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## The Effectiveness of Parenting Skills Training for Mothers on Academic Procrastination and Mother–Child Relationship Among Elementary School Students

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### ABSTRACT

**Purpose:** The present study aimed to investigate the effectiveness of a parenting skills training program for mothers on academic procrastination and mother–child interaction among elementary school students.

**Methods and Materials:** This study was conducted using a quasi-experimental pretest–posttest design with a control group. The statistical population consisted of mothers of 10- to 12-year-old elementary school students in District 7 of Tehran during the 2018–2019 academic year. After applying the inclusion and exclusion criteria, 42 mothers were selected through convenience sampling and randomly assigned to the experimental and control groups (21 participants in each group). The research instruments included the Mother–Child Relationship Evaluation Scale (MCRE) and the Procrastination Assessment Scale for Students (PASS). The experimental group participated in a parenting skills training program for six weeks (one 90-minute session per week), whereas the control group received no intervention. Data were analyzed using univariate and multivariate analysis of covariance in IBM SPSS Statistics.

**Findings:** The results of ANCOVA indicated that parenting skills training significantly reduced students' academic procrastination ( $P < 0.001$ ,  $F = 4.92$ ,  $\eta^2 = 0.11$ ). In addition, the results of MANCOVA demonstrated a significant difference between the two groups in mother–child interaction dimensions ( $P < 0.001$ ,  $F = 10.44$ ,  $\eta^2 = 0.55$ ). Univariate analyses revealed that the intervention increased maternal acceptance ( $\eta^2 = 0.29$ ) and reduced rejection ( $\eta^2 = 0.30$ ) and overprotection ( $\eta^2 = 0.20$ ). However, no significant difference was observed in the permissiveness dimension ( $P = 0.09$ ).

**Conclusion:** Parenting skills training is an effective intervention for improving the quality of the mother–child relationship and reducing academic procrastination among elementary school students. Implementation of this program in schools, counseling centers, and educational institutions may contribute to improved academic functioning and healthier parent–child interactions. Future studies are recommended to employ long-term follow-up assessments and larger sample sizes.

**Keywords:** Parenting skills training, mother–child interaction, academic procrastination, elementary school students, quasi-experimental study

## 1. Introduction

Parenting is recognized as one of the most influential factors in children's emotional, behavioral, social, and academic development. The quality of parenting practices and the nature of parent-child interactions shape children's psychological adjustment, self-regulation, emotional security, and academic functioning across developmental stages. Contemporary developmental psychology emphasizes that parenting is not merely a biological or caregiving responsibility but a multidimensional process involving emotional responsiveness, behavioral regulation, communication patterns, discipline strategies, and psychological support. Ineffective parenting practices, including rejection, inconsistency, overprotection, and excessive permissiveness, have repeatedly been associated with behavioral maladjustment, emotional dysregulation, and reduced academic engagement among children and adolescents (Burkeland Lie et al., 2026; Wang et al., 2026). In contrast, positive parenting characterized by warmth, acceptance, structure, and emotional attunement contributes to healthier developmental trajectories and more adaptive psychosocial outcomes. Recent theoretical and empirical perspectives increasingly conceptualize the parent-child relationship as a dynamic reciprocal system in which parental stress, parenting behavior, and child adjustment continuously influence one another over time (Wang et al., 2026). Consequently, interventions aimed at improving parenting competencies have become a major focus in preventive and therapeutic psychological programs.

The mother-child relationship is particularly important during middle childhood because this developmental period coincides with significant cognitive, emotional, and academic transitions. Children between the ages of 10 and 12 increasingly encounter academic demands, social comparison, self-regulation challenges, and expectations for autonomy, making parental guidance and emotional support especially critical. Maternal behaviors such as acceptance, emotional availability, and consistent guidance facilitate emotional security and adaptive coping in children, whereas rejection, hostility, or intrusive overprotection may contribute to maladaptive emotional and behavioral responses (Nematzadeh et al., 2026; Zhang et al., 2025). Research has demonstrated that high-quality parent-child interactions can moderate the negative effects of adverse experiences and contribute to children's psychological well-being (Zhang et al., 2025). Similarly, studies on parenting stress indicate that deteriorating mother-child relationships

may intensify parental stress, creating a vicious cycle that negatively affects both maternal functioning and child adjustment (Wang et al., 2026). These findings highlight the importance of strengthening parenting skills and improving interactional patterns within the family environment.

