from those with Major De-
pression. And for number of events and undesirable stres-
sors, both these groups did differ from the Schizophrenia
group. As far as the entrance/exit dimension, there were
no differences among the three groups for entrances, but
for exits, although a significantly higher proportion of
the group with Major Depression had exits than in the group
with Schizophrenia, the group with Schizophreniform Disor-
der did not, in fact, differ significantly from either of
the other two groups, falling midway between them.

With regards to controllable stressors, things get more difficult. The reader will recall that nearly a third of the subjects with Schizophreniform Disorder had experienced events that were rated as "controllable." This was a significantly higher proportion than in either of the other two diagnostic groups. It was pointed out previously that the only difference between Schizophreniform Disorder and Schizophrenia is the duration of the illness, and therefore the cross-sectional differential diagnosis will more often than not depend on the accurate assessment of the length of the prodromal phase of the illness, that is, the period of deterioration before the onset of the active psychotic phase. Since such a large proportion of individuals with Schizophreniform Disorder were rated as having experienced controllable stressors before the onset of their illness, as the clinicians assessed it, one can only surmise that for this diagnosis, clinicians were inaccurately dating its onset, probably not noticing a lengthy prodromal phase when in fact there had been one.

Is it possible that most of the subjects with Schizophreniform Disorder who also had controllable stressors had Personality Disorders that were responsible for these stressors, rather than the psychotic disorder insidiously developing? This explanation is not supported by the data, since more than half of the subjects in question had no Personality Disorder recorded.

This dimension of the stressors is the most crucial

one, as far as establishing an etiologic significance or not of the stressors in the onset of mental disorder. As discussed earlier, it is also crucial that the disorder onset be dated accurately, so that there is not confounding of "consequence" and "cause" vis à vis the stressors themselves. Unfortunately, for Schizophreniform Disorder we have no assurance that this confounding is not present, since so many of the stressors listed as prior to initiation of the disorder could actually have been the consequence of already developing psychopathology (and hence "controllable"). Therefore, we must conclude that further study is needed, with more careful attention paid to dating illness onset, in order to understand more fully the relationship between psychosocial stressors and Schizophreniform Disorder, as well as between Schizophreniform Disorder and the other two disorders in this study.

Strengths and Weaknesses of This Study

This study has many strengths and many weaknesses. Both must be kept fully in mind as one ponders the implications of the study's findings.

Strengths. Up until recently, most studies depending on diagnostic distinctions to define sample subjects have suffered from the lack of reliable and valid criteria to use in making these diagnoses. This is true of nearly all of the studies of life events and mental disorder. Nearly

each study has used a different set of criteria, and few studies report levels of diagnostic reliability. Even worse, several studies have used mixed diagnostic groups, which immediately call into question the validity and interpretation of any findings.

The current study, with its use of DSM-III criteria for diagnosis, has incorporated the most up-to-date reliable and valid criteria available today. The results of reliability studies[1] have demonstrated kappa levels well within the range of acceptability, especially for the three diagnostic categories studied here. Furthermore, the participants in this reliability study were the field trial clinicians themselves, who also provided the diagnostic data for this study. In addition, as discussed previously, these criteria are based on the most up-to-date research, attesting to their validity.[2,3] This assurance of the

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[1]Janet B. W. Williams and Robert L. Spitzer, "DSM-III Field Trials: Interrater Reliability and List of Project Staff and Participants," Appendix F in Diagnostic and Statistical Manual of Mental Disorders, third edition (DSM-III) (Washington, D.C.: American Psychiatric Association, 1980), pp. 467-481.

[2]Robert E. Kendell, Ian F. Brockington, and Julian P. Leff, "Prognostic Implications of Six Alternative Definitions of Schizophrenia," Archives of General Psychiatry, 36 (January 1979), pp. 25-31.

[3]J. Craig Nelson and Dennis S. Charney, "The Symptoms of Major Depressive Illness," American Journal of Psychiatry, 138 (January 1981), pp. 1-13.

accuracy with which the diagnostic categories were judged permits more confidence in the results of this study, as more likely to represent truly valid distinctions.

Another value to this study of using DSM-III and its multiaxial system is that, since Personality Disorders are listed separately on Axis II, clinicians are encouraged to evaluate their presence or absence, and, although most of the Personality Disorder criteria have not yet been fully validated, the judgment of the presence or absence of a Personality Disorder is likely to be meaningful. Since individuals with long-term personality disturbances may differ with regard to stressful life events than individuals without, it was important to this study to be able to examine these possible differences.

