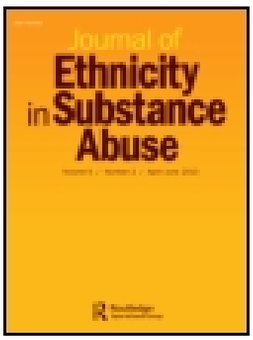

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The effect of child-abuse on the behavioral problems in the children of the parents with substance use disorder: Presenting a model of structural equations

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ABSTRACT

Child abuse may potentially create the behavioral problems particularly in the children of parents with substance use disorder. Thus, the current study was conducted to investigate the effects of child abuse on the behavioral problems in the children of parents with substance use disorder using the emotional regulation and social skills as mediators. In this paper, the method of Structural Equation Modeling (SEM) was applied. The study population included 358 children of parents with substance use disorder whose parents had referred to the addiction treatment center in Kermanshah province, Iran (2017-2018). Conners Comprehensive Behavior Rating Scales (CBRS), Emotion Regulation Checklist (ERC), Social Skills Rating Scale (SSRS) Questionnaire, and Child Abuse Questionnaire were also used for data collection. IBM SPSS Amos 22 software was utilized for statistical analysis of the obtained data. The SEM was also analyzed to confirm fit of the model. The results showed a direct relationship between the child abuse and behavioral problems so that, the boys outperformed the girls in this regard. The findings also suggested a significant relationship between the family characteristics and behavioral problems. On the other hand, family characteristics and emotional regulation had direct and significant effects on improvement of the social skills ($P < 0.001$). The results revealed a direct effect of child abuse on the behavioral problems in the children of parents with substance use disorder. Thus, it is suggested to take a preventive approach toward child abuse in the children of parents with substance use disorder by employing a comprehensive program and intervention methods.

KEYWORDS

Child abuse; behavioral problems; parents with substance use disorder

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Introduction

Childhood is one of the most important stages of life in which the children's personality is formed and children may be exposed to various behavioral problems due to the family circumstances and inappropriate environment. Behavioral problems include the behaviors that are disproportionate to the child's age, and are severe, chronic, or persistent, ranging from extroverted behaviors (conduct disorder and impulsivity) to introverted behaviors (somatization and anxiety). Such behaviors have a negative effect on the process of development and proper adaptation of the child to the environment and create the problems for the people who are in close contact with the child (Gau et al., 2010).

Family characteristics including low social level, family conflict, family disorganization, deviation of family communications, poor parent-child relationship, mental diseases, and drug addiction among the family members are among the risk factors for behavioral problems in the children (Jogdand & Naik, 2014; Kjeldsen et al., 2014; Piotrowska et al., 2015). Behavioral problems in the children are closely related to the parental substance abuse. In the other words, the more severe the parental substance abuse the more likely the behavioral problems in children occur (Bountress & Chassin, 2015). Studies on the behavioral problems in the children of parents with substance use disorder have shown that the traits such as poor attachment (Solis et al., 2012), low self-esteem (Omkarappa & Rentala, 2019), and emotional problems (Lander et al., 2013) are commonly found in these children than the normal level.

On the other hand, substance and alcohol abuse in the parents can influence on the child abuse and neglect toward the children. In this regard, results of a study in Rafsanjan, southeastern Iran showed that drug addicted parents committed 81.9% of child abuse cases in the city (Kholasezade et al., 2008). In the family, adults' violence against the children is destructive and has adverse effects on the behavior of children; because it occurs in the private environment of the family, and is not reported in many cases (Kholasezade et al., 2008). Child abuse leads to various behavioral problems such as poor interpersonal communication (Solis et al., 2012), social problems (Farina et al., 2018), cognitive problems (Leonard & Das Eiden, 2002), and learning difficulties (Morrow et al., 2006).

The inability to regulate the emotions is another factor influencing the children's behavioral problems. The lack of emotional regulation is the main and basic cause of children's behavioral problems and plays a major role in the prevalence of mental disorders (Kalvin et al., 2016; Titelius et al., 2018). Emotional regulation is a pattern for organization of the emotions in response to environmental conditions and is a basic principle in

the initiation, assessment, and management of adaptive behavior, as well as prevention of negative emotions and maladaptive behaviors. Also, it is one of the most important elements in the development of emotional-social skills and maintaining the relationships with the peers, communicating with the adults, developing the cognitive abilities and academic achievement (Kerns et al., 2017). On the other hand, impairment of social skills is of particular importance in the case of children's behavioral problems (Runjić et al., 2015). Failure to perform social skills by creating a disruptive cycle of negative social outcomes such as anxiety, defective cognition, and avoidance behaviors contributes to the development of children's behavioral problems. Children with difficulty in regulating their emotions or those with low levels of social skills not only do not engage successfully with their peers, but also experience more problematic behaviors (Vahedi et al., 2012).