Parenting skills training programs have therefore emerged as evidence-based interventions designed to improve parental competence, emotional responsiveness, and child outcomes. Such programs typically focus on behavioral management, communication skills, emotional regulation, positive reinforcement, effective discipline, and conflict resolution strategies. Systematic reviews indicate that parenting interventions are effective in enhancing children's social-emotional development and reducing behavioral difficulties (Vatou et al., 2026; Younas & Gutman, 2026). Moreover, intervention studies have shown that programs emphasizing supportive parenting practices and parent-child interaction can improve child compliance, emotional adjustment, and maternal parenting efficacy (Liu et al., 2024; Rosen et al., 2026). The literature further suggests that interventions incorporating direct behavioral practice, coaching, emotional awareness, and reflective communication strategies produce stronger and more sustainable outcomes than purely informational approaches (Favieri et al., 2026; Younas & Gutman, 2026). As parenting behaviors are learned and modifiable, structured educational interventions may provide parents with practical tools for responding more effectively to children's emotional and behavioral needs.

Recent intervention research has increasingly examined the effectiveness of different parenting models and delivery formats. For example, mindful parenting programs have been associated with improvements in maternal emotional awareness and parent-child interaction quality among mothers with adverse childhood experiences (Cho & Shin, 2025). Similarly, autonomy-supportive parenting interventions have demonstrated positive effects on maternal parenting skills and children's executive functioning (Hendrawan et al., 2026). Telehealth and online parenting interventions have also gained attention due to their accessibility and feasibility for high-risk families, with findings indicating improvements in parenting practices and family functioning (Stormshak et al., 2021). In addition, intervention models based on parent-child interaction therapy have shown effectiveness in increasing child compliance and reducing maladaptive parental behaviors (Nekkanti et al., 2020; Rosen et al., 2026). The growing diversity of parenting interventions reflects recognition that

parenting difficulties may arise from multiple contextual, emotional, and cognitive factors requiring multidimensional approaches.

An important issue related to parenting and child adjustment is academic procrastination or academic negligence among students. Academic procrastination refers to the intentional delay of academic tasks despite awareness of potential negative consequences and is associated with poor academic performance, reduced self-regulation, emotional distress, and lower educational achievement. Although academic procrastination has often been examined as an individual cognitive or motivational problem, increasing evidence suggests that family dynamics and parenting behaviors significantly contribute to its development and maintenance. Supportive and structured parenting may foster self-discipline, responsibility, and academic engagement, whereas inconsistent or emotionally negative parenting environments may contribute to avoidance behaviors and reduced academic persistence. Namiyan and Hosseini reported that psychological and environmental factors play a substantial role in explaining academic procrastination among students (Namiyan & Hosseini, 2011). Parenting styles characterized by excessive control, rejection, or inconsistency may undermine children's self-confidence and self-regulatory capacities, thereby increasing tendencies toward procrastination and academic disengagement.

Theoretical perspectives on parenting suggest that children internalize behavioral regulation, emotional coping strategies, and interpersonal expectations through repeated interactions with caregivers. Consequently, maladaptive parenting patterns may impair children's emotional security and autonomous functioning. Studies examining parenting styles in families of children with developmental and behavioral difficulties have shown that parents experiencing elevated stress or ineffective interaction patterns are more likely to display inconsistent or maladaptive parenting behaviors (Burkeland Lie et al., 2026; Keyvanfar, 2021). In contrast, positive parenting interventions may improve family functioning by increasing parental responsiveness, emotional understanding, and behavioral consistency. Arjmand and colleagues found that positive parenting group training improved mother-child relationships and psychological hardiness among mothers of hyperactive children (Arjmand et al., 2022). Likewise, interventions focused on mother-child interaction have demonstrated positive effects on communication quality and behavioral management in families of children with behavioral

problems (Mohamadi & Ghamarani, 2026). These findings support the assumption that improving parenting competencies may indirectly influence children's emotional and academic functioning through enhanced relational quality.

