The Mediating Role of Cognitive Emotion Regulation and Cognitive Distortion Strategies in Relation to Attachment Styles and Dissociative Experiences

Ali Taheri[1], Hojatollah Javidi[1*], Hossein Bagholi[1], Ali Firoozabadi[2]

1. Department of Psychology, Marvdasht Branch, Islamic Azad University, Marvdasht, Iran
2. Department of Psychiatry, Shiraz University of Medical Sciences, Shiraz, Iran

***Corresponding authors:**Tel: +98 9171130190 ; Fax: +98 7143311172
Address: Department of Psychology, Marvdasht Branch, Islamic Azad University, Marvdasht, Iran
E-mail: javid952@hotmail.com
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Abstract

Introduction: In dissociative experience, the coherent and perfectly coordinated quality of human cognition becomes highly incoherent. This study aims at investigating the mediating role of cognitive emotion regulation and cognitive distortion strategies between attachment styles and dissociative experiences among students.

Materials and Methods: This study was descriptive and used a correlation design. The statistical population consisted of all students of Islamic Azad University of Marvdasht. Using convenience sampling, 329 students (187 girls and 142 boys) were selected as the sample of the study. For accomplishing the research, the dissociative experiences (Bernstein and Putnam, 1986), attachment styles (Bartolomio and Horowit, 1991), cognitive distortion (Hammachi and Ozturk, 2004), and emotion regulation (Garnefski, Kraaij, Spinhoven, 2001) questionnaires, were used.

Results: The results showed that the direct effect of safe style, isolation avoidance, and fearful style on dissociative experiences was equal to -0.15, 0.17, 0.21 which was significant ($P < 0.01$). The direct effect of preoccupied style was not significant. The indirect effect of safe and fearful style on dissociative experiences were equal to -0.12 and 0.33 which was significant ($P < 0.01$ and $P < 0.05$, respectively). The indirect effect of avoidance/detachment style and preoccupation style was not significant. The fitness of the model was 0.02, which was at the desired level.

Conclusion: Considering the negative effect of secure style and the positive effect of insecure style on dissociative experiences, the importance of secure style and insecure style should be given more attention in treatment.

Keywords: Dissociative experiences, Attachment styles, Cognitive distortion, Emotion regulation

Introduction

Some different attitudes and biological, cognitive, and affective components have been proposed as indicators of developing vulnerability concerning dissociative disorders. The theoretical models proposed some variables like the sets of cognitive-affective-behavioral variables and emotion regulation. A set of variables features considerable research background and empirical support. Other hypotheses enjoy less empirical basis (1).

Lithuania proposed the model of development of dissociation based on attachment that has been formed according to the attachment theory (2). Bowlby pointed out the association between the attachment processes and dissociation pathology for the first time. He examined the probability that the caring interactions while being dissatisfied with the initial caretakers can lead the infant to form several internal representations of its

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characters and attachment instead of having a unique representation (3).

The attachment model provides a firm framework to understand the individual capacity in relation to others and constructing supportive relations as the coping sources (4). According to the attachment model, some people perceive others as well-wishers (positive model of others) while considering themselves as defective and less likable or as deserving less well-being concerning others (negative model of self) (5). On the contrary, the children whose parents have not responded well to their needs tend to inactivate their attachment systems as adults to suppress their emotions and remove intimacy from their relationships (6). They consider others as untrustworthy (negative model of others) and adopt a positive or negative attitude. At last, those who take a positive attitude to themselves and others enjoy secure attachment (7).

The theoretical models of developing dissociation have proposed some mediators involved in the development of dissociation as the predicting factors and as the style of attachment. The initial damages cause some cognitive and affective processing disorders, a combination of thoughts, feelings, and the capacity to understand and express affective states. The cognitive and emotional turbulences, prove effective in the formation of dissociation (8).

