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The Journal of Sociology & Social Welfare

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Volume 11  
Issue 4 December

Article 6

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December 1984

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### Recommended Citation

Ritter, Christian (1984) "Occupational Stress and Depression among Vietnam Veterans," *The Journal of Sociology & Social Welfare*: Vol. 11: Iss. 4, Article 6.

DOI: <https://doi.org/10.15453/0191-5096.1678>

Available at: <https://scholarworks.wmich.edu/jssw/vol11/iss4/6>

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## OCCUPATIONAL STRESS AND DEPRESSION AMONG VIETNAM VETERANS\*

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### ABSTRACT

An exploratory analysis was conducted to assess the effect of exposure to a distal source of extreme trauma on current levels of depression. The purpose of this study was to assess the nature of the relationships among: (1) exposure to the extreme stressor of combat in Vietnam; (2) persistently difficult life conditions; and (3) psychological distress. The impact of various stressors on current psychological distress is evaluated in light of the mediating influence of personal coping resources. Findings suggest that exposure to combat has neither a direct nor an indirect effect on current levels of depression. Exposure to combat was found to affect depression only as it interacts with work-related sources of chronic strain.

### INTRODUCTION AND PURPOSE

Almost a decade has passed since United States armed forces withdrew from Vietnam, yet debate continues about the long-term impact of the war on the lives of the survivors. Relatively few battlefield psychiatric casualties were produced by the Vietnam War. However, once the war had ended, mental health

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\* An earlier version of this paper was presented at the annual meeting of the Midwest Sociological Society in Chicago, April 20, 1984. The research was supported in part by the National Institutes on Drug Abuse, Grant DA-2046, Richard R. Clayton and Harwin L. Voss, Co-principle investigators.

professionals began to report high rates of psychiatric symptoms among Vietnam veterans. This problem was also acknowledged by the government, as noted in a 1975 Veterans Administration internal memorandum indicating that: ". . . serious and prolonged readjustment difficulties seem to exist in one out of five Vietnam Veterans and to a lesser degree are experienced by all." (Boulanger et al., 1981)

Labeled Post-Traumatic Stress Disorder (PTSD) in 1980 by the American Psychiatric Association, service in Vietnam became legitimized as a distal but powerful causal factor in producing a set of symptoms that includes: feeling jumpy and irritable; having nightmares and flashbacks; apathy; anxiety; depression; insomnia; fear of losing control; and experiencing general disphoria. A variety of related behavioral problems found to be associated with exposure to combat in Vietnam include confusion, anxiety, frustration, helplessness and social isolation (Worthington, 1978); drug dependence (Robins et al., 1974); substance abuse and (Nace et al., 1978); and manifest anxiety (Enzie et al., 1973).

Since the war, there have been a number of research reports that address the psychological and social adjustment process of Vietnam veterans to reintegrate back into society (Boulanger, 1981). In a review of the literature on the long-term psychological consequences of combat exposure, Boulanger et al., (1981) indicate that many of these studies identify the amount and intensity of exposure to combat as potential causes of psychological distress (i.e., Helzer et al., 1978; Glass and Appel, 1969; De Fazio and Rustin, 1975; Strayer and Ellenhorn, 1975; Figley and Southerley, 1980). Boulanger further notes that the more precisely combat experience is measured, the more the long-term psychological consequences become apparent.

In a number of other studies, no "significant" effects of combat exposure were found. However, Boulanger et al. (1981) argue that these results can be discounted for two reasons: (1) because they failed to precisely measure combat exposure or (2)

biased samples were used (i.e., Borus, 1974; Buchbinder et al., 1979; Panzarella et al., 1978). Neither Buchbinder et al. nor Panzarella et al., distinguishes between combat and non-combat Vietnam veterans, however, although both reports suggest that military service in Vietnam was itself sufficient to produce stress reactions.

These findings are subject to further criticism because in failing to control for combat exposure the analysts fail to provide support for the existence of a post-Vietnam stress syndrome associated with combat experience. Boulanger et al. (1981) also criticize the research of Nace et al., (1978) for only using an "approximate" measure of combat exposure thereby raising a question about the validity of the major finding: that the only psychological adjustment difference found to exist between combat and non-combat veterans of the Vietnam War was an increased incidence of depression.

