Relationship Between Experiential Avoidance and Cognitive Fusion to Social Interaction Anxiety in Students

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Abstract

Background: The current study aimed at assessing the relationship between experiential avoidance (EA) and cognitive fusion to the level of anxiety in students experiencing such problems in their social interactions.

Methods: The sample consisted of 324 college students who were randomly selected by cluster sampling method. They completed acceptance and action questionnaire (AAQ-II), social anxiety-acceptance and action questionnaire (SA-AAQ), cognitive fusion questionnaire (CFQ), believability of anxious feelings and thoughts questionnaire (BAFT), and social interaction anxiety scale (SIAS). Pearson correlation coefficient and multiple regression analysis were used to analyze the data.

Results: The results showed a positive correlation between EA (r = 0.45; P < 0.001) and social anxiety-acceptance and action (r = -0.50; P < 0.001) and anxiety in social interactions. A significant positive correlation was also found between CFQ (r = 0.48; P < 0.001) and BAFT (r = 0.26; P < 0.001) and social interaction anxiety. Overall EA (β = 0.45) and acceptance (β = -0.37) and action (β = -0.12) components of SA-AAQ scores were predictor for overall anxiety score in social interactions (P < 0.001) In addition, overall cognitive fusion score (β = 0.48; P < 0.001), and somatic concerns (β = 0.16; P < 0.01), negative evaluation (β = 0.32; P < 0.003) and emotion regulation (β = -0.21; P < 0.001) components of BAFT could predict anxiety in social interactions.

Conclusions: The results of the current study showed a correlation between EA and cognitive fusion and students anxiety in social interactions.

Keywords: Experiential Avoidance, Cognitive Fusion, Social Interaction Anxiety, Acceptance and Commitment Based Therapy

1. Background

One of the main factors in acceptance and commitment therapy known responsible for etiology and persistence of pathology is experiential avoidance (EA) (1). EA refers to a phenomenon that occurs when a person is unwilling to remain in contact with particular private experiences and takes steps to alter the form or frequency of these events and the contexts that occasion them (2). The rigid and inflexible pattern found in experiential and emotional avoidance is common in different kinds of anxiety disorders and creates anxiety and fear in anxious patients. In the framework of acceptance and commitment therapy (ACT), these avoidances are considered as destructive processes that cause fear and anxiety experiences to turn into a disorder. In fact, the main problem in anxiety disorders is the fear of fear and doing anything possible to avoid experiencing such fear. The aim of ACT is not to help people manage their anxiety, but to teach them how to get in touch with their fear and anxiety in a more profound, substantial and different way (3). People with social anxiety disorder (SAD) and generalized anxiety disorder (GAD) prefer not to experience normal physical and emotional reactions. Worries about social evaluation, and daily life obstacles and failure are perfectly normal experiences. When the negative affections associated with these concerns are not accepted in a way they are and even are avoided, the problem rises (3). Several researches indicated the association between EA and anxiety disorders (4-9). To the best of authors' knowledge, there are no researches covering the association between EA and anxiety in students' social interactions. Therefore, the authors aimed at conducting a research with a high quantity of samples and appropriate tools to examine the relationship. Actually, the currency study aimed at evaluating the relationship between EA or social anxiety acceptance and action, and students' anxiety in social interactions.

Another fundamental construct in acceptance and commitment therapy is cognitive fusion. Hayes, Strosahl, and Wilson defined cognitive fusion as follows: The domination of verbal/cognitive processes over other sources of stimulus control is called cognitive fusion. It is the tendency for behavior to be overly regulated and influenced by cognition ([10]). Gillanders et al., provided a more comprehensive definition of cognitive fusion. They described a process in which a person is excessively entangled in his thoughts, and the thoughts dominate his behaviors. Cognitive fusion includes domination of cognition on experiences, inability to perceive cognitive issues from different perspectives, emotional reaction to thoughts, behaviors excessively modified by cognition, effort to control thoughts, overanalyzing situations, and evaluation and judgement of thoughts ([11]). Cognitive defusion plays an important role in different human disorders such as depression ([12], [13]), psychosis ([14]), pain ([15]), drug abuse ([16]), post-traumatic stress disorder (PTSD) ([17]), obsessive-compulsive disorder ([18], [19]), and anxiety and its' symptoms ([5], [20-22]). Researches showed a relationship between EA and cognitive fusion, and psychological disorders such as anxiety; however, the relationship between EA and cognitive fusion in students' social interactions is not investigated so far. Understanding this relationship is a significant step toward designating a proper psychological intervention for students. In addition, the conducted researches did not generally use suitable and proper assessment tools. Also, they only assessed the general aspects of EA, while using a questionnaire to assess EA and/or acceptance in the context of social anxiety may provide more conclusive results.

