

Research Article

The structural relationship between attachment styles and coping strategies with mediation of defense mechanisms in mothers of children with cancer

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ABSTRACT

The main objective of the present research is to determine the structural relationship between attachment styles and coping strategies with mediation of defense mechanisms. Descriptive correlation has been considered as the research method. The statistical population consists of all the mothers of the children with cancer who have referred to the hospitals and cancer clinics during 2014-2015. The samples over 200 parents were selected via convenient sampling. To collect field data, questionnaires of attachment style, coping strategies and defense mechanisms have been used. Data analysis was made using software SPSS and Lisrel. With regard to the results from the present research, there is a significant structural relationship between attachment styles and coping strategies with mediation of defensive mechanisms in mothers of children with cancer.

Key words- attachment styles, coping strategies, defensive mechanisms

INTRODUCTION

Cancer has been considered as one of the major causes of mortality worldwide, so that new epidemic at our age has been recognized after heart diseases. Cancer is the third leading cause of death in Iran after heart diseases, accidents and other natural phenomena (Khanjari et al. 2013) and is the second cause of death for children in third world countries (Kaatsch, 2010). Childhood cancer is a fatal disease that is followed by stress, emotional stability, fear, depression, lifestyle changes and uncertainty about the future. Children and adolescents with cancer are subjected to high risk for depression and other mental disorders due to the disease and its treatment (Matziou et al., 2008). On the other hand, treatment of cancer at childhood is an experience with high levels of stress, challenging and disturbing for children and their family members (Ries et al. 2005). The family system is an important factor to children with a chronic disease (Kazak et al., 2003). Children's coping with a stressor such as cancer can be influenced by the people around them and the

facilities available to family as well as attachment styles (Langrock et al., 2002). The basic assumption that people tend to gain acceptance of others and abandon social exclusion are the base of attachment theory. Attachment theory has been regarded as one of the key development concepts in process of human growth which was raised firstly by John Bowlby to determine the relationship between child and caregivers and then used to justify the relationship between adults. Attachment system intends to raise sense of security and intimacy with caregiver. On the other hand, it seems that individuals' attachment styles have kept growing and their adulthood has internalized, followed by constant process (Dewall et al, 2012). Meyers & Landsberger have regarded attachment as thinking style, feeling and people's description from social relations. With regard to this description, individuals' attachment styles have various types (Akhtar). Attachment styles determine emotional and cognitive rules and refer to the guidelines that

conduct emotional reactions in individuals and inter-personal relationships. John Bowlby has put emphasis on importance of maternal behavior style and its effect on child attachment. Bowlby in an emphasis on the importance of mother-child communication believes that many forms of mental and personality disorders result from the child's deprivation from maternal care and/or instability of the child's relationship with attachment face. At the end of childhood and early adolescence, mother has been considered as the main attachment face and children refuge mother in the face of stress and anxiety. Mother's failure to create a warm, sensitive and responsive relationship in the first year of life raises stable mood and behavioral problems in child. Any gap in mother-child communication can have decisive negative impact on the development of children's personality and mental health (Jahan bakhsh, Bahaduri, Amiri and Anisi, 2012). The parent-child relationship might be the most important predictor of interpersonal communication in adulthood and how to adapt with critical situations (Akhtar, 2012). This interaction is a mental model of "self" in relation to others (Tamaki & Takahashi, 2013). Nayebe nia(2011), Shahabi zadeh & dastjerdi (2011) in their study obtained these results that stress and anxiety have a negative correlation with parents' secure

attachment style. When the child is suffering from cancer, women are affected by this incident. When a child is diagnosed with a fatal disease, mother is severely distraught and basically every mother may be affected by this issue in a certain form and react to it in different ways. Therefore, the main questions is what a structural relationship exists between attachment styles and coping strategies with mediation of defense mechanisms in mothers of children with cancer?