In some vulnerability factor models, the cognitive impairment increases intrusive thoughts, functional avoidance, ruminations, and dissociative states (9). Some other models consider dissociative experiences as the natural destruction of the multiple mental processes like thoughts, feelings, and experiences experienced in consciousness and memory (10). The cognitive-behavioral approach also considers irrational thoughts and beliefs and cognitive distortions as important factors involved in the development and persistence of dysfunctional behaviors and mental disorders (11 & 12).

Hence, the attachment-experience model indicates that the dissociation process can be identified as the initial response to stress which protects the mind against dysfunctions and destruction (13). The present paper examined the intermediary role of the strategies used to cognitively regulate emotions and cognitive distortions in connection with the attachment styles and dissociative experiences.

Materials and Methods

This study was descriptive and used a correlational model. The statistical population consisted all students of Islamic Azad University of Marvdasht. Using convenience sampling, 329 students (187 girls and 142 boys) were selected as the sample of the study. In general, the sample size can be determined as 5 to 15 observations per variable (14). Therefore, considering the dimensions of the dissociative experiences (3 dimensions), attachment style (5 dimensions), emotion regulation (9 dimensions), cognitive distortions (3 dimensions) totaling 20 dimensions, a sample volume of 300 is required. The data were analyzed using Lisrel. Information gathering tool: in the present study, a questionnaire was used to gather the required information. Dissociative experiences questionnaire: this is a self-evaluation scale measuring the normal and abnormal dissociative experiences together (15). This scale includes 28 questions, and it asks the respondents to determine the frequency of these experiences (including the experience in connection with alcohol or drug) using a 100-point questionnaire. The total grade is calculated by summing all

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questions and dividing them by 28. Grade 30 is used as the cut-off point to define the upper dissociation. The amnesia dissociation (10 questions), self-derealization and derealization (8 questions), and fictitious involvement and attraction (10 questions) (16). In Iran (17), Cronbach's Coefficient Alpha was obtained as 0.92 for the dissociative experiences scale, indicating internal consistency of this scale.

The questionnaire of attachment styles in adults: this scale is adapted from the questionnaire of adults' attachment (19). It includes four descriptions of the attachment styles where the individual determines the degree of their agreement with each one on the five-point scale. It includes 23 questions, secure style (seven questions), dismissive-avoidant style (6 questions), preoccupied style (five questions), and fearful style (five questions). The validity coefficient of the questionnaire retest in a nearly one-month interval was obtained as 0.82 that is considered to be an acceptable validity (20).

The scale of interpersonal cognitive distortion: this questionnaire includes 19 questions and three dimensions. Rejection in the interpersonal relationships (8 questions), unrealistic expectations (8 questions), and wrong perception in interpersonal relationships (3 questions). The reliability of the whole scale was obtained after two weeks as 0.67 and 0.74, respectively (21). This questionnaire was examined in Iran in a study. The results showed that the sub-scales of cognitive distortions enjoyed good internal consistency (Cronbach's Coefficient Alpha range varied from 0.76 to 0.92).

Emotion regulation questionnaire: this multidimensional questionnaire is used to identify emotion regulation's cognitive and coping strategies after experiencing negative events or situations (23). This questionnaire includes 18 items and nine subscales. The subscales mentioned above evaluate nine cognitive strategies, including the self-blame cognitive strategy, rumination, catastrophizing, and blaming others (as the negative strategies of emotion regulation); acceptance, positive refocusing, refocus on planning, positive reappraisal, putting into perspective (as the positive strategies of emotion regulation) (24). In this study (25), Cronbach's Coefficient Alpha was reported from 0.632 to 0.80 for nine subscales of the questionnaire mentioned above. In Iran, the correlation between the subscales was used to measure validity. The correlations varied from 0.73 to 0.88, and Cronbach's Coefficient Alpha was used to measure validity, where these coefficients vary from 0.68 to 0.86 for the subscales (26).

Results

The findings showed that the average age of the participants in the research was 26, with a standard deviation of 0.64. The indices of descriptive statistics for the sample under study (n=329), including the mean, standard deviation, kurtosis, and skewness for the given variables, have been presented in Table 1.