It can also be stated that, in most cases, behavioral problems and child-abuse should be considered as a sign of a disorder in the whole family, and appropriate measures can be taken to solve these problems only by understanding the factors involved in this problem. It is important to identify the family characteristics such as parental education and occupation making the children at risk of encountering the behavioral problems and harassment. In this regard, Li, Godinet and Arnsberger (2011) showed that the parents with higher level of literacy and better socio-economic class were less likely to misbehave their children.

On the other hand, identifying the individual demographic factors such as age and gender of children may be considered as a risk factor for child-abuse and related children's behavioral problems. For example, Scher, Forde, McQuaid, & Stein (2004) found that gender and educational level are associated with the child abuse, and they revealed that the prevalence of childhood misbehavior was about 30 and 40% in men and women, respectively. Mahoney, Donnelly, Lewis, & Maynard (2000) reported similar results. Identifying these influential factors is essential for developing appropriate intervention strategies.

Huge expenses are paid annually in various communities to compensate for the detrimental consequences caused by the children's behavioral problems. Given the importance of the problem of drug addiction in the society and its widespread and dangerous harm to the individuals and families and the increase in the prevalence of this social dilemma, especially for the children of the drug addicted parents who often grow in poorly controlled environments, with loose emotional relationships and poor parenting performance making them prone to various behavioral problems therefore, it is important to study the factors influencing the children's behavioral problems.

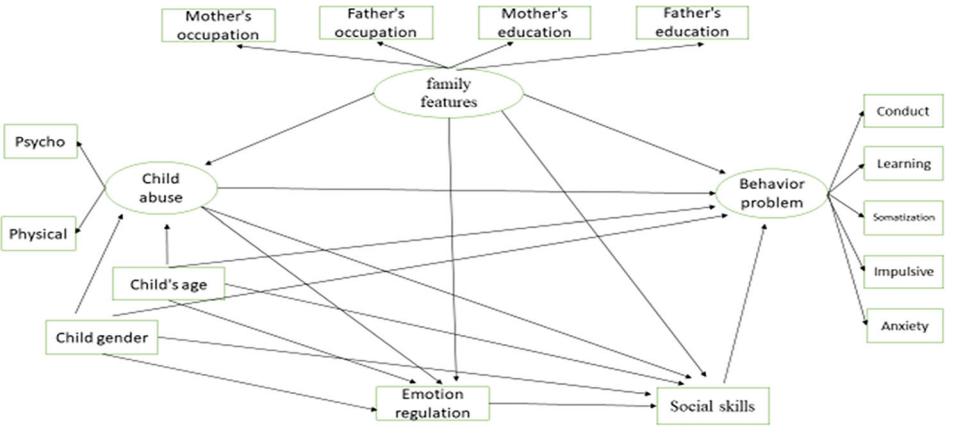

Figure 1. The proposed model.

The relationship between child-abuse and behavioral problems in the children has been shown in some studies. But, the novelty of the present study is that the mediating variables and the effect of other variables related to behavioral problems such as family and individual characteristics as well as emotional regulation and social skills are also considered through the SEM while, in the other studies, only the direct relationship between behavioral problems and child-abuse has been considered, and the indirect relationship between these variables and mediators has not been studied

Therefore, the present study was performed to investigate the effects of child abuse on the behavioral problems in the children of parents with substance use disorder using the emotional regulation and social skills as mediators. Figure 1 displays the proposed model of the present study.

Methodology

Participants

In the present study, a model of structural equations was presented. The statistical population of the study included all the children of parents with substance use disorder and their parents. The parents of these children had referred to the drug abuse treatment centers affiliated to the Kermanshah University of Medical Sciences for Methadone Maintenance Therapy (MMT) during 2018–2019. Totally, 358 parents with substance abuse disorder were selected. Prior to starting the study, a written informed consent was obtained from all the participants. The inclusion criteria were the history of drug abuse in the father or mother or both of them for at least one year, having at least one child under 12 years of age (The Conners Comprehensive Behavior Rating Scales was used to evaluate the children's

behavioral problems, considering that the validity and reliability of this questionnaire have been measured in Iran for the children aged between 6 and 11 years old, so the children over 12 years of age were not included in the study.), willingness to participate in the research, and having at least elementary level of education (under diploma). Exclusion criteria were the history of mental diseases in the family members, physical or mental disability or both of them in the children, alcohol abuse during the last 5 years, and any medical diseases in the parents.

Parents with alcohol abuse and those with psychiatric disorders were excluded from the study, as it was believed that the alcohol abuse and or having other psychiatric disorders simultaneously could influence the results of the study, so in this study, only the parents with substance use disorder were included in order to have more control and achieve more accurate results.

Procedure

Subjects were randomly selected from the individuals referred to eight addiction treatment centers affiliated to the Kermanshah University of Medical Sciences. After visiting the centers, the necessary preparations were discussed with the technical manager, psychologist, and the social worker in the center. Then, the researchers attended the group sessions in these centers and provided the explanations regarding the study objectives for the drug-addicted people. Later on, the addicted people were asked to participate in the study if they were interested. After obtaining the written informed consent from the participants, the questionnaires were given to them, and they were asked to enquire about any ambiguities while filling the questionnaires so that, the researchers could solve their problems. Moreover, they were assured that their privacy will be completely respected and they will remain anonymous.