Research method

In the present research, data were analyzed using software SPSS and Lisrel. In this regards, descriptive data including mean, standard deviation, Skewness and Kurtosis were analyzed via software SPSS. Structural equation modeling via software Lisrel was used to examine structural relationship between research variables.

Findings

Correlation matrix of the research variables has been represented in table 1. In this table, 3 variables under study were examined on individuals in sample group. This table requires for examining model. Sarmad et al.(2008) stated that correlation matrix of existing variables which are calculated in model are used as the early data of structural equation modeling and path analysis.

Table 1. Correlation matrix of research variables

Variables	secure attachment style	Avoidant Attachment Style	ambivalent attachment style	defense style of maturity	defense style of neuroticism	defense style of immaturity	problem-oriented strategy	Emotion-oriented strategy	
secure attachment style	1								
Avoidant Attachment Style	-0.30**	1							
ambivalent attachment style	-0.44**	0.47**	1						
defense style of maturity	0.11	0.41**	-0.49**	1					
defense style of neuroticism	-0.16	-0.44**	0.30**	-0.33**	1				
defense style of immaturity	-0.59**	-0.44**	0.34**	-0.56**	0.49**	1			
problem-oriented strategy	0.05	0.15	-0.27**	0.42**	0.04	-0.09	1		
Emotion-oriented strategy	-0.48	0.47**	0.46**	0.15	0.44**	0.52**	-0.34**	1	
**: $0.01P \leq \star$: $0.05P \leq$					

Table 1 represents correlation between all the variables with each other. With regard to the results shown in table above, the highest correlation coefficient relates to defense style of maturity and Emotion-oriented strategy, and secure attachment style and defense style of immaturity. Insignificant correlations include the relationship between secure attachment style and defense style of maturity, defense style of neuroticism and problem-oriented strategy. Further, there is not a significant relationship between Avoidant Attachment Style and problem-oriented strategy. There is not a significant relationship between defense style of neuroticism, defense style of immaturity and problem-oriented strategy.

Path analysis of the model variables representing the relationship between attachment styles, defense mechanisms and coping strategy

Software Lisrel and structural equation modeling were used to examine variables of model representing attachment styles, defense mechanisms and coping strategy which includes exogenous variable of attachment styles and mediator defense mechanism. Direct and indirect effects have been represented in next tables.

Direct effects

Table 2. Coefficients of direct effects

Direct relationship between variables in model	Estimation values	t-value	Standard error	Sig
secure attachment style and defense style of immaturity	-0.36**	-8.84	0.04	<0.01p
secure attachment style and Emotion-oriented strategy	-0.24**	-4.28	0.05	<0.01p
Avoidant Attachment Style and defense style of maturity	0.11*	2.46	0.05	<0.05p
Avoidant Attachment Style and defense style of neuroticism	-0.24**	-4.87	0.05	<0.01p
Avoidant Attachment Style and defense style of immaturity	-0.27**	-5.75	0.05	<0.01p
Avoidant Attachment Style and Emotion-oriented strategy	0.31**	6.47	0.04	<0.01p
anxious attachment style and defense style of maturity	-0.21**	-4.66	0.05	<0.01p
anxious attachment style and defense style of neuroticism	0.19**	3.73	0.05	<0.01p
anxious attachment style and defense style of immaturity	0.22**	3.95	0.05	<0.01p
anxious attachment style and problem-oriented strategy	-0.24**	-5.85	0.05	<0.01p
anxious attachment style and Emotion-oriented strategy	0.37**	7.99	0.05	<0.01p
defense style of maturity and problem-oriented strategy	0.27**	5.14	0.05	<0.01p
defense style of neuroticism and Emotion-oriented strategy	0.25**	4.42	0.05	<0.01p
defense style of immaturity and Emotion-oriented strategy	0.32**	7.51	0.03	<0.01p

