

The Effect of Child Abuse by Parents on Mind Reading Ability of Children

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Abstract

The aim of the present study was to examine the relationship between parental abuse and mind reading ability in female students. 268 female high school students were selected among high schools of Bonab city as the sample of the study by multistage cluster sampling method. The tools of the study were Reading the Mind in the Eyes Test (RMET) and two-dimensional child abuse questionnaire (Javanmard & Mamagani). In order to analyze the collected data, Pearson's correlation coefficient and standard multiple regression analysis were used. According to the results of the study, there was significant negative relationship between the mind reading ability of children with emotional abuse ($r=-0/215$, $P<0/001$) and physical abuse by parents ($r=-0/22$, $P<0/001$). The mentioned ability changes were predicted by emotional and physical abuse by parents.

Keywords: mind reading ability, child abuse, parents, children

Introduction

Mind reading ability is one of the important and major mental abilities in social relations and a kind of social cognition and an important element of a set of abilities which is called social intelligence (Realo, Allik, Olvak, Valk, & Ruus, 2003). The term theory of mind which refers to the cognitive ability to understand mental states such as goals, intentions, beliefs, desires, and emotions in oneself and others, for the first time, was used by Premack and Woodruff (1978) to test the hypothesis that whether monkeys are capable of attributing mental states in order to understand, explain, and behavior prediction. This

ability consists of a set of inferences considered as "theory", because, first, mental states are not directly observable, and second, it was used to predict especially about other creatures' behavior (Razavieh, Lotfian, Arefi, 2006). Mind reading is also considered as a judgment about one and others' mental states (Wang, Wang, Chen, Zhu, & Wang, 2008). According to the studies, Brune (2005) indicated that the performance quality of the schizophrenic patients in mind reading tasks is the proper predictor for the severity of the patients' behavioral abnormalities. Bura et al. (2006) also indicated that the ability of decoding mental states is the best mediator of

social functioning in schizophrenia (as cited in Najati, Zabihzadeh, Maleki, & Mohseni, 2012). Psychologists have examined family and parents elements that strengthen the social competence level of adolescent and in many studies the importance of the effect of family functioning on adolescent development are discussed. They also examined the parenting processes such as management and supervision role of parents (Santrock, 2005; Huebner & Howell, 2003; Gudarzi, Zarnaghash, & Zarnaghash, 2002), family cohesion (Conger, 1975; Rostami, 2002), parents and adolescent relation and parents' style (Golchin et al., 2001; Shahsavari, 2003) and many other factors. The results suggest that control, cohesion, and the lack of conflict in the family cause the positive development of self concept and social competence (Khosravi et al., 2007). Over the last two decades, it was thought that due to the existing of cordial and loving relationships and emotions, family is the best place to live for adults and also the best place to children's and adolescents' emotional and physical development. Surprisingly, however, studies have indicated that not only the problematic families but also the desired and normal families may be abusive toward their children. In fact, more violence occurs in the family (Mikaili & Zamanlou, 2012). In all human societies with different colors, races, and socio-cultural levels, child abuse occurs in all communities and it is associated with a vast range of mental symptoms including anxiety, depression, increased risk of suicidal behavior (Amiri Nezhad, Goreyshi Rad & Javanmard, 2011) and also with physical diseases caused by trauma or malnutrition and lack of adequate child growth. Child abuse and

maltreatment was described from different legal, medical, and social perspectives and includes any types of physical, sexual, and emotional abuse and child neglect (under 18 years) by an older person (over 18 years) (National Exchange Club Foundation, 2000). Physical abuse of child means infliction of intentional harm to the child's body by an older person (Rhimimogar, Babaii & Rostami, 2003), sexual abuse including any type of sexual activity with child before the age of legal consent and neglect means a failure to meet a child's basic needs such as food, clothing, maintenance, support, and training facilities (Hobbs & Hank, 1999). Emotional abuse means any type of child abuse based on social criteria and specialists' view is psychologically traumatic, i.e., any behavior that affect behavioral, cognitive, physical, and emotional functioning such as constant belittling, insults, and profanity to children (Purnajee, 1999). Child abuse and neglecting are the most complex problems that modern societies face. This need felt well that experts and ordinary people should try more on the nature of the problem in order to be more aware of the consequences of this type of relationship. According to the fact that child abuse in different ways leads to creating aggressive, withdrawn, and hyperactive personality in adolescents and young adults of the society. It is important that children may in the future somehow commit child abuse, so, this problem becomes more serious.

