The structural relationship between alexithymia and somatization in the students of Islamic Azad University, Marand Branch

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Abstract

The purpose of this study is to determine the structural relationship between alexithymia and somatization in the students of the Islamic Azad University of Marand. The statistical population in this study consists of all students of Islamic Azad University of Marand (8881 students due to the announced statistics). The statistical sample consists of 267 students, who were selected using the Morgan table and using a cluster sampling method. For data collection purposes, The Toronto-Alexithymia-Scale (TAS-20), and Paul wainwright's physical symptoms scale (1991) were used. The validity and reliability of the scales were confirmed. The results obtained from the study by regression analysis showed that components such as alexithymia and difficulty in identifying and describing the feelings can predict the physical symptoms in the students.

Keywords: alexithymia, physical symptoms, students, somatoform disorders.

Introduction

The physical complaint is one of the most fundamental experiences of humans in life. Identification and assessment of symptoms are vital for some people, because the symptoms can show the formation of a physical disease, and identifying them enables individuals to search for professional supports. When referring to a physician, medical examinations are taken to identify the infrastructural disease. In many cases, despite perfect medical examinations, negative or non-specified findings are obtained. In this case, other reasons should be searched. The results of multiple studies showed that 25-40% of total symptoms in primary care settings have no certain origin and reason (Hiller, Reef, and Breahler, 2006). Patients with these symptoms are usually diagnosed as patients with somatoform disorders (SFDs).

Somatoform Disorder (SFD) is formed of multiple symptoms, which begin before the age of 31, and remain for several years. The disorders appear due to a combination of symptoms such as pain, gastrointestinal disease, sexual problems, and neurological symptoms (Erickson and Uresin, 2002).

Somatoform disorders are the conditions, in which psychological factors affect the physical disease. Decomposition disorders: in each disorder, the body clears the stress and conflict abnormally and strangely. The disorders play a vital role in the history of abnormality psychology.

Martinez et al. (2015) conducted a study under the title of "the relationship between physical symptoms, emotional stress, and feeling pain in Fibromyalgia with the mediating role of alexithymia". They found that women with fibromyalgia had significantly more problems for identification and explanation of the feelings. In the clinical group, problems in the identification of feelings and difficulties in explaining the feelings had a significant correlation with sleep quality, anxiety, depression, and catastrophic pain and fear of pain.

Now, types of alexithymia are discussed due to the theoretical significance of each type (development of personality theory concerning biological factors) and practical meanings (mental health, stress resistance, psychotherapy, interpersonal relationships, job interests, and creativity) (Bermond, Vorst, and Moormann, 2016). On the contrary, difficulty in identifying the emotions and difficulty in describing the feelings are correlated to environmental factors. The study conducted by Igracias on lots of placentas of the twins showed that genetic factor has a significant effect on all parts of alexithymia. The recent investigations have shown that two polymorphism genes of COMT and BDNF are correlated to alexithymia (Karukivi, 2018, 3). The investigations show that the correlation between difficulty in identifying and describing the feelings and somatoform disorders is neglected more and less. According to the problems of the youths, this study tends to answer the question that whether there is a correlation between difficulty in identifying and describing feelings and somatoform disorders or not?

Methodology

The present study is applied research. The data collection method in this study is the field method. In terms of nature, this is a descriptive-correlative study. The statistical sample n this study consists of 267 students of the Islamic Azad University of Marand. Samples were selected using Morgan Table and using a cluster sampling method. For data collection, a standard questionnaire was used as follows:

The Toronto-Alexithymia-Scale (TAS-20):

The Persian version of the Toronto Alexithymia Scale (TAS-20) (Bagby, Parker, and Taylor, 1994) is a 20-item test that measures three subscales of difficulty in identifying emotions, difficulty in describing emotions on a 5-point Likert scale from (1=totally disagree) to (5=totally agree). A total score is also measured from the sum of the scores of 3 subscales for alexithymia. This scale is adequate for general and clinical samples, and can be implanted in a group or individually due to the conditions. The psychometric specifications of the TAS-20 are confirmed in multiple studies (Parker, Taylor, and Bagby, 2001, 2003; Taylor and Bagby, 2000), and the Persian version of TAS-20 is also confirmed in relevant studies (Besharat, 2007 (a), 2007 (b), and 2008). The scoring method in this scale is as follows: first, the score of items 4, 5, 10, 18, and 19 are reversed. Then, the score of each item is specified as follows: disagree=1, disagree=2, not disagree with =3, agree=4, and agree=5. Afterward, the score of each subscale including difficulty in identifying emotions and difficulty in describing emotions were measured by summation of scores of items of each subscale.