It should be noted that significant results have been represented in table above due to facilitated understanding of obtained findings. With regard to table above, direct effect of secure attachment style on defense style of immaturity and Emotion-oriented strategy is significant at $P \leq 0.01$. Direct effect of avoidant attachment style on defense style of maturity, defense style of neuroticism and defense style of immaturity is significant at $P \leq 0.01$. Direct effect of avoidant attachment style on Emotion-oriented strategy is significant at $P \leq 0.01$. Direct effect of anxious attachment style on defense style of maturity, defense style of neuroticism and defense style of immaturity is significant at $P \leq 0.01$. Direct effect of anxious attachment style on problem-oriented strategy and Emotion-oriented strategy is significant at $P \leq 0.01$. Direct effect of defense style of maturity on problem-oriented strategy is significant at $P \leq 0.01$. Direct effect of defense style of neuroticism on Emotion-oriented strategy is significant at $P \leq 0.01$. Direct effect of defense style of immaturity on Emotion-oriented strategy is significant at $P \leq 0.01$.

Indirect effects

Further, the values in direct relationship between independent variables and coping strategies in the model can be observed in table below.

Table 3. Estimation of coefficients of indirect effect

indirect relationship between independent variables	Standardized parameter	t-value	Standard error	Sig
Effect of secure attachment style on Emotion-oriented strategy with mediation of defense mechanisms	0.09*	3.56	0.04	<0.05p
Effect of Avoidant Attachment Style on Emotion-oriented strategy with mediation of defense style of neuroticism	-0.06*	-2.97	0.05	<0.05p
Effect of Avoidant Attachment Style on Emotion-oriented strategy with mediation of defense style of immaturity	-0.09**	-3.67	0.04	<0.05p
Effect of anxious attachment style on problem-oriented strategy with mediation of defense style of maturity	-0.06**	-2.89	0.05	<0.05p
Effect of anxious attachment style on Emotion-oriented strategy with mediation of defense style of neuroticism	0.05**	1.73	0.12	0.05p
Effect of anxious attachment style on Emotion-oriented strategy with mediation of defense style of immaturity	0.07**	3.04	0.04	<0.05p

With regard to what represented in table above, indirect effect of secure attachment style on Emotion-oriented strategy with mediation of defense style of immaturity is significant at $P \leq 0.05$.

Indirect effect of Avoidant Attachment Style on Emotion-oriented strategy with mediation of defense style of neuroticism is significant at $P \leq 0.05$.

Indirect effect of Avoidant Attachment Style on Emotion-oriented strategy with mediation of defense style of immaturity is significant at $P \leq 0.05$.

Indirect effect of anxious attachment style on problem-oriented strategy with mediation of defense style of maturity is significant at $P \leq 0.05$.

Indirect effect of anxious attachment style on problem-oriented strategy with mediation of defense style of maturity is not significant at $P \leq 0.05$.

Indirect Effect of anxious attachment style on Emotion-oriented strategy with mediation of defense style of immaturity is significant at $P \leq 0.05$.

Major hypothesis

Features of model fitness

The values related to indices of model fitness have been represented in table below:

Table 4. Indices of model fitness

Index	Value	Range	Result
χ^2	1.76	≤ 2	model fitness
p.valu	0.19	$\geq 0/05$	model fitness
RMSEA	0.0001	$\leq 0/05$	model fitness
NFI	0.96	$\geq 0/95$	model fitness
CFI	0.96	$\geq 0/9$	model fitness
GFI	0.97	$\geq 0/9$	model fitness

With regard to results shown in table 4, since value of χ^2 equals to 1.76 which is under 2, this index indicates model fitness. The obtained p-value equals to 0.19 which is greater than criterion value (0.05), thus it can conclude that the model enjoys suitable fitness. Existing RMSEA in table equals to 0.0001

which is under criterion value (0.05), thus it can conclude that model enjoys fitness. Obtained NFI in table equals to 0.96 which is greater than 0.95, indicating suitable fitness. CFI index equals to 0.96 which is greater than 0.9, indicating suitable fitness. The obtained GFI equals to 0.97 which is greater than 0.9, indicating suitable fitness. In general, the indices relating to model fitness indicate suitable model fitness.

