

The Life Setting in Which Mental Illness Occurs *

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ABSTRACT

The use of recent life change measurement in the lives of persons developing mental disorders parallels the measurement of risk factors by epidemiologists to understand disease distribution. A significant association between recent life change build-up and illness symptomatology has been documented repeatedly. Proposed mechanisms explaining this association are 1) lowered bodily resistance and resultant precipitation of illness symptomatology, and 2) direct and formative influence on subsequent symptom formation. For schizophrenia and most physical illnesses, the precipitation mechanism appears the most likely one. However, for depression and neurotic disorder, both mechanisms may be operative. Future advances in the area of life change and illness awaits the development of measures of persons' stress tolerance characteristics—such as social support systems, psychological defenses, coping capabilities, and illness behaviour tendencies.

Studies of life setting and its association with the onset of psychological illness can perhaps best be understood from the perspective of epidemiology. That is, epidemiologists studying a number of physical diseases, such as coronary heart diseases (CHD), label environmental factors reliably associated with disease onset as risk factors. As recent genetic studies find serum cholesterol minimally influenced by genetic factors it likely represents an environmental risk factor (Christian *et al.*, 1976). Persons' serum cholesterol levels can serve to identify those at high risk (about twice the average) for future development of CHD (The Pooling Project, 1978). However, even though serum cholesterol is a reliable risk factor for this disease, pathophysiological mechanisms linking risk factor to CHD are far from clear. Disconcertingly, hypotheses regarding such mechanisms shift from time to time.

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In a seeming paradox, the consistent and relatively strong association seen between subjects' serum cholesterol levels and CHD obscures another equally interesting association; the majority of persons with elevated serum cholesterol **never** develop CHD. That is, even though people who develop heart disease often have elevated serum cholesterol levels, most people with elevated serum cholesterol do not develop this disease over a lengthy interval of study (Rosenman *et al.*, 1975). Therefore, a risk factor is useful in that it reliably identifies a subset of the population with higher risk for developing certain diseases than persons without the factor, but such risk factors are notoriously non-specific. The number of false positives are generally much larger than the number of true positives.

Similar interpretations apply to life setting as a risk factor in the onset of mental disorders. For example, person's recent life change experience (generally counted over the past six months to one year) and the appearance of a depressive disorder has been studied extensively by Paykel and associates (Paykel *et al.* 1969, 1971 & Paykel, 1974). As in the example of cholesterol and CHD, Paykel found that although recent life change build-up was experienced significantly more often in groups of persons developing depression than in healthy control groups, many more persons experienced recent life change build-up and stayed healthy than those who go on to develop depressive disorders (Paykel, 1974). Paykel argues for calculating relative risk ratios to support the concept of the risk of near future illness (from two to seven times higher) in populations of persons with recent life event stress than in persons without such stress (Paykel, 1978).

One major difference between life change as a risk factor for mental disorders compared to environmental risk factors associated with physical diseases is that life change build-up is a **temporary** risk factor. Environmental risk factors linked to physical diseases tend to remain relatively stable over the years. Life changes, on the other hand, have a definite period of impact on a person's life adjustment (generally six months to one year) and it has been my observation that most persons don't expe-

perience high life change loads for more than a year or two before returning to baseline levels.

A notable similarity between serum cholesterol and life change build-up is that they are both non-specific risk factors. Elevated serum cholesterol has, for example, been shown to be associated with death from a number of causes in prospective studies carried out in Göteborg, Sweden (Tiblin). Recent life changes have been shown to be associated with the number of physical illnesses as well as with a wide variety of mental disorders (Rahe and Arthur, 1978).

Risk factors can also be influenced by disease processes. An individual hospitalized for a recent myocardial infarction will show an abrupt elevation in serum cholesterol (Rahe *et al.*). Similarity, life changes can occur secondarily to a recent psychological illness (Rahe and Paasikivi, 1971).

