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Effectiveness of Mindful Parenting Training on Parent-Child Relationship and Externalized Behavior of Primary School Students in Yazd City

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ABSTRACT

Objective: Childhood is a critical developmental period, and difficulties during this stage often persist into adulthood. This study aimed to examine the effectiveness of mindful parenting training on the parent-child relationship and the externalizing behaviors of male elementary school students in Yazd during the 2023–2024 academic year.

Methods: A quasi-experimental design with pre-test and post-test and a control group was used. A total of 27 mothers were selected through purposive sampling and randomly assigned to an experimental group ($n = 13$) and a control group ($n = 14$). Both groups completed pre-test measures, after which the experimental group received eight sessions of mindful parenting training. Post-test measures were administered to both groups following the intervention. The parent-child relationship was assessed using the Pianta Child-Parent Relationship Scale (CPRS), and externalizing behaviors were measured with the Achenbach Child Behavior Checklist—Parent Form (CBCL). Data were analyzed using multivariate analysis of covariance (MANCOVA).

Results: The findings indicated no significant differences between the experimental and control groups in the parent-child relationship dimensions of intimacy ($p > 0.023$) and conflict ($p > 0.014$), nor in externalizing behavior domains such as rule-breaking ($p > 0.000$) and aggression ($p > 0.003$). However, a significant difference was found between the two groups on the dependency dimension of the parent-child relationship ($p < 0.313$), indicating a change attributable to the intervention.

Conclusions: The mindful parenting training program did not lead to improvement in the overall parent-child relationship or in children's externalizing behaviors. The only observed effect was an increase in the dependency component of the parent-child relationship among participants in the experimental group. These findings suggest that while mindful parenting may influence certain relational aspects, it may not be sufficient on its own to produce broader changes in parent-child dynamics or externalizing behaviors.

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Introduction

Childhood is widely viewed as a crucial period of human growth and maturity, in which the foundations of one's personality are laid. Neglecting emotional behavioral problems at this stage can potentially lead to various behavioral problems in most children in future (Zareei et al., 2022). The children belong to the age group of 6-12 years. Considering that this age group has recently entered society and has an emotional relationship with the environment and other people (Steger et al., 2021), this may pose risks to themselves and others. Various injuries contribute to the emergence and exacerbation of behavioral problems in children. These include insufficient positive relationships between parents, insecure attachment, violence, unstable disciplinary regulations, insufficient marital satisfaction, and parental injuries and disorders (Rosenkrantz et al., 2020). Therefore, experts in this field pay close attention to children and their functions, identifying and evaluating them for timely diagnosis (Wang et al., 2022).

Due to the persistence of some childhood disorders into adulthood and the impairment of his functioning (Eggers et al., 2022) the study and assessment of the mental health problems of children and adolescents exposed to internal and external disorders is an important topic for researchers. It has been bred all over the world. This has now become an important public health policy concern (Rahimi et al., 2021). It is estimated that 10 to 20 percent of children and adolescents may worldwide suffer from various types of mental illness (Husky et al., 2018).

According to DSM-5, children's behavioral disorders are divided into two categories: internalized behavioral disorders and externalized behavioral disorders. Externalized behavioral disorders are related to maladaptive patterns and problems that are expressed through interpersonal conflicts and environmental incompatibility (Landers et al., 2017). These maladaptive patterns can be referred to as attention deficit disorder, conduct disorder, and oppositional defiant disorder, which includes a wide range of deviant behaviors such as engaging in illegal activities and showing aggressive behaviors (Timothy et al., 2019). Internalizing disorders, on the other hand, refer to psychological issues that affect the inner self, such as anxiety and depression. The distinction between these two categories is very important because they require different therapeutic approaches and interventions to address the underlying causes of disorders (Khanjani & Hadavandkhani, 2011).

Based on the findings of several studies, it is known that people classified as children with externalizing behavior disorder are more likely to refer to clinics. The reported prevalence of these

disorders in populations referring to clinics is reported to be over 50%, which indicates that most of the clinical cases are related to this particular group of patients (Farmer et al., 2016).

In contemporary times, the family unit is recognized as the most important and basic element, which is known as the foundation of the child's behavior and future actions. Many behavioral and psychological abnormalities are diagnosed by psychologists in the family and early stages of upbringing (Hossini Yazdi et al., 2022).