The model representing the relationship between attachment styles and coping strategies with mediation of defense mechanisms. Ultimately, the model extracted from research is as follow:

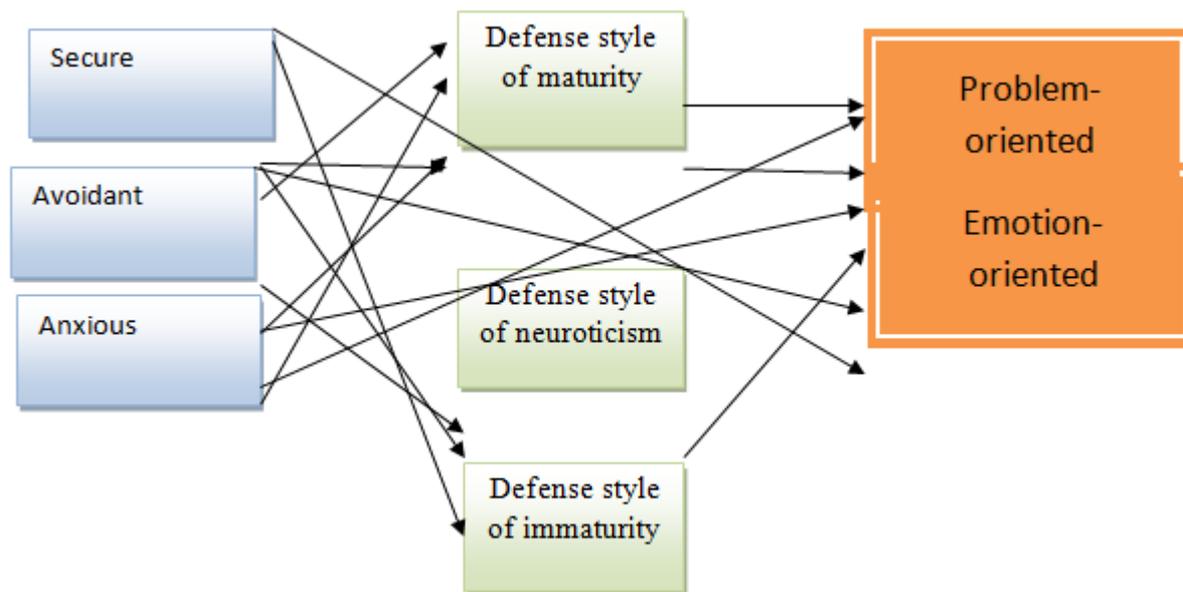


Figure 1. Final path of model

With regard to the obtained results, the obtained model concerning the relationship between attachment styles and coping strategies with mediation of defense mechanisms is significant.

Secondary hypotheses

-Defensive mechanisms have a direct effect on problem-oriented strategy and Emotion-oriented strategy in mothers of children with cancer.

Direct effect of defense style of maturity on problem-oriented strategy is significant at $P \leq 0.01$.

Direct effect of defense style of neuroticism on Emotion -oriented strategy is significant at $P \leq 0.01$.

Direct effect of defense style of immaturity on Emotion -oriented strategy is significant at $P \leq 0.01$.

-Secure attachment style has a direct effect on problem-oriented strategy and Emotion-oriented strategy in mothers of children with cancer.

Direct effect of secure attachment style on problem-oriented strategy is significant at $P \leq 0.01$.

Direct effect of secure attachment style on Emotion -oriented strategy is significant at $P \leq 0.01$.

Direct effect of secure attachment style on Emotion -oriented strategy is not significant at $P \leq 0.05$.

-Avoidant attachment style has a direct effect on problem-oriented strategy and Emotion-oriented strategy in mothers of children with cancer.