A word about the "golden fleece" of mechanism.. Once reliable associations are found between risk factors and disease, a search for mechanisms linking environment to pathophysiology is begun. What appears today as likely mechanisms may be thrown out tomorrow as new data are accumulated. To use the cholesterol-CHD example once again researchers used to be quite convinced that the mechanism explaining this association was that high serum cholesterol levels were atherogenic, leading to coronary artery atherosclerosis and eventual CHD (Sodhi, and Mason, 1977). Just this past year the role of total serum cholesterol in atherosclerosis appears to be less important than the ratio of lipoprotein carriers for cholesterol in the blood. Relatively low concentrations of high density lipoproteins is what now seems to be the atherogenic mechanism (Miller *et al.* 1977). The association between total serum cholesterol level and CHD remains as intact as ever (The Pooling Project, 1978). The lesson here is that one should accept association on its own merits, and place rather small amounts of credence on current ideas of mechanism "explaining" the association.

Recent Life Change Measurement

First, it should be pointed out that there is no unanimity of opinion among researchers today as which life change events are most representative and/or meaningful in persons' lives. One of the first lists published was by Holmes and Rahe and contained 43 life change events (Holmes, and Rahe 1977). Distilling data from thousands of interviews of subjects admitted to hospital with various physical diseases, events which were reported to have occurred over the few years prior to disease were analyzed. These events were organized into categories dealing with health, work, family, personal life, social and community relations, and finances. The Holmes and Rahe life events list was designed to sample these key areas of life adjustment and not to cover all possible life change events. The theme of this list of events was change from a previous "steady state" of life adjustment (Holmes and Rahe, 1967; Rahe et al. 1964).

In England, Brown and Birley formulated an inventory of life change events derived from interviews of persons developing acute episodes of schizophrenia (Brown and Birley, 1968). Paykel, Prusoff, and Uhlenhuth extended the Holmes and Rahe list to 60 life change events (Paykel et al. 1971). Myers, Lindenthal and Pepper (1971) formulated a list of 62 events based on items from the work of Holmes and Rahe and Antonosky and Kats. Rahe subsequently expanded the original Holmes and Rahe list to 54 events, some of which had two to four options so that the actual number of life change events inquired about is 76 (Rahe, 1975). Most recently B.S. Dohrenwend and B.P. Dohrenwend have composed a life change list of slightly over 100 items (Dohrenwend et al. 1978). Though the Dohrenwends completely rethought issues of sampling, completeness, and wording of life events, their list proved to be very similar to previous lists. These similarities can be seen in Table 1, where the Rahe list is presented next to the Dohrenwend list.

TABLE I

RECENT LIFE CHANGES QUESTIONNAIRE	PERI LIFE EVENTS SCALE
WORK	
Changed to a new type of work?	Changed jobs for a better one
Changed your work hours or conditions?	Changed jobs for a worse one
Had a change in your responsibilities at work:	Changed jobs for one that was no better and no worse than the last one
(a) More responsibilities?	Conditions at work got worse, other than demotion or trouble with the boss
(b) Less responsibilities?	Conditions at work improved, not counting promotion or other personal successes
(c) Promotion?	Took on a greatly increased work load
(d) Demotion?	Sharply reduced work load
(f) Transfer?	Promoted
Experienced troubles at work:	Found out that was not going to be promoted at work
(a) With your boss?	Demoted at work
(b) With co-workers?	Had trouble with a boss
(c) With persons under your supervision?	Started a business or profession
(d) Other work troubles?	Expanded business or professional practice
Experienced a major business readjustment?	Suffered a business loss or failure
Retired?	Retired
Experienced being...	Fired
(a) Fired from work?	Laid off
(b) Laid off from work?	Started work for the first time
Taken courses by mail or studied at home to help you in your work?	Returned to work after not working for a long time
	Had significant success at work
	Stopped working, not retirement, for an extended period
FINANCIAL	
Taken on a moderate purchase, such as AT.V., car, freezer, etc.?	Started buying a car, furniture or other large purchase on the installment plan
Taken on a major purchase or a mortgage loan, such as a home, business, property, etc.?	Took out a mortgage
Experienced a foreclosure on a mortgage or loan?	Foreclosure of a mortgage or loan
Experienced a major change in finances:	Repossession of a car, furniture or other items bought on the installment plan

- (a) Increased income?
- (b) Decreased income?
- (c) Credit rating difficulties?