2. Methods

The current descriptive study was conducted on the students attending Shahid Beheshti University of Medical Sciences as the study statistical population from 2014 to 2015. The cluster sampling method was used and accordingly, 324 students were randomly selected. Five colleges were randomly selected of which classes were randomly selected as samples. Participants were informed about the research procedure and accordingly, they were asked to sign the written informed consent form.

2.1. Assessment Tools

Acceptance and action questionnaire (AAQ)-II: The questionnaire was developed by Bond and et al. It includes 10 items to assess acceptance, EA, and psychological inflexibility. AAQ-II is scored based on a seven-option Likert scale ranging from 1 (never true) to 7 (always true). Higher

scores show more psychological flexibility. Bond and et al., showed that the questionnaire has a good reliability, validity, and construct validity ([23]). Abbasi et al., reported good validity and reliability for the Persian version of AAQ-II in Iran ([24]).

Social anxiety-acceptance and action questionnaire (SA-AAQ): The questionnaire was developed by MacKenzie and Kocovski in order to assess acceptance specific to social anxiety symptoms and the extent to which the person is aware of his thoughts and feelings about his own social anxiety without trying to change them. The final version of the questionnaire has 19 items scored based on a seven-option Likert-scale ranging from never true (1) to always true (7). Higher scores signify higher acceptance of social anxiety-related thoughts and feelings. Cronbach's alpha was 0.94 for this questionnaire. It also has a good reliability ([25]). Soltani et al., reported good validity and reliability for the Persian version of SA-AAQ in Iran ([26]).

Cognitive fusion questionnaire (CFQ): The questionnaire was developed by Gillanders et al., ([27]). It is a seven-option Likert-scale questionnaire ranging from never true (1) to completely true (7). Higher scores indicate higher fusion. Gillander reported good validity and reliability for CFQ ([11]). Soltani et al., reported good validity and reliability the Persian version of SA-AAQ in Iran ([27]).

Believability of anxious feelings and thoughts questionnaire (BAFT): It was designed to assess cognitive fusion in people with anxiety disorders and their tendency toward fusion with anxious feelings and thoughts. BAFT comprised of 16 items scored based on a seven-option Likert-scale ranging from I don't believe at all ([1]) to I believe completely ([7]). Validity and reliability of BAFT were good in samples of non-clinical subjects and patients ([28]). Soltani et al., reported good validity and reliability for the Persian version of SA-AAQ in Iran ([27]).

Social interaction anxiety scale (SIAS): It is scored based on a five-option Likert-scale ranging from it is extremely wrong for me (0) to extremely true for me (4) to assess reactions to situations related to the group and interpersonal social interactions. Higher scores indicate higher levels of anxiety in social interactions. Validity and reliability of the questionnaire are 0.84 and 0.91, respectively ([29]). Tavoli et al., reported good validity and reliability for the Persian version of SA-AAQ in Iran ([30]).

Data were analyzed with SPSS version 18 using correlation and regression tests.

3. Results

sample size comprised of 324 students (135 males and 189 females). The distribution of participants according to

the field of study was 109 (%33.6) in School of Medical Sciences, 80 (%24.7) in School of Nursing and Midwifery, 57 (%17.6) in School of Nutrition Sciences and Food Technology, 56 (%17.3) in School of Health, and 22 (%6.8) in School of Pharmacy. The age range of the participants was 18 to 43 years with the mean of 22.01 (SD = 1.69). Two hundred and eighty-six (%88.3) students were single and 38 (%11.7) were married. Table 1 shows a significant positive correlation between EA and anxiety in social interactions (r = 0.45; P < 0.001); in other words, as EA increases, anxiety in social interactions rises as well. SA-AAQ was also used to evaluate more precise results. Results showed a significant negative correlation between total score of the questionnaire and anxiety in social interactions (r =-0.50; P < 0.001). Evaluation of subscales also showed that the more acceptance, non-judging of experience, and action increase, the more scores of anxiety in social interactions decrease (r = -0.47, -0.33, -0.25; P < 0.001).