Indeed, many biological, psychological, and social factors interact to act as underlying, perpetuating, and exacerbating elements of externalizing behavior problems. Despite the importance of biological components, it seems that unfavorable environmental factors within the family, such as unfavorable parent-child relationships, ineffective parenting methods, negativity, excessive mothering and lack of social skills, play an important role in the emergence, development, continuation or strengthening of the symptom. have externalized (Santos et al., 2020).

Parenting and parenting methods are formed by various factors, including the personality of both parents and their characteristics. Research shows that positive and happy parents are more attentive to their children's needs and show greater levels of kindness and attention to their children. Strengthening the bond between parents and their children facilitates a better understanding of the child's needs and enables parents to take a proactive stance in reducing problems for themselves and their children. One of the problems encountered in raising children is the lack of effective communication, especially with parents (Chronis-Tuscano et al., 2016).

One of the new approaches in the field of parenting, which increases the psychological well-being of parents and reduces children's behavioral problems, is mindful parenting. This approach, conceptualized by Kabat-Zinn. Mindfulness acts as a tool to disrupt the cycle of repetitive and pessimistic thoughts and enables parents to be present in their interactions with their child rather than dwelling on their internal rumination. This practice also strengthens the parent's ability to adopt an open and non-judgmental attitude towards their child, as opposed to bias towards negative cues or negative interpretations of their child's behavior. As a result, it is assumed that mindfulness increases parent-child communication and prevents the transmission of negative prejudices in generations (Coatsworth et al., 2010)

Deep attention to the child's interaction from active listening to the child, re-evaluating strategies for interacting with children, reflecting on their interaction, progressing towards developing useful habits of the child, examining conventional and non-correlated behavioral aspects, teaching interpersonal communication, observation and response. In the child's body language, it is possible to prioritize the effectiveness of behavioral communication, show insight in interacting with children, and develop a nurturing relationship with the child (Atar et al., 2024).

(Hossini Yazdi et al., 2022) concluded in their research that the combined training of mindful parenting and parent management training can reduce the externalized and internalized behavioral problems of preschool children. (Fazeli et al., 2018) in their research findings show that parent education has an effect on children's behavioral problems and reduces the symptoms of attention deficit disorder and hyperactivity. (Yang et al., 2021). It is indirectly related to adolescent internalizing and externalizing behaviors through mother-child communication and adolescent self-disclosure. In addition, specific components of mindful parenting were explored in detail. The interaction component with full attention showed unique patterns, while the components of compassion and acceptance and children's emotional awareness showed a similar pattern to the total score.

Raising children and parenting is one of the most important responsibilities of parents, which affects the parent-child relationship during childhood. Also, facing the problems of children's externalized behaviors has a great impact on their growth and future. Due to the fact that children in primary school have just entered a structured environment in the first period of play, many of their behavioral problems appear. If this period is not paid attention to, these problems will continue. It starts to stabilize in the second period of primary school and in other educational stages, due to entering adolescence and emotional and physical changes in the puberty stage, as well as the high influence of this age group of peers, they can hardly be changed. So, by re-forming the parent-child relationship and reducing these children's behavioral problems, it helped the children and the society a lot.

Therefore, a lot of research has been done in the field of different types of parenting as well as conscious parenting. The research showed that boys have more externalizing behavioral problems than girls (Khanjani & bahadorikhosroshhi, 2017). This group of people are more present in the society due to their male gender and their special duties, and they have more influence and

influence in the environment. So far, there has been no research on the effect of mindful parenting training on improving the parent-child relationship and reducing externalizing behavior in primary school male students. This study aims to examine the effect of mindful parenting training on improving parent-child relationships and reducing externalizing behaviors in male elementary school students.

Material and Methods

The research method was a quasi-experimental pre-test-post-test type with a control group. The statistical population included all mothers with elementary school boys with externalized behavioral problems in the academic year 2023-2024 in Yazd city. The study sample included 30 mothers with male children with externalized behavioral problems in elementary school. In this research, the subjects were purposefully selected and randomly assigned to two experimental (15 people) and control (15 people) groups (according to the dropout of people, 13 experimental people and 14 people remained in the control group). Then all the mothers completed the consent form to participate in the training.

The entry criteria include: obtaining a score lower than 120 in the CPRS questionnaire, obtaining a score of 12 and above 12 in the CBCL questionnaire, mothers with sons aged 7-12 years.