Took a cut in wage or salary without a demotion
 Suffered a financial loss or loss of property not related to work
 Went on welfare
 Went off welfare
 Got a substantial increase in wage or salary without a promotion
 Did not get an expected wage or salary increase
 Had financial improvement not related to work

HOME AND FAMILY

A change in residence

- (a) A move within the same town or city?
- (b) A move to a different town, city or state?

A change in family "get-togethers"?

A major change in the health or behavior of a family member (illness, accidents drug or disciplinary problems, etc.)?

Major change in your living conditions (home improvements or a decline in your home or neighborhood)?

Death of a spouse?

Death of a :

- (a) Child?
- (b) Brother or sister?
- (c) Parent?
- (d) Other close family member?

The death of a close friend?

A change in the marital status of your parents?

- (a) Divorce?
- (b) Remarriage?

Marriage?

A change in arguments with your spouse?

In-law problems?

A separation from spouse?

- (a) Due to work?
 - (b) Due to marital problems?
- A reconciliation with spouse?
- A divorce?

Moved to a better residence or neighborhood
 Moved to a worse residence or neighborhood
 Moved to a residence or neighborhood no better or no worse than the last one
 Unable to move after expecting to be able to move
 Change in frequency of family get-togethers
 Remodeled a home
 Spouse died
 Child died
 Family member other than spouse or child died
 Close friend died
 Married
 Trouble with in-laws
 Married couple separated
 Married couple got together again after separation
 Divorce
 Birth of a first child
 Birth of a second or later child
 Adopted a child
 New person moved into the household
 Someone stayed on in the household after he was expected to leave
 Became pregnant
 Abortion

A gain of a new family member:

- (a) Birth of a child ?
- (b) Adoption of a child ?
- (c) A relative moving in with you?

Wife beginning or ceasing work
outside the home ?

Wife becoming pregnant?

A child leaving home ?

- (a) Due to marriage ?
- (b) To attend college ?
- (c) For other reasons ?

Wife having a miscarriage or
abortion ?

Birth of a grandchild ?

PERSONAL AND SOCIAL

A major personal achievement?

A change in your personal habits
(your dress, friends,
life-style, etc. ?)

Sexual difficulties ?

Beginning or ceasing school
or college ?

A change of school or college?

A vacation ?

A change in your religious
beliefs ?

A change in your social activities
(clubs, movies, visiting)?

A minor violation of the law ?

Legal troubles resulting in your
being held in a jail

A change in your political beliefs?

A new, close, personal relationship?

An engagement to marry ?

A 'failing out' of a close personal
relationship girlfriend (or
boyfriend) problems ?

A loss or damage of personal property?

An accident ?

A major decision regarding your
immediate future

Miscarriage of stillbirth

Found out that cannot have children

Relations with spouse changed for
the worse, without separation
or divorce

Relations with spouse changed for
the better

Marital infidelity

Person moved out of the household

Serious family argument other than
with spouse

Lost a home through fire, flood or
other disaster

Built a home or had one built

Started school or a training program
after not going to school for
a long time

Changed schools or training programs

Graduated from school or training
program ?

Had problems in school or in training
program

Failed school, training program

Did not graduate from school
or Training Program

Took a vacation

Was not able to take a planned
vacation

Increased church or synagogue,
club, neighborhood, or other
organizational activities

Went to jail

Started a love affair

Became engaged

Engagement was broken

Broke up with a friend

Assaulted

Robbed

Accident in which there were no
injuries

Involved in a lawsuit

Accused of something for which a
person could be sent to jail

Lost drivers licence

Arrested

Got involved in a court case

Convicted of a crime

Acquitted of a crime
 Released from jail
 Didn't get out of jail when expected
 Took up a new hobby, sport, craft or recreational activity
 Dropped a hobby, sport, craft or recreational activity
 Acquired a pet
 Pet died
 Made new friends
 Entered the armed services
 Left the armed services
 Took a trip other than a vacation

HEALTH

An illness or injury which :

- (a) Kept you in bed a week or more, or took you to the hospital ?
- (b) Was less serious than described above ?

A major change in eating habits ?

A major changes in sleeping habits ?

A change in your usual type and/or amount or recreation ?

Major dental work ?

