Published in final edited form as:

Psychol Inj Law. 2010 June 1; 3(2): 89–99. doi:10.1007/s12207-010-9072-1.

Toward a Typology of High-Risk Major Stressful Events and Situations in Posttraumatic Stress Disorder and Related Psychopathology

B.P. Dohrenwend

Columbia University, New York, NY, USA; New York State Psychiatric Institute, New York, NY, USA

B.P. Dohrenwend: dohrenw@pi.cpmc.columbia.edu

Abstract

The diagnosis of posttraumatic stress disorder (PTSD) was introduced in 1980 with the publication of the Diagnostic and Statistical Manual of the American Psychiatric Association, Third Edition (DSM-III). DSM-III put forward a novel syndrome consisting of intrusive, avoidance/numbing, and arousal symptoms as distinctive psychopathology following exposure to traumatic events. The traumatic stressors, although expanded in later editions published in 1987 (DSM-III-R) and 1994 (DSM-IV), focus on life-threatening events and situations. However, at least 12 studies, most of them recent, have found associations between the PTSD symptoms and the PTSD symptom syndrome with stressors, such as unemployment and divorce that would not qualify, even in the broadened DSM-IV diagnosis, as traumatic stressors. These findings challenge the basic assumption on which the PTSD diagnosis is based, the assumption that exposure to life-threatening stressors is the primary cause of a unique set of stress response symptoms. The purpose of this paper is to show how to confront this challenge by developing a typology of stressful situations and events that can be tested systematically for their relation to the PTSD symptom syndrome and other relevant variables. The typology includes but is not limited to the types of situations and events defined as “traumatic” in the DSMs.

Keywords

PTSD; Stressor; DSM-III; DSM-IV

The diagnosis of posttraumatic stress disorder (PTSD) was introduced with the Diagnostic and Statistical Manual of the American Psychiatric Association, Third Edition (DSM-III; 1980) in the context of social and political controversy following the US war in Vietnam (e.g., Friedman et al. 2007a). It put forward a novel syndrome of intrusive, avoidance/numbing, and arousal symptoms as the distinctive psychopathology following traumatic exposures. Different from most diagnoses that tend to leave open the question of etiology, this new diagnosis required the antecedent presence of a traumatic event as “Criterion A.” In the DSM-III formulation, the adjective “traumatic” was applied to stressors that are “outside the range of usual human experience” and would “evoke significant symptoms of distress in almost everyone” (DSM-III; APA 1980, page 236). The focus, as DSM-III-R (APA 1987) emphasizes, is on stressors that threaten life or physical integrity.

The role of Criterion A is further spelled out in DSM-IV (1994) as follows:

The severity, duration, and proximity of an individual's exposure to the traumatic event are the most important factors affecting the likelihood of developing this disorder. There is some evidence that social supports, family history, childhood experiences, personality variables, and preexisting mental disorders may influence the development of Posttraumatic Stress Disorder. This disorder can develop in individuals without any predisposing conditions, particularly if the stressor is especially extreme (APA 1994, pages 426–427, *italics added*).

However, at least 12 studies, most of them recent, have found associations between PTSD symptoms and the PTSD symptom syndrome with non-Criterion A stressors such as divorce and loss of a job (Dohrenwend 2010). These studies used diverse measures of exposure; a variety of measures of PTSD and the PTSD symptom syndrome; and samples drawn from such different populations such as college students, community populations, and patients seeking or receiving treatment. Despite this diversity of methods and subject populations, all of the studies suggest that various types of non-Criterion A stressors are associated with PTSD symptoms or the PTSD symptom syndrome. Taken together, they nominate various types of events that the investigators judged were non-Criterion A stressors as defined in DSM-III-R or DSM-IV. As classified by the investigators, these include: sudden death of a loved one (now included in DSM-IV); death of a family member or close friend due to illness; serious physical illness to self or to self or family member; own divorce; unfaithfulness of spouse; parental divorce/separation; loss of a job; job stressors; breakup with a girl friend or boy friend; romantic relationship problems; burglary without confrontation with the burglar; socially stressful events such as being ridiculed by a parent; and various worries about looks, children, siblings. These findings challenge the basic assumption on which the diagnosis was originally based, the assumption that exposure to very severe, life-threatening stressors is the primary cause of a unique set of traumatic stress response symptoms.

My purpose here is to show how to confront this challenge by placing PTSD in the context of a theoretical framework for investigating relations between adversity and stress and psychopathology more generally. I will argue that what is needed is systematic research on relations between the PTSD symptoms and the symptoms of other stress-related disorders to a typology of stressful situations and events that contrast with each in meaningful ways. The typology will include, but not be limited to, prototypical life-threatening events in protracted hazardous situations, such as combat in war zones and human-made and natural disasters.

A Frame of Reference for Investigating the Role of Adversity and Stress in Psychopathology

The foundation for systematic research on the health effects of stress was laid by Canon (1929) 80 years ago in his detailed observations of bodily changes related to pain, hunger, and the major emotions. Over the years, the term “stress” has been linked to a variety of concepts and operational definitions (e.g., Cohen et al. 1997). For some researchers, “stress” is an inferred inner state; for others, it is an observable response to more or less complex stimuli; for still others, it is the stimuli themselves such as shocks or physical confinement in animal experiments or specific events and situations faced by individuals as they live their lives. Although there are differences and disagreements among investigators who study environmental influences on health in how to define “stress,” Cohen et al. point out that all investigators “share an interest in a process in which environmental demands tax or exceed the capacity of the organism, resulting in psychological and biological changes that may put the person at risk ... [for adverse health outcomes]” (Cohen et al. 1997, page 3).

Some time ago, I summarized in several figures relations among what I see as the key variables in life stress processes (Dohrenwend 1998, 2000). Figure 1 is adapted from that formulation.

I will focus here especially on the situation and event components shown in Fig. 1, with some attention as well to the emotional responses introduced as Criterion A2 in DSM-IV. This is not to say that other components of life stress processes such as subjective appraisals and coping in Fig. 1 are unimportant, only that they are less central to Criterion A issues in the diagnosis of PTSD.

