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Original Article

Investigating the relationship between humor and difficulty in regulation of emotions and alexithymia in students

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Abstract

Introduction: Humor is an adaptive coping strategy that can be used as a way to cope with everyday stresses and communication. Therefore, the aim of this study is to investigate the relationship between humor and difficulty in regulation of emotion and alexithymia in students.

Materials and Methods: The present study is correlational. The statistical population of the study is all students of the Persian Gulf University in Bushehr, 200 of which were selected using the cluster sampling method. They responded to the Sense of Humor Questionnaire (SHQ, a 25-item questionnaire), the Difficulties in Emotion Regulation Scale (DERS, 36-item questionnaire), and the Toronto Alexithymia Scale (TAS, a 20-item questionnaire). To analyze the data, the statistical method of simultaneous multivariate regression was used.

Results: The results of the study shows that there is a positive and significant relationship between humor and alexithymia (r= -0.17, *P*=0.05), but there is no relationship between humor and difficulty in emotion regulation (r= -0.08, *P*=0.05). There is also a positive and significant relationship between alexithymia and difficulty in emotion regulation (r= -0.19, *P* =0.01).

Conclusion: Based on the findings of this study, the effective importance of sense of humor in reducing emotional difficulty and alexithymia can be concluded.

Keywords: Alexithymia, Humor, Regulation of emotion

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Introduction

Most research in the field of emotion emphasize the positive and adaptive role of emotion in human behavior (1); also, people deal with a range of emotional issues that require different strategies for emotion regulation (2). Different theories emphasize that effective emotion regulation includes knowledge and emotion assessment skills, emotion management, and adaptive use of emotion (3). The role of emotion regulation for maintaining mental health has been confirmed in many studies (4,5). In contrast, the inability to regulate emotions can have devastating effects on mental health (6). Also, the use of inappropriate and maladaptive strategies is associated with low well-being and low physical health (7). Gratz and Roemer (8) attribute the difficulty to regulate emotions to the use of rigid strategies that may have been useful in the past or in some cases, but currently cause disruption in the normal and proper social, cognitive and interpersonal functions (6). One of the emotional and cognitive problems also associated with emotion regulation is

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alexithymia (9-12). Alexithymia refers to the difficulty in emotion regulation, and in other words, the inability in cognitive processing of emotional information and the ordering of emotions (13-15). Alexithymia is associated with problems in creating and maintaining interpersonal relationships, lower social support, smaller social networks, reduced social skills (16), lower empathy (17), and increased anger and aggression (18).In recent years, the attention of psychology has been focused on positive concepts that help human beings improve their psychological well-being. One of these concepts is humor. Humor is a personality trait that manifests itself in the individual's behavioral habits, experiences, emotions, attitudes and abilities, and is associated with witticism, laughs, hobbies, and so on (19). It has also been known as a developed defense mechanism that helps people deal with emotional conflicts or external stressors by giving importance to humorous and entertaining aspects (20). Humor is often seen as an adaptive coping strategy, however, empirical literature presents non-conclusive results. For example, Lyttle (21) believes that humor is like a double-edged blade that can be harmful to interpersonal relationships (22). There are various classifications for humor; for example, Martin et al. (22) have classified humor into two broad categories: adaptive (positive) and maladaptive (negative). The results of studies on humor styles indicate that in most cases, adaptive styles have a positive relationship with mental health, mental well-being, emotional intelligence components, social adequacy, and academic achievement. In contrast, maladaptive humor styles have a negative relationship with these components and a positive relationship with depression, anxiety, and hostility (22-24).As research has shown that humorous people show good stress management skills, they are able to evaluate, express and manage their emotions, and are also more successful in social interactions (25,26). It seems that it can be related to difficulty in emotion regulation and alexithymia as well. Research shows that there is a relationship between emotional intelligence components and humor. Yip and Martin (23), in their investigation, showed that there is a significant relationship between humor and emotional intelligence. Torabi and Seif (27) found that there is a significant and positive relationship between emotional intelligence and humor and its aspects. Khoshui (28) also showed that there is a significant positive correlation between emotional intelligence and all of its components including enjoyment of humor, laugh, verbal humor, humor in social relationships, and humor in stressful situations. Samson and Gross (29) showed that positive humor was more effective in regulating negative emotions compared to negative humor. They showed that positive humor has succeeded in reducing negative emotion regulation and increasing positive emotion regulation in comparison with negative humor.

Aydin and Campus (30) in their survey showed that negative humor style was positively predictor of alexithymia in general, as well as difficulty components in identifying emotions and difficulty in describing emotions.Due to its benefits, humor is used in a large number of therapeutic and psychological interventions in health centers (31). Also, investigating the relationship between humor and difficulty in emotion regulation and alexithymia can open up new horizons to improve emotion regulation and alexithymia strategies in order to reduce emotional problems. Therefore, the purpose of this study is to investigate the relationship between humor and difficulty in emotion regulation and alexithymia.