In addition to "psychosocial" responses to combat exposure, there is some evidence to suggest that military service in Vietnam had an effect on the educational and work careers of the veterans. These "social" consequences were the primary focus of a work entitled Legacies of Vietnam (U.S. Congress, 1981). The data show that veterans of the Vietnam era have attained less education and hold lower level jobs than do non-veterans. These differences appear to be even more marked among veterans who served in Vietnam since a large number of them have experienced serious work-related problems and have higher levels of unemployment. It is further reported that many of the occupational differentials observed between veterans and non-veterans are due to the greater likelihood of non-veterans having graduated from college.

It is also reported in Legacies of Vietnam that occupational and educational disadvantages of veterans as compared to non-veterans are largely due to background characteristics. The most important of these pre-military characteristics is the level of education attained prior to entry into the military. Moreover, the most disadvantaged group appears to be veterans

who were exposed to combat. In sum, these findings suggest that the effects of military service in Vietnam and exposure to combat on occupational attainment result primarily through its negative impact on post-service educational attainment.

Kadushin et al.(1981) do not specifically consider the potential moderating effect of occupational and educational attainment on the relationship between long-term stress reactions and combat exposure. While some evidence is provided that status as a Vietnam veteran has a deleterious effect on such attainment and that exposure to combat increases the likelihood of post-traumatic stress symptoms, they fail to present their findings in a convincing integrative fashion. This is typical of research that attempts to assess the effect of exposure to traumatic situations. No attempt is made to sort out the potential statistical interactions, and no attempt is made to theoretically integrate the process by which stressful events impact on the subsequent life-course of the survivors. For example, Kadushin et al. (1981) indicate that psychological stress reactions were more intense and more likely to persist among men whose social position makes them least able to cope (i.e., minority members, the unemployed, the poor, and members of unstable families). In reporting these findings, however, the analysts fail to conceptually account for or empirically disentangle the effects of exposure to combat.

In order to understand the relationship between the extreme stress of combat and subsequent levels of psychological distress, it is necessary to extend conceptually and analytically previous lines of inquiry. To understand the manner in which exposure to combat affects the psychological well-being of survivors, it is essential to consider the relationship in terms of predispositional characteristics as well as taking into consideration the potential consequences of exposure to combat. It is also essential that the relationship between combat exposure and subsequent psychological and social adjustment be examined within the more general context of the effects of stressors on distress.

The purpose of this paper is to examine the consequences of Vietnam military service within the integrative framework suggested by Pearlin. This framework allows for consideration of the nature of the relationships among: (1) exposure to the extreme stressor of combat in Vietnam; (2) persistently difficult life conditions; and (3) psychological distress. The impact of various stressors will be assessed in light of the mediating influence of individual coping resources.

### CONCEPTUAL FRAMEWORK

Pearlin et al. (1981) indicate that stress can result from either discrete events or the presence of continuous problems. The analysts also note that adverse consequences are primarily dependent on the "quality" of stressful life events as determined by their desirability (Gersten et al., 1977; Mueller 1979; Vinakur and Seltzer, 1975), the degree of control people have over their occurrence, and whether or not these life events are "scheduled" life-cycle transitions.

Another important factor is the recognition that stressful events do not always have a direct effect on individuals, but may also operate through a wider context of "chronic" stressors. Arguing that stressful experiences and chronic stressors converge in the production of psychological distress, Pearlin and Liberman (1979) empirically demonstrated that life events may create new stressors or intensify pre-existing stressors thereby producing a stress-related response. Occupational strain and job dissatisfaction, for example, have been shown to have a deleterious impact on mental health (House et al., 1979; House, 1981; Kasl, 1974, 1978; Kornhauser, 1965; LaRocco et al., 1980), and are included among the category of stressors identified by Pearlin and Schooler (1978) as having the potential for arousing threat.

These research findings suggest that role strains are important mechanisms linking stressful events to adverse reactions such as depression. Moreover, these

adverse changes can serve to intensify the level of psychological distress. Stressors often have both direct and indirect effects on the exacerbation of role strains (Pearlin and Lieberman, 1979). This further suggests that exposure to stressful events not only increases role strain, it increases the vulnerability to depression when the strains become intensified.