Clinical interest in stressful life events goes back to the 1930s when Adolph Meyer and his colleagues advocated the use of a “life chart” in medical diagnosis. The events to be recorded in the patient's life chart were to consist of “the changes of habitat; of school entrance, graduations or changes or failures; the various ‘jobs’; the dates of possible important births and deaths in the family; and other fundamentally important environmental incidents” (Meyer 1951, page 53). The research implications of this approach began to take shape with the development by Holmes and Rahe (1967) of a more explicit procedure for inventorying life events with a checklist of 43 events called the Schedule of Recent Experience. Consistent with Meyer's formulation, Holmes and Rahe emphasized the amount of readjustment-requiring change that events such as “death of a spouse,” “divorce,” “fired at work,” and “sex difficulties” were likely to bring about in the lives of the individuals experiencing them.

Increasing numbers of investigators have used this instrument or other, usually longer, but also economical, checklist inventories (e.g., B.S. Dohrenwend et al. 1978; Paykel et al. 1971; Sarason et al. 1978) or, much less frequently, labor-intensive interview and rating procedures (e.g., Brown and Harris 1978; Dohrenwend et al. 1993) to investigate relations between stress and health outcomes. While the emphasis has usually been on recent events occurring within relatively brief intervals of time, such as 6 months to a year, a few studies have attempted to assess “traumatic” events (usually life-threatening or otherwise threatening to physical integrity) and/or other major events (e.g., spousal bereavement) over the life course of the respondents (Breslau et al. 1991, 1997, 1998; Davidson et al. 1991; Kessler et al. 1997, 1995; Norris 1992; Resnick et al. 1993; Turner and Lloyd 1995, 2004).

There has been a tremendous increase in quantitative research on relations between life events and health since the 1967 publication of the Holmes and Rahe measure. This voluminous literature documents that stressful life events are related to a wide variety of physical and psychiatric disorders in both cross-sectional and longitudinal research (e.g., Breslau 2002; Brown and Harris 1989; Dohrenwend and Dohrenwend 1974; Gunderson and Rahe 1974; Grant et al. 2004; Rahe and Arthur 1978).

Critical reviews have multiplied along with the substantive studies of life events and psychopathology. While the reviewers have been impressed with the consistent relationships found between life events and a wide variety of psychological problems, they have advanced two broad themes of criticism in these reviews. One theme emphasizes the small to modest relationships of the events to psychopathology and focuses attention on other variables, such as social support, that may increase or decrease the impact of the events (e.g., Johnson and Bradlyn 1988; Paykel 2001; Rabkin and Struening 1976; Rahe 1975; Sarason and Sarason 1985). The other focuses more on problems in the conceptualization and measurement of stressful life events (e.g., Brown et al. 1973; Creed 1985; B. P. Dohrenwend 1974, 2000; Monroe and Johnson 1990; Monroe and Roberts 1990) that have made the associations with psychopathology difficult to interpret. The two themes of criticism are not, of course, mutually exclusive.

My main focus here, however, will be on problems in the conceptualization of life events with some attention paid as well to measurement issues. One measurement issue is critical and requires discussion before I turn to conceptual issues. This is the problem of intracategory variability in the widely used checklist approaches—that is, the tendency for respondents with

vastly different experiences to be included in the same checklist category (Dohrenwend 2006).

Consider as examples of this problem of intracategory variability how different the experiences could be for individuals giving positive responses to the first three items in the Criterion A checklist used by Kessler et al. (1995) in the National Co-Morbidity Study. Positive responses to, “You had direct combat experiences during a war,” could be given by veterans who received occasional mortar fire in a relatively safe base camp, on the one hand, as well as by veterans who participated in fire fights, saw comrades killed and wounded, and were wounded themselves, on the other. Positive responses to, “You were involved in a life-threatening accident,” could be based on a respondent's being either in a fender bender in which no one was hurt or in a collision involving death and injuries. Positive responses to, “You were involved in a fire, flood or natural disaster,” could be given by respondents who were evacuated safely prior to a minor impact on their homes as well as by respondents who were injured, lost loved ones, and had their homes destroyed. The problem is that equivalent scores based on responses to such checklist items tend to mask very disparate actual experiences. Labor-intensive narrative rating methods do a far better job of dealing with this problem than checklists (Dohrenwend 2006).

The more fundamental problem, however, and the one I will address here, is the lack of a comprehensive specification of the situations in which events occur and of the characteristics of life events that are likely to determine the nature and extent of their impact as risk factors for psychopathology. The point of the above discussion is that this specification cannot be adequately addressed without the use of measures that provide much more information about the events and situations than traditional checklist approaches provide (Dohrenwend 2006).

Most investigators assume that diverse types of events have characteristics in common that determine their impact. Investigators differ, however, in the characteristics of events they emphasize as making them more or less stressful, severe, or demanding. As noted earlier, for Meyer (1951), as translated by Holmes and Rahe (1967), events are stressful to the extent that they bring about changes in the life of the individual that require his or her readjustment. In accord with this focus on change per se, Holmes and Rahe include positive as well as negative incidents in their list of stressful events. However, it has become evident that negative events, but not positive events, are positively associated with psychological distress and disorder (e.g., Grant et al. 1981; Lewinsohn et al. 2003; Paykel 1974; Vinokur and Selzer 1975; Zautra and Reich 1983).

It is not surprising, therefore, that investigators who focus on adverse outcomes that involve psychopathology especially have focused on their negative characteristics, for example, their undesirability (Sarason et al. 1978); objective negative impact (Paykel 1997); the extent to which they involve loss of resources (Hobfoll 1989); their degree of “contextual threat” (Brown and Harris 1978); and the extent to which they are likely to contribute to uncontrollable negative changes in the usual activities of most individuals who experience them (Dohrenwend 1998, 2000). These latter uncontrollable negative changes can be described as fateful, and I have argued that when they occur and persist; they are major factors in the onset of a wide variety of psychopathology (Dohrenwend 1998, 2000, 2010).

The General Characteristics of Stressful Life Events

I have focused on six general characteristics as most important in determining uncontrollable negative changes in the usual activities of those who experience the event: source, valence, unpredictability, magnitude, centrality, and tendency to exhaust the individual physically (Dohrenwend 2000).

