

The Effectiveness of Cognitive-Based Psychological Intervention on Compassion Fatigue: A Case Study of Female Teachers of Students with Autism Spectrum Disorder

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ABSTRACT

Purpose: This study aimed to determine the effectiveness of cognitive-based therapy in reducing compassion fatigue among these teachers.

Methods and Materials: This study employed a quasi-experimental design with a pretest-posttest format, a two-month follow-up period, and a control group. The statistical population consisted of all teachers working in autism schools in the city of Qazvin during the 2025–2026 academic year. From this population, 34 participants were selected using purposive sampling and were randomly assigned to either the experimental group ($n = 17$) or the control group ($n = 17$). The experimental group received cognitive-based therapy in 10 sessions, each lasting 90 minutes, whereas the control group received no intervention. Data were collected using the Compassion Fatigue Self-Test (CFST) developed by Figley and colleagues and were analyzed using repeated-measures analysis of variance in SPSS software, version 25.

Findings: The results indicated that the cognitive-based intervention led to a significant reduction in compassion fatigue scores in the experimental group compared with the control group ($p < .01$). Repeated-measures analysis further demonstrated that this reduction remained stable at the follow-up assessment ($p < .05$). The effect size of the intervention for compassion fatigue was estimated to be large ($\eta^2 = .48$).

Conclusion: By modifying cognitive biases and enhancing mental processing, cognitive-based therapy can serve as an effective intervention for reducing emotional exhaustion and promoting the mental health of teachers working in special education settings.

Keywords: Compassion fatigue, cognitive-based therapy, autism teachers, emotional exhaustion.

1. Introduction

Teaching is widely recognized as one of the most demanding helping professions because it requires sustained emotional engagement, empathy, and psychological investment in students' academic, social, and emotional development. Among educational professionals, teachers working with students diagnosed with Autism Spectrum Disorder (ASD) face particularly complex challenges due to the unique cognitive, behavioral, communicative, and social characteristics associated with this condition. The educational needs of students with ASD often require continuous individualized support, intensive behavioral management, emotional regulation strategies, and close collaboration with families and multidisciplinary teams. These responsibilities place substantial psychological demands on teachers and increase their vulnerability to occupational stress and emotional exhaustion. Research has consistently shown that special education teachers experience higher levels of occupational strain compared to teachers in general education settings, largely because of the complexity of student needs and the emotional intensity of their work (Cormier & Wong, 2022). Behavioral difficulties frequently exhibited by students with ASD, including repetitive behaviors, communication impairments, emotional dysregulation, and challenging social interactions, have been identified as significant contributors to teacher stress and burnout (Hamana & Mori, 2019). Consequently, understanding and addressing the psychological well-being of teachers working with this population has become an important area of inquiry within educational and psychological research.

One psychological construct that has received increasing attention in helping professions is compassion fatigue. Figley conceptualized compassion fatigue as a state of physical, emotional, and psychological exhaustion resulting from prolonged exposure to the suffering and distress of others and the continuous provision of empathic care (Figley, 2002). Unlike general occupational stress, compassion fatigue emerges specifically from empathic engagement with individuals experiencing difficulties and can gradually undermine an individual's emotional resources and professional functioning. Compassion fatigue has been extensively studied among healthcare providers, psychotherapists, nurses, and social workers; however, evidence suggests that educators working with vulnerable populations are similarly susceptible to this phenomenon (Maytum et al., 2004; Ray et al., 2013). Teachers of students

with ASD often develop strong emotional bonds with their students and are regularly exposed to the frustrations, struggles, and challenges experienced by both students and their families. Over time, this sustained empathic involvement may contribute to emotional depletion, reduced professional satisfaction, and diminished psychological well-being.

Contemporary models of compassion fatigue emphasize that the phenomenon is multidimensional and closely linked to burnout, emotional distress, and reduced professional effectiveness. Although compassion fatigue and burnout are related constructs, they are not identical. Burnout is generally characterized by emotional exhaustion, depersonalization, and diminished personal accomplishment resulting from chronic occupational stress, whereas compassion fatigue is more specifically associated with secondary exposure to the suffering of others (Hofmeyer et al., 2020; Ruiz-Fernández et al., 2020). Nevertheless, substantial overlap exists between these constructs, and research has consistently demonstrated significant relationships among compassion fatigue, burnout, anxiety, depression, and other indicators of psychological distress (Koutsimani et al., 2019; Türkel et al., 2025). In educational settings, compassion fatigue may manifest through emotional withdrawal, reduced empathy toward students, diminished motivation, irritability, concentration difficulties, and decreased job satisfaction. Such consequences not only affect teachers themselves but may also negatively influence classroom climate, educational quality, and student outcomes.