Physical illness

Injury

Started menopause

Physical health improved

Unable to get treatment for an illness or injury

Life Change Scaling

In an attempt to give life change events weights to indicate their various levels of significance for the average individual, Holmes and Rahe conducted a life event scaling study which employed the proportionate scaling method of Stevens (Holmes and Rahe, 1967). Since in physiology it is change from homeostatic balance that leads to possible bioregulatory failure, organ system dysfunction, and ultimate disease processes, an abrupt change in an individual's steady state of life adjustment was adduced to have similar detrimental effects on psychological function and psychological disease etiology. Extremely pleasant life changes (such as marriage, inheriting a large sum of money, etc.) were found to require nearly equal amounts of life adjustment as unpleasant events (Holme and Rahe, 1967). For these reasons life change events were originally scaled in terms of the amount of change they induced in one's previous state of life adjustment.

Paykel, Prusoff, and Uhlenhuth undertook a scaling study for use with depressed patients (Paykel *et al.* 1971). They reasoned that depressed patients may be severely affected by **upsetting** life changes and less affected by non-upsetting ones. Thus, they scaled their list of events as to various degrees of **upsettingness** rather than change. It turned out that life events scaled as to upsettingness had very similar rank ordering as to that when they were scaled as to change ($r=0.68$).

Though controversies continue as to the merits of scaling life change events by change, upsettingness, social desirability, degree of control an individual has over the occurrence of the event, etc., the superior utility of any life change scaling method over simply counting the number of events per unit time has yet to be convincingly demonstrated (Rahe, 1978). More importantly, these qualities of the life change events are often qualities of the individual rather than aspects of the environment. It should be clear to investigators that when they gather sentiments of upsettingness, desirability, control, and what have you, from subjects they are measuring a host of subjective responses to the environment which confound attempts to secure objective estimates of life change (Rahe, 1978).

One helpful manipulation of life change reports that does not require scaling but leads to categorization of quality of recent life change is to keep separate tallies for health, work, family, personal, social and financial life changes. Cheriboga, for one, has found this classification to be helpful in understanding the meaning of recent life change in retired populations (Cheriboga, 1978).

Life Change and Depression

Studies of life change events in samples of persons with depressive symptomatology can be divided into two general categories: epidemiological and clinical studies. Epidemiological studies rely on questionnaire estimates of life change and questionnaire diagnoses of depression in large, randomly selected, samples of populations. Clinical studies utilize interview assessments of both recent life changes and depression in a small, non-random groups of individuals.

Of epidemiological studies, perhaps the classic investigation is that of Myers, Lindenthal and Pepper (1971). Myers, a medical sociologist, took on the ambitious task of interviewing and testing one adult from each of 938 households, selected at random, in New Haven Connecticut. These subjects reported the number of life changes which had occurred to them one year prior to study. Psychological disturbance was measured by the Health Opinion Survey (HOS) of MacMillian (MacMillan, 1957). Six of the 20 HOS questions deal specifically with depressive symptomatology. Individual events, groups of events, and total events all showed highest prevalence rates in the most psychologically disturbed third of Myers' sample, intermediate life change prevalence rates were found in the moderately impaired third of the group, and lowest life change prevalence was found in the healthiest third. Myers, *et al.*, repeated the study two years later on 720 members of their original sample and analyzed the occurrence of newly developed psychological disturbance over the intervening two years (Myers *et al.*, 1972). When the investigators compared the amount of life change reported at the first interview with that reported at the second, persons showing increases in recent life change levels tended to show a worsening of their mental status. This increase in HOS score occurred whether or not the life changes were positive (socially desirable) or negative ones (undesirable).

A re-examination of Myers' data was recently published (Eaton, 1978). A panel regression model was used with these data and it was seen that life events reported at the first exam (time 1) had a very weak (non-significant) correlation with events reported at the second examination two years later (time 2). Thus, only a minimal tendency was found for subjects to consistently report high life change experiences across two years' time. Second, psychological symptoms reported at time 1 had a substantial and significant correlation with symptoms reported at time 2, indicative of considerable chronicity of mental symptoms in the population. Third, symptoms at time 1 showed no correlation with amount of life change reported at time 2. Thus, high symptomatic persons at time 1 do not tend to report high life changes at time 2.