Direct effect of Avoidant attachment style on problem-oriented strategy is significant at $P \leq 0.01$.

Direct effect of Avoidant attachment style on Emotion -oriented strategy is not significant at $P \leq 0.01$.

-Anxious attachment style has a direct effect on problem-oriented strategy and Emotion-oriented strategy in mothers of children with cancer.

Direct effect of anxious attachment style on problem-oriented strategy is significant at $P \leq 0.01$.

Direct effect of anxious attachment style on Emotion -oriented strategy is not significant at $P \leq 0.01$.

-Secure attachment style has a direct effect on defense mechanisms in mothers of children with cancer.

Direct effect of secure attachment style on defense style of immaturity is significant at $P \leq 0.01$.

Direct effect of secure attachment style on defense style of neuroticism and defense style of maturity is not significant at $P \leq 0.01$.

-Avoidant attachment style has a direct effect on defense mechanisms in mothers of children with cancer.

Direct effect of Avoidant attachment style on defense style of maturity is significant at $P \leq 0.01$.

Direct effect of Avoidant attachment style on defense style of neuroticism is significant at $P \leq 0.01$.

Direct effect of Avoidant attachment style on defense style of maturity is significant at $P \leq 0.01$.

-anxious attachment style has a direct effect on defense mechanisms in mothers of children with cancer.

Direct effect of anxious attachment style on defense style of maturity is significant at $P \leq 0.01$.

Direct effect of anxious attachment style on defense style of neuroticism is not significant at $P \leq 0.01$.

Direct effect of anxious attachment style on defense style of maturity is significant at $P \leq 0.01$.

-Secure attachment style has an indirect effect on problem-oriented strategy and Emotion -oriented strategy in mothers of children with cancer.

Indirect effect of secure attachment style on emotion-oriented strategy with mediation of defense style of immaturity is significant at $P \leq 0.05$.

Indirect effect of secure attachment style on problem-oriented strategy with mediation of defense style of immaturity is significant at $P \leq 0.05$.

-Avoidant attachment style has an indirect effect on problem-oriented strategy and Emotion -oriented strategy in mothers of children with cancer.

Indirect effect of Avoidant attachment style on emotion-oriented strategy with mediation of defense style of neuroticism is significant at $P \leq 0.05$.

Indirect effect of Avoidant attachment style on emotion-oriented strategy with mediation of defense style of immaturity is significant at $P \leq 0.05$.

Indirect effect of Avoidant attachment style on problem-oriented strategy with mediation of defense mechanisms is not significant at $P \leq 0.05$.

-anxious attachment style has an indirect effect on problem-oriented strategy and Emotion -oriented strategy in mothers of children with cancer.

Indirect effect of anxious attachment style on emotion-oriented strategy with mediation of defense style of neuroticism is significant at $P \leq 0.05$.

Indirect effect of anxious attachment style on emotion-oriented strategy with mediation of defense style of immaturity is significant at $P \leq 0.05$.

Indirect effect of anxious attachment style on problem-oriented strategy with mediation of defense mechanisms is not significant at $P \leq 0.05$.

DISCUSSION AND CONCLUSION

The main purpose of the present research has been to determine the relationship between attachment styles and coping strategies with mediation of defense mechanisms. With regard to the findings from the present research, the model concerning the relationship between attachment styles and coping strategies with mediation of defense mechanisms is significant. Findings from the present research are consistent with the findings of research by Davoudian(2014), Mohebi(2013), Khanjari et al(2013), Borjali lu et al.(2013), Sirati Nayer et al.(2012), Vatan khah(2012), Moller et al(2014), Rodriguez(2012), Norberg et al.(2011), Cabizuca et al(2009). Ghasem Broujerdi(2011) in a research found that there is a significant relationship between coping styles and