Recent evidence indicates that compassion fatigue represents a significant occupational health concern across diverse caregiving and helping contexts. Studies conducted among family caregivers, nurses, mental health professionals, and educators have consistently demonstrated that compassion fatigue is associated with poorer psychological functioning and reduced quality of care (Mahzoun et al., 2025; Yang et al., 2025). In family caregivers, compassion fatigue has been linked to increased emotional burden and reduced well-being, particularly when social support systems are inadequate (Yang et al., 2025). Among healthcare professionals, elevated levels of compassion fatigue have been associated with reduced patient safety, impaired decision-making, and diminished professional performance (Mahzoun et al., 2025). Similarly, investigations involving mental health practitioners have demonstrated that compassion fatigue frequently co-occurs with burnout and psychological distress, highlighting the

need for preventive and therapeutic interventions (Ray et al., 2013). Given the emotionally demanding nature of special education, it is reasonable to expect that teachers working with students with ASD may experience similar psychological vulnerabilities.

The consequences of compassion fatigue extend beyond individual well-being and have important organizational implications. Studies have reported that compassion fatigue contributes to increased absenteeism, reduced occupational commitment, lower professional efficacy, and higher turnover intentions among helping professionals (Curran & Hill, 2017). In the field of special education, teacher retention represents a critical concern, as experienced teachers play a central role in ensuring continuity and quality of educational services for students with developmental disabilities. Compassion fatigue may therefore contribute indirectly to educational inequities by increasing workforce instability and reducing the availability of skilled educators. Research examining special education teachers has highlighted that prolonged exposure to emotionally demanding situations, coupled with limited psychological support, can substantially increase the likelihood of burnout and professional attrition (Cormier & Wong, 2022; Curran & Hill, 2017). Consequently, identifying effective interventions capable of reducing compassion fatigue among teachers constitutes an important priority for educational systems and mental health professionals alike.

Theoretical explanations of compassion fatigue suggest that cognitive processes play a central role in the development and maintenance of emotional exhaustion. Negative automatic thoughts, maladaptive cognitive schemas, catastrophizing, perfectionistic standards, and dysfunctional interpretations of occupational stressors can intensify emotional reactions and diminish coping capacity. Contemporary cognitive models propose that individuals experiencing compassion fatigue often develop maladaptive beliefs regarding responsibility, self-worth, and professional effectiveness, which contribute to chronic psychological strain (Hofmeyer et al., 2020; Sinclair et al., 2023). The empirical model of compassion proposed by Sinclair and colleagues emphasizes that compassion involves complex cognitive, emotional, relational, and behavioral processes that can be strengthened or impaired depending on an individual's psychological resources and coping mechanisms (Sinclair et al., 2023). From this perspective, interventions targeting maladaptive cognitions and promoting adaptive psychological processing may represent an effective strategy for reducing compassion fatigue.

Cognitive-based psychological interventions have demonstrated considerable effectiveness in addressing various forms of emotional distress, occupational stress, and burnout. Such interventions aim to identify and modify dysfunctional thought patterns, enhance cognitive flexibility, improve emotional regulation, and strengthen adaptive coping strategies. Cognitive-behavioral approaches have consistently been associated with reductions in anxiety, depression, stress, and occupational burnout across diverse populations. Among individuals exposed to chronic caregiving demands, cognitive interventions have shown particular promise because they address both emotional experiences and the cognitive interpretations that sustain psychological distress (Segal et al., 2013). Furthermore, the integration of mindfulness-based techniques into cognitive interventions has expanded their effectiveness by fostering present-moment awareness, nonjudgmental acceptance, and improved emotional regulation (Segal et al., 2013).

