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A COMPARATIVE ANALYSIS OF POST-TRAUMATIC
STRESS SYNDROME AMONG INDIVIDUALS EXPOSED TO
DIFFERENT STRESSOR EVENTS

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ABSTRACT

The purpose of the present study was to compare post-traumatic stress syndrome among persons involved in nine different stressor events: combat in the Vietnam War; rape; serious life-threatening events; divorce; the death of a significant other; critical, near fatal illness of a significant other; family trauma; multiple traumatic events; and no stressful event. To assess the severity of the symptoms which define post-traumatic stress disorder (PTSD), the Impact of Event Scale, the Beck Depression Inventory, the Stress Assessment Scale for PTSD from the Vietnam Era Stress Inventory (Wilson & Krauss, 1980) and the Sensation Seeking Scale were administered to the participants (N=409). A person by situation conceptual model of PTSD was presented from which two major hypotheses were tested. As predicted from the model, the degree of loss of a significant other and life-threat were predictive of syndrome-specific symptoms of PTSD. The results of the study strongly support the heuristic value of an interactionist model of PTSD.

Introduction

The purpose of the present paper is to develop a conceptual framework for analyzing post-traumatic stress disorder (PTSD) in survivor groups and to examine empirically the nature and severity of this stress response syndrome among persons exposed to nine different stressful life events. The need for a comparative analysis of PTSD among different populations of survivors of unusually stressful life-events stems from a number of theoretical and clinical sources. First, PTSD is now recognized as a distinct mental disorder with explicit diagnostic criteria presented in DSM-III of the American Psychiatric Association (1980). Second, despite the new diagnostic category for the stress syndrome, the phenomena of prolonged stress reactions to catastrophically stressful events has been documented for many decades in medical reports and the psychiatric literature (e.g., Lifton, 1983). Third, there is a growing body of empirical research which has begun to identify the antecedent stressor variables that best predict PTSD and its severity in different survivor populations (c.f. Gleser, Green, Winget, 1981; Wilson & Krauss, in press; Figley and Leventman, 1980, Wilson and Zigelbaum, 1983). These studies suggest that it is important to construct valid measures of the syndrome in order to obtain precise predictions of the onset, duration, and severity of stress disorders and levels of impairment. Fourth, although there is a core set of features which characterize PTSD, it is likely that the syndrome may vary among survivors depending on predispositional variables, the nature of the trauma, and the recovery environment to which the survivor returns (Green, Wilson, and Lindy, 1984). Thus, a comparative analysis of PTSD among survivors of different stressor events is heuristically important since it facilitates an understanding of the dynamic mechanisms which underlie PTSD and its idiosyncratic expression in groups or individuals exposed to qualitatively different life-events.

In recent years attempts have been made to develop theoretical models of stress response syndromes and the patterns of adaptation that individuals make to extraordinarily stressful life-events (e.g., Horowitz, 1976, 1979). In this vein, Green, et al. (1984) recently have constructed a conceptual model by which to understand PTSD

in different survivor groups. Building upon the seminal work of Horowitz (1976, 1979) they propose that it is necessary to consider how dispositional variables (e.g., personality traits, pre-morbid psychopathology, learned ego-defenses, etc.) and situational variables co-determine the specific way in which the trauma is processed cognitively by the survivor. Thus, in order to predict the nature of psychological adaptation to a traumatic event (healthy or pathological) it is necessary to attempt to specify how personological variables interact with situational-stressor variables to produced syndrome-specific symptom clusters. Obviously a full discussion of a person by situation interactional analysis of stress syndromes is well beyond the scope of this paper. However, for the purpose of this study a theoretical perspective of the relationship between personality and stressor variables and the development of post-traumatic stress syndromes is relevant to the hypotheses being tested.

Theoretical Overview and Review of the Literature The Effects of Stressor Variables on Core Personality Processes

In order to understand the different forms of human adaptation to stressful life-events it is necessary to consider how personality processes moderate the perception, evaluation, and cognitive-processing of the stressor experience. Clearly, not all persons respond to stressor events in a similar manner, a fact which underscores the need to assess how individual difference variables influence post-trauma adaptation. Thus, it is relevant to this inquiry to present an abbreviated conceptual analysis of the possible role that personality variables play in the development of post-traumatic stress syndromes.

Table 1 presents a broad theoretical overview of the effects of stressor variables on core personality processes and the formation of the symptoms that define PTSD. This table is not intended to be a comprehensive analysis of the personological determinants of PTSD. Rather, the goal is to develop a useful way of thinking about the effects of stressor events on some of the core processes of personality functioning. In constructing the table we have selected for discussion those theorists whos work seems most directly applicable to the analysis of PTSD as well as other psychosocial effects of unusually stressful life-events. Thus,

these theories include: (1) epigenetic psychosocial development (Erikson, 1982), (2) psychoformative processes (Lifton, 1983), (3) learned helplessness (Seligman and Garber, 1981), and (4) cognitive processing of trauma (Horowitz, 1979).