Instruments

Conners comprehensive behavior rating scales (CBRS)

The CBRS questionnaire was standardized by Conners et al., in 1999. Parents' form in the CBRS is consisted of 48 questions. The answers are rated based on a four-point Likert scale ranging from 0 (never), 1 (rarely), 2 (most often), to 3 (almost always).

This questionnaire includes five subscales (conduct disorders, learning problems, somatization problems, impulsivity, and anxiety). Conduct disorders include arrogance, being irritable, sabotage, and contention. Learning problems include the cases such as carelessness and frustration in

performing the activities. Somatization problems include the cases such as headaches, nausea, and problems in sleeping. Impulsivity also includes the cases like distraction and restlessness, and finally, the anxiety also involves the cases like shyness, cowardice, and worry.

Studies conducted in Iran have shown that 35% of the variance in the factors was explained in factor analysis for testing the construct validity. Besides, 49- 90% of correlation was reported between the factors and the total score. The factor load of the items was also estimated, indicating a range of 40–70%. Test–retest reliability value was obtained as 58%, and 41-76% for the total scale and the subscales, respectively. The reliability score was determined as 70% and 46–71% for the total scale and the subscales, respectively. Also, Cronbach's alpha was obtained as 83% and 57–86% for the total scale and the subscales, respectively (Eisanezhad & Khandan, 2017).

Emotion regulation checklist (ERC)

ERC is a 24 -item self-report scale including positive and negative items (Shields & Cicchetti, 1997) to be filled by the children. The items exploit the information regarding the regulation of emotional core features including adequate competence, emotional potency, flexibility, and intensity as well as proportion in emotional expression. Each item is rated by a four-point Likert scale ranging from almost always to almost never. This scale has also been evaluated by some studies conducted in Iran to ensure its validity and reliability. Esmaeelian et al. achieved the score of 0.86 for the reliability using the Cronbach's alpha indicating the high reliability for studying the children and teenagers in Iran. Also, a significant correlation was found between the emotional regulation subscales and the anxiety, irritation, and depression components. Thus, the appropriate convergent and divergent validity were reported for the ERC (Esmaeilian et al., 2017).

The social skills rating system (SSRS) questionnaire

The SSRS was employed for assessment of the social skills. This questionnaire utilizes a ranking scale for the skills proposed by Gresham and Elliott. Parents, teachers, and students are assessed individually by a particular questionnaire of assessment to specify the social skills scale. The assessment can be performed separately or altogether. Herein, only the parent questionnaire was used in which the items are rated by a three-point rating scale including never, sometimes, and often. Assady et al., reported the reliability of 79% for the scale by the studies conducted in Iran, compared to that of the study by Gresham and Elliott, indicating 94% of

reliability for the social skills based on the Cronbach's alpha coefficient. Structural and concurrent validity were also confirmed for this scale. Furthermore, several studies have confirmed the diagnostic advantage of the scale in the children (Assady et al., 2014).

Child abuse questionnaire

The child abuse questionnaire has been used in the Iranian society to evaluate the child abuse (Farina et al., 2018). This questionnaire is a self-report scale and is completed by the child. This Likert-type questionnaire has three subscales including the psychological abuse, physical abuse, and neglect, and the total score is called as an abuse scale score. In Iran, Hosseinkhani et al., evaluated the validity of the inventory after reviewing the existing relevant literature and preparing the initial version by calculating the clarity and relevance, and also measured the reliability of the inventory through the Cronbach's alpha and the repeatability was measured by the Intra-Class Correlation Coefficient (ICC) and the test-retest at the intervals of two weeks. In their research, the mean clarity and relevance of the inventory was equal to 80.36 and 92.5, respectively, and the relevancy range of the items was from 90.14 to 97.2, respectively. The mean ICC and Cronbach's alpha were equal to 0.95 and 0.92, respectively (Hosseinkhani et al., 2014).

Analysis strategy

The continuous variables were presented using the mean and ± Standard Deviation (SD). The categorical variables were also described using the frequency (percentage). It is noteworthy that the proposed model employs both the continuous and categorical variables. Total fit for the model was estimated by the Maximum Likelihood Estimation (MLE) method. Besides, it was tried to identify the directional and non-directional relationships using the Boot Strap method at the confidence level of 95%. IBM SPSS Amos 22 software was utilized to carry out all the statistical analyses needed in this research.

For modeling of the structural equations, it is necessary to evaluate some assumptions including variable-interval, normal distribution of the variables (e.g., Kolmogorov–Smirnov test and the Skewness), and linear relationship between the variables (e.g., Scatter diagram).

Results

In this study, 358 parents with substance abuse disorder who had the children aged between 6 12 years old were evaluated. As shown in Table 1,

Table 1. Demographic features and characteristics for the children in the age of 6 to 12 by establishing behavioral problems, child abuse, emotional regulation, and social skills.