As shown in Table 1, considering the values obtained for kurtosis and skewness of research variables almost between -1 and +1, all variables have been distributed normally. Because the basis of the studies is the path analysis of the correlation between the variables, the correlation matrix of the research variables will be provided in the following.

Table 2 shows that among the exogenous variables (secure style, dismissive/avoidant style, preoccupied style, and fearful style), the fearful style has the greatest correlative coefficient

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(0.40), and avoidant style (0.40) has the lowest correlative coefficient with the dissociative experiences where the fearful style coefficient was statistically significant at 0.01 level. In the following, the chart of the fit model path will be provided along with the estimated parameters (standard values).

Table 1. Descriptive statistics of the variables including average, standard deviation, kurtosis and skewness among the subjects under study

Variable	Average	Standard deviation	Kurtosis	Skewness
Secure style	22.55	3.87	0.110	0.77
Dismissive-avoidant style	19.65	3.10	-0.317	-0.675
Preoccupied style	14.80	2.74	0.198	0.185
Fearful style	14.14	2.68	0.184	0.545
Negative emotion regulation	20.97	5.53	0.477	0.605
Positive emotion regulation	31.08	6.74	0.296	0.210
Cognitive distortion	53.94	8.68	-0.174	-0.165
Dissociative experiences	29.44	9.51	0.325	0.319

The normal distribution of kurtosis and skewness for the research variables is between -1 and +1.

Table 2. Correlation matrix of the research variables. The matrix includes the highest to the lowest correlation coefficient and level of significance.

Variables	1	2	3	4	5	6	7	8
Secure style	1							
Avoidant style	0.32**	1						
Preoccupied style	-0.03	-0.11	1					
Fearful style	0.46**	-0.14**	0. 62**	1				
Negative emotion regulation	-0.18**	-0.15**	-0.39**	0.51**	1			
Positive emotion regulation	0.13*	0.26**	-0.38**	-0.41**	0.07	1		
Cognitive distortion	-0.15**	-0.15**	0.49**	0.49**	0.55**	0.27**	1	
Dissociative experiences	-0.21**	0.04**	0.32**	0.40**	0.51**	-0.30**	0.45**	1

*P < 0.05 ** P < 0.01.

The fit indices were used to examine the model fit. The present study reports the fit indices x2/df, RMSEA, CFI, GFI, and AGFI. The specifications of the fit of the dissociative experiences predicting model have been provided in Table 3.

Table 3. Goodness of fit for the predictive model of research (estimation and satisfactory value).

Specifications	Estimation	Satisfactory value
The ratio of X-squared to the degree of freedom (X^2/df)	1.23/1=1.23	Less than 3
Comparative fit index (CFI)	1.00	Greater than 0.9
Good fit index (GFI)	1.00	Greater than 0.9
Adjusted good fit index (AGFI)	0.97	Greater than 0.9
The root means square error of approximation (RMSEA)	0.026	Less than 0.08

Considering the goodness of fit specifications reported in Table 3, the dissociative experiences predicting model fit are at a desirable level. Estimating the standardized coefficients of direct effects, indirect effects, and the effects of all variables on dissociative experiences were reported to compare the direct, indirect, and effects of all variables on dissociative experiences.

Given Table 4, secure style, dismissive/avoidant style, and fearful style directly affect dissociative experiences as exogenous research variables. However, the preoccupied style did not have a direct effect on dissociative experiences. Also, the indirect effects of both secure and fearful styles on dissociative experiences were statistically significant (P < 0.01). The total effects of all components were significant. The variance explained for the

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research variables of negative emotion, positive emotion, cognitive distortion, and dissociative experiences have been estimated as 0.29, 0.25, 0.25, and 0.19, respectively.

Table 4. Standardized coefficients of direct, indirect effects and effects of total variables.

Variables	Direct effects	Indirect effects	Total effects
Secure style	-0.15**	-0.12*	-0.27**
Dismissive/avoidant style	0.17**	0.02	0.17*
Preoccupied style	0.07	0.09	0.16*
Fearful style	0.21**	-0.33**	0.26**
Negative emotion regulation	0.43**	-	0.43**
Positive emotion regulation	-0.26**	-	-0.26**
Cognitive distortion	0.13*	-	0.31**

*P < 0.05 ** P < 0.01.