Psychosocial Development: The Application of Eriksonian Theory to PTSD

In an attempt to construct a broad theoretical basis of psychic trauma in Vietnam veterans, Wilson (1978, 1980) presented a detailed analysis of stress-producing experiences and their effects on psychosocial development from Erikson's (1968) perspective of ego-development. Wilson (1980) suggested that a stressor event could impact on psychosocial development in a variety of ways that could lead to PTSD. First, the stress producing event could intensify or aggravate the predominant stage of ego development. Thus, the effect produced in terms of PTSD might vary greatly as a function of the stage-specific qualities of personality development. For example, a person in the process of identity formation who experiences a life-threatening event might develop acute or chronic identity diffusion (see Koenig, 1964, for an example in Nazi persecution victims). As an outcome, then, such a person may manifest ideological confusion, an inability to make commitments to self and others, bisexual confusion, low self-esteem and a loss of a sense of continuity and self-sameness. In extreme cases, identity diffusion might lead to the formation of PTSD and a borderline or Schizotypal personality disorder if the disturbance in identity is the predominant clinical symptom.

Second, the stress producing event might cause to retrogression in ego development by taxing ego-defenses beyond their limits. As a consequence, the survivor may show strong regressive tendencies that are stage specific in nature. For example, a trauma could produce profound mistrust, a loss of hope and will, feelings of abandonment, a heightened sense of vulnerability and the need to be nurtured by a protective person. While it is probable that retrogression occurs to some degree in all cases of PTSD, it is likely to be most pronounced and debilitating when there exists either pre-morbid pathology or a set of specific personal vulnerabilities that resulted from childhood development.

Third, the stress-producing event may cause acceleration in ego development. Wilson (1980) has indicated that although this is an unusual response to a traumatic event, it is nevertheless one which seems to strengthen the survivor by creating more ego-strength through the premature emergence of qualities of awareness centered around the issues of generativity and integrity (Wilson, 1980). In this case the survivor is likely to face the paradoxical task of coping with PTSD while experiencing positive changes in ego-identity, values and beliefs. Based on interview data, Wilson (1980) found that the psychosocially accelerated person becomes more ethical, altruistic, humanitarian and self-actualizing in behavior.

In summary, a traumatic life-event can affect psychosocial development in different ways depending on the predominant stage of ego-development, the level of personality integration and identity formation and the severity of the trauma itself. Thus, in terms of PTSD, Table 1 indicates that the effects of the stressor on psychosocial development can produce mistrust, a sense of isolation, time confusion, guilt, loss of intimacy, identity diffusion, despair, hopelessness, ideological changes, decreased autonomy and a lack of goal-directedness. These symptoms would comprise part of the stress syndrome as an overlay to the process of re-experiencing the original event. Table 1 also indicates which of the diagnostic criteria in DSM-III are met by this theoretical derivation.

Psychoformative Processes

In a modification of Erikson (1968), Lifton (1983) has attempted to construct a general psychological theory that moves beyond the limitations of instinct and epigenetic models of personality to one that places emphasis on the self as an active constructor of reality. Briefly, psychoformative theory concerns the ways in which persons conceptualize and symbolize their experiences in life. As an active process, individuals evolve images and forms of their experiences which contribute to a sense of continuity or discontinuity in the self structure. Specifically, Lifton (1976) proposes that the major focus of experience can be conceptualized as the paradigms of connection versus separation; movement versus stasis and integrity versus disintegration. Thus, when

individuals feel centered in their life experiences, they have a symbolic or actual sense of connection (to people, ideas, space, time), movement (growth, aliveness, creativity, etc.) and integrity (psychic wholeness, physical well-being, egovitality). However, immersion in the death experience can radically alter an individual's sense of continuity and self-sameness and lead to traumatic survivor syndromes. Thus, exposure to death, dying, destruction and the loss of social order may cause the survivor to experience a loss of continuity in psychoformative processes. In many different ways the individual may struggle with a sense of separation, stasis, isolation, and a "broken connection" (Lifton, 1983) with life as previously experienced. Immersion in the death experience may also lead to a feeling of physical and psychological disintegration—that the self has fragmented into emotional shards that no longer cohere in a meaningful or ordered structure. Thus, in response to these massive changes in psychoformative processes the survivor may become psychically numb during the initial stage of adaptation following the trauma. This blunted emotional responsiveness is often coupled with survivor guilt, the reoccurrence of the death imprint in consciousness, anger, rage, depression (the loss of self, others, and self-control), and the task of reformulating the experience so as to develop a new sense of the self as alive and growing again. As Table 1 illustrates, psychoformative theory provides a conceptual basis for understanding all aspects of PTSD.

Learned Helplessness

Learned helplessness (Seligman and Garber, 1981) occurs when a person is subject to an environment in which there are aversive consequences of an uncontrollable and unpredictable nature. Clearly, learned helplessness is often a core element of PTSD since the survivor of a traumatic event develops cognitions that he/she is a pawn whose destiny is shaped by external forces over which there is little or no control. This external locus of attribution in causality may then produce motivational deficits in the form of a loss of ability to initiate adaptive responses. When this occurs, the survivor typically begins to see the world as a hostile and threatening place which can inflict more pain and suffering in their life. Ultimately, the eventual outcome of learned helplessness is depression, withdrawal from the field,

isolation, and chronic anxiety associated with the fear that the trauma will reoccur (Seligman, 1974). If prolonged, this psychological state of being is very likely to lead to illness of a somatoform nature. Table 1 indicates that these symptoms are associated with numbing and changes in adaptive behavior.