The conceptual framework explicit in Pearlin's work in particular provides insight into how exposure to combat in Vietnam can have long-term effects on the survivor's psychological well-being. Nevertheless, there is evidence to suggest that the impact of exposure to combat on psychological distress may also be contingent upon predisposing and mediating factors.

Kohn (1972, 1977) defines coping resources as learned individual predispositions relevant to coping that are generally interpreted as dispositional characteristics affecting psychological well-being (Wheaton, 1983). Pearlin and Schooler (1978) define psychological resources as the personal characteristics that people draw upon to help them withstand threats to their environments. These resources usually act as barriers to the psychological consequences of stress. Prominent among these psychological resources are self-esteem and mastery. Self-esteem refers to the positiveness of one's attitude toward oneself (Rosenberg, 1965), while mastery concerns the extent to which one's life is personally controlled (Pearlin and Schooler, 1978). Both serve to buffer the negative consequences of stress.

A number of researchers have looked at personal control as an important mediator in the stress process. Smith (1969) and Turner and Noh (1983) view personal control as a powerful mediating force which is largely derived from one's history of efficacies and inefficacies in coping. However, Turner and Noh found that stress factors alone cannot account for variations in mental health between social status groups; that is, controlling for personal control rendered the relationship between social class and psychological distress nonsignificant. In general, then, the differences observed in personal vulnerability

may be no less important than are the differences in the incidence and level of stress in accounting for the social class/psychological distress relationship (Brown and Harris, 1978; Dohrenrend, 1973, Kessler, 1979; Kessler and Cleary, 1980).

Wheaton's (1980) suggestion that fatalism may be an important factor in mediating the effects of stress and psychological disorder implies that low social status leads to a behavioral pattern of deference. In this context, fatalism is a defense or coping mechanism which fails. High levels of stress may undermine the individual's sense of personal power and control leading, in turn, to a general loss of successful coping strategies.

The above discussion clearly indicates that social stress is a complex phenomenon which should be evaluated in a manner that considers stress as emerging within an intricate set of inter-relationships. The relationship between problematic life circumstances and coping mechanisms is also potentially useful for developing a more complete understanding of the conditions under which exposure to an extreme stressor (such as combat in Vietnam) can have long-term effects on social and psychological well-being.

#### DATA AND MEASURES

The data used in this research are from a national sample of young men ages twenty to thirty (N=2,510) who were first interviewed in late 1974 and early 1975. In 1982, a purposive sample of 445 of the original sample were reinterviewed as part of a study concerned with the effects of chronic marijuana use (Clayton and Voss, forthcoming). This research is based on data obtained at these two points in time for the 445 men. While the sample is not assumed to be representative of all men born between 1944 and 1954, it does consist of 298 non-veterans, 57 veterans who served in the United States, 38 men who served overseas but not in Vietnam, and 52 Vietnam veterans.

## Depression

Depression was measured using the Center for Epidemiological Studies Depression Scale (CES-D). Developed to measure depressive symptoms in community populations, the CES-D does not provide diagnostic criteria for assessing depression. However, the scale does discriminate between clinically depressed patients and others and has been found to have a high correlation with other depression rating scales (Weissman et al., 1977). The entire scale has a high level in internal consistency (Cronbach's Alpha reliability .87). The items and scoring procedures for the CES-D as well as the other measures used are discussed at length elsewhere.<sup>1</sup>

The CES-D contains 20 Likert Scale items representing several components of depression including: depressed affect, feelings of worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, sleep disturbance and the absence of positive affect (Radloff, 1977). Respondents indicated how much time within the previous week they had experienced each symptom ranging from "rarely or never" to "most of the time." The CES-D score was computed by summing the responses on each of the 20 items with a potential range from 0 to 60, with the larger score indicating a high level of depression.

## Combat Exposure

Level of combat exposure was measured using a series of questions pertaining to combat-related events. The fifty-two Vietnam veterans in the sample were asked if they had ever experienced combat, and eleven stated that they had not been exposed to combat. However, when questioned further about their Vietnam experiences, only four of the eleven "non-combat" respondents indicated that they had "never" experienced combat.

