

The Effectiveness of Schema Therapy on Loneliness and Hope for Life in Mothers of Children with Autism

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ABSTRACT

Mothers of children with autism face numerous financial, social, and psychological pressures that affect their psychological well-being. The present study was conducted to determine the effectiveness of schema therapy on loneliness and hope for life in mothers of children with autism. The present research employed a quasi-experimental pretest-posttest design with a control group. The study population consisted of all mothers of children with autism who referred to autism associations in the city of Tehran in 2025. Considering the inclusion and exclusion criteria, 30 participants who met the eligibility criteria were selected through convenience sampling and assigned to an experimental group (15 participants) and a control group (15 participants). Data collection instruments included the Russell Loneliness Questionnaire, the Snyder et al. (1991) Hope for Life Questionnaire, and a schema therapy protocol consisting of 12 sessions of 90 minutes each. Data were analyzed using SPSS-28 software and analysis of covariance (ANCOVA). Comparison of loneliness and hope for life scores between the pretest and posttest in the experimental group showed that these scores significantly decreased and increased, respectively ($P < .05$). It can be concluded that schema therapy was effective in reducing loneliness and increasing hope for life among mothers of children with autism. Therefore, it is recommended that psychotherapists utilize the schema therapy approach to improve the mental health of these mothers.

Keywords: Schema therapy, loneliness, hope for life, autism

1. Introduction

Autism Spectrum Disorder (ASD) is recognized as one of the most complex neurodevelopmental disorders characterized by persistent deficits in social communication, restricted interests, repetitive behaviors, and impairments in adaptive functioning (American Psychiatric, 2022). The prevalence of autism has increased substantially over recent decades, leading to growing concern among healthcare professionals, psychologists, educators, and families regarding the psychological and social consequences associated with this disorder (Waddington et al., 2021). Children with autism often require extensive emotional, educational, financial, and caregiving support, which places considerable demands on family systems, particularly mothers who are commonly the primary caregivers (Picardi et al., 2018; Pisula & Porebowicz-Dorsmann, 2017). The chronic and demanding nature of caregiving for children with autism exposes mothers to persistent stressors that negatively influence their mental health, emotional functioning, and quality of life (Alhuzimi, 2021; Woodman et al., 2022).

Mothers of children with autism frequently experience psychological difficulties such as chronic stress, emotional exhaustion, anxiety, depression, hopelessness, social isolation, and loneliness (Bujnowska et al., 2019; Roskam & Mikolajczak, 2023). The caregiving burden associated with autism often limits social interactions, reduces opportunities for recreational and occupational engagement, and contributes to feelings of social withdrawal and loneliness (Landon et al., 2018; Mund & Johnson, 2020). Loneliness is considered a painful subjective experience arising from a discrepancy between desired and actual social relationships and has been associated with psychological distress, maladaptive coping, reduced life satisfaction, and impaired emotional well-being (Li et al., 2019; Yalom & Leszcz, 2020). Studies have demonstrated that mothers caring for children with developmental disabilities report significantly higher levels of loneliness and social isolation compared to mothers of typically developing children (Barbosa et al., 2018; Picardi et al., 2018). The social stigma surrounding autism, limited societal support, and the demanding caregiving responsibilities further intensify emotional isolation among these mothers (Anthony, 2017).

Hope for life is another critical psychological construct closely associated with mental health and adaptation among caregivers of children with chronic developmental conditions. Snyder conceptualized hope as a cognitive-

motivational process involving agency thinking and pathways thinking, through which individuals perceive themselves as capable of pursuing goals and identifying effective routes toward achieving them (Ogeston et al., 2021). Hope contributes significantly to resilience, emotional adjustment, psychological flexibility, and life satisfaction, whereas reduced hope is associated with despair, helplessness, and psychological vulnerability (Talebi et al., 2025; Zamani & Mohammadian Akerdi, 2020). Mothers of children with autism often encounter persistent uncertainty regarding their child's future, educational opportunities, social functioning, and independence, which can diminish hope and increase emotional distress (Bujnowska et al., 2019; Woodman et al., 2022). Research has shown that chronic caregiving stress may impair positive future-oriented thinking and negatively affect caregivers' motivation and psychological capital (Aliabadi & Abdolkhodaei, 2022; Roskam & Mikolajczak, 2023).