Cognitive Processing of Trauma: Horowitz Information Processing Model

In recent years the seminal research of Horowitz (1976, 1979) has attempted to explain post-traumatic stress syndromes from a cognitive model of information processing. This approach assumes a completion tendency in which "the mind continues to process important new information until the situation or the models change, and reality and models reach accord (1979, p. 249)." Thus, until a traumatic life-event can be successfully integrated into the existing self structure, the psychological elements of the event remain in memory and therefore as determinants of intrusive imagery or other stress response symptoms. Further, Horowitz (1979) has found that survivors typically progress through a well-defined sequence of stages when assimilating the trauma: outcry, avoidance, intrusive imagery and re-experience of the event, transition, and integration. However, depending upon the severity of the trauma and the personality of the victim, the survivor may experience a cyclical alternation between the avoidance and intrusion stages. In the process, survivors report feelings of depression, anger, episodic rage, and unconscious re-enactment of the event. Thus, Horowitz (1979) has developed a general model of post-traumatic stress disorder as it affects survivors of different stressor events.

For purposes of a summary, Table 1 illustrates the proposed relationship between stressful life-events and the dimensions of personality most likely to be affected by the trauma as derived from the four theoretical positions discussed above. The table also indicates the hypothesized dimensions of PTSD related to core personality processes and to which of the diagnostic criteria in DSM-III they conform.

Insert Table 1 about here

The Relation of Stressor Variables to PTSD

A person by situation model of PTSD assumes that there is a predictable relation between personality and situational variables in determining the syndrome-specific dynamics of post-trauma adaptation. Conceptually, then, three major effects may be discerned regarding post-traumatic adaptation. First, dispositional or pre-morbid variables may account for significant degrees of variance in the determination of post-trauma adaptation. For example, individuals with a pre-morbid personality disorder might manifest more psychopathology after a stressful life-event than matched control subjects with no pre-morbidity. Second, the observed pattern of post-trauma adaptation may be explained by the interaction effect of personological and situational variables. (Aronoff and Wilson, 1984). For example, persons with a strong sense of morality and ethics might develop strong survivor guilt as a result of involvement in a situation where they fail to act prosocially to help save the life of a victim in a flood. Third, the nature of the stressor event itself may constitute the major determinant of the observed pattern of adaptation to the trauma. For example, Lifton (1967) reports that obsessional fears of "atomic-disease poisoning" were universal symptoms among the survivors of the atomic bomb at Hiroshima.

Dimensions of Stressor Variables

All traumas are not alike nor are they assimilated identically by individual victims or survivors. However, a person-by-situation model of post-traumatic stress syndrome necessitates that the stressor dimensions which impact on the person be specified as precisely as possible. Thus, if relatively well-defined stressor variables can be identified, then it becomes possible to examine their effects across different traumatic events. In recent years, Gleser, Green and Winget (1981) and Wilson, Smith and Johnson (1984) have made extensive discussions of different stressor variables which include: (1) degree of life-threat; (2) degree of bereavement; (3) speed of onset; (4) duration

of trauma; (5) degree of displacement in home community; (6) potential for reoccurrence; (7) degree of exposure to death, dying and destruction; (8) degree of moral conflict inherent in situation; (9) role of person in trauma; and (10) proportion of community affected by trauma. Clearly, of course, many stressful life-events contain one or more of these stressor dimensions. Thus, the task of assimilating the trauma and the onset of post-traumatic symptoms clusters probably varies as a function of the interaction of dispositional and situational-stressor variables.

A Study of Survivor Groups

We have presented a conceptual framework of PTSD which explicates some of the ways that stressor events affect personality and the development of stress response syndromes. The purpose of this paper is to undertake a pilot study which presents a comparative, empirical analysis of the nature and severity of PTSD among individuals who have been involved in different stressful life-events. As such, this research specifically compares stress response symptoms among the survivor groups which include: (1) Vietnam combat veterans, (2) victims of rape, battering, and child abuse, (3) victims of serious life-threats which include auto accidents, armed robbery, natural disasters, (4) persons divorced, (5) serious, near-fatal illness of a loved one, (6) family trauma, including the effects of alcoholism, mental illness, family break-up, (7) the death of a significant other, (8) victims of multiple traumas, and (9) a control group made up of persons who did not report experiencing stressful life-events (see Method section). An additional purpose of this study was to explore the effects of threat and loss of significant others, different stressor variables, or the specific manifestation of the symptoms clusters which define PTSD.

METHOD

Subjects

The combat veterans (N=74) were volunteers who belonged to the Northern Ohio Veterans Association. All subjects had verified combat experience and ranged in age from 31 to 41 with a mean of 35 years. For purposes of statistical comparison, their scores on the assessment

instruments were compared with those of a national sample obtained by Wilson and Krauss (in press) of combat veterans participating in the VA's readjustment counseling program. Statistical analyses indicated that the scores for combat subjects in this study did not differ significantly from those obtained in the national sample and thus appear representative of the larger population of Vietnam combat veterans.

The non-veteran subjects (N=335) who completed the assessment instruments were drawn from several sources. Approximately 85% were undergraduate students who were attending an urban, state-supported university. These subjects ranged in age from 18 to 50 years with a mean of 21 years. The other subjects were volunteers who worked at centers of abortion, wife-battering, or in other health care agencies located in Cleveland, Ohio. They range in age from 21 to 33 years with a mean of 22. In all, 409 subjects (185 females, 214 males) successfully completed the questionnaire. Data on gender was missing for 10 non-veteran subjects.

Assessment Questionnaires

To assess the symptoms of PTSD and other dimensions of personality, the following questionnaires were given to the subjects: The Impact of Events Scale (IES) by Horowitz, Wilner, and Alvarez (1979), the Beck Depression Inventory by Beck (1961), the Stress Assessment Questionnaire for PTSD from the Vietnam Era Stress Inventory (VESI) by Wilson and Krauss (1980), and the Sensation Seeking Scale (SSS) by Zuckerman (1979).