			Behavioral problems					Child abuse			
			Mean(SD)					Mean(SD)			
Variable		Total(%)	Conduct	Learning	Somatization	Aggression	Anxiety	Psychological	Physical	Emotional regulation Mean(SD)	Social skills Mean(SD)
Child gender	**Boy**	206(57.5)	9.36(0.46)	5.03(0.23)	4.18(0.23)	5.20(0.27)	4.73(0.21)	4.90(3.36)	3.50(2.54)	50.15(1.04)	29.18(0.96)
	Girl	152(42.5)	8.43(0.54)	4.57(0.27)	4(0.29)	4.62(0.25)	4.32(0.26)	3.35(2.17)	2.25(2.06)	51.23(1.16)	32.38(1.15)
Child age	**6–8**	133(37.2)	8.84(0.52)	4.45(0.27)	3.94(0.27)	5.04(0.38)	4.58(0.27)	4.38(2.32)	3.21(2.40)	51.13(1.35)	30.81(1.22)
	9–10	98(27.4)	8.93(0.77)	4.96(0.35)	4.62(0.38)	4.93(0.30)	4.19(0.32)	4.10(2.45)	2.87(2.56)	48.55(1.35)	30.43(1.49)
	11–12	127(35.4)	9.11(0.59)	5.14(0.30)	3.88(0.31)	4.88(0.27)	4.81(0.28)	4.20(2.47)	2.77(2.33)	51.65(1.31)	30.33(1.85)
Mother's education	**High school**	192(53.6)	9.93(0.49)	5.14(0.24)	4.61(0.25)	5.06(0.22)	4.98(0.23)	4.88(2.24)	3.57(2.43)	49.01(1.14)	27.84(1.02)
	High school diploma	166(46.4)	7.84(0.49)	4.48(0.25)	3.52(0.25)	4.83(0.32)	4.06(0.23)	3.50(2.39)	2.28(2.23)	52.46(1.01)	33.66(1.01)
Father's education	**High school**	197(55.0)	10.32(.0.54)	5.27(0.27)	4.59(0.28)	5.09(0.24)	5.08(0.26)	5.05(2.15)	3.54(2.34)	48.51(1.27)	26.47(1.08)
	High school diploma	161(45.0)	7.85(0.45)	4.47(0.23)	3.71(0.24)	4.85(0.28)	4.13(0.21)	3.58(2.40)	2.51(2.40)	52.32(0.95)	33.86(0.95)
Mother's occupation	**Housewife**	291(81.3)	9.23(0.40)	4.93(0.19)	4.23(0.20)	4.97(0.21)	4.68(0.18)	4.32(2.46)	3.08(2.45)	50.29(0.88)	30.45(0.83)
	Employee	67(18.7)	7.80(0.74)	4.43(0.39)	3.55(39.11)	4.89(0.42)	4.04(0.36)	3.89(2.15)	2.49(2.25)	52(1.64)	30.95(1.59)
Father's occupation	**Self-employee**	248(69.3)	9.70(0.44)	5(0.22)	4.37(0.22)	5(0.20)	4,75(0.21)	4.48(2.44)	3.15(2.38)	49.27(0.98)	28.97(0.89)
	Employee	110(30.7)	7.30(0.55)	4.45(0.29)	3.51(0.3)	4.85(0.42)	4.11(0.27)	3.70(2.23)	2.57(2.48)	53.62(1.17)	34.07(1.25)

57.5% of the parents had girl and 42.5% of them had boy children. Totally, 37.2% of children aged between 6–8 years old, 27.4% of them aged between 9–10 years old and also 35.4% of them aged between 11–12 years old. The highest level of education for mothers and fathers was reported as high school diploma and under diploma, respectively. Among the mothers, 81% of them were housewife and 69% of the fathers were self-employed. Table 1 presents other related information.

The findings of this study showed a direct relationship between the psychological abuse and conduct disorders, learning, somatization, aggression, and anxiety and a reverse correlation was found between the emotional regulation, social skills, gender and age, parental education, and father's occupation ($p < 0.001$). But there was no significant correlation between the psychological abuse and mother's occupation ($p > 0.001$). A direct relationship was also found between the physical abuse and conduct disorders, learning difficulties, somatization, aggression, and anxiety. As demonstrated in Table 2, a direct relationship was also observed between the emotional regulation and social skills, parental education, and father's occupation and a reverse relationship was also observed between the emotional regulation and conduct disorders, learning difficulties, somatization, and anxiety ($p < 0.001$). But, no significant relationship was found between the emotional regulation and age, gender, mother's occupation and, impulsivity ($p > 0.001$). Table 2 presents other related information.