The multiaxial system also provided a brief clinical way to note the subjects' highest level of functioning in the past year, an important indicator of presence or absence of psychopathology. In addition, the multiaxial system allowed clinicians to note relevant psychosocial stressors, and to rate their severity. Both of these last two judgments were made with good reliability.

Finally, a significant strength of this study is its large sample size, and its inclusion of subjects with both "chronic" Schizophrenia and "acute" Schizophrenia. The large sample of reliably diagnosed subjects, with Schizophreniform Disorder included as a separate group, make this study unique.

<u>Weaknesses</u>. There are several major weaknesses in this study. First of all, there is no suitable control group. It is interesting and useful to know that most people who develop, for example, Major Depression, have recently suffered a loss of some kind. However, without knowing how frequently losses are experienced in the general population, without an ensuing depression, it is impossible to determine the etiologic significance of such losses. The same holds true for all the different types of life events. In order to determine their etiologic relationship to the various mental disorders, a suitable control group is necessary.

This is also an impediment to considering the treatment implications of the findings of this study. In other words, it has been shown that a relatively high proportion of people who develop a Major Depression have recently experienced a loss in their lives. However, it is possible that losses are fairly commonly experienced by memebers of the general population, and that it is instead a special vulnerability or characteristic of these people who develop a depression in response, that gets them into situations where loss occurs, such as a bad marital situation with ensuing divorce. It is this other characteristic, then, that leads these people to putting themselves in such situations, that perhaps could benefit from therapeutic intervention, rather than merely help in coping with the loss itself.

A second major weakness of this study, one that is

potentially very confounding, is the fact that the same clinicians who diagnosed the study subjects were the ones to investigate and rate these subjects' life events. In other words, the clinicians who determined what life events were significant enough to record were not blind to their patients' diagnoses. Obviously, if a clinician had a particular bias towards associating undesirable events with depression, for example, this bias may have crept into their clinical inquiry and finally into their clinical rating of the severity of stressors and what stressors to list. Worse yet, a clinician evaluating an individual with Schizophrenia who has been hospitalized many times may have assumed that the current exacerbation was due to some trivial happening in the individual's life, and may not have inquired about stressors at all. This then could have led to a spurious rating on Axis IV, both in the number of events recorded and their severity. Since the Axis IV rating is supposed to be etiologic rather than descriptive, this type of bias could explain the lower mean number of stressors for the subjects with Schizophrenia.

This study utilized retrospective ratings of life events, rather than prospective. Because of the danger of the "effort after meaning" phenomenon discussed earlier and memory problems, these retrospective ratings could have been distorted. Future research testing this study's and others' findings would be more fruitful and convincing if prospective designs are utilized.

Other potential methodologic flaws must be borne in
mind when one considers the results of this study. It is
clear that among the stressor dimensions selected for study,
there is some overlap. For example, surely most "loss" or
"exit" events are also "undesirable." This overlap may
have affected the study results in that, for instance, de-
pending on the relative proportion of exit events, the re-
sults for the undesirable stressors will be not independent
of, and most likely will be the same as, the results for
the exits. This causes great difficulty when one is trying
to cull out the most important dimensions. For example,
the differences found among diagnostic groups for the desir-
ability dimension might be in large part due to the fact
that there is overlap with the entrance/exit dimension, and
that the salient aspect of these stressors is the latter,
and not whether or not they are desirable. This problem
is not unique to this study, and is, in fact, true of all
studies that include several possibly overlapping dimensions
of events.

It would have been useful to have included the dimen-
sion of "threat," used so effectively by Brown and Harris.[1]
Unfortunately, rating this dimension requires a fairly thor-
ough understanding of the details of the stressful events

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[1]Brown and Harris, op. cit.

and the contexts in which they occurred, information that simply was not available in this study. Future research should definitely pay attention to the degree of "threat" involved in a life event, since this dimension holds great promise for unraveling the etiologic relationship of stress-ful events to mental disorder.

It would also have been extremely valuable to have had available more demographic information about the sub-jects in this study. There are certainly differences in the stressors that occur in the lives of people of differ-ing marital statuses, different social classes, etc. Brown and Harris[1] and others have pointed out that examination of these demographic factors is essential for explaining as much of the variance as possible in the relationship of stressful life events to mental illness.

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[1]Ibid.

CHAPTER VI

CONCLUSION

The study of the relationship between stressful life events and mental disorders is a relatively new area of research. Since its popularization in the 1960s, it has been plagued by methodologic problems. This study is an attempt to examine some of the issues that have been acknowledged in the literature, while resolving some of these methodologic problems.

