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DEFENSIVENESS, LEVEL OF PSYCHOLOGICAL DISTRESS, AND HELP-SEEKING
BEHAVIOR AMONG VICTIMS OF A MAJOR NATURAL DISASTER

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Abstract

Thirty-nine victims of a tornado (16 males and 23 females) were interviewed from two proximal communities in central-east Ohio and central-west Pennsylvania within six weeks following the disaster. Measures of defensiveness, self-reports of post-disaster psychological distress, and help-seeking behavior were used to test a help-seeking model based primarily on laboratory research. Causal relationships posited in the help-seeking model were not supported, although, level of defensiveness and levels of self-reported symptomatology were found to be significant, independent predictors of these victims' tendency to seek aid for psychological distress when confounds between measures of defensiveness and reported distress levels were controlled.

**Defensiveness, Level of Psychological Distress and Help-Seeking
Behavior Among Victims of a Major Natural Disaster**

The psychological and physical problems following a major natural disaster are often traumatic. Reactions to such events may include shock, anxiety, sleep disturbance, impaired interpersonal relationships and guilt (Hartsough, 1982; Ollendick & Hoffman, 1982; Chamberlin, 1980). There are also long-term medical and emotional problems for disaster victims. According to Cohen (1983), approximately 10% of all disaster victims will have some problems associated with the event for two to four years. Although mental health intervention programs and informal sources of help serve to alleviate short term distress and help prevent the development of long term illnesses (Gist & Stoltz, 1982, Butcher, 1980), evidence indicates that such sources of aid are grossly underutilized by disaster victims (Lindy, Grace & Green, 1981; Taylor, Ross & Quarantelli, 1976).

Why do only some disaster victims seek help for psychological distress? According to McMullen and Gross (1983), numerous epidemiological studies of general populations demonstrate that neither the type of disorder nor the objective severity of existing symptomatology alone distinguishes those who report problems and seek treatment from those who do not. However, some research provides evidence that persons who seek help (in non-disaster laboratory settings) exhibit different personality characteristics than those who choose not to pursue external offers of aid (Nadler, 1983).

One of the personality variables most relevant to help-seeking behavior is defensiveness. The dimension of defensiveness has been extensively investigated by Byrne (1961) and Byrne, Barry and Nelson (1963), who define this personality variable as a bipolar construct labeled repression-sensitization (RS). Persons who are low on the RS dimension are described as repressors and tend to avoid or defend against

threatening stimuli. Persons who are high on this dimension are described as sensitizers and tend to maintain a heightened awareness to threat. Although repressors report low levels of experimentally induced distress (i.e., anxiety), objective measures of galvanic skin conductance, graphomotor performance, and cognitive problem solving indicate the presence of anxiety in these subjects (Cook, 1985; Rao & Potash, 1985). Repressors further demonstrate levels of distress exceeding those objectively observed among sensitizers. Subjects who utilize sensitizing defense strategies tend to exaggerate their distress by reporting significantly higher levels than are actually recorded by objective indices (Cook, 1985; Scarpetti, 1973; Weinstein, Averill, Opton & Lazarus, 1968).

How may the personality variable of defensiveness be related to help-seeking behavior? Repressors are individuals who are likely to be unaware of varying forms of threatening stimuli, including their own psychological distress. Individuals must first be able to identify and be aware of their symptomatology before they can make a decision that seeking help is a viable means to improving their current condition. Repressors, being relatively unaware of their symptoms, would seek help infrequently even though they may clinically demonstrate elevated levels of psychopathology. Conversely, sensitizers are expected to be highly vigilant toward their distress and thus should seek help frequently to reduce negative psychological states.

Despite the importance of this personality variable to the study of help-seeking behavior, no field investigation has yet focused on how defensiveness relates to individual awareness of psychological distress and, consequently, the decision to seek aid. The purpose of this study is to explore the relationship between this personality variable and help-seeking behavior in an actual disaster setting. In this exploratory analysis, a model is presented that was guided by previous research on help-seeking behavior in laboratory settings.

Models of help-seeking behavior exist that incorporate personality components and situational factors (e.g., Fisher's (1983) Threat to Self-Esteem Model). However, these models tend to describe personality variables as general predispositions and address only their distal role in the help-seeking process. A simple model is presented below that focuses on how the personality dimension of defensiveness more directly relates to differences in seeking aid for victims of a natural disaster (see Figure 1).