Empirical evidence increasingly supports the application of cognitive and compassion-focused interventions for reducing compassion fatigue. Lee and colleagues demonstrated that a cognitive-behavioral therapy-based program significantly reduced compassion fatigue while simultaneously enhancing compassion satisfaction among oncology nurses (Lee et al., 2021). Similarly, Onishowi reported that cognitive-behavioral group therapy effectively reduced stress and depressive symptoms among mothers of children with ASD, suggesting that cognitive interventions may be particularly beneficial for individuals facing ongoing caregiving-related stressors (Onishowi, 2023). Research conducted by Hasani and Rezaei further indicated that acceptance and commitment-based training significantly reduced both job burnout and compassion fatigue among teachers, highlighting the value of psychologically informed interventions in educational settings (Hasani & Rezaei, 2023). Moreover, compassion-based therapeutic approaches have been shown to improve resilience, self-compassion, and psychological functioning while reducing fatigue among professional caregivers (Rezavandi et al., 2025). Meta-analytic evidence has likewise demonstrated that interventions targeting compassion fatigue and burnout can produce meaningful improvements in psychological well-being, although additional research remains necessary to determine the most effective intervention strategies for specific occupational groups (Deriglazov et al., 2025).

Despite the growing literature on compassion fatigue, several important gaps remain. First, the majority of existing studies have focused on healthcare professionals, leaving

educational populations comparatively underrepresented. Second, although special education teachers face unique occupational demands, relatively few investigations have specifically examined compassion fatigue among teachers of students with ASD. Third, while interventions based on acceptance and commitment therapy, compassion-focused approaches, and mindfulness have demonstrated promising results, limited evidence is available regarding the effectiveness of structured cognitive-based psychological interventions specifically designed to address compassion fatigue among special education teachers (Hasani & Rezaei, 2023; Rezavandi et al., 2025). Given the critical role of teachers in supporting students with ASD and the substantial emotional demands associated with this work, evaluating targeted psychological interventions may contribute to both teacher well-being and educational effectiveness.

Considering the theoretical importance of cognitive processes in compassion fatigue, the documented psychological challenges faced by teachers of students with ASD, and the promising outcomes associated with cognitive-based interventions in related populations, further empirical investigation is warranted. Therefore, the present study aimed to determine the effectiveness of a cognitive-based psychological intervention in reducing compassion fatigue among female teachers of students with Autism Spectrum Disorder.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a quasi-experimental design using a pretest–posttest format with a control group and a two-month follow-up assessment. The target population consisted of all female teachers working in elementary schools serving students with Autism Spectrum Disorder (ASD) in Qazvin, Iran, during the 2025–2026 academic year. Participants were selected through purposive sampling based on predefined inclusion and exclusion criteria. The inclusion criteria included having at least three years of professional experience working with children diagnosed with ASD, possessing a bachelor's degree or higher, being between 25 and 55 years of age, and not receiving any concurrent psychological treatment during the study period. Participants who were absent from more than one intervention session were excluded from the study. A total of 34 eligible teachers were recruited and randomly assigned to either the experimental group ($n = 17$) or the control group ($n = 17$). The required sample size was determined using

G*Power software based on an anticipated effect size of 0.40, a statistical power of 0.80, and a significance level of 0.05.

2.2. Measures

Compassion Fatigue Self-Test (CFST). Compassion fatigue was assessed using the Compassion Fatigue Self-Test (CFST). The original version of this instrument was developed by Figley (1995), and an expanded version was later introduced by Figley and Stamm (1996). The scale was designed to distinguish and measure two primary constructs: compassion fatigue, conceptualized as secondary traumatic stress resulting from empathic engagement with the suffering of clients, and burnout, conceptualized as a state of generalized emotional exhaustion and hopelessness associated with professional responsibilities. The instrument uses a five-point Likert-type response format ranging from 1 (never/rarely) to 5 (very often/always). Higher scores indicate greater symptom severity and increased vulnerability to compassion fatigue and related psychological distress. Previous psychometric investigations have demonstrated strong internal consistency for the scale, with Cronbach's alpha coefficients ranging from 0.86 to 0.94 across its dimensions, supporting its reliability and suitability for use among helping professionals and educators.