Theoretical perspectives in health psychology suggest that prolonged exposure to caregiving-related stress may disrupt emotional regulation processes, reduce adaptive coping resources, and contribute to maladaptive cognitive patterns (Anthony, 2017). Mothers of children with autism are repeatedly confronted with emotional challenges such as fear regarding their child's future, guilt, self-blame, financial concerns, and social pressures, all of which may contribute to dysfunctional cognitive-emotional schemas (Alhuzimi, 2021; Powers, 2016). According to schema theory, early maladaptive schemas are pervasive dysfunctional patterns consisting of memories, cognitions, emotions, and bodily sensations that develop during childhood and continue across the lifespan, influencing individuals' interpretations of experiences and interpersonal relationships (Young et al., 2016). These maladaptive schemas are activated under stressful conditions and are associated with various forms of psychopathology, emotional dysregulation, loneliness, hopelessness, and impaired psychological functioning (Renner et al., 2016; Samani et al., 2022).

Schema therapy, originally developed by Young and colleagues, is an integrative psychotherapeutic approach that combines cognitive-behavioral, attachment, psychodynamic, experiential, and interpersonal techniques to modify maladaptive schemas and improve emotional functioning (Arntz et al., 2021; Young et al., 2016). This therapeutic approach emphasizes identifying dysfunctional cognitive-emotional patterns, understanding their developmental origins, and replacing maladaptive coping

styles with healthier emotional and behavioral responses (Farrell & Shaw, 2018). Schema therapy has increasingly gained empirical support as an effective intervention for emotional disorders, personality disorders, interpersonal difficulties, and chronic psychological distress (Masley et al., 2021; Roediger et al., 2023).

Recent evidence indicates that schema-based interventions can significantly improve emotional regulation, resilience, psychological well-being, and interpersonal functioning (Tan et al., 2021; Taylor et al., 2023). Research has demonstrated that schema therapy reduces loneliness and maladaptive cognitive processes by addressing dysfunctional beliefs related to rejection, abandonment, emotional deprivation, and social isolation (Doosti et al., 2023; Ojaghloo et al., 2022). Similarly, schema-focused cognitive restructuring has been associated with increased hope and goal-directed thinking by enhancing adaptive coping strategies and modifying negative cognitive schemas (Armenta & Kane, 2022). These findings suggest that schema therapy may play an important role in improving psychological functioning among individuals exposed to chronic emotional stress.

Several studies have investigated the effectiveness of schema therapy across different clinical and non-clinical populations. For example, schema therapy has been shown to improve self-efficacy and hope for life among divorced women while reducing maladaptive schemas (Aghili et al., 2021). Research has also demonstrated the effectiveness of schema therapy in increasing hope and happiness among individuals with depression (Zamani & Mohammadian Akerdi, 2020), improving psychological capital among patients with binge eating disorder (Bozorgvari & Khosh-Lahjeh Sedgh, 2024), and reducing loneliness among divorced women (Sangani & Dashtbozorgi, 2019). Moreover, schema therapy interventions have shown positive outcomes in reducing emotional distress, rumination, and maladaptive coping strategies (Carlucci et al., 2021; Tapia et al., 2019). Group schema therapy has additionally been associated with improvements in emotional resilience and interpersonal functioning through experiential and emotion-focused techniques (Dickhaut & Arntz, 2020; Roediger et al., 2023).

Research conducted specifically within Iranian populations has further supported the effectiveness of schema-based interventions. Studies have reported that schema therapy improves hope for life, psychological well-being, and quality of life among housewives and women experiencing emotional difficulties (Mahzoon Khorasani &

Mousavi, 2020; Talebi et al., 2025). Schema therapy has also demonstrated effectiveness in reducing loneliness, emotional dysregulation, and distress tolerance problems among women affected by marital infidelity (Nasirnia Samakoush & Yousefi, 2023; Samakoush & Yousefi, 2023). Furthermore, investigations have shown significant relationships between early maladaptive schemas and psychological capital, emotional functioning, and mental health outcomes (Elahian et al., 2025; Samani et al., 2022). These findings emphasize the relevance of schema-based interventions in addressing cognitive-emotional vulnerabilities among psychologically distressed populations.