Insert Figure 1 about here

The model is comprised of three components: defensiveness, awareness of psychological distress, and help-seeking behavior post-disaster. The relationship between the personality variable of defensiveness and the awareness of psychological distress has been investigated in previous research. A strong, positive linear relationship between RS and self-reported indices of maladjustment has been reported (Orlofsky, 1967; Byrne, 1964; Tempone & Lamb, 1967). Sensitizers (i.e., persons who score high on the RS dimension) are likely to report they are experiencing high levels of symptomatology as these individuals maintain a heightened awareness of threatening forms of stimuli (including psychological distress). Repressors (i.e., individuals who score low on the RS dimension) tend to use avoidant responses toward threat and are less likely to report they are aware of distress. As previously noted, laboratory studies have shown that repressors reliably demonstrate strong physiological and behavioral reactions to induced stressors, even though these individuals report experiencing little or no anxiety. Therefore, RS is not an indicator of the absence or presence of symptomatology, but rather an indicator of one's tendency to be sensitized toward or to defend against various forms of negative stimuli, including psychological distress.

In laboratory investigations, the form of distress studied is usually anxiety. The present investigation will expand the study of distress to include depression and somatization. These three symptom areas were selected to coincide with frequently reported symptomatology among disaster victims in field research (Ollendick & Hoffman, 1982; Penick, Powell & Sieck, 1976).

According to the model, level of psychological distress is further related to help-seeking behavior in a linear and positive fashion. Individuals who are aware of elevated levels of symptomatology (i.e., sensitizers) should seek help to alleviate their distresses. Conversely, individuals who report that they are not experiencing such psychological distress (i.e., repressors) are less likely to pursue external sources of help. Although previous research tends not to support a positive, linear relationship between self-reported levels of psychological distress and help-seeking behavior (McMullen & Gross, 1983), prior investigations have not characteristically monitored personality variables that could account for individual differences in level of sensitivity and awareness to psychological distress.

The present study will explore how the personality variable of defensiveness (defined as RS) is related to subject awareness of psychological distress and help-seeking behavior among disaster victims. Laboratory paradigms of the stressors that result from natural disasters cannot nearly approximate the intensity and severity of stressors that occur in such real-life traumas. The aftermath of a major natural disaster provides an appropriate and rigorous test of the proposed help-seeking model in this natural field setting. To test this model, the zero-order correlation between level of defensiveness and level of psychological distress will be examined along with the beta weights obtained in a standard regression analysis. It is predicted that individuals who score high on the RS dimension (i.e., sensitizers) will report higher levels of

psychological distress (indicating greater awareness of such distress) and tend to seek help more often than individuals who tend to repress adverse psychological states.

Method

Description of Subjects and Disaster Site

Thirty-nine victims of a major natural disaster volunteered to participate in this investigation that served as pilot work for a larger, longitudinal study. All subjects had directly experienced a series of tornados that swept over areas of Ohio and Pennsylvania on May 31, 1985. The tornados resulted in extensive property damage and loss of life (85 persons were killed). Two separate communities, approximately 40 miles apart, were selected from the disaster region to serve as research sites. Tornado victims were recruited from two communities to provide subjects possessing a broad range of demographic characteristics.

Residents in region I (located in central east Ohio) were recruited via door-to-door screening within the most heavily damaged areas. If residences had been completely destroyed, the names and locations of these persons were solicited from neighbors. Approximately one third of the sample from region I was selected in this manner. Prospective subjects first completed a brief, self-report, screening instrument to assess level of psychological distress, extent of physical injury to anyone in their household, and estimated property damage. From this group of 36 subjects, 24 agreed to be interviewed. Selection criteria for all subjects were as follows: scoring one standard deviation above the average on a screening instrument (for any of five subscales pertaining to post-disaster increases in anxiety, depression, somatization, family conflict or decreased family cohesion); reporting excessive use of alcohol since the disaster; or having more than 300 dollars in property damage.¹ Recruitment of subjects from region II (central west Pennsylvania) was more difficult as almost all residents had been

relocated due to severe property damage. A partial list of relocated residents was obtained from city records and these individuals were contacted by phone. From this group, 15 people agreed to participate.² The screening instrument was not given over the phone as all subjects from region II were eligible to participate by virtue of extensive damage to their property. The screening instrument was administered to these subjects during the interview session. The demographic composition of subjects who participated in this investigation was as follows: 24 individuals from region I (11 males, mean age of 50.8 years and 13 females, mean age of 50.4 years), 15 individuals from region II (five males, mean age of 49.4 years, and 10 females, mean age of 52 years).

