Coping Effectiveness and Diversity Under Traumatic Stress

Introduction
During the coping process individuals attempt both to manage situations that cause them unpleasant emotions, and to manage those emotions themselves. Lazarus points to a continuing concern over how to define coping efficacy and how to assess it (Lazarus, 2000). Specifically, the crude division of coping strategies into positive and negative categories may overlook the possible effectiveness of some strategies under exceedingly stressful conditions during which actually impacting the stressful environmental conditions may be very difficult or even impossible. It seems overly simplistic to label problem focused coping as effective, and emotion focused coping as non-effective. Carver, Scheier, and Weintraub (1989) say “Some emotion-focused responses involve denial, others provide positive reinterpretation of events, and still others involve the seeking out of social support. These responses are very different from each other, and they may have very different implications for a person's success in coping (p. 268).” Individuals differ in their propensity to use specific coping strategies and they rely on differing numbers of strategies when confronted with stressful situations. Some individuals may rely on a broad array of strategies, others may tend to rely on a narrower cluster. Therefore, psychological adjustment may be less related to any specific coping strategy than to the individual’s ability to draw upon a diverse set of effective strategies and to apply them flexibly (Cheng, 2001). Coping diversity may allow the individual to adapt to a broad range of circumstances, even those in which his or her preferred mode of coping is ineffective.

Hypotheses
1. Under traumatic stress conditions, coping strategies in the functional coping cluster (Carver, Scheier, & Weintraub, 1989) will be more effective (i.e. positively related to psychological adjustment); while those in the dysfunctional cluster will be less effective (i.e. inversely related to psychological adjustment).

Methods
Participants
Soldiers in nine units of the U.S. Army (n= 632) participated in the study while stationed in Iraq (mean age = 27.7, 98% male). By rank the sample was 56%, Men, 33% Mid-grade Non-commissioned Officers, 5% Senior Non-commissioned Officers, and 5% Company Grade Officers.

Measures
Psychological adjustment. Psychological adjustment was measured using the Brief Symptom Checklist (BSI) (Derogatis & Melisaratos, 1983). This 55 item measure has nine symptom cluster scales and a summary Global Severity Index (GSI). The symptom cluster scales include: 1) Somatization, 2) Obsessive–Compulsive, 3) Interpersonal Sensitivity, 4) Depression, 5) Anxiety; 6) Hostility; 7) Phobic Anxiety; 8) Paranoid; 9) Psychoticism. The GSI was used as the overall measure of reactions to stress.


Procedure
Voluntary participants filled out anonymous questionnaires distributed in Iraq through their commanding officers. Data were collected over a one month period during a time of high insurgency activity. All units were deployed to Iraq for two or more months at the time of data collection and had been actively involved in the Iraqi insurgency. Results
All BSI symptom scales are elevated for the soldiers with peaks in Hostility, Paranoid, and Obsessive/Compulsive, as might be expected under combat conditions. Demographic variables of Rank, Age, and Education correlated significantly with GSI (Global Symptom Index); therefore, subsequent analyses will attempt to control for those relationships. The GSI, as a measure of overall psychological adjustment, was significantly positively skewed (skew = 1.014). A large proportion (62.2%) of the soldiers reported overall psychological symptoms below the mean for the sample. A square root transformation was used for this dependent variable, following Cohen and Cohen (1983, p. 263) in order to control for excessive skewness.

Hypothesis 1. The relationship of coping strategies with psychological adjustment
An examination of the intercorrelations of coping strategies indicates that the theory-based scales show a good deal of overlap. To account for this overlap, a hierarchical multiple regression was used with the relevant demographics entered at Step 1, and all of the coping strategies entered at Step 2. The table below indicates that the inclusion of coping strategies increased the variance accounted for by 15% over and above that accounted for by the demographic variables alone. Clearly, coping strategies add significantly to the explanation of psychological adjustment of soldiers in the traumatic combat situation.

When the overlap of coping scales is accounted for, the functional coping group shows only three of nine scales reach statistical significance: Positive Reinterpretation, Emotional Social Support, and Humor; with Active Coping reaching only marginal significance. For the dysfunctional grouping, five of six strategies reached statistical significance: Vented Emotions, Denial, Mental Disengagement, Behavioral Disengagement, and Alcohol and Drug Use. These patterns seem to indicate that direct, active coping with the source of stress for soldiers in a combat situation is less likely than more indirect ways of functional coping (e.g. Positive Reinterpretation) or dysfunctional coping (e.g. Denial, Alcohol and Drugs).

Hypothesis 1 is supported. There seems to be a decrement in the use of strategies in the functional category under traumatic stress conditions. Although soldiers did not necessarily use more coping strategies in the dysfunctional category, those strategies seemed to have a more direct impact on their psychological well being.

Conclusions
The diversity of coping strategies employed seems not sufficient, in itself, to account for coping effectiveness. It is not the number of strategies available, but also their discrete effectiveness that matters. Some coping strategies are, indeed, more effective; even under traumatic stress conditions. In the current study, the direction of deviation from the mean, and not the deviation alone was meaningful in relating coping strategies to psychological adjustment. The traditional distinctions between problem focused and emotion focused coping were not useful in determining effectiveness under traumatic conditions. Clearly, some problem focused strategies such as Active coping and Planning were effective; at the same time the more indirect, emotion focused strategy Positive Reinterpretation was also related to positive adjustment. Coping effectiveness seems to span the problem versus emotion focused dichotomy.

Hypothesis 2. Relation of coping diversity to psychological adjustment
Two different indices of coping diversity were calculated to test the hypothesis that direction, variation and intensity of coping responses would be related to psychological adjustment. The first coping diversity index was the simple addition of normalized, z-scores of individuals’ coping responses in comparison with the means and standard deviations of coping scores for each of the nine military units in the sample. More frequent and intense use of the coping strategies in the functional cluster was inversely related to psychological symptoms (r = -.156, p < .001); whereas, such an index for dysfunctional cluster strategies was positively related to symptoms (r = .507, p < .001). When the results for the functional and dysfunctional cluster scores were combined, a simple, unaligned sum of the two scores showed a significant positive relation to psychological symptoms (r = .126, p < .01); whereas, aligned scores (dysfunctional cluster scores reversed) showed a strong inverse relationship with symptoms (r = -.455, p < .001). For this index of coping diversity, the amount of deviation from the mean was not sufficient, in itself, to provide a positive link to psychological adjustment.

The second index of coping diversity was based on distance, or D-scores described by Tsui and O'Reilly (1989). The D-score indicates that the theory-based scales show a good deal of overlap. To account for this overlap, a hierarchical multiple regression was used with the relevant demographics entered at Step 1, and all of the coping strategies entered at Step 2. The table below indicates that the inclusion of coping strategies increased the variance accounted for by 33% over and above that accounted for by the demographic variables alone. Clearly, coping strategies add significantly to the explanation of psychological adjustment of soldiers in the traumatic combat situation.

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Hypothesis 2 is supported. There seems to be a decrement in the use of strategies in the functional category under traumatic stress conditions. Although soldiers did not necessarily use more coping strategies in the dysfunctional category, those strategies seemed to have a more direct impact on their psychological well being.