Table 3 presents vital indices including the Goodness -of -Fit Index (GFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI), and Adjusted Goodness of Fit (AGFI). Fit indices with a value more than 0.9 are acceptable. The next index is Root Mean Square Error of Approximation (RMSEA) that determines the acceptability level of 0.08 or less, generally 0.05 or less for a standard model. Table 3 expresses the fit for the proposed model and the data obtained regarding the fit indices. As shown in Table 3, the final model has an appropriate fit. The findings showed that the proposed conceptual model fits with the obtained data.

As depicted in Table 4, child abuse directly influences on behavioral problems ($P < 0.001$). Furthermore, the gender of children significantly influences the behavioral problems ($P < 0.002$). There was also a direct relationship between the gender and general abuse ($P < 0.002$). Family characteristics were significantly associated with behavioral problems either directly or indirectly ($P < 0.001$). It was also found that the family characteristics could directly influence on the social skills ($P < 0.001$). Emotional regulation had a significant and direct effect on the social skills ($P < 0.001$).

Table 2. Correlation coefficient among the variables.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Child age	1														
Child gender	0.02	1													
Mothers education	0.02	0.10	1												
Fathers education	0.00	0.12	0.71*	1											
Mothers occupation	−0.02	0.03	0.34*	0.27*	1										
Father occupation	0.05	0.89	0.30*	0.39*	0.31*	1									
Conduct	−0.05	0.06	−0.15*	−0.13*	0.08	−0.16*	1								
Learning	0.04	0.06−	−0.09	−0.11*	−0.05	0.07	0.78*	1							
Somatization	−0.02	−0.02	−0.15*	−0.12*	−0.07	−0.11*	0.72*	0.69*	1						
Impulsive	−0.05	−0.08	−0.03	−0.03	−0.00	−0.02	0.56*	0.59*	0.53*	1					
Anxiety	−0.00	−0.04	−0.14*	−0.14*	−0.07	0.0.9	0.69*	0.67*	0.64*	0.54*	1				
Psychological abuse	−0.04	−0.31*	−0.28*	−0.30*	−0.07	−0.14*	0.42*	0.35*	0.29*	0.28*	0.35*	1			
Physical abuse	−0.15*	−0.25*	−0.25*	−0.21*	−0.09	−0.11*	0.39*	0.36*	035*	0.32*	0.31*	0.57*	1		
Emotional regulation	0.01	0.03	0.11*	0.12*	0.04	0.13*	−0.12*	−0.19*	−0.14*	−0.08	−0.14*	−0.11*	−0.13*	1	
Social skill	0.02	0.11*	0.20*	0.26*	0.01	0.16*	−0.16*	−0.08	−0.14*	−0.07	−0.15*	−0.12*	−0.11*	0.43*	1

*P. value < 0.001.

Table 3. Goodness-of-fit indices for the proposed model.

Index	χ^2/df	GFI	AGFI	CFI	RMSEA
Model	1.42	0.96	0.94	0.98	0.03

Table 4. Directional and in directional impacts as well as all standards for the variables.

Path	Direct standard effect	Indirect standard effect	Total effect
Child abuse → behavioral problems	0.644*	…	0.645
Child gender → behavioral problems	0.190*	−0.241*	−0.051
Child abuse → child gender	−0.362*	…	−0.362
Emotional regulation → social skills	0.424*	…	0.424
Family features → behavioral problems	0.083*	−0.264*	−0.181
Family feature → child abuse	−0.368*	…	−0.368
Family feature → social skills	0.210*	…	0.250
Emotional regulation → social skills	0.424*	…	0.424

Discussion

The present study was carried out to investigate the effects of child abuse on the behavioral problems in the children of parents with substance use disorder using emotional regulation and social skills as mediators. The occurrence of children's behavioral disorders increases in the case of abuse. This finding has also been indicated in the matched studies by Al Odhayani, Watson, & Watson (2013) and Stirling & Amaya-Jackson (2008). Silva, Graña, & González-Cieza (2013) identified the behavioral problems in the teenage criminals as a consequence of abuse in these victims. They showed a drastic correlation between the abused children and inward-outward expressions of their behavioral problems. The absence of education and a supportive family along with the presence of a negative family environment for the abused children are the main reasons for children's behavioral problems. In such case, however, some family roles including giving care and help, showing the empathy, providing the problem-solving techniques, and having definite structure of power can contribute greatly to ensure psychological health in the children. Thus, the children might be at the risk for development of behavioral problems if such family roles are not fulfilled (Al Odhayani et al., 2013; Silva et al., 2013; Stirling & Amaya-Jackson 2008).

Our results also showed that the emotional skills of children are associated with an increase in their social skills, which is consistent with the researches by Berkovits, Tipton, Laugeson, & Blacher (2011) and Bunford, Evans, & Langberg (2018). This suggests that the children tend to use a behavioral pattern in their interactions. This pattern is reflected as different emotional reactions and therefore, requiring the emotional skills in the children. Consequently, the greater the exposure to positive emotional interactions, the more successful the social interaction of the children. Some studies (Berkovits et al., 2011; Bunford et al., 2018) have

also noted that the emotional regulation in children is associated with their ability to predict the peoples' reactions toward their behaviors, consequently allowing them to dominate the situation where the interaction occurs between the children and people.