Some brain injuries occur as a result of abuse. If abuse happen between the ages of one to three years, it can cause trauma, reduced growth, and changes in some parts of the brain

which are related to memory, emotions, and basic movements (Edleson, 1999). Abused and neglected children have lower educational achievement and fail more than others (Eckenrode, Laird, & Doris, 1993) and they also achieve lower score in all cognitive dimensions (Lowenthal, 1999). Poor performance of these children especially in mathematics and language tests indicates their cognitive disorders (Kaplan, 1999; Edleson, 1999; Bush, 2004). As family function, parenting style, parental violence and aggression towards children can affect on different mental and cognitive dimensions of children, it seems that mind reading ability is one of the effective components. Therefore, this study aims to examine the effect of child abuse on mind reading ability among female adolescents. Today's adolescent girls are mothers of the next generation and it seems that the study about theory of mind as the most prominent and important components of social cognition and perception can bring important and useful findings in the field of training, education, and cognition. Research literature shows poor studies about mind reading and child abuse by parents that suggests doing research to address this major gap. There are contradictory findings about the theory of mind injury in psychopathic patients, for example, some studies indicate that incomplete or biased understanding of others' mental states can lead to aggressive, antisocial, and psychopathic behavior, but several studies couldn't find evidences to confirm the theory and no generalized injuries have been identified inpatients' theory of mind (Brune & Brune-Cohrs, 2006). The results of such studies can answer to these contradictions. Because, despite the new

concept of mind reading, many researchers have recognized that theory of mind or mind reading ability of criminals and rapists or an abusers of children is weaker than normal people. If studies demonstrate that children abuse can undermine their mind reading abilities, the necessity and importance of intervention and prevention of child abuse would be obvious.

Method

Design

The present study was correlational-descriptive research, and in terms of time, it can be considered as cross-sectional study. The sample was selected by multistage cluster sampling method. Thus, two areas were randomly selected among the three geographic areas of the city, and then two schools from each area and two classes from each school were randomly selected in order to complete the sample size of the study. 268 female students, how studied in the 2013-14 academic year in Bonab city were selected.

In the present study, the questionnaire of Reading the Mind in the Eyes Test (RMET) for examining theory of mind ability and two-dimensional child abuse questionnaire (emotional and physical) for examining abuse of students were used.

Reading the Mind in the Eyes Test (RMET)

This neuropsychological test was developed by Baron-Cohen S, Wheelwright S, Hill J, et al (2001) which is comprises of photographs of

the eye region of famous foreign actors which indicates 36 different mental states of calm, disappointed, frightened, and so on. Mental states of similar emotional capacity were provided for each picture. According to the visual information of the image, participants have to choose the best option of four items which describe the mental state of the person in the picture. The maximum score is 36 for selecting the correct option and the lowest is zero. Baron-Cohen's test scoring method is based on the correct response of the participant to the items and the total correct items constitutes the participant's score and the maximum time required for full implementation of the task for each participant is 15 minutes. In order to translate the words of the test into Persian, the guidance and supervision of three linguists have been also used and in a study, Najati, Zabihzade, Maleki, and Mohseni (2012) were reported the alpha coefficients of the test 0.72 and the test-retest reliability of the sample of 30 students in two weeks about 0.61 (Najati, Zabihzadeh, Nikfarjam, Naderi, & Poornagdi, 2012). In this study, Cronbach's alpha for this scale was 0.714.

Two-dimensional child abuse questionnaire

This questionnaire examines emotional and physical abuse by parents that based on the definitions provided by the theorists it has been designed, set, and used by Javanmard and Mamagani (2007) (Mamagani & Javanmard, 2007; Javanmard, Yagubi, & Mamagani, 2011). Before using, the questionnaire primary conducted on 100 people and inappropriate questions were deleted and modified. Finally, a

final questionnaire was prepared consisted of 22 questions. In addition, information on parental education and occupation were considered in the questionnaire. Emotional abuse questions consisted of three factors of humiliation and insult by 7 items, second factor of acceptance and rejection with 5 items, and the third factor of limiting with 3 items and physical abuse questions included two factors, the first factor named severe physical abuse with 7 items and the second factor called deep physical abuse with 6 items. It is worth mentioning that in the present study, the mean scores of child abuse by parents are considered as a measure of parental child abuse. In this study, internal consistency with Cronbach's alpha for the scale of child abuse and child abuse from mother to child abuse by the father 867/0 and 830/0 respectively.

