

The relationship between alexithymia, irrational beliefs, positive and negative emotions with mental disorders

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Original Article

Abstract

Introduction: University students, as the future manpower resources, are of high importance for communities. One of the aspects to focus on is their mental health. The present study was conducted to determine the relationship between alexithymia, irrational beliefs, positive and negative emotions with mental disorders in students.

Methods: There were 400 students, selected randomly through stratified sampling from different disciplines at Razi University (Kermanshah, Iran). The design of the study was descriptive-correlational. The questionnaires used for collecting data were: Mental Disorders Symptoms (SCL_90), Alexithymia (FTAS-20), Jones Irrational Beliefs tests, and Positive and Negative Syndrome Scale (PANAS-X). Collected data were analyzed using statistical indices including correlation, regression and fundamental correlation.

Results: Data analysis indicated that there was a significant relationship between alexithymia, irrational beliefs and negative emotions with mental disorders. There was a negative significant relationship between positive emotions and mental disorders. Alexithymia, irrational beliefs and negative emotions were capable of predicting mental disorders while positive emotions did not have this capacity. Although about 73% of mental disorders were predicted by irrational beliefs, alexithymia, negative and positive emotions, but negative emotions and alexithymia contributed more than other variables.

Conclusion: Alexithymia and irrational beliefs play major roles in mental disorders. These variables explain a high variability rate of mental disorders. They are the predisposing factors for mental disorders. They need more attention in clinical studies.

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Introduction:

Studying the possible causes of mental disorders and identifying overt and covert threatening factors of mental health enable us to

take effective steps to provide students with tranquility. Universities, as institutions have the mission to train healthy manpower for the future, in a unique position for promoting mental health

and also solving mental health problems of the students. By identifying common disorders among the students as well as the factors influencing mental health issues, we can take steps toward the health promotion in the society.

Alexithymia is one of the components associated with mental disorders. It is a personality structure originating from psychodynamic notions which literally means zero terms for emotions (1). Alexithymia is associated with problems of emotional self-regulation; in other words, inability to cognitively process the data related to emotions and regulation of emotions. Individuals suffering from alexithymia have difficulties for recognition, detection, processing and regulating emotions, and also distinguishing internal from somatic emotions (2). There are studies supporting the relationship between alexithymia and increase of negative emotions like anxiety and depression (1). Lots of earlier studies emphasize that alexithymia is associated with demonstration of psychopathologic symptoms for emotional regulation (3). The relationships between alexithymia with depression, anxiety and many other mental and somatic disorders have been verified (4).

The results from recent studies show that alexithymia has negative effects on psychological and emotional wellbeing and considered a risk factor for emotional distress, psychological problems and diagnosis of mental health imbalance (5). There is a relationship between pain (6), rheumatoid arthritis (7), obesity (8), blood pressure (9), irritable bowel syndrome (10), depression (11), self-mutilation behaviors (12), anorexia nervosa (13), job burnout and Alexithymia (5).

In addition to alexithymia, personal beliefs also influence the behavior. Ellis and Harper (1975) believe that irrational beliefs in long term lead to anxiety and consequently mental disorders. From the rational-emotional viewpoint, human thought affects emotions and the associated behaviors, and even create them. Emotions influence thoughts and behavior, and behavior influences thoughts and emotions; therefore, to change one of the three factors, at least one of the two other factors must be changed. According to rational-emotional viewpoint when an activating event (A) occurs for an individual, he/she may have two different and contradictory conceptions based on his/her

inherent tendency (B): a group of logical and rational thoughts, notions and beliefs (rB), and one of the other illogical and irrational thoughts, notions and beliefs (iB). In case the individual is influenced by logical and rational thoughts and notions, he/she will achieve logical consequences (rC) and healthy personality; but if he/she is influenced by illogical and irrational thoughts and notions, he/she encounters illogical consequences (iC). In the latter case, there will be an anxious and abnormal individual who has unhealthy personality (14).

Emotions affect the behavior of individuals. Positive emotions indicate that how much the individual has enthusiasm for life and how much he/she feels active, ready and aware. But negative emotions indicate a general dimension of internal discomfort and unpleasant engagement including unpleasant states such as anger, hatred, disgust, guilt, fear and nervousness (15). In fact, positive emotions include positive feelings and emotions like pleasure, joy, happiness and pride; and negative emotions include negative feelings and emotions like guilt, shame, sadness, anxiety and worry, anger and tension (16). Telgen (1985) believes that those two dimensions are related to depression and anxiety. The results of some studies indicate that low positive emotions and high negative emotions (state and trait form) are respectively related to depression and anxiety (17,18).