Another important consideration in parenting research concerns the intergenerational transmission of parenting behaviors and emotional experiences. Research indicates that parents' own childhood experiences and psychological schemas can significantly influence their parenting styles and emotional responses toward children (Deleş & Aral, 2025; Nematzadeh et al., 2026). Mothers with positive childhood experiences are generally more likely to display adaptive parenting skills and emotionally supportive behaviors toward their children (Deleş & Aral, 2025). Conversely, unresolved adverse experiences may increase vulnerability to maladaptive parenting practices, emotional dysregulation, and relational difficulties. Such findings emphasize the need for parenting interventions that not only teach behavioral techniques but also foster emotional awareness and reflective functioning among parents. Furthermore, schema-based and acceptance-oriented parenting interventions have shown promise in reducing children's behavioral problems and improving assertiveness and relational functioning (Jokar et al., 2026). These approaches suggest that parenting education can serve as both a preventive and therapeutic mechanism for enhancing family relationships and child adjustment.

Research on child behavioral and emotional development also highlights the role of parenting interventions in promoting children's social-emotional competencies. Reviews of intervention studies indicate that parenting-focused programs can strengthen children's emotional regulation, social adaptation, and interpersonal skills, particularly in vulnerable populations (Güldağ et al., 2026; Vatou et al., 2026). Video feedback interventions and parent coaching programs have similarly been found to enhance maternal sensitivity and interaction quality by increasing parents' awareness of children's emotional signals and behavioral needs (Favieri et al., 2026). These interventions are particularly relevant during childhood, when family interactions strongly influence the development of emotional regulation and academic responsibility. Because academic procrastination is often associated with emotional avoidance, low frustration tolerance, and poor self-regulation, interventions targeting parenting quality and relational functioning may contribute to reductions in procrastinatory behaviors among children.

Despite the growing body of evidence supporting parenting interventions, relatively few studies have simultaneously examined the impact of parenting skills training on both mother–child relationship components and academic procrastination among elementary school children. Most existing research has focused either on behavioral outcomes or parental functioning separately, with less attention given to the potential interrelationship between parenting practices and children’s academic self-regulation. Furthermore, cultural and contextual differences in parenting practices necessitate additional research within diverse family systems and educational settings. In societies where mothers often play a primary caregiving and educational role, interventions designed to strengthen maternal parenting competencies may have substantial implications for children’s emotional adjustment and academic functioning. Given the increasing prevalence of academic disengagement and emotional difficulties among school-age children, identifying effective family-based interventions remains an important priority in educational and developmental psychology.

Therefore, the present study aimed to investigate the effectiveness of parenting skills training on academic procrastination and mother–child relationship components among mothers of 10- to 12-year-old elementary school students in Tehran.

## 2. Methods and Materials

### 2.1. Study Design and Participants

The present study employed a quasi-experimental design based on a pretest–posttest control group framework. In this study, parenting skills training was considered the independent variable and was administered to the experimental group, whereas the control group received no intervention. In this design, both groups first completed a pretest, followed by implementation of the educational intervention for the experimental group, and finally both groups completed the posttest.

The statistical population consisted of all mothers of 10- to 12-year-old elementary school students in Tehran whose first child was enrolled during the second half of the 2018–2019 academic year. Inclusion criteria included absence of a history of psychiatric disorders and nonuse of psychotropic medications, having a first parenting experience, not receiving concurrent psychological or counseling interventions during the study, and possessing at least basic literacy skills. Exclusion criteria included a history of

psychiatric disorders, use of psychotropic medications, previous parenting experience, receiving counseling services simultaneously with the study, and inability to read and write.