Results

According to Table 1, the mean of emotional child abuse by parents is more than physical child abuse of parents.

Table 1
Descriptive statistics related to the ability of mind reading in children and types of child abuse in parents

Variable	M	SD
Mind Reading Ability of Children	16.57	4.19
Emotional Child abuse by Parents	9.22	5.91
Physical Child Abuse by Parents	2.66	1.81

According to Table 2, there is significant negative relation between mind reading ability of children with both emotional child abuse by parents ($r = -0.215$, $P < 0.001$) and physical child abuse by parents ($r = -0.22$, $P < 0.001$). In other words, more emotional and physical abuse by parents leads to lower theory of mind ability in children.

Table 2
The correlation coefficients between mind reading ability of children and emotional and physical child abuse by parents

Variable	Emotional Child Abuse by Parents	Physical Child Abuse by Parents
Mind Reading Ability	- .215	- .222

** $P < 0.01$

Multiple regression analysis was performed in order to determine the contribution of each type

Table 4
The beta coefficients of predictor variables effective on theory of mind ability in female children

Model		Nonstandard Coefficients		Standard Coefficients	t	P
		B	SE B	β		
1	Constant Value	17.57	0.547		32.15	.0001
	Emotional Abuse by Parents	-0.084	0.062	-0.118	-1.36	.174
	Physical Abuse by Parents	-0.125	0.078	0.139	-1.59	.112

According to standard beta coefficients and significant level in Table 4, common variance between two predictor variables (emotional and physical abuse by parents) were high enough to cause no significance for contribution of each

of child abuse in parents for predicting mind reading ability changes in children:

Table 3
Simultaneous regression analysis of mind reading ability of children based on emotional and physical abuse by parents

Model	R	R ²	R ⁻²	SE	F	P
Model 1	.24	.056	.049	4.09	7.3	.001

Predictor variables: emotional abuse by parents, physical abuse by parents

According to simultaneous regression analysis and Table 3, in determining theory of mind in female children over emotional and physical abuse by parents, multiple correlation coefficient is obtained about 0.24%, coefficient of determination about 0.056, and pure coefficient of determination about 0.049. However, emotional and physical abuse by parents determine about 5 percent of variance of theory of mind ability score in female children ($F=7.3$, $P < 0.01$).

variable in predicting scores of theory of mind ability. Examining the relationship between two predictor variables and calculating correlation coefficient between them indicated that the cause of this result is due to the high correlation be-

tween these two variables ($r = .70, P < 0.001$) and the linearity error of the variables. Therefore, in order to evaluate the contribution of each variables of emotional and physical abuse by parents, we separately evaluated the contribution of each above variables in predicting theory of mind abilities of female children by linear regression analysis (Table 5).

Table 5
The summary of linear regression analysis of theory of mind ability of children based on emotional abuse by parents

Model	R	R ²	Adjusted R ²	SE
1	.215	.046	.043	4.1

According to the results of Table 5, the correlation coefficient of these two variables is about 0.215 and the coefficient of determination about 0.046 that indicated that about 5 percent of theory of mind ability score variance in females is determined by emotional abuse by parents. Analysis of regression variance for examining the certainty of existence of linear relationship between the variables indicated that the hypothesis of linear relationship between the variables is established ($F = 11.98, P < .001$).

Table 6
Regression coefficients of predicting theory of mind in children based on emotional abuse by parents

Model	B	β	t	P
Constant Value	17.98		37.15	.0001
Emotional Abuse by Parents	-0.15	-0.215	-3.46	.001

Criterion variable: mind reading ability in female children

The results of standard and nonstandard regression coefficients of predictor variable indicated that emotional abuse by parents (Beta = -0.215) with confidence of 99 percent can predict the changes related to theory of mind ability in female children (Table 6).