The exit criteria include: absence of more than three sessions in the training course, non-cooperation during the sessions and not doing homework, divorce and separation of parents, taking psychiatric medication by the child, Also the parents filled the questionnaires with their consent and attended the meetings.

The results obtained from the research were analyzed using SPSS 26 software. Descriptive statistics and inferential statistics were used. In the following, the tools used in this research will be explained.

Parent-Child Questionnaire (CPRS): This measurement tool was developed by Pianta in 2015 and consists of 33 items that assess parents' views on their bond with their children. The measurement scale includes different areas, namely conflict, intimacy, dependence and overall positive relationship (Shapourabadi et al., 2013). Conflict includes the negative aspects of the relationship such as conflict, expressing anger towards each other, showing disobedience and not accepting restraints, as well as showing unpredictability (Khodapanahi et al., 2012). Intimacy refers to the

degree to which parents create a warm bond with their child and includes emotional and comfortable perceptions (Driscoll & Pianta, 2011). It also refers to the level of attachment shown by the mother and child. The parent-child relationship scale is a self-report questionnaire that is evaluated using a five-point Likert scale. A score of 5 indicates definite application, while a score of 1 indicates that it is definitely not applied. To get the overall score of positive relationship from this scale, the score of questions in the field of conflict and dependence should be reversed (Abareshi et al., 2009). This scale has been used to evaluate parent-child relationships in all age groups (Shapourabadi et al., 2013). Each of the fields of conflict, intimacy, dependence and overall positive relationships were determined using Cronbach's alpha with the respective values of 0.84, 0.69, 0.46 and 0.80. In their study, (Driscoll & Pianta, 2011) used Cronbach's alpha to evaluate the questionnaire in terms of the four components of conflict, closeness, dependence and overall positive relationship, and as a result, the reported values were 0.75, 0.74, 0.69 and respectively. 0.80 was obtained. The reliability of the questionnaire in this research is 0.92

Achenbach's Child Behavior Questionnaire (CBCL) - Parent Version: The Child Behavior Questionnaire is a parallel version of the Achenbach ASEBA and assesses the problems of children and adolescents in eight factors. These factors include anxiety/depression, isolation/depression, physical complaints, social problems, thinking problems, attention problems, ignoring rules, and aggressive behavior. In the domain of externalizing problems, two factors in particular refer to rule breaking and aggressive behavior. This questionnaire not only evaluates emotional and behavioral problems, but also evaluates the academic and social abilities and competencies of children aged 6 to 18 from the perspective of their parents. Typically, it takes about 20-25 minutes to complete. In this research, the parenting training protocol based on Kabat zin mindfulness designed by the researchers was used. In this protocol, the research participants were taught the components of mindful parenting, the consequences of this type of parenting, as well as the factors that affect mindful parenting.

Table 1. Structure of mindful parenting training sessions

meeting	Issue	Curriculum	Duration	Assignments
First	Automatic parenting	- Logic (non-reactive parenting), automatic mode, doing mode versus being mode	90 min	Topics taught in each session
Second	Parenting with a pure mind	- Seeing the child with a beginner's mind, kind attitude, practice obstacles, expectations and interpretations	90 min	Topics taught in each session
Third	Reconnecting with your body as a parent	- Bodily sensations, awareness of pleasant events, observing the body during parenting stress	90 min	Topics taught in each session
Fourth	Responding rather than reacting to parenting stress	- Awareness and acceptance of parenting stress, grasping and letting go, how thoughts intensify stress? responding instead of reacting to stress	90 min	Topics taught in each session
Fifth	Parenting patterns and schemas	- Identifying your child's patterns, tolerating strong emotions, being aware of the angry and vulnerable child and the punishing and strict parent.	90 min	Topics taught in each session
Sixth	Conflict and parenting	- Taking a point of view, joint attention, breaking and rebuilding, coordinating with the child's emotional states	90 min	Topics taught in each session
Seventh	Love and limitations	Compassion and love, affection, friendship with oneself and the inner child, awareness of limitations, setting the limitations of mindfulness	90 min	Topics taught in each session
Eighth	Mindful path through parenting	- Reviewing your growth using symbolic objects or stories, looking to the future, practicing intention How can I take care of myself (and my child)?	90 min	Topics taught in each session

Results

Descriptive results showed that the mean and standard deviation of the subjects' age were 38.30 and 7.5 in the experimental group and 36.42 and 62.6 in the control group, respectively.