The study sample was selected from mothers of students attending one of the elementary schools in District 7 of Tehran. In the first stage, 50 mothers who met the inclusion criteria were selected through convenience sampling. Based on the recommendation of Collins and Onwuegbuzie regarding the adequacy of a minimum of 21 participants per group in experimental studies, a final sample of 42 participants was considered, and they were randomly assigned to the experimental and control groups (21 participants in each group). Data collection was conducted using the Mother–Child Relationship Evaluation Scale and the Procrastination Assessment Scale for Students.

To implement the intervention, the parenting skills training program was designed and administered based on the guidelines of the Ministry of Health (2014). The program was conducted over six weeks in the form of six 90-minute training sessions for the experimental group. Session content included familiarization with parenting principles and child behavior management, identification of the causes of behavioral problems, training in effective communication skills with children, reinforcement of desirable behaviors through encouragement and rewards, instruction on appropriate ways of giving commands and establishing family rules, management of undesirable behaviors and appropriate disciplinary strategies, and finally preparation for managing difficult situations and future planning. In addition to theoretical instruction, practical exercises for implementing the learned skills at home were provided during each session.

During the implementation phase, all mothers of 10- to 12-year-old children studying in the selected elementary school were invited to participate in an introductory research session. After explanation of the study objectives and obtaining informed consent, the Mother–Child Relationship Questionnaire was administered to the mothers, and instructions for completion were provided. In a separate session, the Academic Procrastination Questionnaire was administered to their children and completed after the necessary explanations were given. The data obtained at this stage were recorded as the pretest. Participants were then randomly assigned to the experimental and control groups. The experimental group participated in the parenting skills training program for six weeks, with one 90-minute session per week, whereas the control group received no

intervention. Following completion of the training sessions, the Mother–Child Relationship Questionnaire and the Academic Procrastination Questionnaire were re-administered to both groups, and the resulting data were recorded as the posttest. Finally, the data were analyzed using SPSS software through analysis of covariance (ANCOVA) to examine the effects of parenting skills training on academic procrastination and dimensions of mother–child interaction.

## 2.2. Measures

The Mother–Child Relationship Evaluation Scale (MCRE) was developed by Robert M. Ross in 1961 and consists of 48 items designed to assess the quality of the mother–child relationship. The scale includes four subscales: acceptance, overprotection, excessive permissiveness, and rejection. Due to its satisfactory reliability and validity coefficients and its considerable diagnostic capability, the instrument is recognized as a sensitive measure of parental attitudes. Each subscale contains 12 items, and all items are scored on a five-point Likert scale. Items 1 through 39 are scored directly from “Strongly Agree = 5” to “Strongly Disagree = 1,” whereas items 40 through 48 are reverse scored from “Strongly Agree = 1” to “Strongly Disagree = 5.” Reported cutoff scores for the subscales are 41 for acceptance, 34 for overprotection, 31 for permissiveness, and 34 for rejection. Zamiri (2005) reported Cronbach’s alpha coefficients of .77 for acceptance, .72 for rejection, .71 for permissiveness, and .78 for overprotection. A correlation coefficient of .55 between the acceptance and rejection subscales was also reported as evidence of acceptable construct validity. In this questionnaire, higher scores on each subscale indicate greater intensity of the attitude or behavior associated with that subscale, whereas lower scores indicate lower intensity of the corresponding characteristic.

The Procrastination Assessment Scale for Students (PASS) was developed by Solomon and Rothblum in 1984 and consists of 27 items. Respondents indicate their level of agreement with each item on a five-point scale including “Never,” “Rarely,” “Sometimes,” “Most of the Time,” and “Always,” scored from 1 to 5, respectively. In this scale, items 2, 4, 6, 11, 13, 15, 16, 21, 23, and 25 are reverse scored. Total scores range from 27 to 135, with higher scores indicating greater academic procrastination. Previous studies have confirmed the validity of the scale through factor analysis and item-total correlations. In some studies,

including the report by Happe (2011), scores of 60 and above have been considered indicative of high procrastination, whereas scores of 35 and below indicate low procrastination. Namian and Hosseinchari (2011) reported acceptable reliability for the questionnaire using Cronbach’s alpha, indicating satisfactory internal consistency of the instrument.