Instruments

The four-hour interview session was composed of structured interviews, questionnaires, and scales administered in a standardized fashion. These instruments were used to assess an extensive range of feelings and behaviors related to the subject's experiences with the disaster. Of these instruments, three were particularly relevant to the present paper. To assess subject level of defensiveness, a self-report, 30-item, revised RS scale that controls for social desirability and acquiescence response set (i.e., having an equal number of true and false keyed items) was used. The controlled repression-sensitization (CRS) scale (Handal, 1973) correlates highly with an earlier and longer version of the RS scale ($r=.80$). Byrne et. al., (1963) report that the earlier version of the RS scale achieved a split-half reliability of .94 and a test-retest value of .82.

A second measure, the Brief Symptom Inventory (BSI), was used to provide information on subject awareness of psychological distress (Derogatis & Spencer, 1982). Nineteen items composed of three subscales (anxiety, depression and somatization) and a total psychological distress score were selected from this self-report instrument.

Subjects rated (on a scale ranging from "not at all" to "extremely") the severity of each symptom as had been experienced within the past week. The anxiety subscale (6 items) includes general symptoms and signs of nervousness, tension, panic attacks and feelings of terror. The depression subscale (6 items) reflects a range of clinical depression indicators such as lack of motivation and withdrawal from life interests. The remaining somatization subscale (7 items) reflects indicators of distress arising from perceptions of bodily dysfunction (e.g., faintness, pains in heart or chest, hot or cold spells, etc.). Reliability and validity data for all subscales and the total psychological distress score have been reported by Derogatis and Spencer (1982), and achieve acceptable psychometric standards.

Help-seeking behavior following the disaster was obtained in the context of an intensive, structured interview that assessed symptomatology pre and post disaster. Help-seeking behavior was recorded in reference to all clinically significant symptoms reported during this structured interview section that covered specific pathognomic areas (i.e., anxiety, depression and somatization).³ Subjects reported help-seeking sources from a comprehensive list provided by the interviewer. Help-seeking behavior was defined to include both formal (i.e., medical doctors, psychologists, social workers, nurses, counselors, psychiatrists, clergy, lawyers, government officials, chiropractors) and informal (i.e., family, friends, relatives, neighbors) sources.

Procedure

All subjects were interviewed within six weeks following the disaster. When data are collected six months (Lindy, Grace & Green, 1981) or even one year (Bolin, 1982) after the disaster, measurement of resulting symptoms is often confounded by various events and experiences that transpire over time. Therefore, the relatively short span of time between the event and our contact with victims helped to provide indices of

maladjustment that were strongly associated with the impact of the tornado.

Interview sessions were conducted in the subject's home, in a quiet room, where only the examiner and subject were present. The subject and interviewer were seated at a table where an audio cassette recorder was used to record the structured interview. The four-hour session included two 10-minute rest periods held at specific times during the interview. All subjects were paid fifty dollars for their participation in the study.

Results

Data Preparation

The data were examined for missing values and for violations of the assumptions of linear modeling (Tabachnick & Fidell, 1983). Univariate analyses were performed on all scales to determine the percentage of missing data and to identify skewness and outliers. Because approximately 15% of participants had missing CRS scores, a regression analysis was performed to estimate CRS values from three correlate measures that were collected during interviews but were not used in the present study. An item-analysis performed on CRS scores resulted in dropping six items negatively correlated with total CRS. The resulting alpha equaled .80. Missing CRS scores were then computed using the constant and parameter estimates obtained in this regression. No more than four participants had missing values on any other variable; thus, substituting sample means for all other missing values was deemed appropriate. The BSI total and the total incidence of help-seeking were significantly, positively skewed. This problem was corrected using standard, non-linear transformations. The square root of total symptomatology, which was moderately skewed ($t=2.58$) was computed; while total help-seeking was more severely skewed ($t=3.49$) and required a logarithmic transformation. The resultant transformed variables showed little evidence of residual skewness ($t<1.0$). To identify bivariate outliers, scatterplots were examined for all combinations of the

CRS scale, log symptomatology, square root BSI, and the BSI subscales. No aberrant points were found.

Tests of Hypotheses

To test the help-seeking model, CRS and the square root of total symptomatology were entered in a standard regression analysis, with the log of help-seeking as the criterion.⁴ Together, the two predictor variables were significantly related to the criterion ($R^2=.18$, $P=.03$). However, neither the personality measure of CRS nor the situational measure of level of awareness to psychological symptomatology was a significant, independent predictor.