Because of this discrepancy, the following indicators of combat were used: (1) whether he was part of a land or naval artillery unit which fired on the enemy; (2) whether he received incoming fire from

enemy artillery, rockets or mortars; (3) whether his unit received sniper or sapper fire; and (4) whether his unit patrol engaged the Vietcong or North Vietnamese Army in a fire-fight. The 48 respondents who had part in these activities were then asked how much they were involved ranging from "very little" to "most of the time." The alpha reliability of this scale computed (N = 52) for the index before multiplication by the frequency rating resulted in an alpha of .65.

### Chronic Stressors

Chronic stressors were measured directly and indirectly. The indirect measures, low occupational status and low income, are interpreted as proxies standing for potentially stressful environmental conditions (Wheaton, 1983). More specific items were used to construct indicators of persistent occupational strains.

The questionnaire contains ten items about work-related sources of stress. These questions were asked of the 393 employed respondents. In the interest of data reduction and the formation of reliable scales, a principle component factor analysis with oblique rotation was used to extract four factors. The first factor, bored with job, included three variables. In two of these variables the respondent was asked to rate (a) how routine and boring the work is, and (b) how intellectually stimulating and challenging the work is--resulted in a standardized item alpha of .69. The third variable concerns the degree to which the respondent agreed or disagreed that his job gave him satisfaction.

The work stress scale factor included two variables. The first item measured the degree to which the respondent agreed that he had few problems or hassles on his job. The second item measured the respondent's perception of the general level of job-related stress. The third factor included two items for measuring the respondents' perception of job advancement opportunities and the adequacy of financial rewards provided by his work. Two items also loaded on the fourth factor. These items measure the

degree to which the respondent felt that his work had good fringe benefits such as sick pay and retirement, and the degree to which his job paid well.

### Self Concepts/Personal Coping Resources

Measures of personal coping resources were derived from a set of items designed to measure a variety of dimensions of self-concept. Respondents were asked to respond to sixteen statements dealing with how they felt about themselves. These Likert Scale items were then factored using a principle component analysis with oblique rotation. Three distinct factors were extracted: (1) self-derogation, (2) positive self-esteem and, (3) mastery. Since this study is concerned with the mediating effect of coping resources, only those items which loaded on the factors relating to positive self-esteem and mastery were used. <sup>2</sup>

## RESULTS AND DISCUSSION

To assess the relative impact of combat exposure on depression the analysis was conducted in three stages. The first stage of the analysis deals with the additive effects of combat exposure and occupational chronic stressors on depression as mediated by the personal coping resources, mastery and positive self-esteem. In the second stage the indirect effect of combat exposure on depression based on occupational strain, mastery and positive self-esteem is evaluated. In the third and final stage, the focus is on determining whether post-combat exposure operates in conjunction with current chronic stressors in predicting current levels of depression and whether this hypothesized effect is mediated by a sense of mastery and/or self-esteem.

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Table 1 About Here

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Based on a hierarchical regression analysis model, the additive effects of combat exposure, work-related sources of stress, and a set of control variables, namely race, level of education, father's occupational status, and age, are shown in Table 1. The first equation also includes the combat exposure variable, four direct measures of occupational stress, occupational status, and income. Both standardized and unstandardized regression coefficients are reported for all variables in each step of the equation. In the second step, mastery is added to the model, and positive self-esteem is added in the third step (equation three).

The findings in Table 1 address two issues: (1) the degree to which the distal stressor of combat exposure, current levels of work-related stress and coping resources affect depression and, (2) the effect of personal coping resources in buffering the impact of various stressors on depression. In the first equation the findings indicate that bored with job, work stress, lack of prospect for advancement, occupational status, and income all have a statistically significant effect ( $P < .05$ ) on depression in the predicted direction.

In the second equation mastery was added to the model and was also found to have a statistically significant effect on depression ( $\beta = -.526$ ,  $P < .01$ ). As expected, the higher the score on the mastery variable, the less likely it was that depression existed. Moreover, mastery buffers the impact of chronic stressors on depression. Comparison of the unstandardized beta coefficients in equations one and two indicate that the coping resource of mastery reduces the relationship between four of the five significant stressors and depression. The reduction in strength is greatest for bored with job, which is rendered non-significant. However, no prospect for advancement is significant at the .01 level with the addition of mastery to the model.