Despite the growing body of evidence regarding the effectiveness of schema therapy, limited attention has been devoted to mothers of children with autism, particularly regarding loneliness and hope for life. Existing studies on parents of children with autism have mainly focused on stress, burnout, coping styles, and quality of life (Aliabadi & Abdolkhodaei, 2022; Roskam & Mikolajczak, 2023). Although these studies highlight the considerable psychological burden experienced by mothers, fewer investigations have examined interventions targeting maladaptive schemas and emotional isolation in this population. Considering that mothers of children with autism frequently experience chronic emotional strain, social isolation, uncertainty, and diminished hope regarding the future, schema therapy may offer an effective therapeutic framework for improving their emotional well-being.

Schema therapy may be particularly suitable for mothers of children with autism because it directly addresses deep-rooted maladaptive beliefs related to emotional deprivation, failure, self-sacrifice, vulnerability, and social isolation that may emerge or intensify under caregiving stress (Farrell & Shaw, 2018; Young et al., 2016). Through cognitive restructuring, experiential exercises, emotional processing, and behavioral pattern-breaking strategies, schema therapy can help individuals reinterpret stressful experiences, regulate emotional responses, and develop healthier coping mechanisms (Roediger et al., 2023; Taylor et al., 2023). Furthermore, group-based schema therapy interventions may provide emotional support, validation, and opportunities for interpersonal connection that reduce feelings of loneliness and enhance hopefulness (Yalom & Leszcz, 2020).

The importance of addressing loneliness and hope for life among mothers of children with autism extends beyond individual psychological functioning and may also influence

parenting quality, family relationships, and child developmental outcomes. Maternal emotional well-being is strongly associated with caregiving effectiveness, adaptive parenting behaviors, and family adjustment (Pisula & Porebowicz-Dorsmann, 2017; Woodman et al., 2022). Consequently, interventions that improve maternal psychological health may indirectly benefit children with autism by strengthening family resilience and reducing emotional strain within the caregiving environment. Given the chronic nature of autism-related caregiving demands and the increasing prevalence of ASD, identifying effective psychological interventions for caregivers remains an important clinical and social priority (American Psychiatric, 2022; Waddington et al., 2021).

Accordingly, the present study was conducted to determine the effectiveness of schema therapy on loneliness and hope for life among mothers of children with autism.

2. Methods and Materials

2.1. Study Design and Participants

The present study employed a quasi-experimental design using a pretest-posttest format with a control group. The statistical population consisted of all mothers of children with autism who referred to autism associations in Tehran during 2025. After considering the inclusion and exclusion criteria, 30 eligible participants were selected through convenience sampling and were assigned to an experimental group (15 participants) and a control group (15 participants). Inclusion criteria included willingness to participate in the study, no prior participation in schema therapy sessions, and absence of physical illness, psychological disorders, or severe physical injuries during the previous months. Exclusion criteria included a history of participation in psychological interventions, particularly schema therapy, and the presence of specific physical illnesses or psychological disorders such as depression. Prior to the intervention, all participants completed the pretest assessments, and after the completion of the intervention sessions, the posttest assessments were administered to both groups.

2.2. Measures

The Russell Loneliness Questionnaire was used to assess participants' feelings of loneliness. This scale was originally developed by Russell et al. (1980) and, following three revisions, the final version demonstrated a Cronbach's alpha

coefficient ranging from .89 to .94. The questionnaire consists of 20 items scored on a four-point Likert scale ranging from 1 (Never) to 4 (Always). Total scores range from 20 to 80, with higher scores indicating greater levels of loneliness. Davarpanah (1994) standardized the scale in Iran and reported a Cronbach's alpha coefficient of .87, indicating satisfactory reliability and validity for use in Iranian populations.