Two facts became clear to the authors during the review of literature on distress and help-seeking behavior. First, in many laboratory studies, measures of psychological distress and symptomatology are often limited to anxiety. Secondly, anxiety is a prevalent form of post-disaster psychopathology reported by researchers, especially during the first few weeks after the trauma (Boyd, 1981). Therefore, because this investigation was applying a model based primarily on laboratory research and because there is empirical evidence that anxiety (rather than psychological distress in general) is the form of pathology that participants in this study were most likely to display, a second regression analysis was performed. The anxiety score from the BSI was used in place of the square root total-symptom score.⁵ It was hypothesized that this post hoc procedure would serve as a sensitivity analysis for the proposed help-seeking model since a more clinically refined form of pathology was being utilized. The results of this second regression analysis, however, demonstrated only a minor increase in the total variance accounted for by the joint predictors of CRS and anxiety score ($R^2= .20$, $P=.03$). Hence, this second set of results was virtually identical to those of the first analysis.

Discussion

The personality variable of CRS and the situational variable of awareness of psychological distress jointly predicted help-seeking behavior, significantly, among persons who had experienced the trauma of a major natural disaster. Persons who tend to sensitize over threatening stimuli were likely to indicate awareness of their distress and sought help from various sources. Conversely, persons who reported the use of repressive or avoidant response strategies to threat were not likely to report awareness of symptomatology. These individuals also infrequently sought help from various sources of aid. If CRS, level of symptomatology, and help-seeking behavior were causally related as depicted in the model, then one would expect to obtain a significant beta for the effect of symptomatology level on help-seeking and a non-significant beta for the effects of defensiveness. In fact, neither of the parameter estimates were significant in this study. Thus, the results did not support the linear causality posited in the proposed help-seeking model. Two explanations seem apparent. First, the small sample size may have limited this study's power to detect relatively small, independent effects for CRS and/or awareness of psychological distress. A second explanation is that these two variables do in fact jointly relate to help-seeking behavior (i.e., they are not linked in a linear, causal fashion as initially proposed).

An integrative view of personality and situational factors can serve as a useful theoretical frame for interpreting these results. According to Rokeach (1985), personality characteristics should not be considered in isolation from situational variables. The assessment of individual differences within the context of a particular situation reflects a view, emerging among personality and social psychologists, that these two perspectives should be integrated (Feshbach, 1984). Personality and situational dimensions of behavior co-exist and are not independent. The present

findings, recorded in the field, lend strong support to this theoretical orientation.

Help-seeking behavior was not related solely to the victim's defensive tendencies nor to their current, situational level of perceived psychological distress.

The relationship between CRS and level of symptomatology was significant ($r=.30$, $p=.03$). This field result is consistent with prior laboratory studies that suggest a reliable, causal link between RS measures and self-reports of psychological distress (Orlofsky, 1967; Byrne, 1964; and Tempone and Lamb, 1967). However, because both predictor variables were measured simultaneously, and because they contain similar items, the authors were concerned that the observed relationship between CRS and self-reports of distress might be artifactual.

Possible Confounds Between CRS and Reported Distress

Close examination of the CRS scale resulted in the identification of items that pertain to indicators of psychological symptoms. For example, the item "I am almost never bothered by pains over the heart or chest" directly relates to the respondent's experience of certain somatic symptoms. Such overlap between items on the CRS and measures of symptomatology may in part explain why a linear, positive relationship among these measures is commonly reported. Concern from some personality researchers (Holmes, 1974) has also surfaced over the issue of distinguishing between true repressors (those who report low symptoms, but demonstrate objective clinical distress) and individuals who are truly free of distress, but are labeled as repressors by scoring low on RS measures. Do all individuals who score low on the CRS dimension demonstrate avoidant and repressive tendencies toward distress, or might some "repressors" actually be free of clinical symptoms? In the present study, some disaster victims may have been genuinely free of anxiety, depression, and somatic symptoms, but were labeled as repressors based on self-reports of low symptomatology levels (found in the CRS scale),

rather than the existence of a repressive personality trait. Although low scores on RS scales tend to be correlated with demonstrative reactions to induced laboratory stress, Cook (1985) warns that the accurate assessment of "true repressors" may require the consideration of other subject variables such as social desirability and consistency of response.

A secondary analysis was thus performed to test the proposed help-seeking model with a measure of repression-sensitization that was less dependent upon the subject's self-reports of distress. Items that blatantly indicated psychological distress (i.e., anxiety, depression, and somatization) were eliminated from the CRS (see Appendix).⁶ This modified CRS scale is not as dependent upon the presence or absence of symptomatology. Individuals who score as repressors on this modified scale would not necessarily possess--or be free of--psychological distress. If the previous analysis could be replicated, the present authors would be more confident in concluding that CRS and awareness of psychological symptoms jointly predict help-seeking behavior.