With the publication of DSM-III in 1980, it has become possible to study reliably defined categories of mental disorders that have as much validity as the most up-to-date research can justify. Although the degree of validity for the various mental disorders ranges widely from category to category, the three diagnostic categories studied here, Major Depression, Schizophrenia, and Schizophreniform Disorder, as defined in DSM-III are among those mental disorders with the highest degree of validity. In addition, the use of DSM-III to select and define the samples of subjects in this study ensures, to as great a degree as possible, that the study groups are diagnostically homogeneous. This is obviously a crucial consideration when one assesses the validity of the findings of such a study. Finally, the use of the most up-

to-date specified diagnostic criteria for defining the
study subjects distinguishes this study from any previously
published.

Another unique facet of this study is the inclusion of
subjects from a wide range of settings. To the extent that
the findings of this study replicate those reported in the
literature, these findings are further strengthened because
the subjects represent a wide sociodemographic range, and
therefore any differences are more likely to be due to
diagnostic differences.

Another potential methodologic flaw is the lack of
identification of those individuals with premorbid psycho-
pathology that could foster a vulnerability to psychosocial
stressors. Poor social and occupational adjustment, as
well as having a Personality Disorder, might well affect
the levels of stress associated with illness as opposed
to individuals with good premorbid functioning. Again,
the use of DSM-III as a multiaxial evaluation tool allows
the identification of such subjects.

The particular structure of the DSM-III multiaxial
system permits clinicians to make a judgment of the severity
of psychosocial stressors that, in the clinician's judgment,
are significant for the initiation or exacerbation of the
patient's mental disorder. The severity of the stressors
is judged according to how an "average" person, given sim-
ilar circumstances and sociocultural values as the patient,
would react to them, and not according to the severity of

the individual patient's reaction to them. In addition, the clinician is encouraged to record the actual stressors that have been considered in making this rating. This permits analysis of the relationships between severity of stressors and mental disorders as well as between specific types of stressors and mental disorders. From the recording of the specific stressors themselves, a comprehensive listing of stressors experienced by a general patient population was developed. This list can be used in future research in this area.

The findings of this study fall into two different categories: findings that replicate previous findings cited in the literature, and new findings. Previous findings replicated include that a significantly greater proportion of individuals with Major Depression were reported to have experienced a greater number of stressors, undesirable events, entrances, and uncontrollable events than individuals with Schizophrenia. There were no diagnostic differences for desirable events or events representing entrances.

New findings include that, for Schizophrenia, highest level of adaptive functioning in the past year and level of severity of stressors experienced prior to episode onset are positively correlated. For Major Depression, these two variables are negatively correlated. A greater proportion of subjects with Major Depression than Schizophrenia were reported to have experienced uncontrollable stressors and a greater number of Life Change Units.

Finally, the results for Schizophreniform Disorder are equivocal. They were equivalent to those for Major Depression with respect to the relationship between Axes IV and V, the mean number of stressors recorded, and the desirability of stressors. Although there were no diagnostic differences for entrance stressors, the group with Schizophreniform Disorder fell midway in between the other two groups (that significantly differed from each other) as far as exit stressors. Finally, of course, the group with Schizophreniform Disorder did have a statistically significantly higher proportion of individuals with controllable stressors than the other two groups. Possible explanations for this were discussed.

Implications for social work practice. All studies of life events have implications for social work practice, because the study of stressful life events is so close to the theoretical basis of social work. In order to continue to evolve useful theory that is grounded in research, this area of study must not be overlooked. The search must continue full-speed for etiologic cues to mental disorders, and the evidence now gathering suggests that stressful life events are among them.

It is by now well-established that there are differences in the psychosocial stressors experienced prior to the onset of different mental disorders. Assuming that evidence continues to accumulate in the direction of their having an etiologic role in mental illness, a firm under-

standing of which types of events tend to precede which types of mental disorders is essential in developing the most effective methods of primary, secondary, and perhaps even tertiary prevention of these disorders. Our clients deserve to be treated by professionals who know as much as possible about the stresses impinging on their lives and with which they must cope.

For social workers, a multiaxial system for evaluation is a crucial methodologic advance in that for the first time official recognition is given to social and environmental factors as possibly related to mental illness. This system affords many opportunities to social workers and other researchers in the field of stressful life events to study such factors in large, well-diagnosed samples of subjects. The implications of significant findings in this area are great, for primary, secondary, and tertiary prevention of mental illness.