Positive self-esteem was added to the model in equation three. This variable has a statistically significant impact on depression ( $\beta = -.090$ ,

$P < .01$ ). The direct effect of self-esteem on depression is weaker than that of mastery when both variables are included in the same model (beta =  $-.090$  for self-esteem; beta =  $-.496$  for mastery). As shown in Table 1, the personal resource of self-esteem also serves to reduce the relationship between the stressors and depression. In addition, it can be seen that while self-esteem also buffers the impact of stressors, it is secondary to that of mastery. This finding provides some support for the results reported by Pearlin and Schooler (1978), in that a sense of personal control tends to be a more important factor in buffering the effect of stress than is a favorable attitude toward self.

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Table 2 About Here

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A summary measure of work-related chronic strain was constructed as a means of data reduction. Following the strategy employed by Wheaton (1983), the various measures of work-related chronic stressors were used as a general measure of chronic stress: bored with the job; job stress; lack of chance for advancement; inadequacy of rewards; occupational status and income. A summary index was then calculated by dividing the distribution of each variable into quartiles and assigning a "1" for scores within the most disadvantaged quartile and a "0" for others. A total score for the chronic stressors measure was determined by adding across the variables. The resultant index score of work-related chronic stress has a range of 0 to 6 with high scores indicating the most disadvantaged, i.e., the greatest exposure to chronic stress.

At this point, our interest is in determining whether this stress measure can be used without distorting the effects of the other variables on depression. The data for equation one in Table 2 suggest that the chronic stress measure has a statistically significant impact on depression (beta =  $.252$ ,  $P < .01$ ). A comparison of all other regression

coefficients reported in equation one of Table 2 with those in the first equation in Table 1 suggests that among nonwork-related variables, only race has a significant effect on level of depression. This result also held when mastery and self-esteem are added to the model which again are both statistically significant at the .01 level with unstandardized coefficients similar to those in equation three of Table 1.

Some additional comparisons can be made between equations one and two in Table 2. Mastery and positive self-esteem substantially reduce the effect of total chronic stressors on depression as shown by a reduction in the value of the unstandardized regression coefficients 1.581 and .890. Although the effect of the summary measure of total chronic stressors on depression is still statistically significant (P .01), these personal resources clearly serve to buffer their psychological impact. It can also be noted at this point that exposure to combat has no direct effect on level of depression.

In the next stage of the analysis we are interested in determining whether combat exposure in Vietnam has an indirect effect on depression through level of work-related stressors, mastery and on self-esteem. As noted, the results of previous research suggests that general level of occupational strain is one type of negative outcome of exposure to combat in Vietnam. Since it has been established that these stressors are significantly related to depression, they may serve as a mediating factor between combat and depression. Mastery and self-esteem may also serve as indirect links to depression.

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Table 3 About Here

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The data shown in Table 3, however, indicate that combat exposure does not appear to be related to any of these variables. Individuals exposed to combat are

no more likely to experience high levels of work-related chronic stressors (beta = .057, n.s.), low mastery (beta = -.025, n.s.) or low self-esteem (beta = .041, n.s.) than are those who have not experienced combat. Level of education, father's occupational status and age are all significant predictors of total chronic stressors, as are mastery and self-esteem. Total chronic stressors are both predictive of level of mastery (controlling for self-esteem) and self-esteem (controlling for mastery) with individuals scoring higher on the index of chronic stressors being more likely to experience lower levels of mastery (beta = -.131,  $P < .01$ ) and self-esteem (beta = -.071,  $P < .01$ ). In addition, level of educational attainment is significantly related to one's self-esteem. In sum, these data suggest that there is no indirect effect of combat exposure on depression.

The final question concerns the effect of combat exposure and high levels of chronic stress on depression. As previously discussed, acute stressors, in conjunction with chronic stressors, affect psychological well-being. To determine whether the effect of combat exposure on depression is moderated by general level of occupational stressors, two models for testing two-way interactions are considered. As suggested by Pearlin, the effect of combat exposure on depression is expected to be contingent upon the number of work-related chronic stressors experienced by the veteran. Two models were used to test this hypothesized interaction and the results are presented in Table 4.