Materials and Methods

The present study is a descriptive, correlational study performed on the approval of the Persian Gulf University. The statistical population included all 7,500 students of the Persian Gulf University in Bushehr, 200 of them were selected by cluster sampling method.

This means that from among all the colleges of the university, a number of colleges were selected randomly, then in each of the colleges, a number of disciplines (majors), and then from each discipline, a number of classes were randomly selected, and finally, according to the inclusion criteria, students from each class were randomly selected and tested. Inclusion criteria included consent to participate in the research and studying at Persian Gulf University of Bushehr.

Exclusion criteria included graduate students (students in their last semester) and incomplete questionnaires. Regarding the ethics of research, it should be noted that the participants took part voluntarily in the research and there was no need to mention their name and surname. In addition, it was decided that the results of the study would be available to them at the end of the research. The sample size selection criterion was the

minimum sample size used for correlational studies as 100 samples (32).

Research instruments

A) Sense of Humor Questionnaire (SHQ): This scale is created by Khoshui et al. (33) and has 25 levels, aiming to measure the amount of humor and its factors (enjoyment of humor, laughter, verbal humor, humor in social relationships, and humor in stressful situations). Scoring of this scale is based on a 7-point Likert scale (from totally disagree with score 1 to totally agree with score 7). To assess the validity and reliability, Khoshnei et al. (33) obtained the confirmation of the content validity of the questionnaire by ten knowledgeable professors in this field. The validity of the questionnaire structure was also examined and confirmed through factor analysis by principle component method. The reliability of the questionnaire was tested using Cronbach's alpha coefficient method, ranging from 0.74 to 0.92. In the present study, the correlation coefficients of each factor were examined with the total score in order to investigate the structural validity, which ranged from 0.76 to 0.89. Also, for calculating the reliability, Cronbach's alpha coefficient for the factor ranged from 0.81 to 0.90 and for the whole scale was 0.75.

B) Difficulties in Emotion Regulation Scale (DERS): This scale is a 36-item tool designed to evaluate the difficulty in emotion regulation. The factor analysis reveals the existence of six factors of emotional response, difficulty in performing purposeful behavior, difficulty in controlling impulse, lack of emotional awareness, limited access to emotion regulation strategies, and lack of clarity of emotions. Also, a number of questions have reverse meanings. Higher scores mean more difficulty in emotion regulation. The reviews showed that the internal consistency of this scale was 0.93 and their Cronbach's alpha value was above 0.80. In addition, for assessing the validity of this scale, it was examined by NMR scales and acceptance and practice scales. The reliability of this scale in the study of Azizi, Mirzaie and Shams (34) was reported by alpha value of 0.92. In the present study, this value ranged from 0.88 to 0.93.

C) Toronto Alexithymia Scale (TAS): This questionnaire was developed by Bugby et al. (35) and has 20 items aimed at examining the level of alexithymia or difficulty in expressing emotions.

This scale has three difficulty dimensions in identifying feelings, difficulty in describing emotions and externally oriented thinking. The recitation range is of 5-point Likert scale (totally disagree with 1 to totally agree with 5). Also, a number of questions have a reverse interpretation. In the Persian version of this scale (36), the Cronbach's alpha coefficient for total alexithymia and its three sub-scales ranged from 0.72 to 0.85. Also, the reliability of the retest of this scale in a sample of 67 subjects in two turns with a four-week interval ranged from 0.70 to 0.77. Concurrent validity of the scale was confirmed based on the correlation with the emotional intelligence scale, psychological well-being and psychological distress. The results of the confirmatory factor analysis also confirmed the existence of the above three factors (5). In this study, Cronbach's alpha was 0.68 for emotion recognition factor, 0.71 for difficulty in describing the emotions and 0.59 for externally oriented thinking.

Results

In this study, 200 students participated, 110 of which were female and 90 were male. The mean age of female students was 20.59 (ranged from 17 to 35 years) and the mean age of male students was 28.5 (ranged from 18 to 42 years). In Table 2, descriptive indices related to the research variables along with the Pearson correlation coefficient between variables are presented.

Table 1. Descriptive index based on gender and Pearson correlation test results for the relationship between the research variables

Sub-scale	gender	mean	Standard deviation	Correlation coefficient		
				Difficulty in emotion regulation	Alexithymia	Humor
Difficulty in emotion regulation	Boy	5.13	1.83			
	Girl	5.08	1.86	1	0.19**	-0.08
	Total	5.11	1.84			
Alexithymia	Boy	5.06	1.77			
	Girl	5.26	1.77	0.19**	1	0.15**
	Total	5.17	1.76			
Humor	Boy	9.67	2.61			
	Girl	2.26	9.76	1	0.15**	-0.08
	Total	2.46	9.71			

As can be seen in the table above, there is a positive correlation between humor and alexithymia (r= -0.17, *P*=0.05), but there is no relationship between humor and difficulty in emotion regulation (r= -0.08, *P*=0.05).

There is also a positive correlation between alexithymia and difficulty in emotion regulation (r= -0.19, *P*=0.01).