Table 2. Descriptive indicators of parent-child relationship and externalized behavior

Group	Variable	Pre-test		Post-test	
		Mean	S.D	Mean	S.D
Experiment	Conflict	38.30	9.35	34.84	8.35
	Dependency	12.69	3.42	11.53	2.5
	Intimacy	35.53	7.41	36.15	6.14
	Parent-child relationship	86.53	12.86	82.53	11.28
	law breaking	10.37	4.51	8.07	4.27
	Aggression	14.15	5.58	12.15	6.25
	Externalized behavior	24.46	9.76	20.23	10.04
Control	Conflict	35.28	5.32	31.85	5.34
	Dependency	12.35	3.05	14.28	2.16
	Intimacy	35.07	5.51	34.21	5.30
	Parent-child relationship	82.71	8.59	80.35	8.35
	law breaking	6.64	3.20	7.35	3.79
	Aggression	14	5.56	12.21	5.60
	Externalized behavior	20.64	8.38	19.57	8.59

According to the data in Table 2, the mean and standard deviation of the parent-child relationship score in the experimental group were 86.53 and 12.86 respectively in the pre-test and 82.53 and 11.28 in the post-test. In the control group, the mean and standard deviation of the parent-child

relationship score in the pre-test was 82.71 and 8.59 respectively, in the post-test it was 80.35 and 8.35. Also, the mean and standard deviation of the externalized behavior score in the experimental group in the pre-test were 24.46 and 9.76, respectively, and in the post-test, it was 20.23 and 10.04. In the control group, the mean and standard deviation of the externalized behavior score in the pre-test are 20.64 and 8.38, respectively. It is also equal to 19.57 and 8.59 in the post-test.

The results of the Kolmogorov-Smirnoff test showed that the assumption of normality of the data was met ($P < 0.05$). Also, the results of the equality of variance test are confirmed in all variables. Aggression ($F = 324.3$, $df = 1$, $df2 = 25$, $p = 0.08$) and law breaking ($F = 0.001$, $df1 = 1$, $df2 = 25$, $p = 0.97$) and conflict ($f = 0.092$ $df1 = 1$, $df2 = 25$, $p = 0.764$) and dependence ($f = 0.664$, $df1 = 1$, $df2 = 25$, $p = 0.423$) and intimacy ($f = 306.3$, $df1 = 1$, $df2 = 25$, $p = 0.08$)

Table 3. Investigating the homogeneity of regression slope of parent-child relationship and externalized behaviors and their components

	Scale	Source of changes	F	Significance level
Parent-child relationship	Intimacy	Group* pre-test	0.831	0.371
	Dependency	Group* pre-test	0.534	0.472
	Conflict	Group* pre-test	2.755	0.111
	Parent-child relationship	Group* pre-test	0/130	0.722
Externalized behavior	Externalized behavior	Source of changes	0.425	0.521
	Aggression	Group* pre-test	0.121	0.731
	Breaking the law	Group* pre-test	1.023	0.322

As the results of Table 3 show, the interaction of the group with the pre-test is not significant in any of the components ($p > 0.05$). As a result, no significant difference was observed between the regression coefficients between the dependent and covariance variables in the two groups, and the assumption of homogeneity of the regression coefficients in the two experimental and control groups is established for all scales.

Table 4. Box's M test to check matrix homogeneity and covariance variance

	Box's M	F	Df1	Df2	Significance level
Parent-child relationship	3.954985	0.572401	6	4451.763	0.752646
Externalized behavior	0.7285	0.22174	3	140813	0.88135

Table 4 shows that the significance value of the Box test for examining the homogeneity of the variance and covariance matrices in the multivariate analysis of covariance is greater than 0.05. Therefore, the calculated F is not statistically significant. As a result, the variance-covariance matrices are homogeneous.