Source

This characteristic refers to the factors that cause the occurrence of stressful events (e.g., Dohrenwend 1974; Hammen 1991; Paykel 2001; Robins and Robertston 1998; Rutter 1986; Simons et al. 1993). The origins of some events, such as natural or human-made disasters and most deaths of loved ones, are clearly external to the individual who experiences them. By contrast, other events, such as accidents resulting from adventurous driving, originate in the behavior of the individual. Still other events, such as marital separation or divorce rising out of marital conflict, can sometimes be nearly equal admixtures of the two sources. At issue is the extent to which the source of the event is external to the individual and its occurrence unaffected by his or her actions or behavior (Dohrenwend 1974).

Opposite to externally induced events are events that occur as a function of what Hammen (1991) describes as the “stress generative behavior” of the individual. While not necessarily evidence of the presence of disorder per se and, therefore, “independent” in Brown's original sense of this term (Brown and Birley 1968), such events can often indicate the presence of personal predispositions that contribute to the occurrence of disorder. For example, the events can be evidence of the personality characteristic of sensation seeking (Zuckerman 1979), which, in turn, appears to be associated with increased alcohol use (Newcomb and McGee 1991).

Distinctions with regard to the sources of events are fundamental to etiological interpretation of the relation of life events to adverse health outcomes. Differences in source indicate that different processes contribute to the psychiatric outcome, with externally induced events representing more of a role for environmental circumstances and self-generated events representing more of a role for personal predispositions. Unlike externally induced events, such as death of a loved one, for example, exposure to self-generated negative events, such as many marital separation/divorce events and job loss events, has been found, in genetically informative twin samples, to be partly heritable (Kendler 1998; Kendler et al. 1999; Rijdsdijk et al. 2001; Suaudino et al. 1997). Some research suggests that these genetic effects on the occurrence of some types of negative self-generated events may be mediated by personality characteristics (Suaudino et al. 1997), perhaps in some instances by neuroticism (Van Os et al. 2001) or, as suggested earlier, by sensation-seeking tendency, which also appear to be heritable (Zuckerman 1994).

While by no means unimportant as risk factors, events whose occurrence is influenced to an appreciable degree by the actions of the individual are less representations of environmental adversity than are more externally generated events, and the interpretation of the nature of their etiological impact must differ accordingly. Moreover, without detailed information about the source of checklist events, it is difficult to know whether, or to what extent, many such events are confounded with psychiatric disorder.

Valence

Most investigators of relations of life events to psychiatric outcomes distinguish between positive and negative events—that is, events that are normatively desirable or undesirable: those likely to involve gain or loss. This distinction between positive and negative valence is important because, as emphasized above, it is negative events that have proved to be associated with adverse psychological outcomes.

Positive events have received less attention than they deserve in research on life events and psychopathology; positive events are, for example, grossly underrepresented in checklist inventories. Unlike negative events, positive events tend to be inversely related to psychological symptoms (e.g., Grant et al. 1981; Rowlison and Felner 1988). Unless they

happen to others who are important to the individual, the occurrence of most positive events — such as graduation from school, getting a first job, marriage, and birth of a child—is, as a rule, strongly influenced by the behavior of the individual. Such events can frequently, therefore, represent positive personal predispositions that contribute to positive outcomes (e.g., Rowilson and Felner 1988; Suh et al. 1996; Thoits 1995, Zautra and Reich 1983).

Unpredictability

Unpredictability of occurrence has long been pointed to as an important determinant of the impact of life events (e.g., B.S. Dohrenwend and Martin 1979; Isherwood et al. 1982; Lejuez et al. 2000; Pham et al. 2001; Thoits 1983). The strong role of unpredictability has been most rigorously demonstrated in the results of stress experiments with animals. Foa et al. (1992), for example, concluded on the basis of their review of experiments relevant to animal models of PTSD that both unpredictability and uncontrollability of onset of stressful exposures are major factors in the occurrence of adverse outcomes that seem congruent with the characteristics of PTSD in humans.

This conclusion about the importance of unpredictability has strong counterparts in research with humans. Schnurr et al. (2000), for example, have shown that military personnel who were given protective training were less likely than their unprepared counterparts to develop PTSD after exposure to mustard gas. And the ability to predict the occurrence of a disaster and the preparation this anticipation makes possible on both collective and individual levels can transform potential havoc into manageable inconvenience (e.g., Weisaeth 1994). Other things equal, unpredictability of onset reduces the opportunity to take advance action that will reduce the negative impact of an event. However, other things are not always equal; there may be instances in which there is no opportunity to take preventive action in the face of severe and highly repetitive negative events, for example, sustained experience with ongoing child abuse or other domestic violence and long-term status as a prisoner of war. Under such circumstances, predictability may confer no particular advantage.

Magnitude

Consistent with Meyer (1951), the objective magnitude of a life event is defined by the hypothetical amount of change that the event would bring about in the usual activities of most people experiencing the event. In the Holmes and Rahe (1967) method, these changes are measured by Life Change Unit scores based on magnitude estimations by panels of judges and applied to each event on their checklist. The assumption involved is that the higher the cumulative scores summed across events, the greater the likelihood of subsequent illness onset.

However measured, this general dimension of the magnitude of events must be distinguished from the actual changes following the occurrence of a particular event for a particular individual experiencing the event. As Fig. 1 shows, the actual changes for particular individuals depend on other variables as well as those characterizing the event per se. For this reason, actual changes for particular individuals are not part of the definition of the magnitude of the event. When, as here, the interest is in events as risk factors for psychopathology, the magnitude of the event is the normative amount of negative change in usual activities expected for most people who experience the event.

Centrality

Normative magnitude of negative change is different from, but related to, Brown's formulation of contextual threat to goals (Brown and Harris 1978) and Hobfoll's (1989) focus on the impact of the events on the resources of the individual. Contextual threat, the main characteristic of stressful life events in Brown's formulation, is inferred from the estimated impact of the event on "likely central goals, plans, and concerns" of the individual against the background of her

or his “biography and immediate circumstances” (Brown 1998, p. 361). By estimated impact, Brown is referring to hypothetical impact, since his approach avoids relying on the subjective perceptions of the individual because such perceptions tend to be influenced by antecedent risk factors, such as prior psychiatric disorder or coping history, in prospective research and by psychological outcomes in retrospective studies (Brown and Harris 1978; Grant et al. 1976; Schless et al. 1974; Theorell 1974).