Since earlier studies mainly investigated one aspect of mental health (e.g. depression) with some contradictory results on one hand, and lack of shared current variables used together for the prediction of mental disorders, the present study aims to answer these questions: what is the relationship between alexithymia, illogical beliefs, positive emotions and negative emotions, on one hand, and mental disorders on the other? What part do variables play to predict mental disorders?

Methods:

This research is a descriptive-correlational study. There were 400 students selected randomly from Razi University of Kermanshah (the sample size was determined 375 using Chocran formula, but considering factors such as missed data or incomplete questionnaire, 400 students were

selected). In this study, stratified random sampling method was used. In such a way that out of 7 schools of Razi University considering the number of the students of each school and field of participants were equally distributed in the sample. Then the questionnaires of the study were prepared and subjects were selected. The questionnaires were distributed. The students were briefed by the researcher on how to complete the questionnaires. The subjects were informed to ask for further information in the process of filling out the questionnaires. Students filled out the questionnaires after declaring consent for participation in the study and getting assured about the confidentiality of their information. The subjects individually filled out the questionnaires in the presence of the researcher. Then the questionnaires were collected. Mean age was 21.87 ± 2.22 years old. Following questionnaires were used for data collection:

1. Alexithymia questionnaire FTAS-20

Alexithymia Toronto scale is a 20-item test including three sub-scales: 1) difficulty in identifying emotions (7 items), 2) difficulty in describing emotions (5 items) and 3) objective thinking (8 items). Each item is assessed on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A total score is calculated for overall alexithymia. The psychometric characteristics of alexithymia Toronto-20 scale has been studied and validated in several studies. Persian version of alexithymia Toronto-20 scale translated and normalized by Besharat (2011). Cronbach's alpha coefficients for the scale and its three difficulty subscales of difficulty in identifying, difficulty in describing and externally-oriented thinking were calculated respectively as 0.85, 0.82, 0.75 and 0.72, which indicate a good internal consistency for the scale. The reliability of the retest of the scale was confirmed in a 67-member sample which was performed two times with a 4-week interval. The reliability ranged from 0.80 to 0.87 for overall alexithymia and its various subscales. The simultaneous validity of alexithymia Toronto-20 scale in terms of correlation between the subscales of this test and the scales for emotional intelligence, psychological well-being and

psychological distress were studied and confirmed. The results of Pearson correlation coefficient indicated that there was a significant correlation between the score of subjects for overall alexithymia with emotional intelligence, psychological well-being and psychological distress. There were significant correlation coefficients between subscales of alexithymia and the above variables. The analytical results of confirmatory factor also reported the three factors (Difficulty identifying, Difficulty describing and externally-oriented thinking) in Persian version of alexithymia Toronto-20 scale. In the present study, the obtained Cronbach's alpha of the questionnaire was 0.92.

2. SCL-90 questionnaire

The prototype of this questionnaire was designed by Dargotis, Lipman and Kuri (1973) to demonstrate the psychological aspects of psychosomatic patients. Dragotis et al revised the questionnaire and published its final version as revised list of Psychological symptoms (scl-90-R). This short answer inventory includes ninety-five-choice questions (MCQs) (Nothing=0, somewhat=2, Much=3, Very Much= 4). The content of this test measures 9 different dimensions. From the viewpoint of validity, the test has concurrent validity, convergent validity, structural validity and scalability validity. The reliability of the instrument with retest method was reported between 0.78% and 90%. Cronbach's alpha was between 0.70 and 0.90. In Iran, Mirzaei and Bagheri (1980) carried out this test on 2500 subjects. The reliability was reported above 0.80% (20). In this research, the items related to five disorders were used. The Cronbach's alpha coefficient for the questionnaire was 0.94%.