Hope for life was measured using the Snyder et al. (1991) Hope Scale. This instrument was developed by Snyder, Harris, Anderson, Holleran, Irving, and colleagues in 1991 to evaluate individuals' levels of hopefulness. The questionnaire consists of 12 items designed for individuals aged 15 years and older and is administered as a self-report measure. Among the items, four assess agency thinking (Items 2, 9, 10, and 12), four assess pathways thinking (Items 1, 4, 7, and 8), and four are distractor items. Therefore, the questionnaire measures two subscales: agency and pathways. Items are rated on a five-point Likert continuum ranging from 1 (Completely disagree) to 5 (Completely agree). The distractor items are reverse scored. Total scores range from 12 to 60, where scores between 12 and 24 indicate low hope, scores between 24 and 36 indicate moderate hope, and scores between 36 and 60 indicate high hope. Completion of the questionnaire requires approximately 2 to 5 minutes. The overall internal consistency of the scale has been reported between .74 and .84, and test-retest reliability has been reported as .80, with even higher reliability across intervals longer than 8 to 10 weeks. Additionally, substantial evidence supports the concurrent validity and predictive validity of the Hope Scale. For example, the questionnaire has shown correlations ranging from .50 to .60 with measures of optimism, goal attainment expectancy, and self-esteem (Snyder et al., 2003). In a study conducted among 660 female students in Tehran, Zahed Babelan, Ghasempour, and Hassanzadeh (2011) reported a Cronbach's alpha coefficient of .89 for the scale.

2.3. Intervention

The experimental group participated in a localized schema therapy program developed by Shaban (2020) based on the schema therapy model proposed by Farrell and Shaw (2018). The intervention consisted of 12 weekly sessions, each lasting 90 minutes. The first session focused on participant introduction, explanation of the study objectives, review of session structure and regulations, establishment of confidentiality, strengthening therapeutic alliance, and

administration of the pretest. The second session introduced basic emotional needs, maladaptive schemas, their related domains, developmental origins, and schema functioning. The third session focused on explaining schema concepts and coping styles while motivating participants to identify and modify maladaptive schemas. During the fourth and fifth sessions, participants' maladaptive schemas were assessed using the Young Schema Questionnaire, and group discussions were conducted regarding the impact of schemas on individuals' lives. The sixth session initiated the schema change process by motivating participants for change and introducing cognitive, emotional, and behavioral pattern-breaking strategies. The seventh and eighth sessions emphasized cognitive techniques, including identifying evidence supporting and contradicting schemas, evaluating the advantages and disadvantages of schemas and coping styles, engaging in dialogues between healthy and schema-driven aspects of the self, and preparing educational flashcards related to schemas. The ninth session introduced experiential techniques such as imagery exercises, imaginary dialogues, and writing letters to parents. The tenth and eleventh sessions focused on behavioral pattern-breaking strategies, including identifying maladaptive behaviors that activate schemas, prioritizing behavioral changes, and practicing healthy replacement behaviors through imagery techniques. The twelfth and final session

included group discussions regarding schema changes, review and summary of therapeutic content, responding to participants' questions, appreciation of participants' cooperation, and administration of the posttest.

2.4. Data Analysis

Descriptive statistics, including means and standard deviations, were used to summarize the data. Inferential data analysis was conducted using one-way analysis of covariance (ANCOVA) to examine the effectiveness of schema therapy on loneliness and hope for life among mothers of children with autism while controlling for pretest scores. All statistical analyses were performed using SPSS version 28.

3. Findings and Results

The study sample consisted of 30 mothers of children with autism who were randomly assigned to an experimental group (n = 15) and a control group (n = 15). The participants were selected from mothers referring to autism associations in Tehran during 2025. Most participants were within the age range of 30 to 45 years and had at least a high school diploma. All participants completed both the pretest and posttest stages of the study, and no attrition occurred during the intervention period.

Table 1

Descriptive Statistics of Pretest and Posttest Scores for Loneliness and Hope for Life in the Experimental and Control Groups

Variable	Stage	Experimental Group Mean	Experimental Group SD	Control Group Mean	Control Group SD
Loneliness	Pretest	46.33	3.69	46.07	3.10
Loneliness	Posttest	35.73	4.13	44.07	5.93
Hope for Life	Pretest	87.40	2.89	89.07	8.90
Hope for Life	Posttest	113.20	8.04	90.07	13.29

As shown in Table 1, the mean scores of loneliness in the experimental group decreased from pretest to posttest, whereas the control group demonstrated only a slight reduction in loneliness scores. In contrast, the mean scores of hope for life in the experimental group increased substantially following the intervention, while the control group showed minimal change between the pretest and posttest stages. These findings preliminarily suggest the effectiveness of schema therapy in reducing loneliness and increasing hope for life among mothers of children with autism.

