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Relationships between Coping Strategies and the Severity of PTSD in Iranian Veterans of the Iran-Iraq War

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Abstract

The aim of this study was to study the relationships between coping strategies and the severity of PTSD. Subjects were 50 treatment seeking Iranian veterans who had experienced war trauma at least once during their military services. Two instruments were used, including: Ways of Coping Questionnaire (Lazarus and Folkman, 1985) and Structured Interview for PTSD (SIP). Correlation coefficients were computed between various coping strategies and the PTSD severity scores. Results indicated that seeking social support, positive reappraisal, planful-problem solving, and self-controlling strategies were negatively correlated to PTSD severity. Escape-avoidance, distancing, accepting responsibility and confronting coping were positively correlated to the severity of PTSD. Theoretical discussion and the applications of these results are represented.

Keywords: coping strategies, PTSD severity, Iranian veterans

"Trauma" refers to a psychological injury that is caused by an extreme emotional threat (Reber, 1995). A traumatized person is a survivor of a traumatic event. Some common traumatic experiences include being physically attacked, being in a serious accident, being in combat and being in a natural disaster.

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DSM-IV-TR "A" criterion for Post-traumatic Stress Disorder (PTSD) defines traumatic event as: "An event or events that involve actual or threatened death or serious injury or a threat to the physical integrity of self or others" (American psychiatric association, 2001).

PTSD is an anxiety disorder currently defined by the coexistence of three clusters of symptoms: re-experiencing, avoidance, and hyperarousal, persisting for at least one month in survivors of a traumatic event (American Psychiatric Association, 2001).

The survivor of a traumatic event may develop PTSD. However, most survivors of traumatic events will recover from early distressing reactions and do not develop PTSD. For example, in a recent research, only 25 percent of individuals who had experienced a traumatic event, leading to physical injury, subsequently developed PTSD (Shalve et. al, 1996 quoted by Davidson and Neale, 2001).

An important issue in coping with post-traumatic stress is the coping strategies the individual uses in stressful life events. Although there is no agreement on a single theory of coping, Lazarus`s theory is widely accepted because of its wide empirical support (Lazarus, 1991 quoted by Frydenberg, 1997). Coping as defined by Lazarus "is the process of managing demands that are appraised as taxing or exceeding the individual`s resources" (quoted by Seaward, 2002).

Every stressor undergoes primary appraisal to determine the extent of damage, and then it is reappraised in a secondary appraisal. At this point a series of coping responses are lined up with the stressor to see which is the best course of action (Seaward, 2002).

Coping strategies can be either positive or negative. Positive coping techniques are those that prove effective in satisfactorily dealing with stress, based on the accomplishment of a peaceful resolution. Negative coping strategies, provide no enlightened resolution. Instead, they perpetuate perceptions of stress and future ineffective responses. Some examples of

negative coping strategies are avoidance of the problem or inhibition of action, victimization, emotional immobility (worrying), hostile aggression, and self-destructive addictive behaviors (e.g, drinking, drug, and food binging) (Seaward, 2002).

Lazarus and Folkman (1985), based on their Coping Ways Questionnaire, divided coping strategies into eight commonly used coping ways which resulted from factor analysis. These coping ways include: confronting coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful- problem solving, and positive reappraisal.

Why do some survivors of traumatic events recover shortly after experiencing it, while others experience constant symptoms of PTSD for months or years after the trauma has been over? One possible answer can be the ways of coping the individual uses in stressful life events.

Our research began with this question: what is the relationship between each of these coping ways and the severity of PTSD?

While a lot of research has been conducted to study various aspects of trauma and PTSD, a review of prior literature in this field revealed that there is little published research concerning the relationship between PTSD severity and coping strategies. To give a brief review of previous related research, first we will review the studies which are generally related to our research, and then we will review the research which is closely related to current research.

Olff, Langeland, and Gersons (2005) in a study on psycho-physiological adjustment with psychological trauma, found that although more people experience at least one traumatic event during their life, many of them do not develop PTSD or any other mental health problems such as anxiety or depressive disorders. Indeed, there is a wide variation among people in their emotional and neuro-biological responses to psycho-social stressors. However, this study did not explain why some survivors developed PTSD, while others did not.

Momartin, Silove, Manicavasagar, and Steel (2003) in their research,

described four inter-related dimensions of trauma which influence survivors' subsequent adjustment: violating human rights, threatening life, traumatic losses, losing properties and homelessness. Using logistic regression method, they found that among these four factors, threatening life, alone could predict developing PTSD. Both threatening life and traumatic losses played a role in the severity of PTSD and disturbed psycho-social functioning. Although this study increases our knowledge about the role of various aspects of trauma on developing PTSD, it did not explain the role of the individual's responses to trauma nor the role of coping strategies.