3. Positive and Negative Affect Scale (PANAS-X)

This questionnaire was prepared by Watson, Clark and Telgen in 1994. In this scale 60 feelings expressed in words. The opinion of respondents regarding the feelings within the past several weeks is evaluated using a 5-degree scale (not at all, a little, on average, high, very high) based on Likert's spectrum. The questionnaire not only measures two top rank scales associated with

PANAS-X Scale (positive affect and negative affect) but also 11 special feelings and emotions. Most people complete 60 items of the instrument in less than 10 minutes. The obtained internal reliability (Cronbach's alpha) of the two scales was more than 0.83 (21). In Iran, Mohammadi (2011) evaluated and confirmed the validity and reliability of the positive and negative scale (22). In the present study Cronbach's alpha was 0.82.

4. Jones irrational beliefs behaviors questionnaire

This test comprises 10 scales and each scale contains 10 questions individually rated based on 5-point Likert scale according which respondents rate their agreement or disagreement regarding each statement. For each scale, a special key has been customized. The instrument is scored in the direction of irrationality, i.e. the higher score the higher the rate of irrationality. The total score of irrational beliefs is the sum of the total score in each subscale. Jones (1969) reported reliability of the test by test-retest method as 0.92 and the reliability of the ten subscales from 0.66 to 0.80. In Iran, Taghipour (1994) reported the reliability

of the test in a study carried out on 106 students from AllamehTabataba'i University by Cronbach's alpha as 0.71 (23). In the present study Cronbach's alpha was 0.61.

5. Demographic information questionnaire

A researcher made questionnaire was used for the collection of personal, social and economic information including age, sex, field of study and income of the study.

Statistical tests including Pearson correlation coefficient, regression analysis and fundamental correlation were used for the analysis of data.

Results:

The subjects of the study were from 18 to 31 years old and the mean age was 21.87 ± 2.22 .

As Table 2 shows the mean of mental disorders including compulsive-obsessive depression, anxiety, aggression and paranoid thinking were 15.40, 14.91, 8.81, 9.78 and 7.11, respectively. The mean and standard deviation of other variables are reported in Table 1.

Table 1. Mean and standard deviation in the variables under this study

Variables	Minimum	Maximum	Mean	Standard Deviation	
Mental Disorders	Compulsive-obsessive	0	35	15.40	7.01
	Depression	0	48	14.91	10.32
	Anxiety	0	40	8.81	8.51
	Aggression	0	24	9.78	6.23
	Paranoid Thoughts	0	24	7.11	5.51
	Needing Approval of Others	13	40	26.34	3.91
	High self-expectations	18	41	28.31	4.46
Irrational Beliefs	Tendency to Blame	17	87	30.34	5.56
	Reaction to Failure	18	45	29.45	4.39
	Emotional Irresponsibility	10	73	27.57	7.50
	Dependency	18	74	21.07	5.01
Alexithymia	Perfectionism	12	40	24.09	4.85
	Difficulty Identifying	7	40	15.58	6.45
	Difficulty Describing	5	23	13.31	3.38
	Objective Thinking	8	35	24.07	4.01
Total Score	23	89	52.96	10.48	
Negative Affection	34	133	75.32	20.89	
Positive Affection	34	132	83.67	17.07	

Table 2. Correlation coefficient between alexithymia and its subscales with mental disorders

Alexithymia Subscales	Statistical Index	Compulsive Obsessive	Depression	Anxiety	Poranoid Thoughts	Aggression
Difficulty Identifying	Correlation	0.58	0.55	0.54	0.42	0.41
	Significance	0.001	0.001	0.001	0.001	0.001
Difficulty describing	Correlation	0.34	0.31	0.35	0.22	0.22
	Significance	0.001	0.001	0.001	0.001	0.001
Abjective Thinking	Correlation	0.25	0.16	0.07	0.20	0.12
	Significance	0.001	0.005	0.19	0.001	0.03
Alexithymia Total score	Correlation	0.56	0.50	0.44	0.41	0.37
	Significance	0.001	0.001	0.001	0.001	0.001

Table 3- Correlation coefficients between irrational beliefs and mental disorders