## 2.3. Intervention

The parenting skills training protocol was implemented over seven sessions designed to enhance mothers’ competencies in child behavior management and effective parent–child interaction. In the first session, participants were introduced to the principles of the parenting program, methods of child behavior management, behavioral observation and recording techniques, and the concepts of positive and reverse behavior. The second session focused on communication with children, identification of the causes of children’s behavioral problems, and strategies for improving parent–child communication. During the third session, mothers were trained in methods for reinforcing desirable child behaviors through rewards and encouragement, including different types of reinforcement strategies. The fourth session addressed effective instruction-giving and family rule-setting, emphasizing appropriate methods of giving commands and using instructions for behavior modification. The fifth session focused on the management of inappropriate behaviors, principles of appropriate discipline, and the natural consequences of behavior. In the sixth session, participants were prepared to manage difficult situations through future planning and strategies for coping with challenging child behaviors. The seventh and final session involved administration of the posttest, appreciation of participants’ cooperation, and closure of the program.

## 2.4. Data Analysis

In the descriptive findings section, the characteristics of the study groups were examined using frequency, percentage, mean, and standard deviation scores of the dependent variables. In addition, assumptions underlying covariance analysis, including normality of the research variables, homogeneity of variances, homogeneity of regression slopes, and homogeneity of variance–covariance matrices, were assessed. In the inferential statistics section, univariate analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA) were

employed. Data analysis was conducted using IBM SPSS Statistics.

### 3. Findings and Results

The statistical population of the present study consisted of 42 mothers (21 participants in each group), with a mean age of 39.04 years in the experimental group and 39.52 years in the control group. Regarding educational level, the highest frequency in both groups was related to a high school

diploma (47.6% in the experimental group and 42.9% in the control group). Prior to the main analysis, the assumptions of normality using the Kolmogorov–Smirnov test (K–S), homogeneity of variances using Levene’s test, and homogeneity of regression slopes were examined and confirmed ( $P > 0.05$ ). In addition, the results of one-way analysis of variance conducted on the pretest scores indicated that the two groups did not differ significantly at baseline ( $P > 0.05$ ).

**Table 1**

*Descriptive Statistics of the Research Variables in the Pretest and Posttest Stages*

Variable	Stage	Experimental Group (M ± SD)	Control Group (M ± SD)
Academic Procrastination	Pretest	81.00 ± 12.27	83.81 ± 10.11
	Posttest	76.57 ± 11.63	83.57 ± 9.47
Child Acceptance	Pretest	36.62 ± 4.93	36.43 ± 4.63
	Posttest	38.86 ± 5.11	36.10 ± 4.73
Child Rejection	Pretest	34.05 ± 3.58	34.71 ± 3.25
	Posttest	31.33 ± 2.70	34.57 ± 3.07
Overprotection	Pretest	33.71 ± 4.24	33.81 ± 2.85
	Posttest	32.29 ± 3.67	34.00 ± 2.84
Permissiveness	Pretest	35.52 ± 2.85	34.81 ± 3.57
	Posttest	34.43 ± 3.10	34.90 ± 3.78

Table 1 demonstrates that univariate analysis of covariance (ANCOVA) was used to evaluate the effectiveness of the intervention on academic procrastination, whereas multivariate analysis of covariance (MANCOVA) was employed for the mother–child

relationship components. The results of the multivariate tests (Wilks’ Lambda = 0.44,  $F = 10.44$ ,  $P < 0.001$ ) indicated that parenting skills training had a significant effect on the linear combination of mother–child relationship components.