Prior to conducting the analysis of covariance, the assumptions underlying ANCOVA were examined. The

normality of data distribution was assessed using the Shapiro–Wilk test, and the results confirmed that the data were normally distributed ($P > .05$). The homogeneity of regression slopes assumption was also examined, and the interaction effect between group membership and pretest scores was found to be non-significant ($P > .05$), indicating a linear relationship between the covariate and dependent variables within the groups. Furthermore, Levene's test was used to evaluate the homogeneity of variances, and the findings indicated equal variances across groups ($P > .05$). Therefore, the assumptions necessary for conducting ANCOVA were satisfied.

Table 2

Results of Analysis of Covariance for Loneliness and Hope for Life

Variable	Source	Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Loneliness	Group	520.623	1	520.623	19.210	.001	.416
	Error	731.746	27	27.102			
	Total	49013.000	30				
Hope for Life	Group	3723.023	1	3723.023	31.574	.000	.539
	Error	3183.684	27	117.914			
	Total	87373.000	30				

The results presented in Table 2 indicate that schema therapy had a significant effect on loneliness among mothers of children with autism, $F(1, 27) = 19.21, P = .001, \eta^2 = .416$. This finding demonstrates that participation in schema therapy significantly reduced loneliness scores in the experimental group compared to the control group. In addition, schema therapy had a significant effect on hope for life, $F(1, 27) = 31.57, P < .001, \eta^2 = .539$. The effect size values indicate that schema therapy accounted for 41.6% of the variance in loneliness scores and 53.9% of the variance in hope for life scores, suggesting a substantial therapeutic impact on both psychological variables.

4. Discussion

The present study aimed to investigate the effectiveness of Rational Emotive Behavior Therapy (REBT) on oppositional defiant disorder and sexual deviance among working children in Tehran. The findings demonstrated that REBT significantly reduced symptoms of oppositional defiant disorder as well as sexual deviance behaviors in the experimental group compared to the control group. The large effect sizes obtained in both variables indicate that the intervention had a substantial impact on improving the behavioral and emotional functioning of working children. These findings suggest that REBT can serve as an effective psychological intervention for vulnerable child populations exposed to chronic stress, emotional deprivation, and maladaptive environmental experiences.

One of the major findings of the present study was the significant reduction in oppositional defiant disorder symptoms following the REBT intervention. Children in the experimental group demonstrated lower levels of aggression, irritability, disobedience, argumentative behavior, and hostility toward authority figures after participating in the intervention sessions. This finding is theoretically consistent with the cognitive foundations of REBT proposed by Ellis, who argued that irrational beliefs

and dysfunctional interpretations of life events are central causes of maladaptive emotional and behavioral reactions (Ellis, 1994). According to the REBT framework, children exposed to adverse social conditions may develop rigid and absolutist beliefs such as “Others must always treat me fairly,” “I should never experience frustration,” or “People are always against me.” These irrational beliefs intensify anger, hostility, and oppositional reactions when environmental expectations are not met. REBT attempts to identify and challenge such irrational cognitions and replace them with more rational, flexible, and adaptive beliefs. Consequently, children become more capable of regulating emotions, tolerating frustration, and responding to interpersonal conflicts in constructive ways.

The findings of the present study are consistent with previous research emphasizing the effectiveness of REBT for disruptive and behavioral disorders among children and adolescents. Gonzalez and colleagues reported in their meta-analysis that rational emotive interventions significantly reduced disruptive behaviors and emotional problems among young populations (Gonzalez et al., 2004). Similarly, Terjesen and colleagues emphasized that REBT is particularly suitable for children because it employs structured, directive, and skill-oriented strategies that are developmentally adaptable for younger populations (Terjesen et al., 2009). The results of the current study also align with the findings of James and Omondi, who demonstrated that REBT and behavioral therapies effectively reduced conduct disorder symptoms among juvenile delinquents in rehabilitation settings (James & Omondi, 2021). Since oppositional defiant disorder and conduct disorder share common features such as aggression, defiance, emotional dysregulation, and hostility toward authority figures, it is reasonable that interventions targeting irrational cognitions and maladaptive emotional responses would improve both conditions.