Regression analysis showed that total score of EA predicts %45 of the variability in anxiety score in social interactions (P < 0.001). For more details about the predictive role of acceptance, SA-AAQ was used. Table 2 shows that acceptance and action were the most effective factors in social interactions and inversely predicted 37% and 12% of variance in anxiety score in social interaction respectively (P < 0.001). Non-judging of experience did not have a predictive role in anticipating anxiety in social interactions (P < 0.09).

According to Table 3, there was a significant positive correlation between cognitive fusion and anxiety in students' social interactions; in other words, as cognitive fusion increases, students' anxiety increases in social interactions (r = 0.48; P < 0.001). Furthermore, BAFT was used for more precise results. The current study results showed a significant negative correlation between total score of the questionnaire and anxiety in social interaction (r = 0.26; P < 0.001). Subscale analysis showed that the more somatic concerns and negative evaluation increase, the more anxiety in students' social interactions increases (r = 0.28, 0.33; P < 0.001). No correlation was found between emotion regulation and anxiety in social interactions (r = 0.006; P < 0.91). Emotion regulation subscale assesses items that reflect the tendency to fuse with and become entangled in the excessive struggle with emotions and control it.

Regression analysis revealed that the total score of cognitive fusion predicts %48 of the variance in anxiety score in social interactions (P < 0.001). The current study investigated BAFT subscales to examine this predictive role more accurately. According to Table 4, negative evaluation (P < 0.003), somatic concerns (P < 0.01), and emotion regulation (P < 0.001) were the most effective factors in social in-

teractions and predicted 32%, 16%, and 21% (conversely) of the variance in anxiety score in social interactions, respectively.

4. Discussion

The current study results showed a correlation between EA and SA-AAQ and social interaction anxiety. The results also showed that EA, acceptance, and action predicted anxiety in social interactions. It was consistent with the results of some previous researches on anxiety disorders (4-9), acceptance, and commitment based therapy. This confirms that EA may be a fundamental process in etiology and perpetuating anxiety disorders. Kashdan et al., (7) and Panayiotou et al., (8) showed a relationship between social anxiety and experiential avoidance. However, the current study used different samples and tools. In the current research, SA-AAQ was used besides AAQ-II to gain more precise results. This questionnaire is specifically designed to assess the acceptance of social anxiety symptoms. AAQ-II assesses experiential avoidance or acceptance in a general sense; however, SA-AAQ is designed specifically for SAD. The sample used in the current study consisted of students, while two aforementioned studies used civilian survivors as their sample. The results showed that non-judging of experience was not predictive of anxiety score in social interactions. The result, however odd, may be due to factors such as sampling or the number of questions in the questionnaire. The sample used in the current study consisted of students who probably had less mental problems or were less judgmental about their symptoms, which may be why this component could not predict anxiety in social interactions. Furthermore, non-judging of experience component was assessed by five questions. Maybe if a different questionnaire was used the results would be different. Also, acceptance and non-judging of experience components could be considered as one factor. The findings of the current study may have important implications to treat anxiety in social interaction of students. ACT could be used for this group, which emphasizes on accepting the endogenous events as an essential skill. This intervention helps people with anxiety in social interactions to learn how to control all their unwanted thoughts, feelings, and physical sensations.

