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The Relation of Alexithymia and Cognitive /Behavioral Coping Strategies with Psychological Vulnerability of Women with Somatization Disorder

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Abstract

***Background*:** There is little information about the relationship of alexithymia and cognitive/behavioral coping strategies with psychological vulnerability. The recent studies indicate that alexithymia and coping strategies affect psychological vulnerability. The present study aims to determine the relationship of alexithymia and cognitive/behavioral coping strategies with psychological vulnerability of women with somatization disorder.

***Materials and Methods*:** The samples of this study included 120 patients with somatization disorder who were selected as convenience sampling among those who attended the psychology centers of Ardabil. Pain coping questionnaire, alexithymia questionnaire, and symptom questionnaire were used to collect the information. The research data were analyzed using the Pearson's correlation coefficient and multivariate regression analysis methods.

***Results*:** The results indicated that there are significant correlations between alexithymia (r = 0.52), cognitive coping strategies (r = -0.27), behavioral coping strategies (r = -0.33) and psychological vulnerability of women with somatization disorder. The results of step-by-step multivariate regression analysis suggested that alexithymia and cognitive/ behavioral coping strategies clarifies 37 percent of the variance of psychological vulnerability of women with somatization disorder.

***Conclusion*:** These findings indicate that cognitive/behavioral coping strategies and alexithymia are associated to psychological vulnerability of women with somatization disorder. In addition, these results have special application in prevention, pathology as well as psychotherapy of this disorder.

Introduction

Somatization disorder is a common problem in different cultures [1, 2] and health care systems [3]. This disorder is specified by several physical symptoms, which are not justifiable by physical tests [4]. The consequences caused by somatoform disorders may lead to psychological vulnerability of these patients. Psychological vulnerability is referred to people's susceptibility towards psychological risks such as stress and depression [5].

Different factors and variables affect vulnerability of women with somatization disorder, such as pain and coping strategies. Feeling pain is an experience which is considered the commonest symptom of a disease or damage and makes a person need for health and treatment care [6, 7]. The strategies to cope with pain are either cognitive or behavioral [8, 9]. If the psychological coping strategies are appropriate, coping with the new conditions will be facilitated and the person will be adapted to new conditions. However, if the psychological coping strategies are inappropriate and insufficient, people need to seek and prepare more coping and supporting sources in order to achieve a new and appropriate plan from the stressing condition, which may ultimately lead to more reactions and psychological disorders [10, 11]. The emotional capability alleviates confrontation of people with life challenges and improves the level of their psychological health [12]. Alexithymia is inability to express feelings due to lack of emotional knowledge. Those with alexithymia are not usually able to recognize, understand and/or describe excitements [13]. Supposing that these features cause deficiency in cognitive process and regulating emotions, they are related to the start and/or persistence of some psychological as well as medical disorders [14-16].

Those with alexithymia make normal physical stimulations great and misinterpret physical symptoms of emotional arousal [17-19]. Alexithymia accompanies physiological excitation, more attention to physical symptoms, complaint from these symptoms and pathological compulsory behaviors [20-22]. The role of alexithymia in mechanisms of creation and persistence of psychological damages ever-increasingly attract attentions. Especially, alexithymia are considered as the important risk factors which cause psychosomatic disorders and behavioral disorders, as these people are unable to regulate their emotions [23-27].

The present study aims to determine the relationship of alexithymia and cognitive/behavioral coping strategies with psychological vulnerability of women with somatization disorder. Due to existence of different

results, the clinical importance of alexithymia and coping strategies in psychological health of these women as well as very limited researches and freshness of the research, conducting this research is of a paramount importance. As far as application is concerned, the present research has important implications on the role of treatment methods in regulating excitations and coping strategies of women with somatization disorder.

Materials and Methods

This is a correlation type research. In this research, alexithymia and cognitive/behavioral coping strategies were considered as predictive variables and psychological vulnerability and symptoms of somatization disorder are considered criteria variables.

The statistical population of this research includes all the patients who attended Ardabil psychological ambulatory centers in 2011. The research sample includes 120 patients with somatization disorder who were selected among those who attended the psychological centers as diagnosed by a psychologist and somatization disorder diagnosis criteria during the end of August 2011 and the end of March 2012. In correlation researches, the appropriate number of samples is 100 people [28]. However, to increase the external validity, in the present research 120 people were selected as research sample. The criteria to enter the research were age between 25-45, having minimum education of middle school degree, having no chronic physical diseases, having no chronic psychological diseases and voluntary satisfaction of subjects to participate in the research.