Identification of Stressor Groups

In an adaptation of the IES (Horowitz et al., 1979), each of the subjects was asked to write down the date and nature of any unusually stressful events that had occurred in their lives.

All events were independently coded by two judges who subsequently agreed on a nine-category system of classification with the following operational definitions: (1) Vietnam Combat Veteran (N=74). All veterans had validated

combat experience. (2) No Event (N=93). Included here were control group subjects who indicated that they had not experienced any unusually stressful life events. (3) Death of Significant Other (N=96). This category included subjects who had experienced the death of family members or friends, abortion or miscarriage, or the suicide of a friend or significant other. (4) Rape/Battering (N=9). The subjects were all women who had experienced rape, battering, or severe physical or sexual abuse as children. (5) Divorcee (N=13). This category was defined as the termination of a marriage or a long-term, primary love relationship. (6) Critical Illness (N=19). The events defining this category include the threatened loss of family members or friends due to serious or critical illness, accidents, or attempted suicide. (7) Life-threat (N=62). Events include serious auto accidents, robbery at gunpoint, naturalistic disasters, fires, explosions, near drowning, and serious medical problems. (8) Family Trauma (N=16). This category includes family alcoholism, divorce, mental illness, and serious legal problems. (9) Multiple Stressor Events (N=27). This category includes persons who had experienced more than one of the stressor events listed above. A total of 58 different stressor events were listed by these subjects and include: 20 deaths, 10 rapes, 10 batterings, 6 divorces, 7 serious illnesses of significant others, 10 serious life-threats, and 5 family traumas.

Results

Two major analyses were performed on the data. First, the mean scores on each of the scales assessing PTSD were compared for each of the stressor categories. Although this analysis does not control for the time-from-event effect, it does provide a general indication of the overall severity of PTSD-related symptoms that are heuristically valuable in terms of the person-by-situation theoretical model presented in this paper. Second, two stressor variables thought to be importantly associated with the onset of PTSD, i.e., degree of life-threat or loss of significant other, will be examined.

Threat. An a priori basis was used to group together into a conceptual variable subjects who had experienced a life-threatening, stressful event. Members of

stressor categories which, by definition, involved a life-threatening event comprised the conceptual variable Threat. Members of the rape, life-threat and combat categories define this variable. In contrast, the No Threat group contained the other stressor categories except for the No Event category. This procedure resulted in three new stress categories whose scores on the dimension of PTSD could be compared.

Loss. Similarly, the effects of loss of a significant other comprised the second conceptual variable and included members of the combat veteran, divorce and death categories. The No Loss stressor cohort included the other stressor categories except for the No Event category.

In order to avoid violating the assumptions of parametric statistics, individuals who had experienced multiple stressful life-events were excluded from the Loss and Threat statistical analyses.

Comparison of PTSD Dimensions Across the Stressor Categories

Table 2 shows the mean scores on the VESI, SSS, BDI, and the IES for the different stressor categories. Inspection of the table indicates that the scores for Vietnam Combat Veterans are two to three times higher than the other stressor groups for nearly all of the dimensions of PTSD.

Insert Table 2 about here

Multi-variate analyses of variance (MANOVAs) were performed to control for alpha levels resulting from a large number of statistical tests. As suggested by Spector (1977), significant MANOVAs were followed up by separate univariate ANOVAs for each variable in the set. As Table 3 indicates, tests of simple effects (Winer, 1971) showed that the stressor categories were significantly different from each other on all of the scales with the exception of the SSS Disinhibition scale ($F_s > 20.60$, $p < .05$). To test for differences in the mean scores on the PTSD dimension across

stressor categories, the Newman-Keuls procedure of ranked means comparison was used for unequal sample sizes (Winer, 1971). Table 3 indicates a summary of the significant differences found in the mean scores of the different stressor categories. By examining the mean scores shown in Table 2, it can be seen that Vietnam combat veterans have significantly higher scores on nearly all of the dimensions of PTSD being assessed with the different scales. The Newman-Keuls analysis indicated that the combat veteran scores on the VESI scales and the BDI are significantly higher than those of all other stressor categories.

The combat veterans and individuals who had experienced multiple trauma yielded significantly higher scores on the SSS experience-seeking subscale than those in the No Event category. In addition, the Combat Veterans, Rape, Divorce, Death, and Multiple Trauma categories showed significantly higher mean scores than the Life-Threat cohort. Scores for the combat veterans also were significantly higher than those of the Death, Serious Illness, Family Trauma, and Multiple Trauma on the Intrusion subscale. On the Avoidance subscale, Family Trauma scores were also significantly higher than Life-Threat scores and on the IES total subscale, both Family Trauma and Serious Illness scores were higher than those of Life-Threat.

Insert Table 3 about here

Comparison of Stressor Categories Involving a Loss of a Significant Other versus No Loss or No Event.

Table 4 shows the mean scores on the dimensions of PTSD for the stressor categories involving a loss of significant others versus those with no loss or no stressor event. Inspection of the table indicates a clear linear trend in the mean scores: those stressor categories involving the loss of a significant other person have higher scores on the PTSD scales than the No Loss stressor category which, in turn, have higher scores than the No Event group.