2.3. Intervention

The experimental group participated in a cognitive-based psychological intervention delivered across ten 90-minute sessions conducted twice weekly. The intervention was developed according to the cognitive-behavioral framework proposed by Anthony (2007) and mindfulness-based principles introduced by Kabat-Zinn (1992). The program began with participant orientation, psychoeducation regarding stress responses, maladaptive emotional cycles, and the cognitive-behavioral model linking thoughts, emotions, and behaviors. Subsequent sessions focused on identifying automatic negative thoughts, recognizing cognitive distortions, cognitive restructuring, positive self-talk, guided imagery, diaphragmatic breathing, and progressive muscle relaxation techniques. Participants were also trained in adaptive coping strategies, positive cognitive reframing, anger management, assertive communication, and problem-solving skills for managing interpersonal and occupational challenges. Mindfulness-based exercises, including body scanning, breath awareness, nonjudgmental

observation of thoughts, and meditation practices, were incorporated to enhance emotional regulation and present-moment awareness. Homework assignments and practical exercises were provided throughout the intervention to facilitate skill acquisition and generalization. The final session included a review of acquired skills, consolidation of learning outcomes, administration of the posttest assessment, and acknowledgment of participants' contributions.

2.4. Data Analysis

Following the acquisition of ethical approval and coordination with the Special Education Department, baseline assessments were administered to both groups. Participants in the experimental group subsequently received the cognitive-based psychological intervention, whereas the control group did not receive any intervention during the study period. Posttest assessments were conducted immediately after the completion of the intervention, and follow-up assessments were administered two months later. Data were analyzed using SPSS version 25. Descriptive statistics, including means and standard

deviations, were calculated for all study variables. Inferential analyses included the Shapiro–Wilk test to assess the normality of data distribution, Levene's test to evaluate the homogeneity of variances, and Box's M test to examine the equality of covariance matrices. Repeated-measures analysis of variance and covariance analyses were employed to evaluate the effectiveness of the intervention across the three assessment points. Statistical significance was established at $p < .05$ for all analyses.

3. Findings and Results

The demographic characteristics of the participants indicated that the mean age of teachers in the experimental group was 34.5 years ($SD = 4.2$), while the mean age in the control group was 35.2 years ($SD = 3.8$). Regarding professional experience, the mean work experience was 8.5 years for participants in the experimental group and 9.1 years for those in the control group. Independent-samples t-tests revealed no statistically significant differences between the two groups in terms of age, educational background, or years of professional experience ($p > .05$), indicating that the groups were comparable at baseline.

Table 1

Means and Standard Deviations of Compassion Fatigue Scores by Group and Measurement Stage

Group	Measurement Stage	n	Mean	SD
Experimental	Pretest	17	38.45	4.12
Experimental	Posttest	17	26.30	3.85
Experimental	Follow-up	17	27.15	4.01
Control	Pretest	17	37.90	4.45
Control	Posttest	17	38.10	4.20
Control	Follow-up	17	38.55	4.35

As shown in Table 1, the experimental group demonstrated a substantial reduction in compassion fatigue scores from pretest ($M = 38.45$, $SD = 4.12$) to posttest ($M = 26.30$, $SD = 3.85$), and this improvement was largely maintained at the two-month follow-up assessment ($M = 27.15$, $SD = 4.01$). In contrast, participants in the control group exhibited minimal fluctuations across the three assessment periods, with mean scores remaining relatively stable. These descriptive findings provide preliminary evidence supporting the effectiveness of the cognitive-based psychological intervention in reducing compassion fatigue among female teachers of students with Autism Spectrum Disorder.

Before conducting the inferential analyses, the assumptions underlying repeated-measures analysis of

variance were examined. The Shapiro–Wilk test indicated that compassion fatigue scores were normally distributed in both groups across all measurement occasions, with all significance values exceeding .05. Levene's test further confirmed the homogeneity of variances at pretest ($F = 0.215$, $p = .64$), posttest ($F = 3.045$, $p = .09$), and follow-up ($F = 2.880$, $p = .10$). In addition, Box's M test supported the equality of covariance matrices across groups, and the assumption of homogeneity of regression slopes was satisfied. Mauchly's test of sphericity was non-significant ($W = .865$, $\chi^2 = 4.821$, $df = 2$, $p = .09$), indicating that the assumption of sphericity had not been violated and that standard repeated-measures ANOVA procedures could be applied.