Pain Coping Questionnaire (PCQ): Pain coping questionnaire is developed by Romano, Jensen, and Turner [29]. This questionnaire comprises of 42 items and each question is replied by a 7-degree scale. This questionnaire measures the cognitive/behavioral coping strategies. The Cronbach's alpha coefficient of this questionnaire was reported at 0.71 to 0.85. Asghari-Moghaddam obtained Cronbach's alpha at 0.75 to 0.83 [8].

Alexithymia Scale: Toronto alexithymia scale [30] is a 20-question self-test scale with three dimensions of having problems to recognize and identify feelings, having problem in expressing feelings and a concentration on external experiences. The questions of this test are replied by a 5-degree Likert scale ranging from "absolutely agree" (1) to "absolutely disagree" (5). According to the Cronbach's alpha of the Iranian sample for the whole scale, the reliability coefficient of internal consistency was reported at 0.79 and the dimensions of having problems to recognize and identify feelings, having problems to express feelings, and concentration on external experiences were reported at 0.75, 0.71 and 0.66 respectively. The reliability coefficient of the overall scale was reported at 0.77 and the dimensions of having problems to identify feelings, having problems to express feelings and concentrate on the external experiences in the Iranian sample using the test-retest method were reported at 0.73, 0.69 and 0.65 respectively [31].

Short Form of Psychological Symptom Questionnaire: The short form of psychological symptoms questionnaire was prepared by confirmatory factors analysis (CFA). This questionnaire has 18 questions and 3 factors (domatization, depression, stress) whose questions are replied as a 5-degree Likert scale. The Cronbach's alpha of questionnaire was reported at 0.89. Correlation coefficient between the short and long forms of the questionnaire achieved as 0.83 [32]. In a research carried out, a significant relationship (p=0.001) was achieved between this questionnaire and the scales of the positive emotion (r=-0.38) and negative emotion (r = 0.46), was obtained. The Cronbach's alpha coefficients and split-half were 0.88 and 0.81 respectively [33].

The patients with somatization disorder were selected based on the psychologist's diagnosis as well as DSM-IV criteria. After identifying and obtaining voluntary satisfaction of the patients to participate in the research, the objective of the research was explained to them. Then they individually filled out the research questionnaires for 40 minutes. Finally, the data were analyzed using Pearson's correlation coefficient (to determine the relationship between alexithymia and cognitive/ behavioral coping strategies and psychological vulnerability) and multivariate regression for (the role of alexithymia and cognitive/behavioral coping strategies in predicting psychological vulnerability).

Results

Twenty percent of the participants were undergraduates, 46 percent had diploma, 6 percent had associate degree and 28 percent had BS/MS degree. Eighteen percent of them were unmarried, 82 percent were married, 19 percent had no children, 36 percent had one child, 35 percent had two children, and 10 percent of them had three or more children. Fifty-nine percent of them were housekeeper and 41 percent were employees. The mean and the standard deviation of women were 35.52 and 5.24 years, respectively. Table 1 shows the mean and standard deviation of alexithymia, pain coping strategies, psychological vulnerability and symptoms of women somatization disorder.

Table 2 represents the correlation coefficient of cognitive/behavioral coping strategies and alexithymia dimensions with psychological vulnerabilities of women with somatization disorder. As it is shown, the Pearson's correlation coefficient indicates that there is a significant correlation (p=0.01) between alexithymia and psychological vulnerability (r=0.52) and symptoms of somatization disorder (r=0.44). There is a negative significant relationship (p=0.01) between the cognitive coping strategies with psychological vulnerabilities (r=-0.33) and the symptoms of somatization disorder (r=-0.37). In addition, there is a negative significant relationship (p=0.001) between the behavioral coping strategies with psychological vulnerabilities (r=-0.27) and the symptoms of somatization disorder (r=-0.29).