Discussion

The results indicated that the direct effect of the secure style, dismissive/avoidant style and fearful style on dissociative experiences were significant. However, the direct effect of preoccupied style on dissociative experiences was not significant. dissociation is an avoidance strategy used to deal with the emotions that destroy the capacity to regulate internal feelings after an injury; therefore, there are some defects in the dissociative symptoms (27 & 28). Parents' damaging caretaking can develop negative attachment models. Avoiding danger and negative attitudes to others are greater in the dismissive/avoidant model (29).

There is a negative attitude toward oneself and others in the fearful model while there is no solution. The studies (30) confirm that secure attachment develops positive evaluations of oneself and one's emotions. This model decreases the development of mental disorders that aligns with the findings of the present study. Several studies on damage in the adult population have found a great level of insecure attachment and forged a connection between the attachment patterns and dissociation (31 & 32). The people with the insecure style and ambivalence have achieved the greatest grades of dissociation index in the studies. In these studies (33). In the present study, there was also a positive and significant relationship between dissociation and attachment on the one hand and a negative attitude to oneself and others, which aligns with the findings of the present study.

The indirect effect of secure style as negative and fearful, as positive through negative emotion regulation, positive emotion regulation, and cognitive distortion on dissociative experiences was significant at 0.05 and 0.01 levels. The cognitive distortions cause vulnerability to negative life events. In this case, it is more probable that the lack of something or an obstacle in life is interpreted in an exaggerated, personalized, and negative way. According to Beck's cognitive model, the cognitive evaluations co-occur with problematic behaviors or distressing affects (34 & 35).

The indirect effect of dismissive/avoidant style through negative emotion regulation, positive emotion regulation, and cognitive distortion on dissociative experiences did not prove significant. The reason behind this finding, concerning the fact that the direct effect of dismissive/avoidant style on cognitive distortion and cognitive regulation of negative emotion was not significant, can decrease the indirect effect and prove effective.

The dismissive/avoiding people tend to ignore the emotional effects of their present and past relationships. They particularly adopt a systematic state of avoidance or denial of negative experiences and memories. They also

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avoid the information based on attachment, and even they prevent themselves from becoming aware of them. They process their experiences cognitively and without indicating or expressing any type of emotional content. Avoiding people are defined as having some content by which people tend to assess themselves as strong or positive and deem others as inaccessible, potential, and rejecting. These people tend to express their personal needs and are not much open to criticism. They do not seek to provide social feedback to others (18).

The indirect effect of preoccupied style through negative emotion regulation, positive emotion regulation and cognitive distortion was not found to have a significant effect on dissociative experiences. Disorganized infant attachment is more common among maltreated infants but does not necessarily indicate active maltreatment (36). There is a strong correlation between the disorganization of infant attachment and the caregiver's unresolved grief or trauma reflected in highly inconsistent, frightened, or overtly threatening behavior toward the child (37). Parents who, according to the child's powerful innate inclination toward care seeking and their objective disposition to care, are perceived by the child as a source of nurturing, simultaneously become a source of threat (36). This paradoxical experience (the parent is at the same time the source of, and the solution to, the child's fear) is capable of disorganizing the child's mental processes and represents a type of traumatic experiences constituting an inescapable threatening experience in the face of which the child is powerless (38, 39). Thus, the role of fictitious survivor is highlighted in the preoccupied style, and the fact that the preoccupied style does not have direct or indirect effect on dissociative experiences can be explained.

Conclusion

The specific dimensions of attachment style may help to explain the relationships among individual forms of attachment and dissociative symptoms. The clinical and therapeutic complexity of developmental trauma and of the traumatic-dissociative dimension requires specific training to enable mental health professionals to recognize the signs of these developments and to implement specific strategies for the treatment of these disorders.

Conflict of interest

The authors declare that they have no conflict of interest.

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