Research literature on avoidance and social support coping strategies was clear and empirically supported. For example , Johnson, Sheahan and Chard (2004), in a study on a treatment seeking sample of adult female survivors of childhood sexual abuse found that PTSD severity and avoidant coping are significantly correlated. Additionally, women with PTSD showed higher rates of avoidant and dependent personality disorders, as well as more avoidant coping, than did women without PTSD.

Wishful thinking which is very relevant to avoidant coping, is also related to more PTSD severity (e.g., Gershuny, Foa, and Valentiner, 1996; Dirkzwager, Beramsen and Henk, 2003). Other studies, also suggested that avoidant coping is related to more PTSD severity (e.g., Stein, Tran, Lund, Haji, Dashevsky, and Baker, 2005; Harvey-Lintz and Tidwell, 1997), and seeking social and informational support is related to less PTSD severity (Harvey-Lintz and Tidwell, 1997).

How are other coping strategies related to PTSD severity? We did not find an adequate answer for this question in previous research. However, general PTSD theories did help us in hypothesis formulation (see Brewin and Holmes, 2003, for a complete review of PTSD theories). Based on research and theoretical literature we suggested eight hypotheses as follows:

Hypothesis 1: There is a positive relationship between escape-avoidance strategy and PTSD severity.

Hypothesis 2: There is a positive relationship between distancing strategy and PTSD severity.

Hypothesis 3: There is a negative relationship between seeking social support strategy and PTSD severity.

Hypothesis 4: There is a negative relationship between planful-problem solving strategy and PTSD severity.

Hypothesis 5: There is a positive relationship between confronting coping and PTSD severity.

Hypothesis 6: There is a negative relationship between self-controlling strategy and PTSD severity.

Hypothesis 7: There is a positive relationship between accepting responsibility strategy and PTSD severity.

Hypothesis 8: There is a negative relationship between positive reappraisal strategy and PTSD severity.

Method

This is a descriptive correlational study in which we posited simple correlations between each of the coping strategies and PTSD severity. Then, we examined the statistical significance of each correlation and compared these correlations to that of other studies.

Statistical population and the sample

The target population of this research was the population of treatment seeking Iranian veterans of the Iran-Iraq war, who have experienced combat on the front line, at least once or more during their military services.

There were about 15 veterans who were referred to three clinics of Bonyade Isargaran of Mash-had, on a mounthly basis. Indeed, the target population consisted of 540 treatment seeking veterans who annually checked into these clinics.

We included 50 of these male veterans in our study. Using an introductory

interview we collected some demographic information from the participants (see Tables 1 to 3 below). The participants` ages ranged between 40 and 60 years (Mean = 50, SD = 4) and they had experienced combat when they were 20 to 35 years old. We used an accessible sample of these veterans using psychiatric referrals.

Table 1

Age Distribution

Age intervals	Frequency	Percent frequency
40-45	11	22 %
45-50	15	30 %
50-55	14	28 %
55-60	8	16 %
60-65	2	4 %
Total	50	100 %

Table 2

Employment Distribution

Status	Frequency	Percent frequency
Employed	21	42%
Unemployed	29	58 %
Total	50	100 %

Table 3

Marriage Distribution

Status	Frequency	Percent frequency
Unmarried	0	0 %
Married	40	80 %
Divorced	10	20 %
Total	50	100 %

Instruments

A) Ways of Coping Questionnaire (Lazarus and Folkman, 1985): The revised version of this scale is a 66-item questionnaire. Usually a stressful encounter is described by the subject in an interview or in a brief written description, saying who was involved, where it took place and what happened. Sometimes a particular encounter, such as a medical treatment or an academic examination, is selected by the investigator as the focus of the questionnaire (Folkman, 1987). Similarly, in this study we asked each participants to describe a stressful encounter which had occurred during the last month.

The reliability of this scale has been studied by Abdi and Sahebi (2001), in Iran. The reliability of subscales of this questionnaire is shown in Table 4.

Table 4

Reliability Coefficients of Subscales of the Ways of Coping Questionnaire

Subscales	Alpha	Subscales	Alpha
Confronting coping	0.70	Accepting responsibility	0.66
Distancing	0.61	Escape-avoidance	0.72
Self-controlling	0.70	Planful-problem solving	0.68
Seeking social support	0.76	Positive-reappraisal	0.76

The questionnaire also has been validated in Iran by Aghajani in 1995. He has said, based on his study, that the questionnaire shows proper validity (Aghajani, 1995, quoted by Abdi, 2001).