Brown's formulation of contextual threat to goals and Hobfoll's focus on resources are related to my definition of objective magnitude in terms of normative negative change in usual activities above. This is because most usual activities are related to the maintenance or achievement of “goals, plans, and concerns” and to the resources on which such maintenance and achievement of goals depends. Though the goals and activities are related, they are not the same thing. I describe the characteristic of events that involve their impact on resources and goals as “centrality.”

Centrality refers to the threat represented by events to the achievement or maintenance of normatively valued goals (Dohrenwend 2000). Following Maslow's (1954) classification, I assess centrality across a hierarchy of four types: threat to life; threat to physical integrity; threat to basic needs for food and shelter; and threat to other important goals in such areas as family, education, work, and social activities. Within each of these hierarchical levels, different degrees of threat can be distinguished. For example, an assault with a weapon carries greater threat to life or physical integrity than an assault with fists, threat to food and shelter is greater than threat to either alone, and impact on goals in more than one area of life is likely to be greater than impact on goals in one area alone. Since centrality involves distinctions between events that involve life threat and threat to physical activity and events that do not, this characteristic of events is essential for defining events that most unambiguously meet the DSM-III, DSM-III-R, and DSM-IV criteria for “traumatic” events in the diagnosis of PTSD.

Tendency to Exhaust the Individual Physically

As McEwen (2002) has pointed out, even reduced amounts of sleep for a number of days can produce elevated diurnal levels of cortisol, a characteristic of major depression, and negative life events have often been found to precede the onset of sleep disturbance (Morin and Ware 1996). This suggests that any aspect of events that increases the likelihood of exhaustion will reduce ability to cope and contribute to uncontrollable negative change in usual activities. The strenuous physical exertion and/or deprivation of sleep that leave a soldier “used up” after prolonged exposure to combat are examples of such factors.

Specific Characteristics of Events

In addition to the general characteristics of events, there are also specific characteristics that are likely to contribute to the nature or extent of their impact. Examples of these event-specific characteristics are betrayal in interpersonal events such as some divorces, involvement in atrocities during combat, known versus unknown assailant in rape and assault, and untimeliness in bereavement.

Hazardous and Other Types of Situations

As Fig. 1 shows, stressful events occur in ongoing situations composed of the usual activities of the individual. These situations can range from hazardous ones involving persistent threat to life or physical integrity, on the one hand, to more usual situations of everyday life where life-threatening experiences are likely to be much rarer, on the other. In an analogy with Maslow's (1954) hierarchy of needs and the centrality dimension of individual events, it is possible to provide a formulation of main types of situations as follows:

- *Hazardous situations that pose persistent life threat.* These situations consist of usual activities such as those that arise in combat or human-made and natural disasters. These situations increase the likely occurrence of acute events involving life threat for individuals in them. This category would include hazardous situations in which racial/ethnic strife is pervasive and violent for the public at large as well as for military personnel.
- *Hazardous situations that pose persistent threat to physical integrity.* These situations involve usual activities such as those in prolonged domestic violence. These situations increase the likelihood that individuals in them will experience acute events that threaten their physical integrity, including rape as well as other bodily harm. At times, these threats can be socially defined even if they do not turn out to be based on actual exposure to harm (Page et al. 2006). An example was the threat of toxic exposure conveyed to the public by the authorities during the nuclear accident at Three Mile Island (Dohrenwend 1983).
- *Hazardous situations that pose persistent threat to ability to satisfy basic needs for food and shelter.* An example is prolonged poverty that increases the likelihood that an individual will experience such acute events as eviction from housing and becoming homeless.
- *Situations of everyday life in peacetime communities.* These situations in modern, developed societies involve usual activities in families, education, work, leisure, and other social relations. The likelihood that individuals in these situations of everyday life in relatively affluent modern societies such as our own will experience acute events that involve life threat, threat to physical integrity, and threat to basic needs is much less than in the above situations—possibly excepting some lower class groups. Rather, the acute negative events such as deaths of loved ones, divorce, and job loss that are more likely to occur in these situations of everyday life are likely to threaten social goals such as achieving honor and recognition, the respect of others, material resources and other factors that can contribute to the good life, liberty, and the pursuit of happiness.

These distinctions among situations involving life threat, threat to physical integrity, threat to basic needs, and threat to social goals can be viewed as forming a hierarchy with each type, starting with life threat, subsuming the others below it both at the situation level and at the individual event level. For example, where life is threatened, so also are physical integrity, basic needs, and social goals, but not vice versa. Within each type of threat, moreover, there are degrees of severity at both the situational and individual event levels.

Posttraumatic Stress Disorder

At present, there is considerable argument as to how broad or narrow Criterion A should be, with advocates for narrow definitions focused mainly on events that involve life threat and threat to physical integrity (e.g., McNally 2003; Weathers and Keane 2007) and advocates for very broad definitions that would expand Criterion A well beyond the central focus on objective life threat or other threats to the physical integrity of the individual (e.g., Maier 2007). The trend from DSM-III to DSM-IV so far has been to broaden the definition to include, for example, indirectly experienced events such as news of injury to a close relative or friend or sudden death of a close relative or friend. If associations with the PTSD symptom syndrome are the grounds for expansion, a great variety of additional events, such as divorce and job loss, may need to be added as well.

It seems evident that such broadening of the definition must lead to inclusion of events that are unlikely to be primary in any of the following senses: (1) the strongest sense, of being necessary

and sufficient for the onset and persistence of the PTSD symptom syndrome, (2) of being more important than a comprehensive set of vulnerability factors, or (3) of being most important in a set of risk factors that are sufficient for the onset and persistence of this syndrome. Moreover, the expansion would mean including events that are more likely to elicit emotions, such as guilt, shame, or anger, than fear, the cardinal emotional response to life-threatening events and situations. The broadening of Criterion A would also challenge, therefore, the intriguing theory that PTSD is a fear circuitry disorder (Foa et al. 1992; Kolb and Multalipassi 1982; Pitman 1988; also the discussion in Friedman et al. 2007b).