Insert Table 4 about here

Table 5 indicates the results of the one-way ANOVA for the stressor groups experiencing different levels of loss. Tests of simple effects revealed that the three stressor categories were significantly different on all of the assessment scales except for the disinhibition and boredom susceptibility subscales of the SSS, $F_s > 3.74$, $p < .05$). The results of the Newman-Keuls mean comparison test produced a large number of significant differences ($p < .05$) between the Loss groups which are summarized in Table 6. First, the stressor category experiencing a Loss of a loved one is significantly different from the No Event group on every scale except the SSS subscales disinhibition and boredom susceptibility. Second, the Loss group is significantly different from the No Loss category on all the variable except the VESI rage scale and the SSS subscale adventure seeking and experience seeking. Additionally, the No Loss stressor category manifests more PTSD than the No Event group as assessed by the IES scales and the SSS adventure seeking scale. Thus, in comparing the three stressor categories, the results indicate, as expected, that the greater the degree of loss of a significant other, the more severe are the syndrome-specific symptoms of PTSD.

Insert Table 5 about here

Table 6 shows that the results of the ANOVA for the stressor categories exposed to different degrees of Threat. As expected, the high Threat stressor category shows higher mean PTSD scores than the No Threat category which has, in turn, higher scores than the No Event category.

Insert Table 6 about here

Table 7 indicates the results of the ANOVA simple effects and Newman-Keuls tests. As predicted, the ANOVA reveals significant differences between the stressor categories $F_s > 4.06$, $p < .05$. Further, the Newman-Keuls comparison shows that the Threat category is significantly different from the No Threat and No Event categories on all

of the VESI dimensions of PTSD. In addition, the Threat category differs significantly from the No Event category on the SSS experience seeking subscale, the BDI, and the IES. It is also significantly different from No Threat on the SSS adventure seeking and boredom susceptibility subscales as well as the BDI. Finally, on the SSS adventure seeking and experience seeking subscales, the BDI, and the IES scales, the No Threat category showed significant differences from the No Event category.

Insert Table 7 about here

Discussion

The results of this preliminary study comparing stress response syndromes in different survivor groups contains within it a number of strengths and limitations. As an exploratory study, the present research is limited in its external validity due to the lack of a random sample, time-since-event effect, and the disparate ages of the subjects in the comparison groups. Despite these methodological problems the overall configuration of the research findings lends support to the person-by-situation conceptual framework presented in this paper as summarized in Table 1. In particular, the effects of two stressor variables, Threat and Loss, on the severity of the symptoms which define PTSD were examined. Overall, the results of the analyses provided strong support for the hypothesis that these variables are linked to the mechanisms which influence post-traumatic adaptive behavior. Individuals who had experienced more life-threat or loss in stressful situations consistently scored higher on the symptom clusters which define PTSD.

First, it is reasonable to expect that the greater the degree of loss or life-threat, the more difficult will be the survivor's task of assimilating elements of the stressful life-event into the self-structure. In this study, Vietnam combat veterans constitute a group of survivors who were exposed to high levels of life-threat and the loss of significant others (e.g., Figley, 1978; Wilson, 1980). Thus, in comparison to the other stressor categories, Vietnam veterans did manifest more severe PTSD as indicated by the

scores on the assessment scales. Taken as a set, the men in this sample appear depressed, troubled by intrusive imagery, stigmatized, lack stable intimate relationships, and are prone to physical symptoms. Furthermore, their scores on the VESI, BDI and IES depression and intrusion scales are remarkably higher than those for the other stressor categories. Since combat in Vietnam nearly always involved the combatant in guerrilla warfare which exposed the soldier to death, dying, destruction, and frequent life-threat, these results may indicate that today these men suffer from impacted grief (Shatan, 1974), feelings of loss of self and former comrades, despair, and a sense of being trapped in the trauma without a tangible sense of a productive future filled with hope and meaning. By way of comparison none of the other stressor categories manifest the severity of depression or total PTSD as did the Vietnam combat veterans. Interestingly, however, the small sample of rape victims exhibit the next highest level of PTSD symptoms across the different scales despite the lack of statistical significance. Indeed, their level of PTSD, as assessed by the IES, is equal to that of the combat veterans despite lower scores on the other scales. Thus, looking at the mean scores across the stressor categories there is enough evidence to suggest that the severity of PTSD, is, in part, a function of the severity of threat and loss.

The results summarized in Table 3 bolster the hypothesis that loss of a loved one and threat are among the central stressor variables associated with post-trauma problems of adaptation. Indeed, victims of rape, multiple trauma, the death of a loved one, family trauma, and divorce show significantly more total PTSD as assessed by the IES scale than do persons who report no event or a life-threatening event. Clearly, the interpretation of these data illustrates the need to specify how the nature and complexity of the stressor event impacts on the unique personality of the survivor. In general, however, these results might be construed as suggesting that the more severe and complex the stressful life-event, the greater the number of stressor variables, the more likely it is that the victim-survivor will develop symptoms of PTSD.