APPENDIX A

DSM-III DIAGNOSTIC CRITERIA FOR MAJOR DEPRESSION, SCHIZO-

PHRENIA, AND SCHIZOPHRENIFORM DISORDER[1]

DIAGNOSTIC CRITERIA FOR MAJOR DEPRESSION

A. One or more Depressive Episodes (see criteria below).

B. Has never had a Manic Episode.

Diagnostic criteria for a Depressive Episode

A. Dysphoric mood or loss of interest or pleasure in all or
almost all usual activities and pastimes. The dysphoric
mood is characterized by symptoms such as the following:
depressed, sad, blue, hopeless, low, down in the dumps,
irritable, worried. The disturbance must be prominent
and relatively persistent but not necessarily the most
dominant symptom. It does not include momentary shifts
from one dysphoric mood to another dysphoric mood, e.g.,
anxiety to depression to anger, such as are seen in states
of acute psychotic turmoil.

B. At least four of the following symptoms:

(1) Poor appetite or weight loss or increased appetite or
weight gain (change of one lb. a week or ten lbs. a
year when not dieting).

(2) Sleep difficulty or sleeping too much.

(3) Loss of energy, fatigability, or tiredness.

(4) Psychomotor agitation or retardation (but not mere
subjective feelings of restlessness or being slowed
down).

(5) Loss of interest or pleasure in usual activities, or
decrease in sexual drive (do not include if limited
to a period when delusional or hallucinating).

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[1]Diagnostic and Statistical Manual of Mental Disorders,
1/15/78 draft of third edition (DSM-III)(Washington, D.C.:
American Psychiatric Association, 1978).

    (6) Feelings of self-reproach or excessive or inappropriate guilt (either may be delusional).

    (7) Complaints or evidence of diminished ability to think or concentrate such as slow thinking, or indecisiveness (do not include if associated with obvious formal thought disorder).

    (8) Recurrent thoughts of death or suicide, or any suicidal behavior, including thoughts of wishing to be dead.

C. The period of illness has had a duration of at least one week from the time of the first noticeable change in the individual's usual condition.

D. None of the following which suggests Schizophrenia is present.

    (1) Delusions of being controlled or thought broadcasting, insertion, or withdrawal.

    (2) Hallucinations of any type throughout the day for several days or intermittently throughout a one week period unless all of the content is clearly related to depression or elation.

    (3) Auditory hallucinations in which either a voice keeps up a running commentary on the individual's behaviors or thoughts as they occur, or two or more voices converse with each other.

    (4) At some time during the period of illness had delusions or hallucinations for more than one month in the absence of prominent affective (manic or depressive) symptoms (although typical depressive delusions, such as delusions of guilt, sin, poverty, nihilism, or self-deprecation, or hallucinations with similar content).

    (5) Preoccupation with a delusion or hallucination to the relative exclusion of other symptoms or concerns (other than delusions of guilt, sin, poverty, nihilism, or self-deprecation, or hallucinations with similar content).

    (6) Marked formal thought disorder if accompanied by either blunted or inappropriate affect, delusions or hallucinations of any type, or grossly disorganized behavior.

E. Not due to any Organic Mental Disorder.

F. Not superimposed on Schizophrenia, Residual subtype.

G. Excludes Simple Bereavement following loss of a loved one if all of the features are commonly seen in members of the individual's subcultural group in similar circum- stances.

DIAGNOSTIC CRITERIA FOR A SCHIZOPHRENIC DISORDER

A. <u>Characteristic schizophrenic symptoms</u>. At least one symptom from any of the following 10 symptoms was present during an active phase of the illness (because a single symptom is given such diagnostic significance, its pres- ence should be clearly established):

<u>Characteristic delusions</u>

(1) Delusions of being controlled: Experiences his thoughts, actions, or feelings as imposed on him by some external force.

(2) Thought broadcasting: Experiences his thoughts, as they occur, as being broadcast from his head into the external world so that others can hear them.

(3) Thought insertion: Experiences thoughts, which are not his own, being inserted into his mind (other than by God).

(4) Thought withdrawal: Belief that thoughts have been removed from his head, resulting in a diminished num- ber of thoughts remaining.

(5) Other bizarre delusions (patently absurd, fantastic or implausible).

(6) Somatic, grandiose, religious, nihilistic or other delusions without persecutory or jealous content.

(7) Delusions of any type if accompanied by hallucinations of any type.

<u>Characteristic hallucinations</u>

(8) Auditory hallucinations in which either a voice keeps up a running commentary on the individual's behaviors or thoughts as they occur, or two or more voices con- verse with each other.

(9) Auditory hallucinations on several occasions with

content having no apparent relation to depression or elation, and not limited to one or two words.

Other characteristic symptoms

(10) Either incoherence, derailment (loosening of assoc-
iations), marked illogicality, or marked poverty of
content of speech -- if accompanied by either blunted,
flat or inappropriate affect, delusions or hallucin-
ations, or behavior that is grossly disorganized or
catatonic.