Herein, the family characteristics including educational level and job status of the parents were also investigated as possible factors influencing the children's behavioral problems. Interestingly, family characteristics majorly contribute in determining the occurrence of children's positive behaviors such as social skills and efficiency, as well as successful interaction. Thus, the parents play an important role to establish a behavioral pattern for the children. Therefore, the children follow this pattern to acquire the skills, norms, values, and so forth. It has also been suggested that the quality of the environment for children as well as the job and educational level of the parents can alter the children's behavior (Cabello, Gutiérrez-Cobo, & Fernández-Berrocal, 2017).

In the current study, the degree to which family characteristics such as educational level and job of the parents directly lead to the abuse of children were also investigated. Therefore, it was found that the parents with higher educational level can alter the misbehaviors in the children by changing their attitudes toward physical punishment, increasing the tolerance toward children, and improving the parental issues, social interactions, and awareness toward the child growth, which is in line with the previous studies (Mersky et al., 2009; Stith et al., 2009).

Most importantly, the results of the current study emphasized the results of other investigations on the relationship between the parental educational level and social skills in the children (Aslan & Arslan Cansever, 2009; Griffith, Arnold, Voegler-Lee, & Kupersmidt, 2016). In addition, Youngblade (2003) stated that the educational level of the parents, particularly mothers enhances the social behavior as well as educational performance in the children. It has also been shown that the children of sociable parents appropriately acquire the social skills, particularly making them to have successful interactions with the children of the same age (Youngblade, 2003).

In this study, directional and non-directional effects of gender on the children's behavioral problems were also evaluated. As shown in Table 1, the mean score for all types of behavioral problems is higher in boys rather than girls. Investigations on the behavioral disorders have suggested somewhat similar findings (Abdollah Zadeh Rafi, Hassanzade, Nesayan, & Assadi Gandomani, 2016; Mohammadi, Vaisi, Jalali, Ghobadi & Abbasi, 2019). The differences between the results of this study and those of other studies may be explained by the social, cultural, biological, and psychological factors. In terms of cultural factors, the boys are more vulnerable to the environments

than the girls. This may result from the manner of educating the boys and girls in different cultures highlighting the effect of gender on the behavioral disorders (Abdollah Zadeh Rafi et al., 2016).

Also, a direct relationship was found between the gender of children and child abuse. As depicted in Table 1, the boys are more prone to the physical and psychological abuses rather than the girls, which is inconsistent with some other studies (Mahoney et al., 2000; Scher et al., 2004). However, the gender stereotypes perceived by the parents may also contribute as a distinct factor in their behaviors toward the victims. In addition, boys' tendency to start a dispute raises the chance of physical punishment by the parents, which does not happen for the girls in the same situation (Amini & Yazdan Panah, 2000).

During this research, it was found that some children of the parents with substance use disorder have been harassed, so the psychologists of these centers expressed the effect of the child-abuse on the children's mental health in the individual and group counseling sessions with the parents in order to help these children, and also explained the complications of child-abuse for the parents. Children were also taught that if they were harassed again, they could ask for help from the 24-hour prevention and intervention centers in the child-abuse sector of the Welfare Organization.

Limitations of the study

There were some limitations in the present paper that can be addressed in the future researches. There was a probability for bias in responding since the questionnaires were employed as data collection tool. Besides, more accurate information could be acquired by comparing both parents' and teachers' forms of the CBRS. The absence of a method to control the intervening variables including children's and parents' characteristics as well as parenting approaches and family's economic status was also considered as a limitation. Thus, it is suggested to study on the clinical subjects in the future researches.

Conclusion

Given the direct effects of child abuse on the behavioral problems in the children, it is recommended to take a preventive approach toward such behavioral problems by creating an appropriate model and teaching the parents about adverse effects of child abuse in attractive ways. Besides, holding the group counseling sessions at addiction treatment centers would be highly beneficial.

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Disclosure statement

The authors declare that they have no competing interests.

Ethical approval

The study was approved by the ethics committee of the vice chancellery of research and technology, Kermanshah University of Medical Sciences (KUMS.REC.2017.496) and the written informed consent was obtained from each participant after explaining the purpose of research.

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References

Abdollah Zadeh Rafi, M., Hassanzade, M., Nesayan, A., & Assadi Gandomani, R. (2016). Prevalence of behavioral disorders in students and prediction of that based on emotional abuse. *Quarterly Journal of Mental Health Research*, *10*(2), 28–41.

Al Odhayani, A., Watson, W. J., & Watson, L. (2013). Behavioural consequences of child abuse. *Canadian Family Physician Medecin de Famille Canadien*, *59*(8), 831–836.

Amini, M., & Yazdan Panah, Sh. (2000). *Iran Medical Universit Investigation of Epidimiology Child Abuse in Rafsanjan* [MD thesis]. Iran University of Medical Sciences, Tehran.