At this point, we lack detailed knowledge of what particular combinations of exposures over what durations in hazardous situations are both necessary and sufficient to lead to the onset and adverse course of PTSD in previously normal persons with good adaptive capacity. And our knowledge of whether stressful events in hazardous situations have counterparts in more usual situations that may also contribute to the occurrence of the PTSD symptom syndrome is intriguing but sparse—as is evident in the recent studies that report associations between PTSD symptoms and such usual events as divorce and job loss.

To gain the required knowledge, we need systematic research on the general characteristics of diverse-seeming events and on the situations in which they occur that are important in determining the events' nature and stressfulness. In addition, we need information about important specific characteristics that are particular to some types of events and likely to add to their impact. To acquire this information, it makes sense to construct a typology of events in situations. The various types and subtypes can then be systematically investigated for the nature and magnitude of their relationship to PTSD symptoms of various types and the PTSD symptom syndrome.

Toward a Typology of Events in Situations

The starting point is the prototype Criterion A stressors that involve prolonged personal life threat or threat to physical integrity. These are events in hazardous situations characterized by chronic stressors that make severe and continuing demands on individuals. Events in hazardous situations need to be assessed not only for their impact on individuals' usual activities in the hazardous situations themselves but also on the activities in the more usual situations to which the individuals may return—as, for example, the return of a veteran to civilian life following service in a war zone.

Major Stressful Events in Hazardous Situations

Major stressful events in hazardous situations, such as combat in war zones, have the following characteristics:

- Their *valence* is negative (i.e., they represent loss rather than gain).
- The *source* of most of the major negative events is external so that the circumstances leading up to them and their immediate occurrence are beyond the control of the individual and uninfluenced by her/his actions or behavior (e.g., being caught in an ambush in a war zone).
- The onset of the event is often *unpredictable* to those targeted (e.g., as in the ambush above).
- Some of the events are life threatening and hence most *central* to the needs and goals of the individual.

–The events are large in objective *magnitude* in that they are highly likely to bring about great negative changes in the usual activities of the individual, all or some of which are beyond his/her control (e.g., the casualties in his/her unit resulting from the ambush).

–Some events in and of themselves, or in the ensuing changes, are likely to *exhaust* the individual physically (e.g., being under prolonged enemy attack or, for POWs, being in a long forced march).

Major Negative Events in More Usual Situations

Examples of important major negative events in more usual situations are experiencing the death of a loved one, undergoing a marital separation or divorce, losing a job, and suffering a serious physical illness or injury. It is also possible that experiences of being a victim of child abuse and being a victim of rape can occur in situations that are usual in the sense of ordinarily not involving ongoing life threat, threat to physical integrity, or threat to basic needs. Some of the characteristics that define major negative events in hazardous situations occur to some degree in most of these major negative events in more usual situations. All of the characteristics of events in hazardous situations are almost never present in any of the major negative events in usual situations, although some of the latter have most of the characteristics.

For example, acute instances of child abuse and neglect have many of the characteristics of events in hazardous situations and strike at the most vulnerable stages of human development; in the context of prolonged domestic violence, these events of abuse and neglect for the child can be considered events in an ongoing hazardous situation. Some rape events are also not only negative, but also externally induced, unpredictable, and life threatening. Life-threatening physical illnesses and injuries can have much in common with events in hazardous situations (that can, of course, include life-threatening injuries) but usually lack the wider threatening circumstances of hazardous situations and occur in contexts in which social supports are more immediately available. Like most major negative events in hazardous situations, death of a loved one such as a spouse or child is likely to be externally induced, but bereavement is usually not life threatening to the grieving individual her/himself. This is true of some types of unemployment such as layoffs that occur when an entire plant shuts down.

The similarities and contrasts between the above events and events in hazardous situations are relatively clear cut. Assessing the points of similarity and contrast between major negative events in hazardous situations and major negative events in more usual situations experienced by individuals in the general population becomes more complicated when we consider events such as marital separation or divorce, the full variety of events involving job loss (e.g., being fired for cause as well becoming unemployed because of a plant shut down), or some types of physical illness or injury that may not occur independently of the actions of the individual. The origins of these types of event may as often be in the “stress generative” behavior of the individual (Hammen 1991) as in the environmental conditions to which the individual is exposed. Still more frequently, such events are brought about by a complex mixture of the person's behavior and factors in her/his external environment. Moreover, the duration of negative changes in usual activities that follow the event may depend more on the coping ability of the person (e.g., choosing a good lawyer prior to divorce, using a successful strategy of job search following job loss) than on external factors in the wider environment (e.g., allied forces liberating concentration camp survivors).

How Would Such a Typology of Events in Situations Be Useful?

Contrasting types of event/situations can be investigated for differences in any or all of the following:

–Likelihood of being followed by the PTSD symptom syndrome

- Biological correlates
- Profiles that differ in relative prominence of intrusive, avoidance, and arousal symptoms and specific symptoms within each of the three symptom types
- Course of disorder
- Types and severities of impairment of functioning
- Types of comorbid psychiatric disorders
- Family history of psychiatric disorders
- Types of treatment and treatment outcomes

What Could Be Learned?

The investigation of situation/event types and their symptom correlates could help answer basic questions, such as:

- Should PTSD be classified as a stress-induced fear circuitry disorder as some have proposed? This question could be investigated because some of the subtypes of situation/event do not feature stressors that are mainly fear inducing, but rather focus on stressors that more centrally involve other factors such as material and social losses and other emotions, such as sadness, shame, and guilt.
- What stressors and situations are necessary for the onset of the PTSD symptom syndrome?
- What stressors and situations are sufficient for the onset of the PTSD symptom syndrome?
- With what types of situation/event exposure is the PTSD symptom syndrome situationally specific and with what types does the syndrome persist beyond the situation/event exposure that precipitated it?
- For which stressors and situations are personal vulnerability factors more important than the stressors in the onset of the PTSD symptom syndrome?
- For which stressors and situations are personal vulnerability factors more important than the stressors in the adverse course of the PTSD symptom syndrome?
- What is the relation of the PTSD symptom syndrome to the symptom syndromes of other disorders, such as major depression, in which environmental stressors play a strong role?
- What treatments are most effective with what situation/event/syndromal subtypes? These subtypes would include not only the PTSD symptom syndrome but the syndromes of other disorders, such as major depression and alcoholism, that are frequently comorbid with PTSD?