Simultaneous multivariate regression analysis method was also used to investigate the role of difficulty in emotion regulation and alexithymia in the prediction of humor. Such that humor was used as a criterion variable and the emotion regulation difficulties and alexithymia variables in were used as predictors. The results are summarized in Table 2.

Table 2. Results of multivariate regression analysis of humor prediction by alexithymia and difficulty in emotion regulation

Criterion variable	Predictor variables	R2	R	*P*	t	Beta	B
Humor	Alexithymia	0.03	0.19	0.01	2.42	0.17	0.24
	Difficulty in emotion regulation			0.10	-1.61	-0.11	-0.15

Based the results of multivariate regression analysis show that alexithymia (Beta=0.17, t=2.42, *P*= 0.01) positively predicts humor in students, but the difficulty in emotion regulation (Beta=0.11, t = -1.61, *P*=0.10) is not able to predict humor in them. Table 3 shows the results of the analysis to examine the differences between male and female students.

Table 3. The results of multivariate analysis of variance to examine the differences between male and female students in research variables

Source of variations	Variable	Variation coefficient	Degree of freedom	Variation mean	F	Significance level
Gender	Difficulty in emotion regulation	1.72	3	0.58	0.17	0.92
	Alexithymia	2.80		0.93	0.30	0.83
	Humor	3.46		1.15	0.19	0.91

The results of Table 3 indicate that there is no difference in the desired variables between the participants in terms of gender.

Discussion

The purpose of the present study was to investigate the relationship between humor and difficulty in emotion regulation and alexithymia in students. The results of Pearson correlation showed a positive correlation between humor and alexithymia. In addition, the results of simultaneous regression analysis indicated that alexithymia can positively predict humor, but the difficulty in emotion regulation cannot be a predictor.The first finding of the study was that there is a relationship between alexithymia and humor in students, and students' humor can be predicted by alexithymia. These results were implicitly consistent with the results of Aydin and Campus (30). In their study of the relationship between humor styles and alexithymia among parents with autistic children, they showed that in general, the aggressive humor style positively predicts alexithymia.In a possible explanation of the positive relationship between alexithymia and humor in students, it seems that the difficulty in expressing and describing emotional feelings to others as well as simple and objective cognitive style can be related to the level of humor in the students. On the other hand, humor is a way to cope with everyday stresses and communication, and can help people overcome what is harmful by releasing emotions without mental pressure and negative effects on others (24). It is also known as a developed defense mechanism that helps individuals to deal with emotional conflicts or external stressors through giving importance to the funny and entertaining aspects (20); however, empirical literature presents non-conclusive results. For example, Lyttle (21) believes that humor can be harmful to interpersonal relationships.

One explanation here is that there are different types of humor, each of them would have different results (22). Also, different results have shown that the relationship between humor and physical and mental health is positive but poor; therefore, different types of humor can be associated with different (positive and negative) consequences; and it seems that people with alexithymia benefit from humor.

Research in the field of humor styles have shown that adaptive styles have positive relationship with positive aspects of psychological well-being such as self-esteem, extroversion, hospitality (cordiality), intimacy, and in general with positive emotions, and have negative relationship with negative emotions such as depression, neuroticism, and anxiety. Maladaptive humor styles have direct relationship with negative emotions and reverse relationship with positive emotions (22).

It seems that people with alexithymia benefit more from self-centered humor styles, including self-enhancing humor and self-defeating humor (22), and thus, in this way, the positive relationship between humor and alexithymia can be explained. People with alexithymia seem to use maladaptive humor strategies more, which is due to their difficulty in identifying and describing their emotional states; and it seems that these people find humor an appropriate way to deal with their problem in expressing and describing their emotions. Consequently, they use it more, because humor can cover their weakness in many cases.

However, another finding of the study indicated that there is no relationship between the difficulty in emotion regulation and humor in the students. To some extent, this finding is not in line with the findings of other studies. For example, Torabi and Seif (27), McGhee (37), Yip and Martin (23) showed that there is a relationship between emotional intelligence and humor. Samson and Gross (29) also suggested that humor could be an effective form of emotion regulation, but this relationship was not confirmed in the present study. Perhaps one of the reasons why this relationship has not been confirmed is that humor in this study is considered in general, and therefore its different dimensions are not considered. On the other hand, in the present study, the relationship between alexithymia and difficulty in emotion regulation has been identified and this confirms the problem of people with alexithymia in the correct regulation of their emotions (13).

The limitation of the present study in interpreting its findings should not be forgotten. On one hand, this research has been conducted in a student sample that may not be a proper indication of the general situation of the whole society and will make generalization of the results difficult. On the other hand, the research is correlational, and the casual interpretation of data should be done with caution.

Another limitation of this study is its cross-sectional nature, based on which it is suggested that similar studies should be carried out in a longitudinal manner. It is also suggested to future researchers that similar studies be conducted on other groups to address the difficulty in emotion regulation and alexithymia in other age groups.

Conclusion

Based on the findings of this study, it seems that humor has a special place in emotion regulation.

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