Table 5. The results of multivariate covariance analysis

	Indicators	value	F	Hypothesis df	Error df	P	Squared Eta
Parent-child relationship	Pillai effect	0.401	4.457	3	20	0.015	0.401
	Wilks' Lambda	0.599	4.457	3	20	0.015	0.401
	Pillai's Trace	0.669	4.457	3	20	0.015	0.401
	Roy's Largest Root	0.669	4.457	3	20	0.015	0.401
Externalized behavior	Pillai effect	0.003	0.37	2	22	0.964	0.003
	Wilks' Lambda	0.997	0.37	2	22	0.964	0.003
	Pillai's Trace	0.003	0.37	2	22	0.964	0.003
	Roy's Largest Root	0.003	0.37	2	22	0.964	0.003

Table 5 shows that all values are significant ($p > 0.05$). Wilks's lambda test, which is more capable than other tests, is significant with (0.59) and ($F = 4.457$) and 0.401 square root, which indicates the size of the effect of conscious parenting education on the parent-child relationship. The effect of education is 0.40. It also shows that all multivariate covariance analysis tests were not significant ($p < 0.05$). Wilks's lambda test, which is more capable than other tests, has a value of (0.997) and F is equal to 0.037, the square of 0.003 is not significant. The effect size of 0.003 indicates the effect size of mindful parenting training on extraverted behavior.

Table 6. Covariance analysis in MANCOVA text for the training of mindful parenting on externalized behavior and parent-child relationship and its components

	Variable	SS	Df	MS	F	P	Effect size
Parent-child relationship	Intimacy	11.079	1	11.079	0.509	0.483	0.023
	Dependency	53.520	1	53.520	10.036	0.004	0.313
	Conflict	0.312	1	0.312	0.302	0.588	0.014
Externalized behavior	Aggression	1.210	1	1.210	0.072	0.790	0.003
	Breaking the law	0.028	1	0.028	0.004	0.952	0.000

As can be seen in Table 6, only the dependency component is significant ($p > 0.05$) and it can be said that the selected variable has an effect on the proposed model and its selection has been done correctly. The effect size value shows that 31% of the variation is due to the dependency component. But in the other two variables, intimacy and conflict are not significant. Also, in the externalized behavior component, the significance level is higher than 0.05, so the selection of the covariance variable has not affected the proposed model.

Table 7. Adjusted post-test means of parent-child relationship and externalized behavior and its components in experimental and control groups

Group	Variables	Experimental groups	Post-test		Confidence interval 0.95	
			Mean	SD	Lower limit	Upper limit
Parent-child relationship	Conflict	Experiment	33.411	0.286	32.818	34.003
		Control	33.190	0.275	32.620	33.761
	Dependency	Experiment	11.467	0.648	10.122	12.812
		Control	14.352	0.624	13.057	15.647
	Intimacy	Experiment	35.829	1.310	33.112	38.546
		Control	34.516	1.261	31.900	37.132
Externalized behavior	Aggression	Experiment	12.461	1.291	9.791	15.130
		Control	11.929	1.233	9.378	14.481
	Breaking the law	Experiment	7.745	0.856	5.974	9.517
		Control	7.665	0.818	5.972	9.358

The adjusted averages of the variable of the effect of education on the scores of the parent-child relationship and the three areas of conflict, dependence, intimacy, and the variable of the effect of education on the scores of extraverted behaviors and the two components of law-breaking and aggression are observed. According to this statistic, the effect of the covariance variable (initial score of the subjects) has been statistically removed. This means that the average of both groups is not significantly different. But the average of the experimental group is lower only in the dependence component compared to the average of the control group.

Discussion

The results of the research show that parenting education has not been effective on the parent-child relationship in general. But in the dependency component, it has had the ability to be effective. This research is inconsistent with (Jafar Tabatabaei et al., 2021; Medeiros et al., 2016; Momeni & taziki, 2017)

The most likely reason for the ineffectiveness of this training is the content of the protocol and the limited time for its implementation. This training was implemented only during eight sessions, and during two months, little change was made in the parenting method.

Externalizing disorders are complex disorders that harm the parent-child relationship. Although mothers change their behavior and attitudes, these disorders cause the return of mothers' negative attitudes.

Considering that it was taught only to mothers. Parents' educational conflicts also did not affect the lack of positive influence of education on children's externalized behavior. In this study,

parents had conflicts in raising and how to deal with their child's externalizing behavior. This inconsistency strengthened children's behavior. Studies have shown that the children of mothers who do not have a good parent-child relationship with their children have sleep disorders, behavioral problems and incompatibility, and more externalized problems (Moghaddasi, 2022; Shomaliahmadabadi et al., 2022)

Sometimes the heavy duties of mothers in the house and outside the house and the absence of the father due to the type of work, drug addiction, illness and disability of the father, the lack of harmony between the father and the mother during the day have caused their lack of awareness and the lack of education. Most tired mothers do not have the ability to empathize and deal appropriately with externalized behaviors. which causes not establishing a positive relationship with the child and increasing externalizing behavior.