Acknowledgments

This paper reports work that was supported in part by NIMH grant R01-MH059627 and grants from the Spunk Fund, Inc.

References

- American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 3rd. Washington, DC: American Psychiatric Association. DSM-III; 1980.

- American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 3rd. Washington, DC: American Psychiatric Association. DSM-III-R; 1987.
- American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4th. Washington, DC: American Psychiatric Association. DSM-IV; 1994.
- Breslau N. Epidemiologic studies of trauma, posttraumatic stress disorder, and psychiatric disorders. *Canadian Journal of Psychiatry* 2002;47:923–929.
- Breslau N, Davis GC, Andreski P, Peterson E. Traumatic events and posttraumatic stress disorder in an urban population of young adults. *Archives of General Psychiatry* 1991;48:216–222. [PubMed: 1996917]
- Breslau N, Davis GC, Peterson EL, Schultz L. Psychiatric sequelae of posttraumatic stress disorder in women. *Archives of General Psychiatry* 1997;54:81–87. [PubMed: 9006404]
- Breslau N, Kessler RC, Chilcoat HD, Schultz LR, Davis GC, Andreski P. Trauma and posttraumatic stress disorder in the community. *Archives of General Psychiatry* 1998;55:626–632. [PubMed: 9672053]
- Brown, GW. Loss and depressive disorders. In: Dohrenwend, BP., editor. *Adversity, stress and psychopathology*. New York: Oxford University Press; 1998. p. 358–376.
- Brown GW, Birley JLT. Crises and life changes and the onset of schizophrenia. *Journal of Health and Social Behavior* 1968;9:203–214. [PubMed: 5676853]
- Brown, GW.; Harris, TO. *Social origins of depression: A study of psychiatric disorder in women*. New York: Free Press; 1978.
- Brown, GW.; Harris, TO., editors. *Life events and illness*. New York: Guilford; 1989.
- Brown GW, Sklair F, Harris TO, Birley JLT. Life events and psychiatric disorders: I. Some methodological issues. *Psychological Medicine* 1973;3:74–78. [PubMed: 4692493]
- Canon, WB. *Bodily changes in pain, hunger, fear and rage*. New York: Appleton-Century-Crofts; 1929.
- Cohen, S.; Kessler, RC.; Gordon, LU. Strategies for measuring stress in studies of psychiatric and physical disorders. In: Cohen, S.; Kessler, RC.; Gordon, LU., editors. *Measuring stress: A guide for health and social scientists*. New York: Oxford University Press; 1997.
- Creed F. Life events and physical illness. *Journal of Psychosomatic Research* 1985;29:113–123. [PubMed: 4009513]
- Davidson JRT, Hughes D, Blazer DG, George LK. Posttraumatic stress disorder in the community: An epidemiological study. *Psychological Medicine* 1991;21:713–721. [PubMed: 1946860]
- Dohrenwend, BP. Problems in defining and sampling the relevant population of stressful life events. In: Dohrenwend, BS.; Dohrenwend, BP., editors. *Stressful life events*. New York: Wiley; 1974. p. 275–310.
- Dohrenwend BP. Psychological implications of nuclear accidents: The case of Three Mile Island. *Bulletin of the New York Academy of Medicine* 1983;59:1060–1076. [PubMed: 6582966]
- Dohrenwend, BP. Theoretical integration. In: Dohrenwend, BP., editor. *Adversity, stress and psychopathology*. New York: Oxford University Press; 1998. p. 539–555.
- Dohrenwend BP. The role of adversity and stress in psychopathology: Some evidence and its implications for theory and research. *Journal of Health and Social Behavior* 2000;41:1–19. [PubMed: 10750319]
- Dohrenwend BP. Inventorying stressful life events as risk factors for psychopathology: Toward resolution of the problem of intracategory variability. *Psychological Bulletin* 2006;132:477–495. [PubMed: 16719570]
- Dohrenwend, BP. The stressor criterion in posttraumatic stress disorder: Issues, evidence, and implications. In: Simpson, HB.; Neria, Y.; Lewis-Fernandez, R.; Schneier, F., editors. *Understanding anxiety: Clinical and research perspectives from the Columbia University Department of Psychiatry*. New York: Cambridge University Press; 2010.
- Dohrenwend, BS.; Dohrenwend, BP., editors. *Stressful life events: Their nature and effects*. New York: Wiley; 1974.
- Dohrenwend BS, Martin JL. Personal versus situational determination of anticipation and control of the occurrence of stressful life events. *American Journal of Community Psychology* 1979;7:453–468. [PubMed: 495586]