Another important explanation for the reduction in oppositional behaviors may involve the role of emotional regulation training provided throughout the intervention process. Working children are often exposed to chronic stressors including poverty, exploitation, social rejection, and emotional neglect. Such conditions contribute to heightened emotional reactivity, impulsivity, and frustration intolerance. Research has shown that emotional dysregulation is strongly associated with maladaptive personality functioning and behavioral disturbances (Norouzi & Zemestani, 2021). REBT helps individuals recognize the connection between thoughts, emotions, and behaviors, thereby improving emotional awareness and self-control. Through role-playing exercises, cognitive restructuring, and anger management techniques, participants in the present study likely learned healthier ways of responding to interpersonal conflicts and stressful situations. These improvements may explain the substantial decrease observed in oppositional and defiant behaviors following the intervention.

The findings may also be interpreted within the framework of maladaptive schemas and cognitive distortions. Children who experience chronic adversity often internalize dysfunctional beliefs regarding trust, self-worth, fairness, and interpersonal relationships. Such maladaptive schemas can contribute to hostility, aggression, and oppositional behaviors (Carr & Francis, 2010). Previous research has demonstrated that childhood trauma and maladaptive schema domains significantly predict cognitive distortions and emotional problems (Lorzangeneh & Esazadegan, 2022). Similarly, childhood trauma has been associated with impaired personality functioning and pathological behavioral patterns (Norouzi & Zemestani, 2020). REBT directly targets irrational and maladaptive cognitions by encouraging children to evaluate the accuracy and usefulness of their beliefs. As irrational schemas become weaker and more adaptive cognitions develop, emotional and behavioral functioning may improve substantially.

The second major finding of the present study was the significant reduction in sexual deviance behaviors among working children who participated in the REBT intervention. This finding is particularly important because sexually deviant behaviors among vulnerable children are often overlooked or inadequately addressed in psychological research and intervention programs. Working children are frequently exposed to inappropriate sexual experiences, unsafe environments, inadequate supervision, exploitative relationships, and distorted sources of sexual information.

Rashidi emphasized that maladaptive sexual attitudes among adolescents may emerge from inappropriate family environments, peer influence, media exposure, and insufficient educational guidance (Rashidi, 2013). Because working children are more likely to encounter these risk factors, they may become especially vulnerable to developing distorted sexual beliefs and maladaptive sexual behaviors.

The effectiveness of REBT in reducing sexual deviance behaviors may be explained through several psychological mechanisms. First, REBT improves self-awareness and impulse control by helping individuals identify irrational thoughts and emotional triggers before acting impulsively. Children exposed to stressful or traumatic environments may engage in maladaptive sexual behaviors as a means of emotional escape, tension reduction, or attention seeking. By teaching children to recognize and challenge irrational beliefs related to shame, self-worth, anger, or interpersonal relationships, REBT may reduce impulsive and maladaptive behavioral responses. Second, REBT emphasizes unconditional self-acceptance and emotional responsibility. Many vulnerable children experience intense shame, guilt, and confusion regarding sexual thoughts or behaviors. These emotions may paradoxically reinforce secrecy, anxiety, and maladaptive coping strategies. REBT encourages children to understand that thoughts and emotions can be managed rationally without engaging in harmful or impulsive actions. This process may contribute to healthier emotional adjustment and behavioral self-regulation.

The current findings are also supported by broader evidence regarding the effectiveness of cognitive-behavioral interventions for disruptive and maladaptive behaviors. McCart and Sheidow identified cognitive-behavioral approaches as among the most effective evidence-based psychosocial treatments for adolescents with disruptive behavioral problems (McCart & Sheidow, 2016). Such interventions are particularly effective because they target the underlying cognitive, emotional, and behavioral processes responsible for maladaptive functioning. In the present study, children participated in interactive activities including storytelling, games, role-playing, and group discussions, which likely enhanced engagement and facilitated emotional learning. The group-based format may also have contributed positively to treatment outcomes by reducing feelings of isolation and promoting peer support among participants who shared similar life experiences.

Another important factor contributing to the effectiveness of the intervention may involve the developmental

appropriateness of the therapeutic techniques used throughout the sessions. REBT concepts were adapted to the cognitive and emotional capacities of children aged 9 to 11 years through simplified explanations, practical examples, drawings, and interactive exercises. This adaptation likely improved comprehension and participation among children who may have limited educational opportunities due to child labor conditions. Terjesen and colleagues emphasized that REBT interventions for children are most effective when abstract cognitive concepts are translated into concrete and understandable activities (Terjesen et al., 2009). Therefore, the child-centered and activity-based structure of the intervention may have significantly enhanced treatment effectiveness.