Table 7
The summary of linear regression analysis of mind reading ability of children based on physical abuse by parents

Model	R	R ²	Adjusted R ²	SE
1	.222	.049	.045	4.1

According to the results of Table 7, the correlation coefficient of these two variables is about 0.222 and the coefficient of determination about 0.049 that indicated that about 5 percent of theory of mind ability score variance in females is determined by physical abuse. Analysis of regression variance for examining the certainty of existence of linear relationship between the variables indicated that the hypothesis of linear relationship between the variables is established ($F = 13.01, P < 0.001$).

Table 8
Regression coefficients of predicting theory of mind in children based on physical abuse by parents

Model	B	β	t	P
Constant Value	16.93		61.29	.0001
Physical Abuse by Parents	-0.199	-0.222	-3.61	.0001

Criterion variable: mind reading ability in female children

The results of standard and nonstandard regression coefficients of predictor variable indicated that physical abuse by parents (Beta=-0.222) with confidence of more than 99 percent can predict the changes related to the theory of mind ability in female children (Table 8).

Discussion

The aim of the present study was to examine the relationship between parental abuse and mind reading ability in female students that the findings indicated that there is negative relation between mind reading ability of children and emotional and physical abuse by parents. It means that, the grater emotional and physical abuse by parents leads to weaker mind reading ability of children. Similar studies indicated that parental abuse causes weakness in the social abilities of children. Raheb, Eglima, Kamroudi, and Kafshgar's (2009) study indicated that 97 percent of abused children show behavioral disorders and you can observe negativism and conflict in their behavior and their behavior sometimes as strong dependence is associated with aggression, they have reactions of fear and sometimes they behave obsessively (Raheb, Eglima, Kamroudi, & Kafshgar, 2009). Ward and Keenan (1999, as cited in Raheb, Eglima, Kamroudi, & Kafshgar, 2009) indicated that 84 percent of abused children have often or always impaired adaptation to the environment, so that the child resistances against things or places change, cannot follow the educational instructions well, and feels expulsion. Inoue et al.'s (2004) study indicated that two fifths of depressed patients have defect

in theory of mind and this impairment is highly correlated with establishing social relations skills of patients. Since the interpersonal conflict is an important factor for depression recurrence, it seems that the theory of mind is the proper predictor for depression recurrence and social interaction of these patients. Najati et al. (2012) suggest that depression as a cognitive-emotional imbalance state can be considered as a kind of abnormal social cognition. Neurological basis of depression which is the inner-ventral prefrontal cortex can associate with neural structures involved in social cognition in general and in decoding others' mental states in particular.

Research evidences indicate the necessity of benefiting from mind reading ability in order to fulfill daily social and behavioral functions. Because the ability of self and others' mind states perception, the relation between self and others, and the relations between others with each other are part of social cognition that leads to facilitate or understand social interactions (Buccino et al., 2001). In other hand, child abuse is one of the social issues that due to its effective features, it strongly requires appropriate planning and study in order to prevent and help to resolve and reduce (Momayezi et al., 2011). However, study about child abuse is one of the growth requirements of healthy and happy generation as well as powerful and developed society (Purnajee, 1999). The preventive study about abuse was considered in which the abusive parents trained about parenting skills. Training of parents includes the study about effective parenting techniques, observing the descriptions of the sample person about how confront with common

challenges of parenting, relaxation training, and other coping skills. In addition, project staff went to their home each week in order to assist the parents in implementing what they have learned. When parents who had participated in the program were compared with the control group of abusive parents, the parents who had participated in the program indicated significant improvement in parenting skills. Following-up the study indicated that none of the abusive parents who were specifically treated harm their children during one year after participation in the program. The present study indicated that effective skills of child control can be taught to parents with a little time and effort (Sarason, & Sarason, 2003).

Like many human sciences research, this study was also limited, such as the study was conducted

only on female students and the data collection tool was the self-report questionnaire that raises the possibility of bias in responses.

Conclusion

The results of this research indicated that child abuse and mind reading have relationship with each other's. Child abuse could effect on this aria too. Given the important role of mind reading in social interactions and negative impact of punishment of children by parents on mind reading, psychologists and other mental health practitioners is the duty to prevent and reduce the abuse of children for interventions of these negative effects.

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