- Dohrenwend BS, Krasnoff L, Askenasy AR, Dohrenwend BP. Exemplification of method for scaling life events: The PERI life events scale. *Journal of Health and Social Behavior* 1978;19:205–229. [PubMed: 681735]
- Dohrenwend, BP.; Raphael, KG.; Schwartz, S.; Stueve, A.; Skodol, AE. The structured event probe and narrative rating method (SEPRATE) for measuring stressful life events. In: Goldberger, L.; Bresnitz, S., editors. *Handbook of stress: Theoretical and clinical aspects*. 2nd. New York: Free Press; 1993. p. 174-199.
- Foa EB, Zinbarg R, Rothbaum BO. Uncontrollability and unpredictability in post-traumatic stress disorder: An animal model. *Psychological Bulletin* 1992;112:218–238. [PubMed: 1454893]
- Friedman, MJ.; Resick, PA.; Keane, TM. PTSD twenty-five years of progress and challenges. In: Friedman, MJ.; Keane, TM.; Resick, PA., editors. *Handbook of PTSD: Science and practice*. New York: Guilford; 2007a. p. 3-18.
- Friedman, MJ.; Resick, PA.; Keane, TM. Key questions and an agenda for future research. In: Friedman, MJ.; Keane, TM.; Resick, PA., editors. *Handbook of PTSD: Science and practice*. New York: Guilford; 2007b. p. 540-561.
- Grant I, Gerst M, Yager J. Scaling of life events by psychiatric patients and normals. *Journal of Psychosomatic Research* 1976;20:141–149. [PubMed: 1271314]
- Grant I, Sweetwood HL, Yager J, Gerst M. Quality of life events in relation to psychiatric symptoms. *Archives of General Psychiatry* 1981;38:335–339. [PubMed: 7212965]
- Grant KE, Compas BE, Thurm AE, Mc Mahon SD, Gipson PY. Stressors and child and adolescent psychopathology: Measurement issues and prospective effects. *Journal of Clinical Child and Adolescent Psychology* 2004;30:412–425. [PubMed: 15136206]
- Gunderson, EKE.; Rahe, RH. *Life stress and illness*. Springfield: Charles C Thomas; 1974.
- Hammen C. Generation of stress in the course of unipolar depression. *Journal of Abnormal Psychology* 1991;100:555–561. [PubMed: 1757669]
- Hobfoll SE. Conservation of resources: A new attempt at conceptualizing stress. *The American Psychologist* 1989;44:513–524. [PubMed: 2648906]
- Holmes TH, Rahe RH. The social readjustment rating scale. *Journal of Psychosomatic Research* 1967;11:213–218. [PubMed: 6059863]
- Isherwood J, Adam KS, Hornblow AR. Life event stress, psychosocial factors, suicide attempt and auto-accident proclivity. *Journal of Psychosomatic Research* 1982;26:371–383. [PubMed: 7120162]
- Johnson, JH.; Bradlyn, AS. Assessing stressful life events in childhood and adolescence. In: Karoly, P., editor. *Handbook of child health assessment: Bio perspectives*. New York: Wiley; 1988. p. 303-331.
- Kendler, KS. Adversity, stress and psychopathology: A psychiatric genetic perspective. In: Dohrenwend, BP., editor. *Adversity, stress and psychopathology*. New York: Oxford University Press; 1998. p. 477-485.
- Kendler KS, Karkowski LM, Prescott CA. The assessment of dependence in the study of stressful life events: Validation using a twin design. *Psychological Medicine* 1999;29:1455–1460. [PubMed: 10616952]
- Kessler RC, Davis CG, Kendler KS. Childhood adversity and adult psychiatric disorder in the US national comorbidity survey. *Psychological Medicine* 1997;27:1101–1119. [PubMed: 9300515]
- Kessler RC, Sonnega A, Bromet E, Nelson CB. Posttraumatic stress disorder in the National Comorbidity Survey *Archives of General Psychiatry* 1995;52:1048–1060.
- Kolb LC, Multalipassi LR. The conditioned emotional response: a sub-class of the chronic and delayed posttraumatic stress disorder. *Psychiatric Annals* 1982;12:979–987.
- Lejuez CW, Eifert GH, Zvolensky MJ, Richards JB. Preference between onset predictable and unpredictable administrations of 20% carbon-dioxide-enriched air: Implications for better understanding the etiology and treatment of panic disorder. *Journal of Experimental Psychology* 2000;6:349–358. [PubMed: 11218343]
- Lewinsohn PM, Rohde P, Gau JM. Comparability of self-report checklist and interview data in the assessment of stressful life events in young adults. *Psychological Reports* 2003;93:459–471. [PubMed: 14650673]

- Maier T. Weathers' and Keane's "The Criterion A problem revisited: Controversies and challenges in defining and measuring psychological trauma". *Journal of Traumatic Stress* 2007;20:915–916. [PubMed: 17955538]
- Maslow, AH. *Motivation and personality*. New York: Harper; 1954.
- McEwen BS. Sex, stress, and the hippocampus: Allostatis, allostatic load and the aging process. *Neurobiology of Aging* 2002;23:921–939. [PubMed: 12392796]
- McNally RJ. Progress and controversy in the study of posttraumatic stress disorder. *Annual Review of Psychology* 2003;54:229–252.
- Meyer, A. The life chart and the obligation of specifying positive data in psychopathological diagnosis. In: Winters, EG., editor. *The collected paper of Adolf Meyer, Vol 3: Medical teaching*. Baltimore: Johns Hopkins; 1951.
- Monroe SM, Johnson SL. The dimensions of life stress and the specificity of disorder. *Journal of Applied Social Psychology* 1990;20:1678–1694.
- Monroe SM, Roberts JE. Conceptualizing and measuring life stress. *Stress Medicine* 1990;6:209–216.
- Morin CM, Ware JC. Sleep and psychopathology. *Applied & Preventive Psychology* 1996;5:211–224.
- Newcomb MD, McGee L. Influence of sensation-seeking on general deviance and specific problem behaviors from adolescence to young adulthood. *Journal of Personality and Social Psychology* 1991;61:614–628. [PubMed: 1960653]
- Norris FH. Epidemiology of trauma: Frequency and impact of different potentially traumatic events on different demographic groups. *Journal of Consulting and Clinical Psychology* 1992;3:409–418. [PubMed: 1619095]
- Page LA, Petrie KJ, Wessely SC. Psychosocial responses to environmental incidents: A review and a proposed typology. *Journal of Psychosomatic Research* 2006;60:413–422. [PubMed: 16581367]
- Paykel, ES. Life stress and psychiatric disorder: Applications of the clinical approach. In: Dohrenwend, BS.; Dohrenwend, BP., editors. *Stressful life events: Their nature and effects*. New York: Wiley; 1974. p. 135-149.
- Paykel ES. The interview for recent life events. *Psychological Medicine* 1997;27:301–310. [PubMed: 9089823]
- Paykel ES. The evolution of life events research in psychiatry. *Journal of Affective Disorders* 2001;62:141–149. [PubMed: 11223102]
- Paykel ES, Prusoff BA, Uhlenhuth EH. Scaling of life events. *Archives of General Psychiatry* 1971;25:340–347. [PubMed: 5116988]
- Pham LB, Taylor SE, Seeman TE. Effects of environmental predictability and personal mastery on selfregulatory and physiological process. *Personality and Social Psychology Bulletin* 2001;27:611–620.
- Pitman RK. Post-traumatic stress disorder, conditioning, and network theory. *Psychiatric Annals* 1988;18:182–189.
- Rabkin JG, Struening EL. Life events, stress and illness. *Science* 1976;194:1013–1020. [PubMed: 790570]
- Rahe RH. Epidemiological studies of life change and illness. *International Journal of Psychiatry in Medicine* 1975;6:247–250.
- Rahe RH, Arthur RJ. Life change and illness studies: Past history and future directions. *Journal of Human Stress* 1978;4:3–15. [PubMed: 346993]
- Resnick HS, Kilpatrick DG, Dansky BS, Saunders BE, Best CL. Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of Consulting and Clinical Psychology* 1993;6:984–991. [PubMed: 8113499]
- Rijsdijk FV, Sham PC, Sterne A, Purcell S, McGuffin P, et al. Life events and depression in a community sample of siblings. *Psychological Medicine* 2001;31:401–410. [PubMed: 11305848]
- Robins, LN.; Robertston, J. Exposure to "fateful" events: A confounder in assigning causal roles to life events. In: Dohrenwend, BP., editor. *Adversity, stress and psychopathology*. New York: Oxford University Press; 1998. p. 331-340.