B. During the active phase of the illness, the symptoms in
A have been associated with significant impairment in
two or more areas of routine daily functioning, e.g.,
work, social relations, self-care.

C. Chronicity: Signs of the illness have lasted continuously
for at least six months at some time during the person's
life and the individual now has some signs of the illness.
The six month period must include an active phase during
which there were symptoms from A with or without a pro-
dromal or residual phase, as defined below.

Prodromal phase: A clear deterioration in functioning not
due to a primary disturbance in mood or to substance
abuse, and involving at least two of the symptoms noted
below.

Residual phase: Following the active phase of the illness,
at least two of the symptoms noted below, not due to a
primary disturbance in mood or to substance abuse.

Prodromal or Residual Symptoms

(a) social isolation or withdrawal

(b) marked impairment in role functioning as wage-earner,
student, homemaker

(c) markedly eccentric, odd, or peculiar behavior (e.g.,
collecting garbage, talking to self in corn field or
subway, hoarding food)

(d) impairment in personal hygiene and grooming

(e) blunted, flat, or inappropriate affect

(f) speech that is tangential, digressive, vague, over-
elaborate, circumstantial, or metaphorical

(g) odd or bizarre ideation, or magical thinking, e.g.,

superstitiousness, clairvoyance, telepathy, "sixth sense," "others can feel my feelings," overvalued ideas, ideas of reference, or suspected delusions

(h) unusual perceptual experiences, e.g., recurrent illusions, sensing the presence of a force or person not actually present, suspected hallucinations

Examples: Six months of prodromal symptoms with 1 week of symptoms from A; no prodromal symptoms with six months of symptoms from A and six months of residual symptoms; six months of symptoms from A, apparently followed by several years of complete remission, with 1 week of symptoms in A in current episode.

D. The full depressive or manic syndrome (criteria A and B of Depressive or Manic Episode) is either not present, or if present, developed after any psychotic symptoms.

E. Not due to any Organic Mental Disorder.

DIAGNOSTIC CRITERIA FOR SCHIZOPHRENIFORM DISORDER

A. Meets all of the criteria for Schizophrenia (see above) except for duration.

B. Duration of illness (including prodromal, active and residual phases) is more than one week but less than six months.

APPENDIX B

DIAGNOSTIC REPORT (DIRE)

Card No: __
(1)

Participant No: __ __ __
(2 3 4)†

DIRE No:
(5—9)†

Facility: _____ Service: _____

Age: __ __ Sex: 1— Male; 2 — Female
(10 11) (12)

Patient's ethnic—racial background: 1 — American Indian or Alaskan native, 2 — Asian or Pacific Island,
(13)

3 — Black, not of Hispanic origin, 4 — Hispanic, 5 — White, not of Hispanic origin

Type of evaluation: 1 — Initial work-up, 2 — Patient already in treatment
(14)

Evaluation part of: Reliability study   No   Yes

Case summary study   No   Yes

MULTIAXIAL DIAGNOSIS

AXIS I CLINICAL PSYCHIATRIC SYNDROMES AND OTHER CONDITIONS

DSM-III Code	DSM-III Name	DSM-II Code
(16-20) __ __ __ . __ __	_____	__ __ __ . __ __ (46-50)
(21-25) __ __ __ . __ __	_____	__ __ __ . __ __ (51-55)
(26-30) __ __ __ . __ __	_____	__ __ __ . __ __ (56-60)
(31-35) __ __ __ . __ __	_____	__ __ __ . __ __ (61-65)
(36-40) __ __ __ . __ __	_____	__ __ __ . __ __ (66-70)
(41-45) __ __ __ . __ __	_____	__ __ __ . __ __ (71-75)

AXIS II PERSONALITY AND SPECIFIC DEVELOPMENTAL DISORDERS

44
(79-80)

DSM-III Code	DSM—III Name	DSM-II Code
(216-20) __ __ __ . __ __	_____	__ __ __ . __ __ (246-50)
(221-25) __ __ __ . __ __	_____	__ __ __ . __ __ (251-55)
(226-30) __ __ __ . __ __	_____	__ __ __ . __ __ (256-60)
(231-35) __ __ __ . __ __	_____	__ __ __ . __ __ (261-65)
(236-40) __ __ __ . __ __	_____	__ __ __ . __ __ (266-70)

Prominent personality features not subsumed by above may be noted:

AXIS III PHYSICAL DISORDERS

APPENDIX B (Continued)

AXIS IV SEVERITY OF PSYCHOSOCIAL STRESSORS (Use scale on page 2:6)   (271)

1 - None, 2 - Minimal, 3 - Mild, 4 - Moderate, 5 - Severe, 6 - Extreme, 7 - Catastrophic, 0 - Unspecified