**Table 2**

*Results of Analysis of Covariance on Posttest Scores of the Dependent Variables Controlling for Pretest Scores*

Dependent Variable	Mean Square	F	Significance Level	Effect Size ( $\eta^2$ )
Academic Procrastination	134.75	4.92	0.03	0.11
Child Acceptance	68.36	14.96	0.001	0.29
Child Rejection	74.17	16.05	0.001	0.30
Overprotection	25.22	9.18	0.005	0.20
Permissiveness	10.26	2.88	0.09	0.07

The results presented in Table 2 indicate that parenting skills training led to a significant reduction in academic procrastination ( $P < 0.05$ ) and significant improvement in mother–child relationship components, including increased child acceptance and reduced child rejection and overprotection ( $P < 0.01$ ). However, the intervention did not have a significant effect on the permissiveness component. Based on the reported effect sizes, the intervention had the greatest impact on reducing child rejection (30%) and increasing child acceptance (29%).

### 4. Discussion and Conclusion

The present study aimed to investigate the effectiveness of parenting skills training on academic procrastination and mother–child relationship components among mothers of elementary school children. The findings demonstrated that parenting skills training significantly reduced academic procrastination among children in the experimental group compared with the control group. In addition, the intervention significantly improved several dimensions of

the mother–child relationship, including increased child acceptance and reduced child rejection and overprotection. However, the intervention did not produce a statistically significant effect on the permissiveness component. These findings suggest that parenting skills education can improve both relational functioning within the family system and children’s academic behavioral outcomes through modifications in parenting practices and interaction patterns.

The significant reduction in academic procrastination following parenting skills training may be explained through several psychological mechanisms. Parenting practices strongly influence the development of children’s self-regulation, emotional control, motivation, and responsibility toward academic tasks. When parents learn effective communication strategies, constructive discipline techniques, and methods of reinforcing adaptive behaviors, children may experience greater emotional security and clearer behavioral expectations, which in turn facilitate academic engagement and reduce avoidance behaviors. Academic procrastination is often associated with emotional dysregulation, fear of failure, low self-efficacy, and inadequate behavioral monitoring. Supportive and structured parenting environments may reduce these vulnerabilities by promoting autonomy, confidence, and consistency in children’s daily functioning. The present findings are consistent with the study conducted by Namiyan and Hosseinchari, who emphasized the importance of psychological and environmental factors in explaining academic procrastination among students (Namiyan & Hosseinchari, 2011). Similarly, Liu and colleagues reported that positive discipline interventions improved parental self-efficacy and enhanced adaptive parent–child interactions, factors that may indirectly influence children’s academic behaviors and emotional regulation (Liu et al., 2024). The reduction in academic procrastination observed in the present study may therefore reflect improvements in emotional support, behavioral consistency, and parental responsiveness acquired through the parenting intervention.

The findings related to increased child acceptance and decreased rejection are also theoretically meaningful. Acceptance within the parent–child relationship reflects emotional warmth, empathy, responsiveness, and supportive interaction patterns, whereas rejection is associated with criticism, hostility, emotional distance, and negative evaluations of the child. Parenting skills training likely increased mothers’ awareness of children’s emotional and behavioral needs while simultaneously equipping them with more constructive interaction strategies. Through learning

effective communication, positive reinforcement, and emotion-sensitive parenting behaviors, mothers may have become more capable of expressing warmth and responding appropriately to their children’s behaviors. The significant reduction in rejection and increase in acceptance observed in the present study are consistent with findings from previous intervention studies demonstrating that parenting education improves parental emotional responsiveness and interaction quality (Arjmand et al., 2022; Mohamadi & Ghamarani, 2026). Arjmand and colleagues found that positive parenting training improved mother–child relationships among mothers of hyperactive children by increasing adaptive parental responses and emotional support (Arjmand et al., 2022). Similarly, Mohamadi and Ghamarani reported that mother–child interaction interventions improved communication quality and behavioral management among mothers of children with behavioral difficulties (Mohamadi & Ghamarani, 2026). These findings collectively support the assumption that parenting interventions can strengthen emotional bonds and foster healthier relational climates within families.