Table 2
Results of Repeated-Measures Analysis of Variance for Compassion Fatigue

Source of Variation	SS	df	MS	F	p	η^2
Within-Subjects Effects						
Time	456.30	2	228.15	15.80	< .001	.33
Time $\times$ Group	389.70	2	194.85	12.45	< .001	.28
Error	980.40	64	15.31	—	—	—
Between-Subjects Effects						
Group	1845.20	1	1845.20	29.45	< .001	.48
Error	2004.10	32	62.63	—	—	—

The results presented in Table 2 revealed a significant main effect of group, $F(1, 32) = 29.45$, $p < .001$, $\eta^2 = .48$, indicating a significant overall difference in compassion fatigue scores between the experimental and control groups. The effect size suggests that approximately 48% of the variance in compassion fatigue scores was attributable to group membership. A significant main effect of time was also observed, $F(2, 64) = 15.80$, $p < .001$, $\eta^2 = .33$, demonstrating that compassion fatigue levels changed

significantly across the three assessment points. More importantly, the interaction effect between time and group was statistically significant, $F(2, 64) = 12.45$, $p < .001$, $\eta^2 = .28$, indicating that the pattern of change over time differed between the experimental and control groups. This interaction suggests that the reduction in compassion fatigue was specifically associated with participation in the cognitive-based psychological intervention.

Table 3
Bonferroni Pairwise Comparisons for Compassion Fatigue in the Experimental Group

Group	Comparison	Mean Difference	Standard Error	p
Experimental	Pretest – Posttest	12.15	1.12	< .001
Experimental	Pretest – Follow-up	11.30	1.18	< .001
Experimental	Posttest – Follow-up	-0.85	1.05	1.000

The Bonferroni post hoc comparisons demonstrated significant differences between pretest and posttest scores ($MD = 12.15$, $p < .001$) and between pretest and follow-up scores ($MD = 11.30$, $p < .001$) in the experimental group, indicating a substantial reduction in compassion fatigue following the intervention. However, the difference between posttest and follow-up assessments was not statistically significant ($MD = -0.85$, $p = 1.000$), suggesting that the therapeutic gains achieved at the end of treatment were maintained over the two-month follow-up period. In contrast, no significant differences were observed across measurement occasions in the control group. These findings provide strong evidence for both the effectiveness and stability of the cognitive-based psychological intervention in reducing compassion fatigue among female teachers working with students diagnosed with Autism Spectrum Disorder.

4. Discussion and Conclusion

The present study aimed to investigate the effectiveness of a cognitive-based psychological intervention in reducing compassion fatigue among female teachers of students with Autism Spectrum Disorder (ASD). The findings demonstrated that participation in the intervention resulted in a significant reduction in compassion fatigue scores among teachers in the experimental group compared with those in the control group. Furthermore, the results of the follow-up assessment indicated that the observed improvements were maintained over a two-month period, suggesting the stability and durability of the intervention effects. The significant interaction between time and group confirmed that the pattern of change in compassion fatigue differed substantially between participants who received the intervention and those who did not. These findings provide empirical support for the effectiveness of cognitive-based

psychological interventions in promoting emotional well-being among teachers working in highly demanding educational environments.

The reduction in compassion fatigue observed in the experimental group can be understood through cognitive theories of emotional regulation and stress management. Compassion fatigue is often maintained by maladaptive cognitive processes such as catastrophizing, excessive responsibility beliefs, negative self-appraisals, perfectionistic expectations, and persistent rumination regarding the suffering of others. Teachers of students with ASD frequently encounter emotionally challenging situations, including managing behavioral difficulties, supporting families, addressing academic needs, and coping with slow or unpredictable developmental progress. These experiences can foster maladaptive cognitive interpretations that amplify emotional distress and gradually deplete psychological resources. The cognitive-based intervention implemented in the present study targeted these dysfunctional thought patterns through cognitive restructuring, adaptive self-talk, problem-solving skills, relaxation training, and mindfulness-oriented exercises. By helping participants identify and challenge irrational beliefs, the intervention likely enhanced psychological flexibility and reduced the emotional burden associated with caregiving and teaching responsibilities. These mechanisms are consistent with cognitive models emphasizing the role of thought patterns in the development and maintenance of occupational stress and emotional exhaustion (Segal et al., 2013).

The findings are consistent with previous research demonstrating the effectiveness of cognitive and cognitive-behavioral interventions in reducing compassion fatigue and related psychological difficulties. In particular, Lee and colleagues reported that a cognitive-behavioral therapy-based program significantly reduced compassion fatigue while increasing compassion satisfaction among oncology nurses (Lee et al., 2021). Although conducted within a healthcare setting, that study highlighted the capacity of cognitive interventions to alter maladaptive emotional and cognitive responses to chronic exposure to human suffering. Similar processes may explain the outcomes observed among teachers in the current study. Both nurses and special education teachers engage in intensive helping relationships that require sustained emotional involvement, making them vulnerable to compassion fatigue. Therefore, interventions that enhance cognitive coping strategies and emotional

regulation appear effective across different helping professions.