Note specific stressor(s):

AXIS V HIGHEST LEVEL OF ADAPTIVE FUNCTIONING PAST YEAR (Use scale on page 2:8) (272)

1 - Superior, 2 - Very good, 3 - Good, 4 - Fair, 5 - Poor, 6 - Grossly impaired, 0 - Unspecified

DIFFICULTY APPLYING DSM—III DESCRIPTIONS AND CRITERIA TO THIS PATIENT   (273)

1 - None	2 - Mild	3 - Moderate	4 - Severe	5 - Extreme
Adequate information, fits description, criteria work well		Questions about meeting criteria, differential diagnostic problems		Inadequate information, does not fit criteria or description

Note type(s) of problem(s) for this case. Suggestions for changes in DSM—III related to these problems should be included in a critique on a separate page according to the suggested format.

(274) ☐   No suitable DSM-III diagnosis.

(275) ☐   Criteria unclear, too inclusive or restrictive.

(276) ☐   Differential diagnostic problem, e.g., not clear how to distinguish from other diagnoses.

(277) ☐   Inadequate patient information, e.g., criteria make sense but not enough information available.

(278) ☐   Problem with use of Axes IV or V.

_____   _____

Name of Clinician (please print)   Date of evaluation

APPENDIX C

DSM-iII 1/15/78 DRAFT TEXT FOR AXIS IV SEVERITY OF PSYCHO-

SOCIAL STRESSORS

This Axis permits the clinician to indicate (1) the specific psychosocial stressors that are judged to be significant contributors to the development or exacerbation of the current disorder, and (2) a rating of the overall severity of stress that an "average" person with similar socio-economic and cultural circumstances would experience. The current disorder that is related to the psychosocial stressor may be either a clinical psychiatric syndrome which is coded on Axis I or an exacerbation of a Personality or Specific Developmental Disorder which is coded on Axis II.

In most instances the psychosocial stressor will have occurred within a year prior to the current disorder (Post-traumatic Stress Disorder is a notable exception). In some instances the stressor will be the anticipation of a future event. For example, the knowledge that one will soon retire may be a significant stressor. Although a stressor frequently plays a formative or precipitating role in a disorder, it may also be a consequence of the individual's psychopathology. For example, Alcoholism may lead to marital problems and divorce, which itself is a stressor contributing to the development of a Major Depressive Disorder.

A psychosocial stressor that is etiologically significant for the development or exacerbation of a disorder in an individual being evaluated, may not be as stressful to the "average" person. For example, for many individuals, going away to school is not a significant stressor, whereas in more vulnerable individuals, it may be a marked stressor.

To ascertain etiologically significant psychosocial stressors, the following areas may be considered:

CONJUGAL (MARITAL AND NON-MARITAL): e.g., engagement, marriage, discord, separation, death of spouse.

PARENTING: e.g., becoming a parent, friction with child, illness of child.

OTHER INTERPERSONAL: all problems with one's friends, neighbors, associates or non-conjugal family members, e.g., illness of best friend, discordant relationship with boss.

OCCUPATIONAL: includes work, school, homemaker, e.g., being unemployed, retirement, problems at school.

LIVING CIRCUMSTANCES: e.g., change in residence, threat to personal safety, immigration.

FINANCIAL: e.g., inadequate finances, change in financial status.

LEGAL: e.g., being arrested, being in jail, involved in a lawsuit or trial.

DEVELOPMENTAL: the meaning given to phases of the life cycle, e.g., puberty, menopause, "becoming 50."

PHYSICAL ILLNESS OR INJURY: e.g., illness, accident, surgery, abortion.

> NOTE: A physical disorder is listed on Axis III whenever it is related to the development of or management of an Axis I or II disorder. A physical disorder also can be a psychosocial stressor if its impact is by virtue of its meaning to the individual, in which case it would be listed both on Axis III and on Axis IV.

OTHER PSYCHOSOCIAL STRESSORS: e.g., natural or manmade disaster, persecution, unmarried pregnancy, out-of-wedlock birth, rape.

FAMILY FACTORS (Children and Adolescents): In addition to the above, for children and adolescents, the following stressors may be considered:

> Cold or distant relationship between parents
> Overtly hostile relationship between parents
> Physical or mental disturbance in family members
> Cold or distant parental behavior towards child
> Overtly hostile parental behavior towards child
> Parental intrusiveness
> Inconsistent parental control
> Insufficient parental control
> Insufficient social or cognitive stimulation
> Anomalous family situation, e.g., single parent, foster family
> Institutional rearing
> Loss of nuclear family members

More than one psychosocial stressor may be judged etiologically significant by the clinician although it is expected that rarely will more than four be listed. The stressors should be noted as specifically as possible and rank ordered in terms of their importance, with the most important listed first.