Fourth, correlations seen between number of recent life changes and mental illness symptomatology at time 1 and at time 2 were sizeable and statistically significant. This consistency between recent life change and illness symptoms suggested high reliability of this finding.

The second major epidemiological study was that of B.P. Dohrenwend et al (Dohrenwend 1974). The investigators studied a large random sample of Washington Heights residents in New York City. Their studies looked at the effects of social class on life event experience and found that lower social class subjects appeared to have more recent life changes chiefly due to the fact they reported proportionately more socially undesirable life events than middle-class subjects. The investigators utilized the Langner scale of illness symptomatology, an instrument with similar assets and failings for diagnosis of depression as the HOS. The researchers found highest correlations between subjects' recent life change events over the preceding year and indications of psychological disturbance at the time of study for lower class subjects (Dohrenwend, 1973).

Rahe has examined recent life change unit scores for six months prior to study and HOS symptomatology at the time of study in groups of thousands of U.S. and Norwegian sailors and found correlations between these life event and illness parameters of 0.22 and 0.36 (Rahe, 1974). Thus, most epidemiological studies in this area support one another.

The most instructive clinical life change and depression studies are perhaps those of Paykel et al. (Paykel, 1974), and Jacobs, et al. (1974). They examined patients' recent life change prior to admission to hospital for psychiatrically diagnoses depressive disorders including suicide intent. Patients coming to an outpatient clinic had significantly higher recent life change upsettingness score over the prior six months than did controls, but not as high as those reported by depressed inpatients. Patients with highest recent life change upsettingness totals over the six months prior to hospitalization was a subgroup of patients who had attempted suicide (Paykel, 1974).

Brown, et al. (1973), studied a group of 114 depressed women living in

London, and compared their recent life event histories to a community sample of women free from this disorder. A marked (four-fold) increase in highly threatening events was seen over 9 months prior to depression, with a concentration of markedly and moderately threatening events seen over the final three weeks prior to disease onset.

Thompson, *et al.*, found that recent life change events identified prior to admission for endogenous depression were equal to those seen prior to reactive depressions (Thompson and Hendrie, 1972). Life changes prior to depression were not, therefore seen only prior to the depressive reactions presumably closely related to recent life stress.

Clinical studies by Vinokur and Selzer (1975) confirmed that recent life changes are elevated in subjects' lives prior to psychiatric depression, and that this association was largely accounted for by recent life change events with socially undesirable connotations. The few positive life change events utilized by authors had little association with depressive symptoms.

Studies of recent life changes and depressive illnesses are not confined to adults. Felner, *et al.* (1975), found that in school age children with histories of parental death were detected to be significantly more anxious and depressed than matched controls. Drug dependence, presumably secondary to disturbed psychological state, has been shown to be related to adolescents' life change scores by Duncan (1976). In his investigations of elderly individuals, Parkes, *et al.* found that a depressive picture is commonly experienced in the postbereavement setting (Parkes, 1970).

Life Changes and Schizophrenia

Studies of recent life changes in the lives of persons abruptly developing clinical episodes of schizophrenia are perhaps best exemplified by the studies of Brown and Birley (1968), in London. Brown and Birley studied a group of 50 patients with acute onset of schizophrenia where they studied patients' recent life events through interview with patients as well as by interview with another person living in the patients'

household. Life change events ranged from family, personal, health, residence, work, and "dramatic events". The authors compared the life event experience of their group of patients to that of 325 individuals from the general population. A peaking of recent life change events was found during the final three weeks prior to disease onset for the schizophrenic patients. In addition, the authors also noted that a greater number of long-term tensions existed in the homes of patients compared to controls.

Patients' life change events prior to onset of schizophrenia were compared to patients' life change events prior to depression by Jacobs, and others, at Yale University School of Medicine (Jacobs *et al.* 1974, Jacobs and Myers 1976). Jacobs utilized the life change list and scaling methodology of Pakel *et al.* (1971). Although both depressives and schizophrenics upon their first admission for their disease showed increased recent life change experiences compared to controls, depressives reported more "exists" from the social field as well as a greater variety of "undesirable" events compared to schizophrenics. The authors took into account possible differences in demographic variables between samples of patients as well as possible retrospective bias in the reporting of life events and came to the conclusions that the significance of recent life events in the lives of schizophrenics was in "precipitating" symptoms rather than in a "formative" role as appeared to be the case for depressives. Further, the difference between schizophrenics and controls in the reporting of recent life events appeared to be smaller in magnitude than the difference seen between depressives and controls.