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Table 4 About Here

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In the first interactive model (equation one) the interaction of combat exposure with total chronic stressors is found to be significantly related to depression ( $P < .01$ , unstandardized coefficient=.095). This finding suggests that combat exposure, when experienced in conjunction with work-related stressors, does affect depression.

In equation two the personal coping resources measures (mastery and self-esteem) were added to the equation. As shown in Table 4, coping resources serve to buffer the impact of this interaction on depression. Although still significant, the unstandardized coefficient decreases from .095 to .052 and drops in statistical significance to the .05 level.

In sum, the findings suggest that: (1) combat exposure has no direct, additive effect on current levels of depression, (2) combat exposure does not indirectly effect depression via mastery, self-esteem or work-related chronic stressors, and (3) that combat exposure does seem to operate in conjunction with chronic stressors in predicting depression.

## CONCLUSION

The finding that combat exposure is not directly related to depression is perhaps surprising since prior studies suggest that exposure to combat is significantly related to Post-traumatic Stress Disorder (PTSD) (e.g., Boulanger, 1981; Kadushin, 1983; Laufer et al., 1984). These studies begin by demonstrating this relationship and then specify the conditions under which it is diminished. In contrast, this report began with the premise that in order to assess adequately the impact of distal stressors on psychological well-being, it is necessary to assess that relationship within a theoretical framework.

As typically posed in the literature, the question of why we should expect individuals who experience the trauma of war to be more psychologically distressed than individuals who did not experience such trauma reflects the orientation of researchers who view stress in terms of the "life events model." Proponents of the "life events model" argue that changes in that which is normative require adjustment and this adjustment is often followed by increased psychological distress.

More recently, the literature on stress has been influenced by Pearlin's empirically-derived models. Pearlin argues that it is not sufficient to conceptualize stress in terms of negative life events, and he further suggests that a comprehensive assessment must include continuing life stressors. The expanded model calls for coping mechanisms, and the availability of social resources that support the coping process and affect the level of depression by mediating the impact of stressors (Pearlin et al., 1981). To assess adequately the long-term effects of exposure to a distal yet potent stressor, such as combat on psychological well-being, it is necessary to recast the findings of previous research within a complete theoretic framework.

Application of the conceptualization provided by Pearlin allows for the assessment of both indirect and interactive effects. While exposure to combat was not found to operate on depression via the mediating variables considered in this research, combat exposure was found to operate in conjunction with chronic stressors in the prediction of distress. These findings further suggest that depression among Vietnam veterans is best understood in terms of chronic occupational related stressors. That is to say, combat exposure alone does not appear to serve as an adequate predictor of depression.

These findings have a number of implications. In particular, the results suggest that researchers should seek to understand the effect of past trauma on depression in conjunction with current strains. Some evidence is provided in support of the argument for further investigation of this interaction. The findings also indicate that our knowledge of the Post-traumatic Stress Disorder should be conceptually extended to include factors suggested by Pearlin and others, and should be studied using samples which include Vietnam veterans, non-Vietnam veterans and non-veterans. Such expansion may provide a more accurate assessment of the nature of psychopathology among Vietnam veterans.

## ENDNOTES

1. A complete list of items and procedures used can be obtained by writing to the author.
2. The seven-item scale construct measuring positive self-esteem consisted of the following: (1) What happens to me in the future mostly depends on me, (2) I can do just about anything I really set my mind to do, (3) I feel that I have a number of good qualities, (4) I feel that I am a person of worth, at least on an equal plane with others, (5) I am able to do things as well as most other people, (6) I take a positive attitude towards myself, and (7) On the whole, I am satisfied with myself. The self-esteem scale had an alpha reliability of .91.

The Mastery Scale consisted of five items which measure the degree to which respondents felt they were in control when dealing with the world around them: (1) I often feel I'm being pushed around in life, (2) I often feel helpless in dealing with the problems of life, (3) There is little I can do to change many of the important things in my life, (4) There is really no way I can solve some of the problems I have, and (5) I have little control over the things that happen to me. These Likert Scale items had a high level of reliability (alpha = .86).