B) Structured Interview for PTSD (SIP) (Davidson, 1995): SIP is a valid instrument that has been widely used for assessment of DSM-IV criteria for PTSD (Nutt, Davidson, Zohar, 2000). This interview contains structured instructions for asking questions. Subscales include: 1- Introduction, which asks seven open questions about personal information; 2- Experience of trauma (scale A), which contains four yes/no questions about the traumatic experience; 3- Re-experiencing (scale B) which asks five self-rating questions about the severity of re-experiencing symptoms; 4- Avoidance (scale C), which asks seven self-rating questions about the severity of avoidance symptoms; 5- Hyperarousal (scale D), which asks five self-rating questions about the severity of hyperarousal symptoms; and 6- The duration of the symptomatology (scale E). SIP, also has another part (scale F) which is devoted to the judgment of the interviewer about the disturbance in the client`s functioning. The Sum of B, C, and D subscales make up the total PTSD severity score.

SIP was first translated into Persian by the author, and its validity and reliability was established using the data of this study based on 20 subjects consisted of treatment seeking Iranian veterans.

To study the validity of SIP, we used the content validity method. After translation and proper modifications, SIP was sent to three qualified clinicians to judge it in accordance with DSM-IV-TR criteria for PTSD. All three clinicians approved its content validity.

Reliability of SIP was established in a pilot study in this research, involving 20 participants. There were some further modifications in the questions based on the feedbacks received form early administration of SIP. Reliability coefficients are shown in Table 5.

Table 5

Reliability Ccoefficients of Subscales of the SIP

Subscales	alpha
Re-experiencing(scale B)	0.76
Avoidance (scale C)	0.78
Hyperarousal (scale D)	0.63

Administering these two instruments, we counted 9 scores for each participant. The first one was the PTSD severity score, and others included: confronting coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem-solving, and positive reappraisal. Then, we computed 8 Pearson correlation coefficients between each of the subscales of Ways of Coping Questionnaire and the severity of PTSD.

Results

The results of this study are shown in Table 6.

Table 6

Observed Correlation Coefficients

	Confronting coping	distancing	Self-controlling	Seeking social support	accepting responsibility	Escape-avoidance	Planful problem solving	positive reappraisal
PTSD severity	0.36	0.54	- 0.31	-0.60	0.514	0.70	- 0.32	- 0.385

As it can be seen in Table 6 the highest correlation was between the escape-avoidance coping strategy and PTSD severity. This correlation coefficient was

0.70 which was statistically significant at 0.01 level, supporting the research hypothesis.

The second highest correlation was between seeking social support and severity of PTSD. This correlation coefficient was – 0.603, suggesting a significantly negative relationship ($\alpha = 0.01$). This result also supports the suggested hypothesis.

The correlation between the distancing strategy and severity of PTSD was 0.54, and was significant at 0.01 level. This result also supports the suggested hypothesis.

Accepting responsibility and the severity of PTSD showed a 0.514 correlation that was significant at 0.01 level.

All other correlations were statistically significant with at least 95% confidence.

Discussion

Results comfirmed the first hypothesis. Escape-avoidance strategy is correlated to higher PTSD severity as suggested by prior research literature (e.g., Gershuny et. al, 1996; Dirkzwager et.al, 2003; Stein et. al, 2005; Harvey-Lintz et. al, 1997).

Cognitive/behavioral avoidance from trauma-related stimuli is believed to be the maintaining factor for PTSD symptoms. Avoidance is reflected in behaviors such as preferring to be alone – because people will remind the patient of the memories of trauma or somehow cause distress, wishing that the stress provoking event could be stopped, trying to forget all things, using drugs or substances to feel better and so on. These avoidant behaviors are negatively reinforced because they cause temporary relief in the experience of stress. This, in turn, will prevent direct exposure to the fear-related stimuli, and extinction may not occur. Hence, avoidance is believed to be the maintaining factor of PTSD in the conditioning models of this disorder (see Brewin and Holmes, 2003).

Results also supported the second hypothsis. Distancing had a 0.54 correlation with PTSD severity. Distancing is a cognitive way of avoidance from trauma-related stimuli.