The modified CRS scale and the square root of total symptomatology were entered into a standard multiple regression analysis, with the log of help-seeking behavior serving as the criterion measure. In this analysis, modified CRS and reported symptomatology became independent, significant predictors of help-seeking behavior among victims of the disaster, ($R=.46$; $P<.01$), each uniquely accounting for nine percent of the total variance (see table 1).

Insert Table 1 about here

When overlapping items between the two predictor variables are removed, the modified CRS provides a measure of repression-sensitization uncontaminated by the subject's reported level of psychological distress. As expected, the zero-order correlation between the two predictor variables, $r(38) = .12$; $P > .05$, was low and non-significant. As assessed by the modified CRS scale, repressors and sensitizers are experiencing similar levels of psychological symptoms following the disaster. Hence, a low score on the modified CRS scale denotes a repressive personality style and not the absence of psychological distress.

As expected, higher levels of symptomatology predicted increases in help-seeking. Moreover, independent of the level of psychological distress, repressors sought help significantly less often than victims who tend to sensitize toward threatening stimuli. This finding suggests that the act of seeking help to alleviate one's distress imposes a threat to which individuals (with varying levels of sensitivity to threat) are likely to respond differently. As compared to sensitizers, repressors are likely to avoid seeking aid from various helping sources, even though these individuals may be experiencing elevated levels of psychological symptoms.

Several investigators have reported that seeking help from others (in a laboratory setting) is often associated with an open admission of failure and inadequacy that can threaten an individual's sense of self-worth (Clark, Gotay & Mills, 1974; DePaulo, Leiphart, & Dull, in press; Stokes & Bickman, 1974). Victims of a disaster may avoid pursuing external offers of help because such actions could highlight their relative

inferiorities. The tendency to avoid or approach threatening stimuli, as measured by the modified CRS, explains in part why repressors are less likely to seek help than sensitizers, regardless of the reported level of psychological distress. As Nadler explains (1983), the help-seeking situation involves "a conflict between the need to alleviate current difficulty by seeking assistance from other(s) and the need to protect one's self-image as a competent and self-reliant person" (p. ???).

In the present study, the modified CRS measure sheds additional light on the nature of the RS construct and its usefulness in understanding how the act of seeking help is affected by the dimension of RS independent of the victim's level of psychological distress in a field setting.

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Footnotes

1. Independent t-tests utilizing pooled variance estimates for unequal sample sizes indicated no significant differences for any of the selection criteria between those individuals who did not agree to be interviewed (n=12) and subjects in the final study solicited in this region (n=24).
2. Information on the total number of phone contacts made was not available.
3. Clinically significant symptoms were established by the use of the Diagnostic Interview Schedule (Robins, 1981), that uses DSM-III diagnostic criteria. The etiology of such symptoms are not attributable to the use of prescribed medications, drugs or alcohol, or physical illness or injury, and therefore, are assumed to be primarily psychological in origin.
4. Due to a limited sample size, formal and informal helping sources were combined in the present analyses.
5. General help-seeking behavior was retained as the criterion in this second regression analysis.
6. The 14-item, modified CRS scale correlated highly with the original CRS scale ($r=.91$). In addition, this modified CRS scale correlated similarly to several other measures (recorded during the field interview, but not used in the present analysis), that the original CRS scale correlated with. Based on these convergent and divergent validity analyses, the authors were confident that the modified CRS scale measures essentially the same construct of repression-sensitization excluding defensive reactions toward psychological symptoms (i.e., anxiety, depression and somatization).

Defensiveness and Help-Seeking

Table 1

Standard Multiple Regression Predicting Log of Help Seeking from Modified CRS Scale and Square Root of Symptoms

Variables	Zero-Order Correlations			Parameter Estimates		
	Log of Help-Seeking (DV)	Modified CRS Scale	Square Root of Symptoms	<u>B</u>		R^2 (Unique)
Modified CRS Scale	.34*			0.030*	0.304	.09
Square root of Symptoms	.35*	.12		0.056*	0.310	.09
				Intercept = 0.361		
Means Standard Deviations	□	7.35 3.19	□		Adjusted	$R^2 = .21^a$ $R^2 = .17$ $R = .46^*$

* $p < .05$

^a Unique variability = .18; shared variability = .03.