This training with raisin meditation technique, the ability to improve the dependency component in the parent-child relationship, was tested in the group. Mothers learned how to see their child from different angles. With mindfulness and attention in the moment and without judging the child, pay attention to his actions and implement what needs to be said with empathy and awareness in the moment. In the exercise of gratitude, parents were taught to take care of themselves and pay attention to the positive characteristics of their child. This case has also affected the parent-child relationship in the dependency component.

In the conflict sector, which has not decreased significantly. In the discussion of parenting, parents have many conflicts with their children. Conflict resolution and problem-solving skills are weak in these families. Also, due to the lack of agreement between the parents in the discussion of parenting, children take wrong models from their parents and use them in the same situation.

Following the conflict, the intimacy in the relationship is damaged. Children need independence to perform their behaviors. But parents do not instill this independence in their children due to their young age as well as their own life, which increases conflict and decreases intimacy. If the parents are affected by the conflicts and tensions of parenting and do not have the ability to use new parenting skills, it reduces their ability to manage their children's behavior and emotions (Mohammadi et al., 2018).

The stress level of mothers regarding raising children was also high, despite the training of self-care skills, body relaxation, and yoga. The reason for this can include the mentioned items or many

reminders from the school and from other places. But unfortunately, this training could not change the attitude of parents about increasing some skills and satisfying some needs of the child. By becoming aware of their negative thoughts and attitudes, and by focusing their attention on the present moment, parents can get away from them and gain a wider perspective, avoid their automatic reactions, and respond to the situation and circumstances with greater awareness. give and ultimately experience less stress in their parenting (Shiralinia et al., 2019); Therefore, by using the mindfulness method in their parenting, parents show less stress and better parent-child relationships and improve parent-child relationships (Atar et al., 2024).

Another factor is the lack of influence of the presence of media and internet, digital tools and internet games in the lives of these families. These tools prevent spending time together and useful time between parents and children and cause many conflicts. Excessive use of the Internet reduces mental health. People who spend a lot of time on the Internet spend less time with their family and relatives (Dehghani & Zareei Mahmoodabadi, 2018). These tools are a model for aggression and law-breaking behaviors for the age group of children. It causes behaviors such as lying, high irritability, hyperactivity and making movements in harmony with the game, inactivity and disobedience to the authorities of the life force such as parents.

It seems that the existence of different types of parenting has caused the lack of effectiveness of education. Mothers who experienced permissive parenting. In life with the child, they were more than satisfactory, and for this reason, the parent-child relationship is good whenever the child's needs are satisfied. But if the parent is not able to satisfy the request, the child will face a lot of aggression, stubbornness, breaking the law, harming himself and others. In authoritarian parenting, we encounter families where the law is too much for every behavior and the parent-child relationship is from top to bottom. In these families, a proper relationship with the child is not formed and the child has an internal anger that eventually becomes external. These cases affect the parent-child relationship and also harm the increase in parenting behaviors. Because of their behavioral habits and habits of parenting, these families find it very difficult and exhausting to change these parenting styles, and this also requires the agreement of the parents. In this research, in most cases, there was no agreement between the parents, and according to the parents themselves, these styles are very useful and avoids pampering or an insensitive person. It seems that the use of an authoritarian parenting style, with a high level of parental demand and low

responsiveness, leads to negative consequences such as internalizing and externalizing behavioral problems (Tarkeshdooz & Farokhzad, 2017).

It seems that the presence of parents with many schemas has prevented the useful use of the protocol. It seems that mothers do not have the ability to modify their parenting style and repair the parent-child relationship and improve aggressive behaviors due to schemas such as abandonment, defects and shame, entitlement, obedience, self-sacrifice. These parents were very perfectionist and blaming and have many resistances. Most of the time, these parents were important to them and did not pay attention to their child in the present time without judgment. When their child seemed like a good child to them, when all the grades were at an excellent level and no complaints about the school happened.

In mindfulness exercises, the connection between thought and emotion and the behavior that takes place is taught. These changes draw the person's attention to his body and the places where it is located and prevent mental imagery that destroys the relationship and engages in undesirable behaviors. It takes effort and daily practice to become a habit. In addition, in parenting training based on mindfulness, reconnecting with the body is introduced as a tool to create a break before action (Merajifar et al., 2020)

Also, mindful parenting training on externalized behavior has not been effective in general and with (Merajifar et al., 2020; Shiralinia et al., 2019) and (Amini et al., 2020; Shamsi & Ghamarani, 2020), is inconsistent.