Positive correlation exists between CFQ and BAFT and social interaction anxiety. Furthermore, cognitive fusion general score and BAFT subscales could predict social interaction anxiety. This finding was consistent with those of previous studies (3, 12-22) conducted on ACT. They were conducted on different disorders, nevertheless Gillander et al., conducted a study on patients with cancer and showed

Table 1. The Mean and Standard Deviation of Experiential Avoidance and its Components, and Their Correlation with Social Interaction Anxiety

	Mean	SD	1	2	3	4	5	6
1. Total score of EA	33.11	1.08	**					
2. Total score of social anxiety-acceptance and action	81.79	16.71	-0.58	**				
3. Acceptance	30.44	9.46	-0.56	0.89	**			
4. Non-judging of experience	21.35	7.34	-0.40	0.79	0.61	**		
5. Action	29.99	5.63	-0.25	0.43	0.17	0.003	**	
6. Social interaction anxiety	24.27	14.05	0.45	-0.50	-0.47	-0.33	-0.25	**

Table 2. Regression Analysis of Social Interaction Anxiety Based on Experiential Avoidance and the Score of Social Anxiety-Acceptance and Action Questionnaire

Predictive Variable	B	SE	β	t	Sig.
Social interaction anxiety					
Experiential avoidance	0.58	0.06	0.45	9.05	< 0.001
Acceptance	-0.55	0.09	-0.37	-5.99	< 0.001
Non-judging of experience	-0.20	0.11	0.11	-1.69	< 0.09
Action	-0.46	0.12	0.12	-3.74	< 0.001

Table 3. The Mean and Standard Deviation of Cognitive Fusion, and its Correlation with Social Interaction Anxiety

	Mean	SD	1	2	3	4	5	6
1. Cognitive fusion	26.53	9.28	**					
2. Total score of believability of anxious feelings and thoughts	73.87	14.11	0.47	**				
3. Somatic concerns	28.59	9.47	0.54	0.87	**			
4. Emotion regulation	22.43	4.48	0.16	0.65	0.30	**		
5. Negative evaluation	22.85	4.03	0.19	0.70	0.39	0.49	**	
6. Social interaction anxiety	24.27	14.05	0.48	0.26	0.28	-0.006	0.33	**

Table 4. The Results of Regression Analysis of Social Interaction Anxiety Based on Cognitive Fusion Questionnaire and the Believability of Anxious Feelings and Thoughts Questionnaire

Predictive Variable	B	SE	β	T	Sig.
Social interaction anxiety					
Cognitive fusion	0.72	0.07	0.48	9.86	< 0.001
Somatic concerns	0.39	0.15	0.16	2.58	< 0.01
Emotion regulation	-0.58	0.15	-0.21	-3.69	< 0.001
Negative evaluation	0.73	0.15	0.32	4.82	< 0.003

that cognitive fusion was the strongest predictor of anxiety, while cognitions about cancer and avoidant strategies were the predictors for depression and lower quality of life (22). Reuman et al., (19) indicated the predictive role of cognitive fusion in OCD. The current study, unlike the previous ones conducted in a general manner on anxiety disorders, investigated the relationship between cognitive fusion and students' anxiety in social interactions by utilizing suitable and appropriate tools for the specific disorder. One of the strengths of the current study was the simultaneous use of two questionnaires to assess cognitive fusion. BAFT is used to assess cognitive fusion in patients with anxiety disorders and nonclinical sample. However, BAFT defines cognitive fusion in a limited way. That is why the current study used CFQ as well to have a more comprehensive definition of cognitive fusion. This might have helped to think of the correlation between cognitive fusion and social interaction anxiety in a more validated sense. Lack of correlation between emotion regulation and social interaction anxiety and the fact that it was conversely predic-

4

tive of anxiety score in social interactions may be due to such factors as sample, tools, and mediating roles of other variables. Perhaps students that participated in the current study had less fusion in emotion regulation of anxious feelings and thoughts. Other mediating variables may play a role in this scenario. For example, Schmertz found that rumination was a mediating variable between mindfulness and social anxiety in clinical population (31). This may have affected the results, meaning that students' ruminations may have affected the correlation between the intensity of cognitive fusion and social interaction anxiety. Although more evidence is needed to talk about this correlation, the results of this study may have important applications for the treatment of anxiety in social interactions of students: ACT could be used for the treatment of this population with an emphasis on reducing cognitive fusion and defuse from anxious feelings and thoughts in social interaction. There were some limitations in this study. The sample used in this study was selected from college students. In addition, self-report measures were used in this study. Future research could investigate this correlation in individuals with SAD and use different kind of assessment tools.

Acknowledgments

Footnote

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