The results also supported the third hypothesis of this study. As noted previously in the research literature, seeking social and informational support is related to lower PTSD severity (e.g, Harvey-Lintz et. al, 1997). Researchers have proposed two theories about how social support modifies stress responses: The "Buffering hypothesis" and the "Direct effect hypothsis". Based on the buffering hypothesis, social support can buffer the person against the negative effects of stress. This may happen in at least two ways (Cohen and Wills, 1985). First, it may influence the process of cognitive appraisal. For example, in a stressful situation, those who have more social support, may appraise the situation as less stressful than those who have less social support. Second, social support may modify the individual`s response to the stressful situation. For example, someone who has much social support may have a friend who provides him with an effective solution for his or her problem or tells him to look on the bright side or hope for other`s forgiveness.

The direct effect hypothesis suggests that despite the severity of stress, social support has helpful effects. Direct effects may function in various ways (Cohen and Wills, 1985) such as increasing self-esteem and/or increasing the sense of belongingness. Such a position itself can bring about positive and hopeful thinking.

The fourth hypothesis was also supported by these results. However, the correlation was relatively low. This result was consistent with Dirkzwager et. al (2003) in that planful problem-solving is related to lower PTSD severity.

People who had successfully coped with traumatic stresses, suggested that "when trying to solve problems, focus on short time intervals (for example, only think about a subsequent stage)" (Finkel and Jakobsen, 1977 quoted by National Center for PTSD, 2005). It should be noted that focusing on the future, and being involved in planning, can induce some levels of anxious

thinking and anticipation of negative events. Therefore, it seems that the best way of problem solving is to focus on short time intervals when trying to solve problems. For example, one should only think about a subsequent stage.

Another relatively high relationship was seen between accepting responsibility and PTSD severity. This is consistent with Dirkzwager et, al (2003) in that accepting responsibility is related to higher PTSD symptoms.

People, who think that the trauma was their fault, tend to feel guilty for a long time after the trauma, and they suffer from substantial emotional distress. Such emotional distress can play a role in exacerbating PTSD symptoms.

Positive reappraisal displayed a significantly negative relationship to PTSD severity ($r = -0.385$). This strategy involves making positive interpretations of stressful events that focus on personal growth. A possible explanation for the negative relationship is that positive reappraisal will help the survivor to cognitively process the trauma or integrate its information into his or her previous cognitions and assumptions (see information processing models for PTSD in Brewin and Holmes, 2003).

Confronting coping ($r = 0.36$) is, by definition, the aggressive efforts to change the situation, and reflects some degree of hostility and risk taking. The results suggest that this strategy can have adverse effects on PTSD severity. Hostility and aggressive behavior can disturb social relationships. Moreover, anger itself is a distressing emotion.

The lowest correlation was found between the self-controlling strategy and PTSD severity ($r = -0.31$). This result suggests that self-controlling may be a useful strategy for PTSD patients. The items of the self-controlling subscale of Lazarus' Questionnaire (Lazarus and Folkman, 1985) involve some degree of coordination and being well adjusted in social situations. This indicates that the regulation of one`s feelings and actions in accordance with situational demands can improve the individual` s adaptation especially in interpersonal interactions and increase his / her social support resources.

These findings help us identify the important correlates of PTSD. They can

especially answer the important question of which coping strategies are related to lower PTSD symptoms, and which ones are related to higher PTSD symptoms.

Based on the observed relationship between seeking social support and PTSD severity, it seems that clinicians should focus on expanding the patients' social support resources if PTSD symptoms are to be relived.

Based on the results, it seems that exposure therapy can play a role in the treatment of PTSD, because it involves preventing various avoidant behaviors in patients through the process of psychotherapy. Thus, it can help PTSD patients extinguish their fears of trauma-related stimuli.

It seems that self-management therapies, especially anger management and problem-solving programs can help the person to use the self-controlling coping strategy more effectively. Hence, self-management therapies may play a role in treatment of PTSD.

Finally, according to findings, it seems that cognitive therapy, meaning-focused therapy and spiritual therapies can also play a role in the treatment of PTSD. Because such treatments help clients make sense of traumatic experiences and see the positive side of events. Thus, they may promote the positive reappraisal coping strategy and/or they can help the patients process their undesirable trauma memories.

Although this research increased our knowledge about how various coping ways are related to PTSD development, it has some limitations. First, this study used a correlational method and it could not suggest causal relationships. Second, given our limitations, we used a small accessible sample, which might not be representative of the population of Iranian veterans of the Iran-Iraq war. Finally, some of these correlations were relatively low and there might be some common sources of variation among these scores. Thus, a partial regression method could better show the relationships.

Repeating this research by using a more representative sample and a partial regression method will modify these findings and will promote our knowledge

about the relationship between coping strategies and PTSD severity.

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