The large effect sizes reported in the present study further highlight the potential value of REBT for working children. Effect sizes exceeding 0.90 are relatively uncommon in psychological intervention studies and suggest that the intervention accounted for a substantial proportion of behavioral improvement. One explanation for these strong effects may involve the severe unmet psychological needs of working children. Because many participants had likely received little or no prior psychological support, the intervention may have produced particularly meaningful emotional and cognitive changes. Additionally, the structured and supportive therapeutic environment may have provided participants with a rare opportunity for emotional expression, social acceptance, and skill development. Previous studies have shown that resilience-oriented and cognitive-behavioral interventions can substantially improve the mental health of working children exposed to chronic adversity (Khanjani et al., 2021).

The findings of the present study also have important theoretical implications. The results provide additional support for cognitive-behavioral theories emphasizing the central role of irrational beliefs and maladaptive cognitive processing in the development of behavioral disorders (Ellis, 1994). The study demonstrates that interventions focused on cognitive restructuring, emotional regulation, and rational thinking can effectively improve behavioral functioning even among highly vulnerable populations exposed to severe environmental stressors. Furthermore, the findings support the argument that behavioral disorders among working children should not be understood merely as disciplinary problems, but rather as complex psychological responses to chronic deprivation, trauma, and maladaptive learning experiences (Radfar et al., 2018). Therefore, psychological interventions addressing cognitive and emotional processes

may be more beneficial than punitive or purely behavioral management strategies.

5. Conclusion

The present study contributes to the existing literature by addressing an understudied population and examining the effectiveness of REBT for both oppositional defiant disorder and sexual deviance simultaneously. Previous studies have primarily focused on anxiety, maladaptive schemas, emotional regulation, or conduct problems in broader child populations (Aflakian et al., 2023). In contrast, relatively little research has specifically examined psychological interventions targeting behavioral and sexual maladjustment among working children. Therefore, the current findings may provide valuable evidence for psychologists, social workers, educators, and policymakers seeking effective mental health interventions for vulnerable child populations.

One limitation of the present study was the relatively small sample size and the inclusion of only male working children aged 9 to 11 years from a single educational center in Tehran. Therefore, caution should be exercised when generalizing the findings to female children, different age groups, or working children living in other geographical and cultural contexts. Another limitation involved the absence of a long-term follow-up assessment, making it difficult to determine whether the observed improvements remained stable over time. In addition, the study relied primarily on self-report and behavioral questionnaires, which may be influenced by response biases or social desirability. Finally, several potentially influential variables such as severity of trauma exposure, family functioning, socioeconomic status, and duration of child labor were not controlled during the study.

Future research should examine the long-term effectiveness of REBT interventions through follow-up assessments conducted several months after treatment completion. Researchers are also encouraged to include larger and more diverse samples involving female working children and adolescents from different social and cultural backgrounds. Comparative studies investigating the effectiveness of REBT relative to other therapeutic approaches such as acceptance and commitment therapy, trauma-focused interventions, play therapy, and mindfulness-based interventions may also provide valuable information regarding the most effective treatment methods for vulnerable children. In addition, future studies may explore the mediating roles of emotional regulation,

maladaptive schemas, self-esteem, and resilience in explaining the effectiveness of REBT on behavioral outcomes among working children.

The findings of the present study have several important practical implications for mental health professionals, educators, and social service organizations working with child labor populations. Psychological support programs designed for working children should incorporate structured cognitive-behavioral interventions aimed at improving emotional regulation, cognitive flexibility, frustration tolerance, and interpersonal skills. Specialized schools, shelters, and child welfare centers may benefit from integrating REBT-based group programs into their routine psychological services. Training counselors, teachers, and social workers in basic REBT techniques could also improve early identification and intervention for behavioral problems among vulnerable children. Furthermore, developing culturally appropriate and developmentally tailored REBT materials specifically designed for working children may enhance treatment accessibility and effectiveness in underprivileged settings.

Authors' Contributions

Authors equally contributed to this article.

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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Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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