Irrational beliefs	Statistical Index	Obsessive Compulsive	Depression	Anxiety	Poranoid Thoughts	Aggression
Needing Approval of Others	Correlation	0.23	0.19	0.17	0.10	0.09
	Significant	0.001	0.001	0.003	0.05	0.09
High self-expectations	Correlation	0.47	0.50	0.46	0.37	0.39
	Significant	0.001	0.001	0.001	0.001	0.001
Tendency to Blame	Correlation	0.09	0.01	-0.03	0.14	0.08
	Significant	0.11	0.77	0.56	0.01	0.14
Reaction to Failure	Correlation	0.36	0.30	0.31	0.30	0.37
	Significant	0.001	0.001	0.001	0.001	0.001
Emotional Irresponsibility	Correlation	0.12	0.12	0.09	0.11	0.12
	Significant	0.04	0.03	0.09	0.05	0.02
Dependency	Correlation	-0.02	-0.10	-0.09	-0.11	-0.13
	Significant	0.68	0.07	0.09	0.05	0.02
Perfectionism	Correlation	0.22	0.32	0.32	0.17	0.18
	Significant	0.001	0.001	0.001	0.002	0.001
Total Score of Irrational Beliefs	Correlation	0.39	0.36	0.31	0.30	0.30
	Significant	0.001	0.001	0.001	0.001	0.001

Table 4. Correlation coefficients between “positive and negative affects” and mental disorders

Variables	Statistical Index	Obsessive-Compulsive	Depression	Anxiety	Poranoid Thoughts
Positive affect	Correlation	-0.34	-0.35	-0.21	-0.25
	Significance	0.001	0.001	0.001	0.001
Negative affect	Correlation	0.55	0.57	0.57	0.41
	Significance	0.001	0.001	0.001	0.001

Table 5. The results concerning prediction of mental disorders based on irrational beliefs, alexithymia, positive affect and negative affect

Criterion variable	R	R ²	F	Significance	Predicting variable	B	β	Significance
Practical-intellectual obsession	0.70	0.49	68.02	0.001	Alexithymia	0.25	0.38	0.001
					Negative affect	0.09	0.28	0.001
					High self-expectation	0.24	0.15	0.004
					Reaction to failure	0.31	0.13	0.005
Depression	0.74	0.56	87.79	0.001	Negative affect	0.19	0.40	0.001
					Alexithymia	0.28	0.29	0.001
					High self-expectation	0.48	0.21	0.001
					Perfectionism	0.21	0.10	0.01
Anxiety	0.67	0.45	56.94	0.001	Negative affect	0.14	0.35	0.001
					Alexithymia	0.19	0.24	0.001
					High self-expectation	0.36	0.19	0.001
					Perfectionism	0.24	0.14	0.003
Aggression	0.54	0.29	28.75	0.001	Alexithymia	0.17	0.28	0.001
					Negative affect	0.05	0.19	0.001
					Reaction to failure	0.19	0.14	0.01
					High self-expectation	0.17	0.12	0.04
Paranoid thoughts	0.53	0.29	28.75	0.001	Alexithymia	0.17	0.30	0.001
					Negative affect	0.07	0.23	0.001
					Reaction to failure	0.26	0.18	0.001

Table 6. Standard coefficients, structural coefficients and other indexes in fundamental correlation analysis

Prediction variable	Coefficients			
	Standard	Structure	Significance	Shgered Variance
Needing Approval of Others	0.04	0.06	0.004	Wilks Lambda=0.27
High self-expectations	0.29	0.30	0.001	RS=0.73
Tendency to Blame	0.03	0.04	0.01	F=11.23
Reaction to Failure	0.18	0.19	0.001	P<0.0001
Emotional Irresponsibility	0.008	0.02	0.20	
Dependency	0.01	0.03	0.11	
Perfectionism	0.11	0.12	0.001	
Negative Affect	0.46	0.47	0.001	
Positive Affect	-0.13	0.15	0.001	
Alexithymia	0.35	0.36	0.001	

The results showed that there were significant correlations between compulsive-obsessive, depression, anxiety, paranoid thought and aggression coefficients and the total score of alexithymia ($P < 0.01$). The correlation coefficients were 0.56, 0.50, 0.44, 0.41 and 0.37, respectively. The results of correlation coefficient and its dimensions with mental disorders are presented in Table 2.

The results showed that there were significant correlations between the total irrational beliefs and

mental disorders including compulsive-obsessive, depression, anxiety, paranoid thoughts and aggression ($P < 0.01$). The correlation coefficients were 0.39, 0.36, 0.31, 0.30 and 0.30, respectively. The correlation coefficients between irrational beliefs and mental disorders are presented in Table 3.