The rating of severity of stress should be based on the

clinician's assessment of the stress that an average person
with similar socio-cultural values and circumstances would
experience from the psychosocial stressor(s). This judgment
involves consideration of the following: the amount of
change in the individual's life due to the stressor, the
degree to which the event is desired and under the individ-
ual's control, and the number of stressors. The individual's
idiosyncratic vulnerability or reaction to the stressor
should not influence the severity rating.

The rationale for Axis IV is that a treatment plan may
include attempts either to remove the psychosocial stress-
or(s) or help the individual cope with them. In addition,
the individual's prognosis may be better when a disorder
develops as a consequence of marked stress than when it
develops after minimal or no stress.

APPENDIX D

DSM-III 1/15/78 DRAFT TEXT FOR AXIS V HIGHEST LEVEL OF

ADAPTIVE FUNCTIONING PAST YEAR

This Axis permits the clinician to indicate his judgment of an individual's highest level of adaptive functioning during the past year. (Subjective distress or other psychopathological signs or symptoms are not included on this Axis since they are included in the Axis I or II disorders or conditions, except in those cases in which impairment of adaptive functioning is part of the definition of the Axis I or II disorder as in Mental Retardation.)

As conceptualized here, adaptive functioning is a composite of three major areas: social relations, occupational functioning, use of leisure time. These three areas are to be considered together, although there is evidence that social relations should be given greater weight because of its particularly high prognostic significance. Use of leisure time will only significantly affect the overall judgment when there is no significant impairment in social relations and occupational functioning, or when occupational opportunities are limited or absent (e.g., retired, handicapped).

Social relations: Includes all relations with other people, with particular emphasis on family and friends. To be considered is the breadth and quality of interpersonal relationships.

Occupational functioning: Includes functioning as a worker, student or housekeeper. To be considered is the amount, complexity and quality of the work accomplished.

Use of leisure time: Includes recreational activities or hobbies. To be considered is the range and depth of involvement.

The clinician should indicate the highest overall level of adaptive functioning that was characteristic of the individual for at least a few months during the past year.

APPENDIX E

AREA OF LIFE SCALE (ALS)

<u>Instructions to raters:</u>

Each stressor receives a five digit code. The first two
digits indicate the area of life:

01 health

02 marital

03 family

04 occupational

05 school

06 interpersonal - nonfamily romantic relationships

07 interpersonal - nonfamily platonic social and occu-
pational relationships

08 financial

09 legal

10 religious

11 physical environmental

12 developmental

13 migration

14 leisure

15 other

Digits 3 and 4 indicate the specific stressor within that
area of life.

Digit 5 should be a "1" if the stressor happened to the sub-
ject, and a "9" if it happened to someone else (such as a
subject's mother dying). Code a "0" in the 5th digit if the
rating is unspecifiable or not applicable.

If you come across specific stressors that are not specified on this list, please keep a separate list of them, and code them "99" in the 3rd and 4th digits.

Read through the entire list before you begin coding, to become familiar with all of the specific stressors.

The Areas of Life

01 Health (includes death)

0101 Physical illness, includes pain

0102 Mental illness, e.g., Alcoholism, use of drugs

0103 Medication discontinued

0104 Operation (surgery)

0105 Injury or accident

0106 Medication side effects

0107 Death of person

0108 Threat of physical harm

0109 Aging

0110 Hospitalization

0111 Death of pet

0112 Discharge from hospital

0113 Excessive weight gain

0114 Refused outpatient follow-up

0115 Medication reduced or changed

0116 Abuse from spouse

0117 Anticipated death (of self=1; of other=9 in fifth digit)

0118 Elopement from hospital

02 Marital

0201 Marriage

- 0202 Separation

0203 Divorce

0204 Arguments with spouse, marital problems

0205 Infidelity

0206 Impending divorce

0207 Decision to be made re: marital status

0208 Anticipated marriage

03 Family (includes parenting)

0301 Childbirth

0302 Problems with in-laws

0303 Thrown out of family home

0304 Interpersonal difficulties with relative(s)

0305 Caring for relative (includes kids)

0306 Lack of family

0307 Denied right to see children (includes loss of custody)

0308 Pressure from family to "perform"

0309 Loss or lack of parental support, parental rejection

0310 Parent gone away for a time, mother to work or anticipation of mother going off to work

0311 Inconsistent parental control

0312 Separation from loved ones

0313 Relative (other than husband) moves into home

0314 Alienated by family

0315 Inability to function as a parent (e.g., as from physical disability)

0316 Family pressure to get medical treatment

0317 Change in family configuration

0318 Relative visiting

04 Occupational - stressors directly related to having a job. Excludes interpersonal difficulties with co-workers or boss. Includes job as a teacher (academic). Excludes students. Includes military.