Schwartz and Myers (1977) studied a group of 132 schizophrenics who had been previously hospitalized but were living in the community of New Haven at the time of study. Their schizophrenic patients were matched with an equal number of community subjects from Myers' original study. The overall correlation found between life events and current psychiatric impairment was seen to be weaker in the schizophrenic group than in the control groups. However, in terms of specificity, schizophrenics appeared to experience a disproportionate number of life

events categorized as "exists from the social field" and "socially undesirable" than controls.

The idea of recent buildup in life change events in subjects' lives acting as stressors lowering the resistance of schizophrenics to the onset of symptoms of their disease has been stated by Zubin and Spring (1977). This mode of influence on the onset of symptoms would be independent from mechanistic theories of schizophrenic disease—such as developmental, learning, genetic, internal environment, or neurophysiological theories.

Life Changes and Neurosis

Cooper and Sylph (1973) studied episodes of neurotic illness seen in a general medical practice. They matched 34 neurotic patients with 34 controls over the three month interval prior to illness onset.

Recently, utilizing a life change inventory based on the lists of Rahe and Paykel, Tennant and Andrews found a significant relationship between patients' recent life change experience and the onset of neurotic impairment in a community sample of adults in Sidney, Australia (Tennant and Andrews, 1978). The authors found that neither the number of recent life change events nor life change scaling results correlated independently with impairment. However, a subjective distress score given by subjects for their recent life changes did independently correlate with levels of neurotic symptoms.

Comment

Recent changes in individuals' lives prior to the clinical onset of a wide variety of physical and mental ailments have now been studied by numerous investigators. The association seen between subjects' life changes over the previous six months to one year's time and illness onset has been repeatedly documented. Correlations run between number of recent life events and the clinical detection of illness are between 0.16

and 0.36. Even the highest of these correlations is a relatively modest one, and indicates that recent life changes alone are not sufficient to account for the onset of disease. Rather, it appears that recent life changes are a necessary, but not by themselves sufficient, condition for illness onset. As pointed out in this paper's introduction, the association of life change with illness onset is well established-regardless of its mechanisms.

Although subjects' recent life change build up can be used in epidemiological fashion to identify populations at high risk for the development of physical and / or mental illness, searches for underlying mechanisms continue to be made. For the majority of physical illnesses, including accidents, and for schizophrenia, the etiological mechanism of recent life change increase appears to be that of lowering individuals' bodily resistance to disease entitles they are prone to develop by virtue of their genetic and environmental predispositions. In other words, the recent life change build up results in lowered bodily resistance to disease and a precipitation of clinical symptoms. In the case of psychological depression and neurosis, however, etiological mechanism may be broader than just precipitation. That is to say, in addition to a lowering of bodily resistance for depressive and / or neurotic disorder, recent life change events themselves, along with subjects' perceptions of these events, appear to have a formative influence upon ultimate symptomatology.

Although not definitive, there is some suggestion that the correlation between subjects' recent life changes and their subsequent illness symptomatology may be of higher order in depression and neurosis than in the development of schizophrenia or physical illnesses (Rahe, 1974; Jacobs et al., 1974; Theorell et al., 1975). Further information of this sort would be useful in prediction of disease experience which might follow natural disasters. Physicians and public health officials could then predict high incidence rates for depression and neurosis following disasters, with lower incidence rates for physical disorders, such as coronary heart disease.

It appears from studies to date that the best environmental measure

of recent life changes is a simple count of life change experience from a standard list (Rahe, 1978). Most efforts to scale life changes as to their change, intensity, upsettingness, and so forth, have provided extremely little utility over and above simply counting life change events. The exception to this rule appears to be in the cases of depression and neurosis. Current investigators of depression and neurosis make argument for measurements of upsettingness of life events, as subjects' perceptions of their recent life events appear to exert a formative influence on illness symptomatology.