attachment style of adolescents with cancer. Mohebi(2013) in a research aiming at determining effectiveness of the strategies to cope with stress in reducing the stress symptoms among adolescents with cancer come to conclusion that coping strategies with stress have affected reducing stress symptoms among adolescents with cancer. In general, with regard to the findings from the present research, the relationship between attachment styles and coping strategies with mediation of defense mechanisms is significant. On the other hand, with regard to the findings from this research, direct effect of defense style of maturity on problem-oriented strategy is significant. Direct effect of defense style of neuroticism on emotion-oriented strategy is significant; direct effect of defense style of immaturity on emotion-oriented strategy is significant. In general, defense mechanisms are used in most of situations by individuals. On the other hand, in addition to use of defense mechanisms in all individuals, it seems that such mechanisms can affect most of psychological dimensions of individuals. In this research, various levels of defense mechanisms affect problem-oriented and emotion-oriented coping strategies. Lazarus & Folkman(1984) have mentioned two categories of coping strategies: problem-oriented coping strategies and emotion-oriented coping strategies. If individuals including mothers of children with cancer apply coping attitudes in their life, their individual abilities will more likely increase. Mothers of children with cancer can make their life more pleasant by means of learning new skills and putting emphasis on meaningful life challenges including disease of their child. Since defense mechanisms affect coping strategies, mothers must be informed of defense mechanisms in addition to coping strategies especially under stressful conditions of their child. As the results indicated, defense style of maturity has affected problem-oriented coping strategy, so that defense style of maturity has been followed by increasing use of problem-oriented coping strategy. defense style of neuroticism and defense style of immaturity have put a direct effect on emotion-oriented strategy, so that by

increasing defense style of immaturity and defense style of neuroticism, use of emotion-oriented strategy increases. On the other hand, with regard to findings from this research, direct effect of secure attachment style on emotion-oriented strategy is significant and direct effect of secure attachment style on problem-oriented strategy is not significant. Indeed, with regard to findings from the present research, mothers of children with cancer with secure attachment style rely on others and do not feel anxious with closeness to others, mentioned that they less likely use emotion-oriented coping strategies. Indeed, since effectiveness of secure attachment style on emotion-oriented coping strategy is inverse, it can state that secure attachment style will be followed by reducing use of emotion-oriented coping strategy. Further with regard to the findings from the present research, direct effect of avoidant attachment style on emotion-oriented strategy is significant and direct effect of avoidant attachment style on problem-oriented strategy is not significant. In general, mothers of children with cancer with mentioned attachment style have features mentioned above. Mothers with this attachment style feel distressed under the conditions approached to others and fail to trust others, so that distrust to others and lack of convenience with individuals affect emotion-oriented coping strategy. These individuals more likely use emotion-oriented coping strategy, such that avoidant attachment style has caused increasing use of emotion-oriented coping strategy in mothers. On the other hand, with regard to the findings of present research, direct effect of anxious attachment style on emotion-oriented strategy is significant and direct effect on anxious attachment style on problem-oriented strategy is significant. Mentioned features in mothers of children with cancer affect use of emotion-oriented and problem-oriented coping strategies, so that effect of anxious attachment style on problem-oriented coping strategy is inverse and effect of anxious attachment style on emotion-oriented strategy is direct. Indeed, mothers with anxious attachment style have more likely used emotion-oriented coping strategy and have less likely used problem-oriented coping strategy. Further,

with regard to the findings from the present research, direct effect of secure attachment style on defense style of immaturity is significant and direct effect of secure attachment style on defense style of maturity is not significant. As mentioned, adults with secure attachment style are those who easily make relationship with others and feel satisfied with their dependence on others. The major features of this style include trust on responsiveness and belief in their constant presence. Mothers of children with cancer who enjoy secure attachment style less likely enjoy defense style of immaturity. Therefore, it can say that secure attachment style affects less use of defense style of immaturity. These defenses avoid mothers of children with cancer to cope with this reality. The mothers who invoke to these defenses seem immature. Constant use of them raises serious problems in coping with reality including disease of the child.

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