Another important finding of the present study was the reduction in maternal overprotection following parenting skills training. Overprotective parenting is characterized by excessive monitoring, intrusive involvement, and restriction of children’s autonomy. Although overprotection is often motivated by parental concern and emotional attachment, excessive control may undermine children’s independence, self-confidence, and self-regulatory capacities. Parenting skills training may help mothers recognize the developmental importance of autonomy support and balanced supervision. By learning adaptive disciplinary methods and effective communication strategies, mothers may gradually replace intrusive control with supportive guidance and collaborative interaction. This interpretation is supported by Hendrawan and colleagues, who demonstrated that autonomy-supportive parenting interventions improved maternal parenting skills and promoted children’s executive functioning (Hendrawan et al., 2026). Similarly, studies on mindful and reflective parenting have emphasized that increased parental awareness and emotional regulation contribute to more balanced and responsive caregiving behaviors (Cho & Shin, 2025). The present findings therefore suggest that parenting education may reduce maladaptive overinvolvement by helping parents adopt developmentally appropriate interaction patterns.

The lack of a significant effect on permissiveness represents an important aspect of the findings and warrants

further consideration. Permissiveness often reflects deeply ingrained parenting beliefs and habitual interaction patterns characterized by insufficient behavioral boundaries and inconsistent discipline. Unlike emotional responsiveness or communication skills, which may improve relatively quickly through educational interventions, permissive parenting tendencies may require longer-term cognitive and behavioral restructuring. It is possible that the duration of the intervention was insufficient to produce substantial changes in this parenting dimension. In addition, permissiveness may be influenced by broader family, cultural, and personality factors that are less responsive to short-term training programs. Previous studies suggest that parenting interventions produce differential effects across parenting dimensions depending on intervention content, participant characteristics, and contextual variables (Vatou et al., 2026; Younas & Gutman, 2026). Some parenting behaviors may be more resistant to change because they are closely linked to parental schemas, emotional histories, or long-standing family interaction patterns. Nematzadeh and colleagues emphasized the role of adverse childhood experiences and parental schema modes in shaping parenting behaviors (Nematzadeh et al., 2026). Likewise, Deleş and Aral found that positive childhood experiences significantly influence parenting skills among mothers (Deleş & Aral, 2025). These findings imply that certain parenting dimensions, particularly permissiveness, may require more intensive or individualized interventions addressing underlying cognitive and emotional factors.

The results of the present study can also be interpreted within broader developmental and family systems frameworks. Family systems theory proposes that changes in one component of family functioning influence other relational and behavioral processes within the family unit. Accordingly, improvements in maternal communication, emotional responsiveness, and disciplinary consistency may have created a more secure and organized family environment that facilitated children's adaptive academic functioning. The bidirectional nature of parent-child relationships further suggests that reductions in children's problematic behaviors may reinforce more positive parenting responses over time (Wang et al., 2026). Wang and colleagues demonstrated that parenting stress and mother-child relationships influence one another reciprocally, creating either positive or negative relational cycles (Wang et al., 2026). In the present study, parenting training may have interrupted maladaptive relational cycles by reducing parental stress and increasing parental competence, thereby

improving both maternal behaviors and children's academic engagement.

The findings are also consistent with contemporary evidence regarding the effectiveness of parenting interventions in promoting children's social-emotional development and behavioral adjustment. Systematic reviews have indicated that parenting programs improve emotional regulation, social competence, and behavioral functioning in children across various developmental contexts (Güldağ et al., 2026; Vatou et al., 2026). Moreover, Younas and Gutman emphasized that effective parenting interventions commonly include components such as emotional communication, positive reinforcement, behavioral management, and parent-child interaction enhancement (Younas & Gutman, 2026). The parenting skills training program used in the present study incorporated many of these evidence-based elements, including effective communication, reinforcement strategies, behavioral management, and constructive discipline. Therefore, the observed improvements in mother-child relationships and academic procrastination are consistent with the broader intervention literature.