Paul wainwright physical symptom scale (1991)

The scale contains 18 items and is prepared by Paul wainwright in 1991 to measure physical symptoms such as heart palpitations, dizziness, etc. Scoring the scale is in 4 points (0=never, 1-sometimes, 2=most of the time, and 3=always). According to this method, the obtained scores are summated and the judgment is done based on the low level of the score (0), intermediate level (36), and high level of scores (54). The score in the range of (0-18) is low (physical symptoms such as heart palpitations and dizziness). The score in range (18-36) is intermediate (physical symptoms such as heart palpitations, dizziness), and the score above 36 is high (physical symptoms such as heart palpitations, dizziness). The reliability of the scale was confirmed by two times implementation within two weeks in Isfahan to 0.68. Besides, the validity of the scale is also confirmed.

Results

As it is presented in table 1, 859 participants are female (59.6%) and possess the highest frequency. 818 individuals are male (41.4%).

Table 1: frequency distribution based on gender

Gender	Percent	Frequency	Accumulative percent
Female	6.59	859	6.59
Male	4.41	818	1.118
Total	1.118	762	

According to the information relevant to table 2 in the analysis of the correlation between difficulty in identifying the emotions and physical symptoms among the students of Islamic Azad University of Marand, the Pearson correlation test was used. The correlation was obtained at r=714.1. According to the significance level (1.118), which is lower than α=15.1, there is a significant and positive correlation between difficulty in identifying the emotions and physical symptoms. According to the obtained value of correlation, the direction of the correlation is direct and is in average intensity. It means that increase (decrease) in the difficulty of identifying the emotions among students of the Islamic Azad University of Marand, the level of physical symptoms can also be increased (decreased).

Table 2: descriptive variable statistics

Descriptive variable statistics			
	Difficulty in identifying emotions	Difficulty in describing emotions	Physical symptoms
Number	762	762	762
Min	2.11	5.11	88.11
Max	34.11	73.11	21.11
Mean	88.26	84.84	78.56
SD	5.27	3.43	8.25

Table 2 shows that the mean value of difficulty in describing emotions is equal to 84.84 and the standard deviation is equal to 43.3. The least mean value among subscales of alexithymia belongs to this variable. Besides, the mean value of the appearance of physical symptoms in the students is equal to 56.78.

Table 3: testing the correlation between difficulty in identifying emotions and physical symptoms

Pearson correlation coefficient			
R		714.1	Difficulty in identifying emotions
Physical symptoms	Sig	1.118	
	N	62.1	
P		1.18	
R		1.885	Difficulty in describing emotions and physical symptoms
Physical symptoms	Sig	1.118	
P		1.18	

**Correlation is significant at the level of 18.1

According to the information in table 3, there is a significant and positive correlation between difficulty in describing emotions and physical symptoms. According to the obtained value of correlation, the direction of the correlation is direct and has medium intensity. It means that the increase (decrease) in the difficulty of describing emotions among the students of the Islamic Azad University of Marand can increase (decrease) the physical symptoms. Table 4 shows the results of multivariate linear regression using the stepwise method for the prediction of research variables. Clearly, in the regression analysis, the variable of difficulty in describing emotions, the correlation coefficient has reached 362.1. The increased correlation for the difficulty in describing emotions is equal to 735.1. In the third step, by adding a variable of difficulty in identifying emotions, the correlation has reached 398.1. The value of the increased correlation coefficient for the difficulty of identifying emotions is obtained to 138.1.

Table 4: Results of regression analysis

Results of regression analysis				
Variables	Adj. correlation coefficient	Sum of correlation	Correlation coefficient	Estimated std. error
Physical symptoms	1.184	1.182	a1.837	3.9794
Difficulty in describing emotions	1.838	1.835	a1.362	7.8756
Difficulty in identifying emotions	1.855	1.859	a1.398	3.5915

The results of the study showed that there is a significant and positive correlation between them. With the increase (decrease) in difficulty in identifying emotions, the physical symptoms are increased (decreased) in the students.

Table 5: multiple analysis of variance

Source of variance	Sum of squares	Df	Mean squares	f	Sig
Regression	752.27243	4	938.6810	30.016	0.000
Residual	716.59449	262	907.226		
Total	468.86693	266			

Multiple variance analysis by the stepwise method was used to predict the alexithymia and its subscales and specified the physical symptoms. As the table shows, analysis of variance confirms the reliability of stepwise regression in the prediction of alexithymia and its subscales, and the physical symptoms (F_{o} = 30.016, p<0.01).