The multivariate regression analysis was used to study the prediction power and the effect of cognitive/

behavioral coping strategies and alexithymia on psychological vulnerability of women with somatization disorder. Table 3 indicates that 37% of the variance of psychological vulnerability is clarified by alexithymia and cognitive/behavioral coping strategies. As it can be seen, alexithymia (B=0.521), cognitive coping strategies (B=0.404) and behavioral coping strategies (B=0.249) can predict significantly the related changes to women with psychological vulnerabilities. In Addition, 38% of the stress variance is explained by alexithymia and cognitive/behavioral coping strategies. With respect to the beta coefficient of alexithymia (B=0.548) and behavioral coping strategies (B=0.254), it can significantly predict the changes of stress of women with somatization disorder, respectively. According to Table 3, 31% of the stress variance is explained by alexithymia and cognitive/behavioral coping strategies. Alexithymia (B=0.481), cognitive coping strategies (B=0.435), and behavioral coping strategies (B=0.211) can respectively predict the changes of stress of women with somatization disorder. In addition, 27 percent of variance of somatization complaints is explained by alexithymia and cognitive/behavioral coping strategies. As it can be seen, with respect to beta coefficients of alexithymia (B=0.421), cognitive coping strategies (B=0.417), and behavioral coping strategies (B=0.233) can significantly predict the changes of somatization complaints of women with disorder.

Table 4 indicates that 32% of variance of women somatization disorder symptoms is explained by alexithymia and cognitive/behavioral coping strategies. As it can be seen, the cognitive coping strategies (B=-0.447), alexithymia (B=-0.444), and behavioral coping strategies (B=-0.291), respectively, can predict significantly the changes of somatization symptoms of women with disorder.

Table 1. Mean and standard deviation of alexithymia, coping strategies, psychological vulnerability and symptoms of somatization disorder in women

Variable	Mean±SD	variable	Mean±SD
Difficulty in sensations diagnosis	4.4±32.21	Somatzation	5.4±58.11
Difficulty in expression sensations	28±31.14	Depression	49.5±55.12
Focusing on external experiences	52.4±35.24	Anxiety	6±71.12
Alexithymia	7.9±98.59	Vulnerability	15±11.37
Somatization disorders symptoms	25.5±55	Behavioral strategies	27±7.57
		Cognitive strategies	42.30±9.64

Table 2. Correlation coefficient of alexithymia, cognitive/behavioral coping strategies with psychological vulnerability and symptoms of somatization disorder in women

Variable	Psychological Vulnerability				Somatization disorder
	Anxiety	Depression	Somatzation	Total	
Difficulty in sensations diagnosis	**0.55	**0.49	**0.45	**0.54	**0.46
Difficulty in expression sensations	**0.29	**0.28	**0.25	**0.29	**0.27
Focusing on external experiences	**0.41	**0.34	**0.28	**0.37	**0.31
Alexithymia	**0.54	**0.48	**0.42	**0.52	**0.44
Behavioral coping strategies	**-0.28	*-0.23	*-0.24	**-0.27	**-0.29
Cognitive coping strategies	**-0.32	**-0.30	**-0.31	**-0.33	**-0.37

*p<0.05, **p<0.01

Table 3. Summary of regression model and results of alexithymia multivariate regression coefficient, cognitive/behavioral coping strategies on psychological vulnerability of women with somatization disorder

Criterion variable	Prediction variable	r^2	Beta
Anxiety	Alexithymia	0.300	0.548
	Behavioral strategies	0.365	0.254
	Cognitive strategies	0.383	0.202
Depression	Alexithymia	0.231	0.481
	Behavioral strategies	0.275	0.211
	Cognitive strategies	0.313	0.435
Somatzation	Alexithymia	0.266	0.421
	Behavioral strategies	0.233	0.233
	Cognitive strategies	0.266	0.417
Psychological Vulnerability	Alexithymia	0.272	0.521
	Behavioral strategies	0.333	0.249
	Cognitive strategies	0.366	0.404

*p<0.05, **p<0.01

Table 4. Summary of regression model and results of alexithymia multivariate regression coefficient, cognitive/behavioral coping strategies of pain coping on symptoms of somatization disorder

Prediction variable	r^2	Beta
Alexithymia	0.197	-0.444
Behavioral coping strategies	0.281	-0.291
Cognitive coping strategies	0.321	-0.447

*p<0.05, **p<0.01

Discussion

The present research discusses the predictive relation and ability of pain coping strategies and alexithymia in changes of psychological vulnerability of women with somatization disorder. The results of this research indicated that there is a positive significant relationship between alexithymia (and its aspects) and psychological vulnerability of patients. The results of this research are consistent with the findings of the earlier researches on depression [14-17, 27]. For instance, it was concluded in a research that when depression symptoms increase, people encounter problems to recognize their feelings and they are unable to talk about their own feelings to the others [15]. In addition, the findings of this research are consistent with that of other researches on stress. These studies suggested that there is a positive relationship between stress and both aspects of difficulty to identify and detect feelings, having difficulty to express feelings and focus on the external experiences [18, 24].