0401 Begin new job

0402 Demotion

0403 Being unemployed, having no job

0404 Unable to find a job

0405 Retirement

0406 Loss of job or laid off

0407 Intolerable responsibilities or physical demands of job

0408 Change in work conditions (new department or boss, reorganization)

0409 Change in work responsibilities

0410 End of summer job

0411 Change jobs

0412 Job pressures or stress

0413 Inability or difficulty in keeping job

0414 Ethical conflict related to job

0415 Turned down for job

0416 Threat of job loss

0417 Job search

0418 Job dissatisfaction

0419 Anticipation of job search

0420 Quit job

0421 Denied request for leave time

0422 Lack of recognition for job performance

0423 Reported for job misbehavior

0424 Discharge from military

0425 Indecision about job

0426 Basic training

0427 Inadequate work performance (so employer dissatis-fied)

0428 Guilt over mistakes at job

0429 Loss of business

0430 Poor performance at work task (e.g., made poor presentation)

0431 Career decisions

0432 Impending job change

0433 Occupational limitations due to physical or mental disorder

05 School

0501 Begin new school experience at higher academic level

0502 Change to new school

0503 End of school term

0504 Graduation

0505 Poor school performance

0506 Prepare for or take exam

0507 Leave school

0508 Quit school

0509 Dissertation topic not approved

0510 Resumption of school year

0511 Classes begin

0512 School pressure or stress

0513 Impending graduation

0514 School application rejected

0515 Change of semester

06 Interpersonal - nonfamily romantic relationships

0601 Engagement

0602 Break engagement

0603 Arguments with partner

0604 Break up with partner

0605 Indecision re: relationship with partner

0606 Rejection of advances by romantic object (not in-
cluding break up with romantic partner)

0607 Begin new relationship

0608 Social difficulties, unspecified

0609 Begin sex in a relationship

0610 Infidelity of partner

0611 No romantic relationship

0612 Revelation of bisexuality (includes "coming out of
closet")

07 Interpersonal - nonfamily platonic social and occupational
relationships

0701 Social isolation, no or few friends

0702 Lives alone

0703 Decrease in socializing

0704 Dependency on others

0705 Difficulty forming new friendships

0706 Arguments or difficulties with friends, co-workers, neighbors, boss

0707 Therapist moves away

0708 Peer pressure to do something ego-dystonic (e.g., use drugs)

0709 Teased by others

0710 Loss of roommate

0711 Rejection by friend

0712 Social problems, unspecified

0713 New therapist

0714 Loss of halfway house 'parents'

0715 Anticipation of living alone

0716 Loss of contact with friend

08 Financial

0801 Financial setback or loss

0802 Excessive debt

0803 Change in financial status

0804 Inadequate finances

0805 Apply or reapply for welfare or social security

0806 Financial problems, unspecified

0807 Limited finances

0808 Financial threat

0809 Concern about financial security

09 Legal

    0901 Jail

    0902 Impending trial

    0903 Prosecution

    0904 Minor legal offense (e.g., parking ticket)

    0905 Arrest

    0906 Fear of jail

    0907 Being investigated

    0908 Concealment of illegal acts (e.g., drug use) with
         fear of exposure

    0909 Punishment (other than jail) for job violations
         (e.g, in Navy)

    0910 Anticipation of legal problems (arrest or lawsuit)

    0911 Legal problems, unspecified

    0912 Litigation about spouse's estate

    0913 Found guilty at trial

10 Religious

    1001 Trouble with church or religion

11 Physical environmental

    1101 Living in slum, high crime-rate area

    1102 Dissatisfaction with living quarters

    1103 Can't find better living quarters

12 Developmental

    1201 Menopause

    1202 Turning 29

    1203 Phase of life cycle, unspecified

1204 Birthday

1205 Aging

13 Migration (in or out of somewhere)

    1301 Change of residence

    1302 Move to nursing home

    1303 Away from home or anticipation of being away from home

    1304 Return from being away

    1305 Fear of deportment

    1306 Ran away from home

    1307 No place to live, moving about

14 Leisure

    1401 Vacation (of therapist = 9 in fifth digit)

    1402 Unsatisfactory vacation

15 Other

    1501 Property loss

    1502 Anniversary reaction

    1503 Culture shock

    1504 Transportation problems (no car)

    1505 Anonymous phone call to subject's father from a friend of the subject

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