Table 6: fitness of the proposed model with the data based on fitness index

Fitness indices	X2	X2/df	DfI	GFI	AGFI	NFI	CFI	IFI	TLI	RSMEA
Proposed model	246.120	22	11.187	0.909	0.813	0.853	0.863	0.864	0.775	0.137
First revised model	248.738	23	10.815	0.908	0.821	0.851	0.862	0.863	0.784	0.134
Final model	59.537	21	2.835	0.976	0.949	0.964	0.976	0.977	0.960	0.058

The table shows the fitness indices of the proposed model. The primary results show that the fitness indices in the proposed model are at the desired level. the chi-square (x2) index, the x2/df index, goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normalized fit index (NFI), comparative fit index (CFI), incremental fit index (IFI), Tucker–Lewis index (TLI), and the Root Mean Square Error (RMSE) index show the acceptable fitness of the proposed model with the data. Figure 1 shows the final model of the research, along with the standard path coefficients.
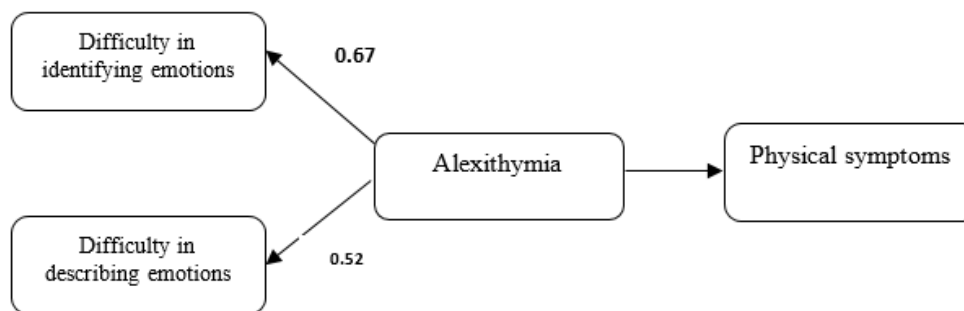
Figure 1: the proposed model of the research with the standard coefficients (all coefficients are significant at the level of p<0.01)

Discussion and Conclusion

The results obtained from the study showed that there is a significant and positive correlation between the difficulty in identifying emotions and physical symptoms. The findings of the study are consistent with the findings of Ghorbani et al. (2017), Bartez et al. (2015). When the alexithymia information is not capable to get the cognitive processing of the perceptions, the individuals become distressed emotionally and cognitively. Such disability can disrupt the organization of their emotions and cognitions. Because of lack of emotional consciousness and inability of cognitive emotion processing, these individuals are unable to identify, understand, or describe their emotions, and have restricted ability to cope with stressful conditions. One of the methods to control the stresses can be alexithymia and discharge of the emotions caused by stress or disease. If the emotions are not discharged and the individual is unable to express negative emotions verbally, the psychological part of alexithymia and

distress systems such as depression and anxiety is increased. Hence, individuals with the capability of identifying their emotions and expressing the emotional states effectively can cope with the daily problems of life better than others. They can also cope with the environment and others successfully. As a result, these individuals are healthier than others physically and mentally. Individuals with physical symptoms have indistinguishable emotions because of the pain and difficulties of the disease and the emotions come with physiologic arousal. However, because of difficulty in distinguishing the description and regulating the emotions, the arousal remains active and is not eliminated. This can disrupt the automatic neurotic system and immune system. Hence, based on the results of this study, it could be mentioned that difficulty in identifying the general health of individuals can play a key role. Besides, there was a significant and positive correlation between difficulty in describing emotions and physical symptoms. With the increase (decrease) in describing the emotions of students, their physical symptoms were also increased (decreased). The findings of this study are consistent with the findings of Pedrosa et al. (2009) and Mark et al. (2010). Individuals with physical symptoms and acute alexithymia are unable to understand and describe the emotions of self and others. They show poor talent in sympathy. Those individuals with improper emotional status can't contact other people properly and weakly cope with others. Therefore, they are prepared to suffer from various types of psychological disorders. On the other hand, they have lower coping capability. Besides, the ability of sympathy as a vital issue in critical conditions such as disease is decreased in individuals with acute alexithymia, and this can be a threat to their general health.

The results of this study are consistent with the findings of Besharat et al. (2014). Emotion regulation is an axial process for all aspects of human performance and plays a vital role in the methods of coping with stressful experiences and happy experiences. Emotion regulation refers to the ability to understand the emotions, adjust, and experience the emotions, and to express them. The construct plays a key role in starting, increasing, preserving, or decreasing the positive and negative emotions in response to environmental events. This is because; it affects the physiologic, behavioral, and empirical processes and can play a mediating role in the correlation between difficulty in describing and identifying the emotions and having objective thought about that, and the physical symptoms such as physical pains, heart palpitations, etc. The major limitations of the study include the lack of using other research instruments such as interviews, along with self-report instrument (questionnaire) and doing the work just in Marand and university.

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