From this paper's introduction, it's clear that far more people experience recent life change build up and do not report illness symptoms than do people who do. Therefore, a major research question is how the majority of individuals tolerate recent life change experience and yet remain healthy. A recent publication has formulated a model to depict the pathway between persons' recent life change experience and subsequent disease (Rahe and Arthur, 1978). It is illustrated in this model that several steps exist along such a pathway where persons can successfully defend or cope with their recent life change experience and thereby avoid illness symptomatology and even eventual disease. Also, the model points out the variable of illness behavior and its role in reducing the number of subjects exposed to recent life change situations and ready to admit to new symptoms. If symptomatic persons don't report symptoms to a medical facility, they never become diagnosed cases. Therefore, most epidemiologic studies underestimate the effect of recent life change experience on psychological and physiological symptoms due to person's hesitancy to report their symptoms to a medical facility.

Certainly a good deal of additional research needs to be done in the area of systematic quantification of subjects' stress tolerance. Questionnaires need to be developed which will reliably and validly measure subjects' biographical assets and liabilities, their social support systems, past and current life satisfactions, psychological defense structure, psychological coping abilities, and illness behavior characteristics. Some recent attempts have been made to add such variables to community life stress

and illness studies. In one such study in Sydney, Australia, the researchers incorporated measures of social support and of psychological defenses to the life change and (psychological) illness measures (Andrews et al. 1978). These investigators found that when these three variables were considered the discriminative power between sick and healthy persons was greatly increased. Persons with low stress, competent social supports, and mature psychological coping, who had only 12% psychiatric impairment rate versus persons with high stress, low social supports, and immature coping, who had a 42% psychiatric impairment rate. Future work in these directions appears destined to vastly the capabilities of psychosomatic researchers to more fully understand the life setting in which mental illness occurs.

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الموجز

الظروف الحياتية التي يحدث فيها المرض النفسي

ان استعمال مقياس « التغير الحياتي الجديد » في حالة الأشخاص المصابين باضطرابات نفسية لهو يوازي قياس « عوامل الخطر » التي يقوم بها الوبائيون لفهم توزيع المرض . ولقد دعم بالبحث مرارا الترابط ذو الدلالة بين نمط التغير الحياتي الجديد وأعراض المرض الناشئ ، والميكانيزمات المفترضة لتفسير هذا الترابط هي :

- ١ - انخفاض المناعة الجسمية مما يرسب الأعراض المرضية .
 - ٢ - التأثير المباشر والتشكيلي على تكوين الأعراض الحادثة .
- والميكانيزم الأكثر قبولا في حالة الفصام والأمراض الجسمية هو ميكانيزم الترسيب ، أما في حالة الاكتئاب والمصاب فانه من المحتمل أن يكون الميكانيزمان مسئولان معا .

ان التحسينات المستقبلية في مجال التغير الحياتي والمرض تنتظر تطوير مقاييس خصائص الفرد من حيث مدى تحمله للمواقف الضاغطة مثل : انظمة السند الاجتماعي ، وميكانيزمات الدفاع ، والقدرة على التغلب على المشكلات، والميول من حيث سلوكية المرض .

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ABSTRAIT

Les conditions de Vie dans lesquelles la Maladie psychiatrique se Produit

L'emploi de la mesure de changement de vie récent dans les vies de personnels développant des troubles mentaux va en parallèle avec la mesure des facteurs de risque faite par les épidémiologistes pour comprendre la distribution des maladies. Une relation significative entre l'apparition de changement récent dans le mode de vie et la symptomatologie des maladies a été plus d'une fois rapportée. Les mécanismes proposés pour expliquer cette association sont :

- 1) La diminution de la résistance du corps et la précipitation de la symptomatologie résultante.
- 2) L'influence directe et formatrice sur la formation ultérieure des symptômes.

Dans la schizophrénie et la plupart des maladies physiques, le mécanisme de précipitation apparaît le plus vraisemblable. Néanmoins dans la dépression et les troubles névrotiques, les deux mécanismes sont valables. Les progrès futurs dans le domaine du changement de mode de vie et de maladie attend le développement des mesures des caractéristiques de la tolérance personnelle du stress; tel que les systèmes de support social, les défenses psychologiques, les capacités d'adaptation et les tendances vers le comportement pathologique.