The results of the analysis for the effects of a loss of a significant other through death or the termination of

a love relationship provide further support to the argument made above. As Tables 4 and 5 summarize, those individuals experiencing the loss of a loved one show more severe symptoms of PTSD, as indicated by the mean scale scores on all variables except the SSS subscales disinhibition and boredom susceptibility than do the No Loss or No Event stressor categories. Even more impressive is the finding that the No Loss Category, which contains persons exposed to trauma, does show more PTSD on the IES scales than the No Event stressor category. Clearly, if the relationship between stressful life-experiences to PTSD were essentially random, one would not expect to find the obtained pattern of results. Further, since depression following trauma is thought to be associated with the loss of an object of love, affection and value (Freud, 1957; Jacobson, 1974) the hypothesis that the stressor categories with greater degrees of loss would have significantly higher PTSD as indicated by the mean scores on the VESI, BDI and IES depression scales gains support. As Table 4 shows, this is indeed the case in as much as the Loss category is significantly different from the No Event and No Loss categories on all three measures of depression or tendencies towards denial and avoidance of thoughts connected to the trauma. This same pattern of results tends to hold across the comparisons of the other stressor categories. Moreover, as Table 4 indicates, the VESI and IES scales indicate that there is a linear relationship between the degree of loss and total PTSD.

The results of the analysis for the effects of threat on adaptive functioning support the significance of this conceptual variable in the development of PTSD. Once again the data summarized in Tables 6 and 7 suggest that the greater the degree of threat, the more severe is the PTSD. In particular, the tables show that the Threat category has particularly high mean scores on depression, stigmatization, and intrusive imagery ($r^2 = .19$ to $.32$). Thus, the impact of a life-threatening event seems likely to be associated with re-occurring images and thoughts of the trauma, feelings of helplessness and depression, and a tendency to be self-conscious as a stigmatized victim. Thus, whether one is a victim of rape, a combat veteran, or involved in a naturalistic disaster, the survivor may feel acutely aware of a change in personal identity, social status, or sense of continuity and centeredness (Lifton, 1976). This severe stigmatization may

also be an expression of the survivor's feeling that they did not "ask for what happened" yet realize implicitly the "just world" phenomena (Lerner, 1974) that those who suffer "bad fate" somehow deserve it. If this is so, then the victim of a life-threatening event may be caught in a no-win cycle of events. To talk about the powerful and overwhelming trauma means the risk of further stigmatization; the failure to discuss the traumatic episode increases the need for defensive avoidance and thus the increased probability of depression alternating with cycles of intrusive imagery and other symptoms of PTSD (Horowitz, 1979).

In conclusion, the present study has suggested that a comparative analysis of PTSD among different stressor categories yields important information on the types of events that produce syndrome-specific symptom clusters. Further, the results of this study strongly suggest that the attempt to understand and predict PTSD from a person by situation interactionist model of behavior has heuristic value. Consistent with others (e.g., Green et al., 1984), we believe that such an approach offers promise: to move beyond the traditional assumptions that suggest that PTSD is either caused by pre-morbid character pathology or simply a reactive process to catastrophic stress. It is undoubtedly the case that some persons are more vulnerable to stress than others and that some stressors will produce stress syndromes in everyone (e.g., Hiroshima). The scientific explanation of PTSD, however, will ultimately necessitate complex theoretical predictions of how persons, situations, and stressor events jointly produce the adaptive syndromes which define post-traumatic personality processes.

Reference Note

More specifically, the question said: Many people experience unusually stressful events from time to time in their lives. This includes such things as car accidents, rape, death of a close family member, assault, floods, tornadoes, fires, airplane accidents, near drowning, witnessing a life-threatening event, military combat, incarceration, child abuse (sexual or physical), wife-beating, sexual assault, robbery, or being with someone who is critically ill, etc.) If you have had an experience similar to the ones described above, please indicate the approximate date/year _____ that you experienced _____ (stressful life-event).

Below is a list of comments made by people after stressful life events. Please read each item and indicate how frequently these comments were true for your DURING THE PAST SEVEN (7) DAYS by marking the appropriate letter on the computer answer sheet. If they did not occur during that time, please mark the "Not at all" answer.

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Table 1

The Effect of Stressor Events on Core Personality Processes: Personological Variables in PTSD

Core Personality Processes: Dimension and Theorist	Dimension of Personality Affected by Stressor Event
Stages of Psychosocial Development (Erik Erikson, 1982)	<ol style="list-style-type: none"> 1. Stage-specific impact on psychosocial development 2. Age-related influences on emergent ego-strengths and integrative capacities
Psychoformative Processes (R.J. Lifton, 1980)	<ol style="list-style-type: none"> 1. De-centering and ungrounding of self-structure in modes of psychological experience
Learned Helplessness (M.E.P. Seligman, 1974)	<ol style="list-style-type: none"> 1. Cognitive: External locus of attribution for causality 2. Motivational: Loss of response initiative; loss of goal-directed behavior
Cognitive Processing of Trauma (M. Horowitz, 1979)	<ol style="list-style-type: none"> 1. Entire self-structure: cognitive process of assimilating trauma into self

Source: John Wilson

PTSD Symptom Related to Personality Process	DSM-III Criteria
Mistrust, isolation, time confusion, identity diffusion, loss of intimacy, decreased autonomy, loss of industry, death anxiety, despair, loss of meaning, ideological changes.	Numbing and changes in adaptive behavior
Psychic numbing, survivor guilt, rage, depression, loss of continuity in self-structure, symbolic death, search for meaning, denial, loss of intimacy, death guilt, survivor guilt.	Re-experience, numbing, changes in adaptive behavior
Depression, helplessness, intense anxiety somatic processes, withdrawal, isolation, despair, negative view of world, fear of repetition.	Re-experience, numbing, changes in adaptive behavior
Avoidance, denial, dissociation, anxiety, nightmares, intrusive imagery, cognitive constriction, somatic complaints, fear of repetition, rage at source, etc.	Re-experience, numbing, changes in adaptive behavior