The present findings also align with the results reported by Onishowi, who found that cognitive-behavioral group therapy significantly reduced stress and depressive symptoms among mothers of children with ASD (Onishowi, 2023). Although the target population differed from that of the present study, both groups experience chronic exposure to the demands associated with caring for children with ASD. The success of cognitive-behavioral approaches in both contexts suggests that modifying dysfunctional cognitions and strengthening adaptive coping skills can mitigate the psychological burden associated with long-term caregiving roles. Teachers and parents frequently encounter uncertainty, emotional strain, and high expectations regarding children's development and behavior. Consequently, cognitive interventions may function by reducing negative interpretations of stressful experiences and promoting more balanced appraisals of challenging situations.

The results are also supported by the findings of Hasani and Rezaei, who demonstrated that acceptance and commitment-based training effectively reduced compassion fatigue and job burnout among teachers (Hasani & Rezaei, 2023). Although acceptance and commitment therapy differs conceptually from traditional cognitive interventions, both approaches emphasize psychological flexibility, awareness of internal experiences, and adaptive responses to stress. The convergence of findings across these intervention models suggests that compassion fatigue among teachers may be particularly responsive to psychological interventions that target cognitive and emotional processes. The present study extends this literature by demonstrating that a structured cognitive-based intervention can produce meaningful and sustained reductions in compassion fatigue among teachers working specifically with students diagnosed with ASD.

Another important aspect of the findings concerns the maintenance of treatment gains during the follow-up period. The absence of a significant difference between posttest and follow-up scores suggests that participants retained the skills and coping strategies acquired during the intervention. This stability is particularly important because compassion fatigue is often regarded as a chronic and recurring occupational challenge. The durability of intervention effects may be attributable to the practical nature of the techniques taught during treatment, including cognitive restructuring, positive self-talk, mindfulness exercises, relaxation training, and adaptive problem-solving. These

skills can continue to be applied beyond the formal intervention period, enabling participants to manage future stressors more effectively. Similar conclusions have been reported in studies emphasizing the long-term benefits of cognitive and mindfulness-based interventions for emotional well-being and stress reduction (Lee et al., 2021; Segal et al., 2013).

The findings may also be interpreted in light of the broader literature examining compassion fatigue, burnout, and emotional exhaustion in helping professions. Compassion fatigue has repeatedly been associated with adverse psychological outcomes, including anxiety, depression, emotional exhaustion, and diminished professional satisfaction (Koutsimani et al., 2019; Ruiz-Fernández et al., 2020). Research conducted among nurses, mental health professionals, and caregivers has demonstrated that individuals who experience high levels of compassion fatigue are more likely to report psychological distress and impaired occupational functioning (Mahzoun et al., 2025; Maytum et al., 2004; Ray et al., 2013). The current findings suggest that interventions targeting compassion fatigue may simultaneously contribute to broader improvements in psychological health. By reducing emotional exhaustion and maladaptive cognitive reactions, cognitive-based interventions may help protect teachers from the cascading negative consequences often associated with prolonged occupational stress.

The results can further be understood through contemporary conceptualizations of compassion. Sinclair and colleagues proposed that compassion involves a dynamic interaction of cognitive, emotional, behavioral, and relational processes (Sinclair et al., 2023). According to this perspective, compassion fatigue develops when individuals become overwhelmed by the emotional demands associated with caring for others and lack sufficient psychological resources to maintain healthy engagement. Cognitive-based interventions may strengthen these psychological resources by enhancing self-awareness, emotional regulation, and adaptive meaning-making. Consequently, teachers become better equipped to provide compassionate support without experiencing excessive emotional depletion. This interpretation is consistent with emerging evidence emphasizing the importance of self-care, resilience, and adaptive cognitive functioning in preventing compassion fatigue (Hofmeyer et al., 2020).