Another relevant explanation for the present findings involves the role of emotional security and attachment processes. Positive and accepting parenting behaviors contribute to children's sense of safety, competence, and emotional stability, all of which are associated with better self-regulation and academic functioning. In contrast, rejection and intrusive overprotection may increase anxiety, dependence, and emotional avoidance, thereby contributing to procrastinatory behaviors. Zhang and colleagues found that positive parent-child interaction moderated the negative effects of maltreatment on children's psychological well-being (Zhang et al., 2025). Similarly, Burkeland Lie and colleagues highlighted the importance of adaptive maternal parenting strategies in promoting healthier parent-child relationships following adverse family experiences (Burkeland Lie et al., 2026). These findings support the notion that improving maternal interaction quality can have protective psychological effects on children.

The current findings further align with intervention studies emphasizing experiential and interaction-based approaches to parenting education. Video feedback interventions, parent-child interaction therapy, and coaching-based parenting models have demonstrated effectiveness in improving parental sensitivity, child compliance, and relational functioning (Favieri et al., 2026; Nekkanti et al., 2020; Rosen et al., 2026). The effectiveness

of the present intervention may similarly be attributed to the practical and skills-oriented nature of the training sessions. Mothers were not only provided with theoretical information but were also encouraged to apply learned strategies within the home environment. Such experiential learning opportunities likely enhanced behavioral generalization and strengthened the sustainability of the acquired parenting skills.

The present findings also carry important implications for preventive mental health and educational interventions. Because family relationships play a foundational role in children's emotional and academic development, interventions targeting parenting competencies may contribute to broader psychosocial improvements beyond the family context. Parenting education may function as an accessible preventive strategy for reducing academic disengagement, emotional difficulties, and maladaptive behavioral patterns among school-age children. Furthermore, considering the increasing psychological and educational challenges experienced by children and families in contemporary societies, structured parenting programs may represent cost-effective and culturally adaptable interventions suitable for schools, counseling centers, and community mental health services.

One limitation of the present study was the relatively small sample size, which may limit the generalizability of the findings to broader populations. Another limitation was the use of self-report questionnaires, which may be influenced by social desirability bias and participants' subjective interpretations. In addition, the absence of a follow-up assessment prevented examination of the long-term stability of the intervention effects. The study was also limited to mothers of elementary school children in one district of Tehran, and therefore cultural, socioeconomic, and regional factors may restrict broader applicability of the results.

Future research should examine the long-term effectiveness of parenting skills interventions through follow-up assessments conducted several months after the completion of training programs. Researchers are also encouraged to compare different parenting intervention models to identify the most effective approaches for improving both parent-child relationships and children's academic functioning. Future studies may additionally investigate the moderating roles of parental stress, socioeconomic status, family structure, and child personality characteristics in the effectiveness of parenting interventions. Expanding research to include fathers and

diverse family systems would also provide a more comprehensive understanding of parenting dynamics and child adjustment.

From a practical perspective, the findings of the present study suggest that parenting skills training programs can be effectively incorporated into school counseling services, family counseling centers, and community mental health programs. Educational authorities and mental health professionals may benefit from designing structured parenting workshops focusing on communication skills, emotional responsiveness, behavioral management, and constructive discipline techniques. Schools can also collaborate with psychologists and counselors to identify families who may benefit from parenting interventions aimed at improving children's academic engagement and emotional adjustment. Finally, increasing parental awareness regarding the importance of supportive and balanced parenting may contribute to healthier family relationships and improved developmental outcomes for children.

#### **Authors' Contributions**

All authors significantly contributed to this study.

#### **Declaration**

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

#### **Transparency Statement**

Data are available for research purposes upon reasonable request to the corresponding author.

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#### **Declaration of Interest**

The authors report no conflict of interest.

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## Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the study and participated in the research with informed consent.

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