Table 2

Mean scores on PTSD dimensions classified by Stressful Life Event

PTSD DIMENSION	STRESSOR CATEGORY			
	<u>VIETNAM COMBAT VETERANS</u>			
	National Sample N-114	Northeast Ohio N-74	No Event N-93	Death N-96
<u>YESI</u>				
Depression	121.6	107.58	51.56	58.61
Physical Symptom	64.8	60.19	35.85	38.74
Stigmatization	42.9	41.69	5.06	5.50
Sensation Seeking	23.4	20.64	10.58	11.38
Rage/Anger	16.8	17.81	10.47	11.44
Intrusive Imagery	27.70	27.55	7.29	7.90
Intimacy Conflict	16.80	16.90	6.71	7.48
Total PTSD	310.9	292.37	127.50	151.05
<u>SENSATION SEEKING SCALE-SSS</u>				
Adventure Seeking		6.40	6.12	7.42
Experience Seeking	Data Not Available	5.91	4.13	4.58
Disinhibition	(N/A)	5.00	4.62	4.76
Boredom Susceptibility		3.55	2.83	2.59
<u>BECK DEPRESSION INVENTORY</u>				
Depression	(N/A)	22.22	5.98	8.58
<u>IMPACT OF EVENT SCALE-IES</u>				
Intrusion	(N/A)	20.32	7.99	19.31
Avoidance		20.42	9.12	16.93
Total		40.74	17.11	32.24

Rape	Divorce	Serious Illness	Life-Threat	Family Trauma	Multiple
N-9	N-13	N-19	N-62	N-16	N-27
65.11	64.46	60.84	54.00	60.12	63.52
47.33	42.08	40.74	37.22	42.31	44.95
5.33	6.08	5.47	5.02	6.06	7.11
11.78	12.46	10.79	11.39	12.00	11.59
12.67	13.00	11.53	11.18	12.50	12.04
7.33	8.38	7.21	7.85	7.19	8.41
9.00	9.46	8.89	6.92	8.12	7.81
158.58	155.92	145.47	133.58	148.31	154.81
7.23	7.46	7.00	6.95	6.94	6.22
4.56	4.23	5.05	4.22	5.38	5.56
3.67	3.85	4.63	4.50	3.50	3.74
3.56	3.00	2.32	2.89	2.88	2.89
10.00	10.62	9.32	6.34	8.81	12.04
20.00	19.31	14.79	11.58	14.88	17.12
20.78	19.92	15.58	12.87	17.75	18.78
40.78	39.23	30.37	24.45	32.12	35.38

NOTE: Mutually exclusive group membership. No subject who experienced multiple events has been included in any primary stressor category.

Table 3

Summary of ANOVA for stressor categories classified by PTSD dimension
Analysis of Simple Effects and Newman-Keuls Multiple Mean Comparison

Dimension	F-value	r ²	<u>Newman-Keuls Mean Comparisons</u>	
			Stressor Categories significantly different from other Stressor Categories	Stressor Categories
<u>PTSD</u>				
Depression	49.09****	.44	Combat veterans	All stressor categories**
Physical symptoms	24.75****	.28	Combat veterans	All stressor categories**
Stigmatization	287.76****	.82	Combat veterans	All stressor categories**
Sensation Seeking	32.41****	.34	Combat veterans	All stressor categories**
Rage/Anger	19.20****	.23	Combat veterans	All stressor categories**
Intrusive Imagery	145.94****	.70	Combat veterans	All stressor categories**
Intimacy Conflict	74.21****	.54	Combat veterans	All stressor categories**
Total PTSD	94.78****	.60	Combat veterans	All stressor categories**
<u>Sensation Seeking Scale</u>				
Adventure Seeking	1.88+	.03	---	---
Experience Seeking	3.90***	.06	Combat veterans/multiple trauma	No Event*
Disinhibition	.74	.01	---	---
Boredom Susceptibility	1.98+	.03	---	---
<u>Beck Depression Inventory</u>				
Depression	31.88****	.33	Combat veterans/multiple trauma	All stressor categories** Life Threat*, No Event*

Impact of Event Scale-IES

Intrusion	27.40****	.30	Combat veterans	No Event**, Death**, Life-Threat**, Serious Illness**, Family Trauma**, Multiple Trauma**
			Rape, Divorce, Multiple Trauma, Death	No Event**, Life-Threat**
			Family Trauma, serious Illness, Life-Threat	No Event**
Avoidance	20.60****	.24	Rape, Combat Veterans,	No Event**, Life-Threat**
			Divorce, Multiple Trauma	
			Family Trauma, Death	No Event**, Life-Threat**
			Serious Illness, Life-Threat	No Event**
Total	36.51****	42	Rape, Combat veterans, Divorce	Life-Threat**, No Event**
			Multiple Trauma, Death	
			Family Trauma, Serious Illness	No Event**, Life-Threat*
			Life-Threat	No Event**

Note: N = 409; df = 8.400

+ p < .10; * p < .05; ** p < .01; *** p < .0005; **** p < .0001

Table 4

Mean scores on PTSD dimensions for stressor categories involving a loss of significant other versus those with no loss or no event