Aslan, N., & Arslan Cansever, B. (2009). Effects of family socio-demographic characteristics on child participation in social activities at school: A comparative study between Turkey and The Netherlands. *Journal of Theory and Practice in Education*, *5*.

Assady, G. R., Nesayan, A., Sershki, N., & Karimlou, M. (2014). The effectiveness of theory of mind training on improving cooperation, self-control and assertive in autistic boys. *Exceptional Children's Quarterly*, *13*(3), 33–43.

Berkovits, L., Tipton, L. A., Laugeson, E. A., & Blacher, J. (2011). *Understanding the relationship between emotion regulation and social skills in adolescence*. 10th International Meeting for Autism Research Conference, San Diego, CA.

Bountress, K., & Chassin, L. (2015). Risk for behavior problems in children of parents with substance use disorders. *The American Journal of Orthopsychiatry*, *85*(3), 275–286. https://doi.org/10.1037/ort0000063

Bunford, N., Evans, S. W., & Langberg, J. M. (2018). Emotion dysregulation is associated with social impairment among young adolescents with ADHD. *Journal of Attention Disorders*, *22*(1), 66–82. https://doi.org/10.1177/1087054714527793

Cabello, R., Gutiérrez-Cobo, M. J., & Fernández-Berrocal, P. (2017). Parental education and aggressive behavior in children: A moderated-mediation model for inhibitory control and gender. *Frontiers in Psychology*, *8*, 1181–1181. https://doi.org/10.3389/fpsyg.2017.01181

Eisanezhad, O., & Khandan, F. (2017). Comparison of the effectiveness of parental education and parental management on positive parenting styles and behavioral-emotional problems of children. *Consulting Research*, *16*(2), 98–125.

Esmaeilian, N., Dehghani, M., & Falah, S. (2017). Check the psychometric features of the children's adrenaline thrilling checklist. *Magazine Achievements of Clinical Psychology*, *2*(1), 15–34.

Farina, V., Salemi, S., Tatari, F., Abdoli, N., Jouybari, T. A., Alikhani, M., … Zakiei, A. (2018). Trauma-focused cognitive behavioral therapy a clinical trial to increase self-efficacy in abused the primary school children. *Journal of Education and Health Promotion*, *7*, 33. https://doi.org/10.4103/jehp.jehp_80_17

Gau, S. S.-F., Chou, M.-C., Lee, J.-C., Wong, C.-C., Chou, W.-J., Chen, M.-F., Soong, W.-T., & Wu, Y.-Y. (2010). Behavioral problems and parenting style among Taiwanese children with autism and their siblings. *Psychiatry and Clinical Neurosciences*, *64*(1), 70–78. https://doi.org/10.1111/j.1440-1819.2009.02034.x

Griffith, S., Arnold, D., Voegler-Lee, M. E., & Kupersmidt, J. (2016). Individual characteristics, family factors, and classroom experiences as predictors of low-income kindergarteners' social skills. *Journal of Educational and Developmental Psychology*, *6*(1), 59–76. https://doi.org/10.5539/jedp.v6n1p59

Hosseinkhani, Z., Nedjat, S., Majdzadeh, R., Mahram, M., & Aflatooni, A. (2014). Design of the child abuse questionnaire in Iran. *Journal of School of Public Health*, *11*(3), 29–38.

Jogdand, S. S., & Naik, J. (2014). Study of family factors in association with behavior problems amongst children of 6-18 years age group. *International Journal of Applied & Basic Medical Research*, *4*(2), 86–89. https://doi.org/12229-516/.4103x.136783

Kalvin, C. B., Bierman, K. L., & Gatzke-Kopp, L. M. (2016). Emotional reactivity, behavior problems, and social adjustment at school entry in a high-risk sample. *Journal of Abnormal Child Psychology*, *44*(8), 1527–1541. https://doi.org/10.1007/s10802-016-0139-7

Kerns, C. E., Pincus, D. B., McLaughlin, K. A., & Comer, J. S. (2017). Maternal emotion regulation during child distress, child anxiety accommodation, and links between maternal and child anxiety. *Journal of Anxiety Disorders*, *50*, 52–59. https://doi.org/10.1016/j.janxdis.2017.05/002

Kholasezade, G., Bakhshi, H., Nazer, M., A., Jacobs, G., Poorgholami, M., & Rabani, A. (2008). Prevalence of child abuse in opiate dependents referring to Addiction Treatment Clinic of Rafsanjan University of Medical Sciences. *Journal of Rafsanjan University of Medical Sciences*, *6*(1), 33–47.