The results obtained from Pearson correlation showed that there were significant correlations between positive affect and obsessive compulsive, depression, anxiety, paranoid thoughts and

aggression ($P < 0.01$). The correlation coefficients were -0.34, -0.35, -0.21, -0.25 and -0.18, respectively. The results also showed that there were significant correlations between negative affect and obsessive compulsive, depression, anxiety, paranoid thoughts and aggression ($P < 0.01$). The correlation coefficients were 0.55, 0.63, 0.57, 0.41 and 0.53, respectively. Table 4 indicates the correlation coefficients between "positive and negative affects" and mental disorders.

As Table 5 shows predicting variables are altogether able to predict and explain 49, 56, 45, 28 and 29 percent of obsessive-compulsive, depression, anxiety, paranoid thoughts and aggression. More complete results concerning regression analysis for prediction of every single criterion variables are given in Table 5.

The results obtained from basic correlation showed that the negative affect with value of 0.46 compared with other variables including irrational beliefs, alexithymia and positive affect showed maximum correlation with the first combination or basic variable obtained from dependent variables (mental disorders). The structure coefficient of negative affect variable with value of 0.47; on one hand, and dependency (0.03) and emotional irresponsibility (0.02) variables; on the other hand, had respectively the maximum and minimum role in creating the basic variable.

As Table 6 shows, Wilks's lambda test is 0.27, i.e. about 73 percent of the associated variables (mental disorders) are predicted. Negative affect variable (with standard coefficient of 0.46) and tendency to blame (with standard coefficient of 0.04) respectively had the maximum and minimum correlation with the first basic variable of mental disorders. Since all the structural coefficients (except positive affect) of predicting variables and mental disorders were positive, it can be concluded that the higher the score of individuals for alexithymia and negative affect the higher scores for their mental disorders.

Conclusion:

The present study was conducted to evaluate the relationship between alexithymia, irrational beliefs, positive and negative emotions with

mental disorders. The results of the study showed that there was a positive relationship between alexithymia and irrational beliefs; on one hand, and mental disorders, in other hand. It means that the higher the scores of an individual for alexithymia and irrational beliefs, the lower the mental health occurs following severer mental disorder. There is also a positive relationship between negative affect and mental disorders. But while there is a negative relationship between positive affect and mental disorders, i.e. increased positive affect and decreased negative affect less mental disorder or a better mental health is achieved. Results showed that negative affect, alexithymia and irrational beliefs had the capability of predicting mental disorders, while positive affect did not.

The results of the research concerning alexithymia and mental disorders is consistent with earlier studies (24-28). It is believed that alexithymia is a risk factor for a wide range of psychiatric disorders the reason is that individuals who suffer from this disorder are severely pressurized by the physical and emotional correlations which do not speak of. This failure prohibits the regulation of emotions, and results in problems for successful adaptation (22). In fact, those who can express their feelings on time are released from mental pressures. They cannot share their feelings with others. To explain the findings of the study, it can be argued that alexithymia is a cognitive-emotional condition in which the individual is not able to regulate and convey his feelings. In the process of cognition processing, when the emotional information cannot be perceived and evaluated, individuals emotionally and cognitively become disorganized and helpless. This disability disrupts the motion and cognition of the individuals suffering from this disorder. Due to lack of awareness of emotions and inability to process their cognitive feelings, such people are not usually able to identify, perceive and or describe their emotions; and have a limited ability to adapt with tension causing conditions. One of the methods of tension control especially for negative affects is the discharge and expression of the emotions resulted from the tension. If the emotion is not discharged and the individual could not express his negative affections in words, then

the psychological components of the systems for emotional expressiveness and psychological distress including depression and anxiety are increased. Those who can identify their feelings and effectively express their emotional states are able to face the problems of life in a better way, and can be more successful in adaptability with environment and others. Consequently, such individuals possess a higher level of mental health. Alexithymia is associated with life dissatisfaction and lack of society support. Studies show that alexithymia directly reduces social support; this, in turn, results in reduction of intimate and supportive relationships. They ultimately lead to depression and other mental disorders.

The present study confirms the results of a study by Dubey et al (2010) who showed that alexithymia is related with anxiety, depression, post-traumatic stress and some other mental disorders. On the other hand, the results of our study is consistent with Porcelli et al (2007), Connelly and Denney (2007), Garnefski and Qnstein (2006), Dubey, Pandey and Mishra (2010) (4,29). However, there are not consistency in some subscales such as the relationship between objective thinking and anxiety, because the researches have emphasized on the positive relation of extraverted thinking with anxiety, while it was not significant in our study.