	Loss (Combat, Divorce, Death)
PTSD	
<u>DIMENSION</u>	n = 183
<u>VESI</u>	
Depression	78.83
Physical Symptoms	47.73
Stigmatization	20.17
Rage/Anger	14.12
Intrusive Imagery	15.88
Intimacy Conflict	11.43
Total PTSD	203.38
<u>SENSATION SEEKING</u>	
Adventure Seeking	7.01
Experience Seeking	4.94
Disinhibition	4.79
Boredom Susceptibility	3.01
<u>BECK DEPRESSION INVENTORY</u>	
Depression	14.24
<u>IMPACT OF EVENTS SCALE IES</u>	
Intrusion	17.62
Avoidance	18.55
Total	36.17

No Loss (Rape, Threat, Illness, Family Trauma)	No Event
n = 106	n = 93
57.09	51.54
39.48	35.85
5.28	5.06
11.57	10.58
7.59	7.29
7.63	6.71
140.06	127.50
6.98	6.12
4.58	4.13
4.30	4.62
2.84	2.83
7.55	5.98
13.37	7.99
14.69	9.12
28.06	17.11

Note: Subjects who experienced multiple trauma have been excluded

Table 5

Summary of significant differences between stressor categories involving a loss of significant other versus those involving No Loss or No Event

Analysis of Variance of Simple Effects and Newman-Keuls Multiple Mean Comparison Test

PTSD Dimension	F-value	r ²	Loss vs.		No Loss vs.		No Loss vs.	
			No Event	No Loss	No Loss	No Event		
<u>VEESI</u>								
Depression	39.52****	.17	**	**	**	---	---	---
Physical Symptoms	24.32****	.11	**	**	**	---	---	---
Stigmatization	55.99****	.23	**	**	**	---	---	---
Sensation Seeking	25.42****	.12	**	**	**	---	---	---
Rage/Anger	18.76****	.09	**	**	--	---	---	---
Intrusive Imagery	48.69****	.20	**	**	**	---	---	---
Intimacy Conflict	40.76****	.18	**	**	**	---	---	---
Total PTSD	45.43****	.19	**	**	**	---	---	---
<u>SENSATION SEEKING - SSS</u>								
Adventure Seeking	3.74*	.02	*	--	--	---	---	*
Experience Seeking	4.73***	.02	**	--	--	---	---	---
Disinhibition	NS							
Boredom Susceptibility	NS							
<u>BECK DEPRESSION INVENTORY</u>								
Depression	31.67****	.14	**	**	**	---	---	---
<u>IMPACT OF EVENT SCALE - IES</u>								
Intrusion	93.01	.33	**	**	**	---	---	**
Avoidance	81.24****	.30	**	**	**	---	---	**
Total	101.27****	.35	**	**	**	---	---	**

Note: df = 2,379

* = p < .05; ** = p < .01; *** = p < .005; **** = p < .0001

Table 6

Mean scores on PTSD Dimensions for stressor categories involving Life Threat versus those involving No Threat or Event

	<u>Threat</u> (Rape, Accident/ Life Threat, Vietnam Combat Veterans) n = 145	<u>No Threat</u> (Death, Divorce Illness, Family Trauma) n = 144	<u>No Event</u> n = 93
<u>VESI</u>			
Depression	82.03	59.60	51.54
Physical Symptoms	49.68	39.70	35.85
Stigmatization	23.75	5.61	5.06
Sensation Seeking	16.13	11.47	10.58
Rage	14.66	11.71	10.47
Intrusive Imagery	17.88	7.77	7.29
Intimacy Conflict	12.14	7.91	6.71
Total PTSD	216.27	143.78	127.50
<u>Sensation Seeking Scale</u>			
Adventure Seeking	6.69	7.31	6.12
Experience Seeking	4.91	4.70	4.13
Disinhibition	4.70	4.52	4.62
Boredom Susceptibility	3.27	2.62	2.83
<u>Beck Depression Inventory</u>			
Depression	14.67	8.89	5.98
<u>Impact of Event Scale (IES)</u>			
Intrusion	16.56	15.56	7.99
Avoidance	17.21	17.06	9.12
Total	33.78	32.61	17.11

Note: Individuals who have experienced multiple stressful life events have been excluded.

1998 /
 Summary of significant differences between stressor categories involving life Threat versus those involving No Threat or No Event. Analysis of Variance of Simple Effects and Newman-Kuels Multiple Mean Comparison Test.

PTSD Dimension	F-value	F ²	Newman-Kuels Mean Comparison			
			Threat vs.		No Threat vs.	
			Threat	No Threat	Threat	No Threat
<u>VRSI</u>						
Depression	43.40****	.19	**	**	*	*
Physical Symptoms	31.69****	.14	**	**	*	*
Stigmatization	90.28****	.32	**	**	*	*
Rage/Anger	22.89****	.11	**	**	---	---
Intrusive Imagery	76.64****	.29	**	**	*	---
Intimacy Conflict	50.28****	.21	**	**	*	*
Total PTSD	59.65****	.24	**	**	*	*
<u>SENSATION SEEKING SCALE-8SS</u>						
Adventure Seeking	5.71****	.03	---	*	*	**
Experience Seeking	4.06*	.02	*	---	*	*
Disinhibition	NS	---	---	---	---	---
Boredom Susceptibility	4.16*	.02	---	*	*	*
<u>BECK DEPRESSION INVENTORY</u>						
Depression	27.72****	.13	**	**	*	*
<u>IMPACT OF EVENT SCALE-IES</u>						
Intrusion	68.13****	.26	**	---	---	**
Avoidance	61.74****	.24	**	---	---	**
Total	74.33****	.28	**	---	---	**

Note: df = 2,379

* = p < .05; ** = p < .01; *** = p < .005; **** = p < .0001