Kjeldsen, A., Janson, H., Stoolmiller, M., Torgersen, L., & Mathiesen, K. (2014). Externalising behaviour from infancy to mid-adolescence: Latent profiles and early

predictors. *Journal of Applied Developmental Psychology*, *35*(1), 25–34. https://doi.org/10.1016/j.appdev.2013.11.003

Lander, L., Howsare, J., & Byrne, M. (2013). The impact of substance use disorders on families and children: from theory to practice. *Social Work in Public Health*, *28*(3-4), 194–205. https://doi.org/10.1080/19371918.2013.759005

Leonard, K. E., & Das Eiden, R. (2002). Cognitive functioning among infants of alcoholic fathers. *Drug and Alcohol Dependence*, *67*(2), 139–147. https://doi.org/10.1016/s0376-8716(02)00051-0

Li, F., Godinet, M., & Arnsberger, P. (2011). Protective factors among families with children at risk of maltreatment: Follow up to early school years. *Children and Youth Services Review*, *33*, 139–148. https://doi.org/10.1016/j.childyouth.2010.08.026

Mahoney, A., Donnelly, W. O., Lewis, T., & Maynard, C. (2000). Mother and father self-reports of corporal punishment and severe physical aggression toward clinic-referred youth. *Journal of Clinical Child Psychology*, *29*(2), 266–281. https://doi.org/10.1207/S15374424jccp2902_12

Mohammadi, M., Vaisi Raiegani, A., Jalali, R., Ghobadi, A., & Abbasi, P. (2019). Prevalence of behavioral disorders in Iranian children. *Journal of Mazandaran University of Medical Sciences*, *28*(169), 181–191.

Morrow, C. E., Culbertson, J. L., Accornero, V. H., Xue, L., Anthony, J. C., & Bandstra, E. S. (2006). Learning disabilities and intellectual functioning in school-aged children with prenatal cocaine exposure. *Developmental Neuropsychology*, *30*(3), 905–931. https://doi.org/10.1207/s15326942dn3003_8

Omkarappa, D. B., & Rentala, S. (2019). Anxiety, depression, self-esteem among children of alcoholic and nonalcoholic parents. *Journal of Family Medicine and Primary Care*, *8*(2), 604–609. https://doi.org/10.4103/jfmpc.jfmpc_282_18

Piotrowska, P., Stride, C., Croft, S., & Rowe, R. (2015). Socioeconomic status and antisocial behaviour among children and adolescents: A systematic review and meta-analysis. *Clinical Psychology Review*, *35*, 47–55. https://doi.org/10.1016/j.cpr.2014.11.003

Runjić, T., Bilić Prcić, A., & Alimovic, S. (2015). The relationship between social skills and behavioral problems in children with visual impairment. *Croatian Review of Rehabilitation Research*, *51*(2), 64–72.

Scher, C. D., Forde, D. R., McQuaid, J. R., & Stein, M. B. (2004). Prevalence and demographic correlates of childhood maltreatment in an adult community sample. *Child Abuse Neglect*, *28*(2), 167–180. https://doi.org/10.1016/j.chiabu.2003.09.012

Shields, A., & Cicchetti, D. (1997). Emotion regulation among school-age children: The development and validation of a new criterion Q-sort scale. *Developmental Psychology*, *33*(6), 906–916. https://doi.org/10.1037/0012-1649.33.6.906

Silva, T., Graña, J., & González-Cieza, L. (2013). Self-reported physical and emotional abuse among youth offenders and their association with internalizing and externalizing psychopathology: A Preliminary Study. *International Journal of Offender Therapy and Comparative Criminology*, *58*(5), 590–606. https://doi.org/10.1177/0306624X12474975

Solis, J. M., Shadur, J. M., Burns, A. R., & Hussong, A. M. (2012). Understanding the diverse needs of children whose parents abuse substances. *Current Drug Abuse Reviews*, *5*(2), 135–147. https://doi.org/10.2174/1874473711205020135

Stirling, J., Jr., Amaya-Jackson, L., & Amaya-Jackson, L. (2008). Understanding the behavioral and emotional consequences of child abuse. *Pediatrics*, *122*(3), 667–673. https://doi.org/10.1542/peds.2008-1885

Stith, S. M., Liu, T., Davies, L. C., Boykin, E. L., Alder, M. C., Harris, J. M., Som, A., McPherson, M., & Dees, J. E. M. E. G. (2009). Risk factors in child maltreatment: A meta-analytic review of the literature. *Aggression Violent Behavior*, *14*(1), 13–29.

Titelius, E. N., Cook, E., Spas, J., Orchowski, L., Kivisto, K., O'Brien, K. H. M., Frazier, E., Wolff, J. C., Dickstein, D. P., Kim, K. L., & Seymour, K. (2018). Emotion dysregulation mediates the relationship between child maltreatment and non-suicidal self-injury. *Journal of Aggression, Maltreatment & Trauma*, *27*(3), 323–331. https://doi.org/10.1080/10926771.2017.1338814

Vahedi, S., Farrokhi, F., & Farajian, F. (2012). Social competence and behavior problems in preschool children. *Iranian Journal of Psychiatry*, *7*(3), 126–134.

Youngblade, L. M. (2003). Peer and teacher ratings of third- and fourth-grade children's social behavior as a function of early maternal employment. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *44*(4), 477–488. https://doi.org/10.1111/1469-7610.00138