Given the results of the present study regarding the relationship of positive and negative affect, it should be noted that the variables are completely independent. Since negative emotional states are seen in both anxiety and depression, the tools for measuring both structures possess the same extent of negative emotional factors. Therefore, negative affect has a positive relationship with anxiety and depression. On the other hand, anxiety and depression have different relationships with positive affect. Tools used for the measurement positive affect have a high negative correlation with depressed mood and its associated symptoms; however, there is no correlation between positive affect, anxious mood, and its associated symptoms. In fact, negative affect is a steady state in an individual's mood influencing all of his/her moods. So, people with high negative affect are likely to manifest depression and anxiety symptoms. On the other hand, studies have shown

that positive affect is involved in health improvement via strengthening the immune system. Positive affect includes tendency to involvement in and confrontation with such environments as social environment. Those with high positive affect look at life actively, enthusiastically, lively and confidently. They seek to be near the others, and enjoy it. In their social interactions they possess confidence and satisfaction. They like exciting experiences. On the other hand, those with low positive affect don't have energy, enthusiasm and confidence. They are reticent and socially prefer to be alone. They avoid enthusiastic experiences, and they are generally skeptical to get involved in the environment actively. But people with high negative affect have tendency toward discomfort and dissatisfaction, they have negative attitude toward themselves. Those who get a low score from this dimension are relatively calm, safe, and self-satisfied. The results of the present study are explainable by the above factors.

BakhshipourRoudsari and et al (2004) showed that negative affect was related with panic, generalized anxiety, obsessive-compulsive compulsion and obsession, social phobia and depression. However, positive affect was only related with obsessive-compulsive and depression (14). Our study just verified the negative affect section of the above study. The results of our study for positive affect showed that the positive affect had negative relationship with each of the five disorders in the study. Watson and Telgen (1985) showed that positive and negative affect were related to depression and anxiety (15). Our study verified the relationship.

The results of our study concerning irrational beliefs were in consistent with some studies like Rashidi et al (2004), Azad and Nejat (2008), Emamipour et al (2008), and Geravand et al (2012) which emphasized the relationship between irrational belief with depression, anxiety and mental health as well (17,19, 30-32). In fact, an individual with irrational beliefs looks at the surrounding world based on the same beliefs. So, his/her own insight leads to either a feeling of happiness or misery. Beliefs determine how an individual interprets the life and its events. For example, an individual with high self-expectation

beliefs, if faced with a failure in a period of his life which happens naturally for anybody, he is overwhelmed with defeat feeling, loses his confidence, and feels guilty and worthless. It results in disorders such as depression. As another example, an individual with irrational belief of expecting approvals from others may either get depressed or act aggressively if partially criticized.

The present study showed that there was not a significant relationship between irrational beliefs such as tendency to blame, and the disorders discussed in this study. This finding is in contrast with earlier studies. Moreover, regarding the prediction of mental disorders, the study showed that mental disorders take lesser role than alexithymia and negative affect. And this can open a new window for future studies. It may be due to the population of the study, since during adolescence period, tendency to self-blame may somewhat have a positive effect on the improvement of performance, and/or may be a motivation for compensation of defeats and shortcomings. However, it is a point to be dealt in future studies.

The results of the present study showed that the negative affect with a value of 0.46, compared with other variables such as irrational beliefs, alexithymia and positive affect, was closely related with the first combination or basic variable resulted from dependent variables (mental disorders). In other words, the prediction capability of the negative affect is more than other variables.

Given the results of the study, it can be concluded that the higher score of the negative variable and alexithymia score show that the individual possesses a lower mental health. Alexithymia, negative affect and irrational beliefs are involved in prediction of mental health, but positive affect cannot predict mental disorders.

It is suggested to note the cause-effect relation of the variables studied in this research in clinical trials of future studies. Since the population of this study was students, it is suggested that a further research is conducted on other populations. Given the results of the study, those professionally involved in clinical tasks can note the role of feelings and emotions in the treatment. Therefore, it is recommended 1) to note (when treating the patients) the ability of the patients for identifying

and describing the emotions and 2) to note that positive and negative variables are independent from each other, although both influence the individual's behavior. Positive affect and negative affect are not the character traits of an individual and they are fixed, but flexible.

Limitations:

Since the population of the study was university students, the study results should be cautiously generalized

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