Externalized behaviors and aggressive behavior are two components that have a lot of overlap. This can be seen from the results of this research. In most cases, if a person has anger control skills, aggressive behavior and externalizing behavior will not occur.

Many biological, psychological, and social factors interact to act as underlying, perpetuating, and exacerbating elements of externalizing behavioral problems. Despite the importance of biological components, adverse environmental factors within the family, such as unfavorable parent-child relationships, ineffective parenting practices, negativity, excessive mothering, and poor social skills, seem to play an important role in the emergence, development, persistence, or enhancement of externalizing symptoms. (Santos et al., 2020).

In this research, mindful parenting training was not effective on externalizing behavior. This lack of effectiveness can have many reasons. One of these is the long process of effective parenting.

During training, some of these behaviors improve, and it is a time-consuming process for most behaviors to decrease. This training taught different aspects of parent-child behavior and how to deal with externalized behavior and changed mothers' attitudes. However, it takes time for the home environment to change and all members to help in this process.

Aggressive behaviors in children in many cases depend on the conflict between parents and children. On the other hand, in this study, mothers were taught to accept themselves and the child as they are at the moment. On the other hand, practicing gratitude is a tool to expand the perspective of mothers so that they can notice the positive side of themselves and their baby. In this context, researches have shown that gratitude has a positive and significant impact on people's lives and also reduces the risk of depression, anxiety and drug addiction (Emmons & Stern, 2013). But the mothers did not learn many life skills such as anger control, empathy, and perspective taking. Despite the partial training in the meetings, it was not enough power to become a habit and notice the changes.

According to the family system, the members of a family are dependent on each other and the behavior of the members cannot be analyzed individually (Parent et al., 2016); Therefore, parent-child relationships and how parents manage children's behavioral problems are also important factors in children's mental health. In this research, there were only mothers and we did not have access to the influence of other family members. It seems that the possibility of influence of other members and even the surrounding environment of their mothers and children caused the lack of influence.

According to the demographic table, it is possible that the level of education of mothers has an effect on this research. In the control group and the experimental group, the most education was in diploma and sub-diploma. This case sometimes causes a decrease in judgment and an increase in awareness to properly deal with the child. Also, these children were mostly in the first grade. Due to the fact that it is the first period of formal education for children, many psychological pressures are possible for these children. Before entering this stage, these children only played, and in the first grade, the games were limited and they had to do most of the homework. The expectations of these children from school, home and other people in the environment to behave better have increased, and sometimes it causes confrontations such as punishment and stealing,

etc. from the parents. Due to the self-compassion exercises in the group, unfortunately, it could not reduce these expectations and encounters of mothers.

Among the limitations of this research, it can be stated that this research was only conducted on mothers with children with behavioral disorders, and it should be done with caution in generalizing to others. As mentioned, most mothers were prevented from communicating positively due to lack of life skills. Also, the non-cooperation of mothers caused a lack of follow-up and attention to effectiveness over time.

It is suggested that in future research, the effect of mindful parenting on fathers with male children with externalizing behavior problems and the effect of mindful parenting on mothers with teenage children are proposed. It should be mentioned that a comparison of the effectiveness of mindful parenting training on mothers with sons and daughters and also a comparison of the effectiveness of mindful parenting training on fathers and mothers with children with externalizing behavior problems should be done.

The results of this training can be used in educational centers (schools), parents' and teachers' associations, and also the results of this training require the holding of educational workshops on the topic of communication and parenting for all parents and educational programs for parents.

Life skills for mothers

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

This article is a part of the Master's research thesis in the Faculty of Psychology and Educational Sciences of Yazd University, which was approved by the Institutional Research Ethics Committee of the Faculty of Psychology and Educational Sciences of Yazd University with code. ID IR.YAZD.REC.1403.029. The authors state that at the beginning of each discussion session, the purpose of the research along with the discussion method, the confidentiality of the information provided, the optionality of participation in the research were explained to the participants and finally informed consent was obtained. In addition, the informed consent of the parents was obtained. The authors state that all procedures were performed in accordance with relevant guidelines and regulations regarding ethical approval and company consent.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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