- Rowlison RT, Felner RD. Major life events, hassles, and adaptation in adolescence: Confounding in the conceptualization and measurement of life stress and adjustment revisited. *Journal of Personality and Social Psychology* 1988;55:432–444. [PubMed: 3171915]
- Rutter M. Meyerian psychobiology, personality development, and the role of life experiences. *The American Journal of Psychiatry* 1986;143:1077–1087. [PubMed: 3529992]
- Sarason, IG.; Sarason, BR. Life change, social support, coping and health. In: Kaplan, RM.; Cricqui, MH., editors. *Behavioral epidemiology and disease prevention. A life sciences edn. Vol. 84.* New York: Plenum; 1985. p. 219-236.
- Sarason IG, Johnson JH, Siegel JM. Assessing the impact of life changes: Development of the life experiences survey. *Journal of Consulting & Clinical Psychology* 1978;46:932–946. [PubMed: 701572]
- Schless AP, Schwartz L, Goetz C, Mendels J. How depressives view the significance of life events. *The British Journal of Psychiatry* 1974;125:406–410. [PubMed: 4425778]
- Schnurr PP, Ford JD, Friedman MJ, Green BL, Dain BJ, et al. Predictors and outcomes of posttraumatic stress disorder in World War II veterans exposed to mustard gas. *Journal of Consulting and Clinical Psychology* 2000;68:258–268. [PubMed: 10780126]
- Simons A, Angell KL, Monroe SM, Thase ME. Cognition and life stress in depression: Cognitive factors and the definition, rating, and generation of negative life events. *Journal of Abnormal Psychology* 1993;102:584–591. [PubMed: 8282928]
- Suaudino KJ, Pedersen NL, Lichtenstein P, Mc Cleary GE, Plomin R. Can personality explain genetic influences on life events? *Journal of Personality and Social Psychology* 1997;72:196–206. [PubMed: 9008381]
- Suh E, Diener E, Fujita F. Events and subjective well-being: Only recent events matter. *Journal of Personality and Social Psychology* 1996;5:1091–1102. [PubMed: 8656337]
- Theorell, T. Life events before and after the onset of a premature myocardial infarction. In: Dohrenwend, BS.; Dohrenwend, BP., editors. *Stressful life events.* New York: Wiley; 1974. p. 101-117.
- Thoits, PA. Dimensions of life events that influence psychological distress: An evaluation and synthesis of the literature. In: Kaplan, HB., editor. *Psychosocial stress.* New York: Academic; 1983. p. 33-303.
- Thoits PA. Stress, coping, and social support processes: Where are we? What next? *Journal of Health and Social Behavior* 1995;5:53–79. [PubMed: 7560850]
- Turner RJ, Lloyd DA. Lifetime trauma and mental health: The significance of cumulative adversity. *Journal of Health and Social Behavior* 1995;36:360–376. [PubMed: 8719054]
- Turner RJ, Lloyd DA. Stress burden and the lifetime incidence of psychiatric disorder in young adults: Racial and ethnic contrasts. *Archives of General Psychiatry* 2004;61:481–488. [PubMed: 15123493]
- Van Os R, Park SB, Jones PB. Neuroticism, life events and mental health: Evidence for person–environment correlation. *The British Journal of Psychiatry* 2001 40:72–77.
- Vinokur A, Selzer ML. Desirable versus undesirable life events: Their relationship to stress and mental distress. *Journal of Personality and Social Psychology* 1975;32:329–337. [PubMed: 1239500]
- Weathers FW, Keane TM. The Criterion A problem revisited: Controversies and challenges in defining and measuring psychological trauma. *Journal of Traumatic Stress* 2007;20:107–121. [PubMed: 17427913]
- Weisaeth, L. Psychological and psychiatric aspects of technological disasters. In: Ursano, RJ.; McCaughey, BG., et al., editors. *Individual & community responses to trauma & disaster.* New York: Cambridge University Press; 1994. p. 72-102.
- Zautra AJ, Reich JW. Life events and perceptions of life quality: Developments in a two-factor approach. *Journal of Community Psychology* 1983;11:121–132.
- Zuckerman, M. *Sensation seeking: beyond the optimal level of arousal.* Hillsdale: Erlbaum; 1979.
- Zuckerman, M. *Behavioral expressions and biosocial bases of sensation seeking.* New York: Cambridge University Press; 1994.

Fig. 1.

Relation of proximal life event(s) experienced by the individual to her or his antecedent biological background, personal predispositions, and wider social environment; contemporary ongoing situation of usual activities; and consequent appraisal/coping processes, and changes in usual activities. Adapted from Dohrenwend (1998, 2000)