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Coping Resources on Depression (standardized coefficients are reported in parentheses).

	Equations		
	1	2	3
Combat	.034 (.023)	.031 (.021)	.037 (.025)
Bored with job	.290 (.131)**	.149 (.068)	.141 (.064)
Job stress	.446 (.141)**	.431 (.136)**	.442 (.139)**
Lack of advancement	.225 (.087)*	.241 (.093)**	.240 (.093)**
Inadequacy of rewards	-.141 (-.038)	-.080 (-.022)	-.112 (-.030)
Occupational status	-.055 (-.194)**	-.030 (-.105)**	-.030 (-.104)**
Income	-.453 (-.141)**	-.209 (-.065)**	-.204 (-.063)**
Education	.275 (.037)	.520 (.070)**	.606 (.081)**
Father's occupational status	.015 (.052)	+	+
Race = Black	1.601 (.087)**	1.485 (.081)**	1.413 (.077)**
Age	.045 (.019)	-.078 (-.033)	-.083 (-.034)
Mastery	-	-1.365 (-.526)**	-1.261 (-.486)**
Self-esteem	-	-	-.186 (-.090)**
Multiple R <sup>2</sup>	.272	.573	.578
Adjusted R <sup>2</sup>	.050	.310	.314

\* Coefficients less than .001  
 + Variable not in equation  
 \* Significant at .05 level  
 \*\* Significant at .01 level

Table 2. Hierarchical Regression of Combat Exposure, Total Chronic Strains and Coping Resources on Depression (standardized coefficients are reported in parentheses).

	Equations	
	1	2
Combat	.296 (.020)	.028 (.019)
Total chronic stressors	1.581 (.252)**	.890 (.142)**
Education	-.036 (-.005)	.520 (.067)**
Father's occupational status	.009 (.031)	-.003 (-.009)
Race = Black	1.783 (.097)**	1.408 (.076)**
Age	-.002 (-.001)	-.093 (-.039)
Mastery	-	-1.253 (-.483)**
Self-esteem	-	-.164 (-.079)**
Multiple R	.277	.576
Adjusted R <sup>2</sup>	.064	.320

\* Significant at .05 level  
 \*\* Significant at .01 level  
 - Variable not in equation

Table 3. Additive Effects of Combat Exposure and Other Predictors on Total Chronic Stressors, Mastery and Self-esteem (standardized coefficients are reported in parentheses).

	Total Chronic Stressors	Mastery	Self- Esteem
Combat	.013 (.057)	-.014 (-.025)	.039 (.041)
Total chronic stressors	-.063 (-.154)**	-.317 (-.131)**	-.216 (-.071)**
Mastery	-.028 (-.084)**	.352 (.443)**	.553 (.439)**
Self-esteem	-.171 (-.144)**	.118 (.041)	.479 (.133)**
Education	-.003 (-.067)*	-.007 (-.057)	-.001 (-.010)
Father's occupational status	.064 (.022)	-.074 (-.010)	-.335 (-.037)
Race = Black	-.056 (-.147)*	-.050 (-.053)	-.012 (-.010)
Age			
Multiple R	.344	.497	.503
Adjusted R <sup>2</sup>	.105	.235	.241

\* Significant at .05 level  
 \*\* Significant at .01 level  
 - Variable not in equation

Table 4. Interactive models: Regression of Combat Exposure, Total Chronic Stressors and Coping Resources on Depression (standardized coefficients are reported in parentheses).

	Equations	
	1	2
Combat (C)	-.123(-.084)	-.056(-.038)
Total chronic stressors	1.460(.233)**	.827(.132)**
Education	-.243(-.003)	.525(.071)**
Father's occupational status	.011(.037)	-.002(-.005)
Race = Black	1.726(.094)**	1.378(.075)**
Age	-.009(-.004)	-.097(-.040)
Mastery	-	-1.246(-.480)**
Self-esteem	-	-.164(-.080)**
C*TCS	.095(.131)**	.052(.072)*
Multiple R	.286	.578
R <sup>2</sup>	.067	.322

\* Significant at .05 level  
 \*\* Significant at .01 level  
 - Variable not in equation