Another notable implication of the present findings relates to occupational sustainability and teacher retention. Previous studies have identified compassion fatigue as an

important predictor of burnout, job dissatisfaction, and turnover intentions among educators and helping professionals (Cormier & Wong, 2022; Curran & Hill, 2017). Teachers working with students who have complex developmental needs often face elevated levels of stress, emotional labor, and professional responsibility. If left unaddressed, compassion fatigue may contribute to diminished teaching effectiveness and increased workforce attrition. The significant reduction in compassion fatigue observed in the present study suggests that cognitive-based interventions may serve as valuable preventive tools within educational systems. By supporting teachers' psychological well-being, such interventions may indirectly contribute to improved educational quality and greater organizational stability.

The current findings are also compatible with evidence demonstrating the effectiveness of compassion-focused and resilience-enhancing interventions. Rezavandi and colleagues reported that compassion-based therapy reduced fatigue while increasing resilience and self-compassion among elderly home nurses (Rezavandi et al., 2025). Although the intervention approach differed from the one used in the present study, both studies suggest that psychological interventions can successfully address compassion fatigue by strengthening internal coping resources. Similarly, recent meta-analytic evidence indicates that interventions targeting compassion fatigue and burnout can produce meaningful improvements across helping professions, particularly when they address both cognitive and emotional dimensions of stress (Deriglazov et al., 2025). The current study contributes to this growing body of evidence by extending these findings to special education teachers.

Furthermore, the findings support theoretical and empirical research highlighting the interconnected nature of compassion fatigue, burnout, and emotional exhaustion. Studies have consistently shown that compassion fatigue frequently coexists with burnout and psychological distress (Türkel et al., 2025; Yang et al., 2025). In the educational context, teachers who experience chronic emotional demands may gradually develop feelings of exhaustion, reduced professional efficacy, and emotional withdrawal. By reducing compassion fatigue, cognitive-based interventions may interrupt this process and promote healthier professional engagement. The substantial effect size observed in the present study underscores the practical significance of the intervention and suggests that cognitive-based psychological programs may represent a valuable

resource for educational institutions seeking to enhance teacher well-being.

Several limitations should be considered when interpreting the findings of the present study. First, the sample size was relatively small and consisted exclusively of female teachers working with students with Autism Spectrum Disorder in a single city, which may limit the generalizability of the results to other populations and educational settings. Second, the study relied on self-report measures that may be influenced by social desirability bias and subjective perceptions. Third, the follow-up period was limited to two months, preventing conclusions regarding the long-term sustainability of intervention effects. Finally, the study did not assess additional psychological variables such as resilience, self-compassion, job satisfaction, or perceived social support that may help explain the mechanisms underlying reductions in compassion fatigue.

Future studies should examine the effectiveness of cognitive-based psychological interventions using larger and more diverse samples drawn from different regions and educational contexts. Researchers may also compare the relative effectiveness of cognitive-based interventions with other therapeutic approaches, including acceptance and commitment therapy, compassion-focused therapy, mindfulness-based interventions, and resilience training programs. Longitudinal studies with extended follow-up periods are needed to determine the long-term maintenance of treatment effects. Additionally, future research should investigate potential mediating and moderating variables, such as emotional intelligence, coping strategies, self-compassion, organizational support, and professional experience, in order to better understand the mechanisms through which interventions reduce compassion fatigue.

Educational administrators and policymakers should consider incorporating structured psychological support programs into professional development initiatives for teachers working in special education settings. Schools may benefit from providing regular workshops focused on stress management, cognitive coping skills, emotional regulation, mindfulness practices, and self-care strategies. Psychological screening procedures could also be implemented to identify teachers at risk for compassion fatigue and emotional exhaustion. Establishing supportive workplace environments, promoting peer support networks, and facilitating access to mental health services may further enhance teacher well-being. Integrating evidence-based cognitive interventions into educational systems has the potential to improve not only teachers' psychological health

but also the quality and sustainability of educational services provided to students with developmental disabilities.

Authors' Contributions

The present article was derived from the doctoral dissertation of the first author. The first author was responsible for data collection, data analysis, and manuscript preparation. The research was conducted from inception to completion under the supervision of Dr. Hossein Janaabadi, Professor at the University of Sistan and Baluchestan, and Dr. Elah Nazar Ali Soufi, Assistant Professor at Farhangian University, Zahedan.

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 interview and participated in the research with informed consent. This study was approved by the Research Ethics Committee of the Islamic Azad University, Zahedan Branch, under ethics approval code IR.IAU.ZAH.REC.1404.111.

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