To explain about this finding, it can be stated that alexithymia is a cognitive/emotional feature and a person with such a disease is unable to regulate and understand his/her excitations. When the excitation information cannot be understood or evaluated in a cognitive processing process, people will be subjected to agitation and distress as far as emotion and cognition are concerned and such ability may disturb their emotions and cognitions organization [31]. In addition, due to lack of knowledge and inability to process their cognitive feelings, these people are not usually able to recognize, understand, and/or express their excitations and have limited ability to cope with stressing conditions. One of the methods to control stress, especially negative excitations, is to discharge and express the excitation caused by stress. If such excitations are not discharged and a person cannot express his/her negative feelings orally, psychological vulnerability will be increased. Those, who are able to recognize their feelings and express their excitation modes in an effective way, can better encounter life problems, are more successful to cope with the environment and others, and consequently will enjoy further psychological health [21].

Such a result is rather different from that of obtained from other studies. For instance, in a study, no significant relationship was found between focus of external experiences and depression [27]. In another study, there were no relationships between difficulty aspects to identify feelings and focus on external experience and depression [21]. Moreover, no relationship was found between stress and the aspect of focus on external experiences [24].

These results indicate that with respect to lack of similar studies on the subject of the present research and the variety of results on agitated and depressed patients, further cautions should be taken to come to certain conclusion. Another part of the results of this study suggested that there is a negative relationship between the cognitive/behavioral coping strategies and psychological vulnerability. Such a result is consistent with this finding based on the effect of cognition on pain-related behavior and the emphasis of patients on actions and beliefs about controlling pain events [13]. In addition, these results follow the findings of the present research that distorted cognitive and pain-related beliefs are related to depression [11].

The results of the present research also indicated that there is a negative relationship between cognitive coping strategies and somatization disorder. It can be stated that those who enjoy higher efficiency of cognitive coping, report less somatization disorder. Another part of the results indicated that there is a negative relationship between behavioral coping strategies and psychological vulnerability. Such a finding is consistent with the study of Prasertsri et al. [6] on the relationship between behavioral coping strategies and depression of patients with cancer, and the study of Badr and Milbury on the relationship between behavioral strategies of pain coping and somatization disorder. The results indicate that people with high behavioral coping strategies have less somatization disorder. Therefore, those with behavioral strategies of pain coping, cope with somatization pains easier at critical times and this make them have more control over life and they prevent aggravation and severity of problems.

The results of the multivariate regression analysis indicated that alexithymia and cognitive/behavioral coping strategies explain 37 percent of variance of psychological vulnerability of women with somatization order and 63 percent of variance and the remaining factors are described by other variables effective in psychological vulnerability of women with somatization disorder (such as other cognitive and excitation factors and biochemical factors, etc). With respect to lack of similar findings in records, it can be concluded from this finding that the effects of cognitive/behavioral coping strategies and alexithymia on psychological vulnerability was almost considerable. Therefore, further studies are required to clarify this point.

In addition, the results of the multivariate regression analysis indicated that alexithymia and cognitive/behavioral coping strategies describe 32 percent of the variance of somatization disorder symptoms in women and 68 percent of variance and remaining factors are described by other variables effective in somatization disorder symptoms in women (such as other cognitive and excitation factors and biochemical factors etc). It can be concluded from this finding that alexithymia and cognitive/behavioral coping strategies have almost considerable effects on somatization.

Studying the subjects only from one province (Ardabil), non-random selection, lack of control on variables such as education, marital status, consumption of drugs, exclusivity of research samples to women as well as the reason of disorder are among the limitations that confronted generalization of the findings with some problems. Moreover, based on the self-reporting scales and due to unconscious protection and prejudices in responses, the collected information brings about the possibility of information distortion.

It is proposed to conduct this study for other provinces with different gender and age groups so that to generalize the results further. It is also recommended to use the tools without self-reporting features to collect information. Other recommendations of this research include training cognitive/behavioral coping strategies and excitation regulation. These results have important implications on pathology, prevention and treatment of patients with somatization disorder.

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Authors' Contributions

All authors had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest

The authors declare no conflict of interest.

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