





Effectiveness of Compassion-Focused Therapy on Occupational Stress and Distress Tolerance in Emergency Department Nurses

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Article Info

Article type:

Original Research

Section:

Occupational and Organizational
Counseling

How to cite this article:

Shaghghi, S., Jahani, J., Ghorbanpour Ahmadsargourabi, F., & Mostafavi, E. (2026). Effectiveness of Compassion-Focused Therapy on Occupational Stress and Distress Tolerance in Emergency Department Nurses. *KMAN Counseling and Psychology Nexus*, 4, 1-7.

<http://doi.org/10.61838/kman.ooc.psyxexus.5144>



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ABSTRACT

The present study aimed to investigate the effectiveness of Compassion-Focused Therapy on occupational stress and distress tolerance among emergency department nurses. The research employed a quasi-experimental pretest-posttest design with a control group. The statistical population comprised all emergency department nurses working in Rasht county hospitals in 2025. Using convenience sampling, 40 nurses were selected and randomly assigned (via lottery) to the experimental group (20 participants) and the control group (20 participants). Data collection instruments included the Emotional Distress Tolerance Questionnaire by Simmons and Gaher (2005) and the Occupational Stress Questionnaire by Krishna and Srivastava (1991). The experimental group received 8 weekly sessions, twice a week (2 hours each) of Compassion-Focused Therapy by Gilbert (2009). Data were analyzed using multivariate analysis of covariance (MANOVA) via SPSS-27. Results indicated a significant reduction in occupational stress and a significant increase in distress tolerance in the experimental group compared to the control group. Compassion-Focused Therapy was effective in reducing occupational stress and enhancing distress tolerance among emergency department nurses.

Keywords: occupational stress, distress tolerance, compassion-focused therapy, emergency department nurses.

1. Introduction

Emergency department (ED) nurses routinely encounter intense and complex demands throughout their daily work, which increasingly highlight psychological health challenges (Zhou et al., 2025). Due to the high-pressure, unpredictable, and challenging nature of ED environments, nurses are significantly exposed to elevated levels of occupational stress and compassion fatigue (Slusarz et al., 2022; Wang et al., 2020). Occupational stress, as one of the fundamental challenges in nursing, primarily stems from high workloads, continuous exposure to critical situations, intense emotional demands, and inefficient organizational dynamics (Dev et al., 2020). These conditions not only negatively impact nurses' psychological well-being but may also lead to reduced clinical decision-making quality, diminished professional performance, and weakened capacity to effectively cope with psychological pressures. In nursing, stress is considered an inherent characteristic of the profession, with nurses frequently operating in highly emotionally charged situations. Nursing is regarded as one of the most stressful occupations (Slusarz et al., 2022; Wang et al., 2020; Wing et al., 2015; Wong & Laschinger, 2015).

Nurses constitute the largest segment of the healthcare workforce globally (Rezavandi et al., 2025). The American Center for Occupational Health and Safety identifies nursing as one of the top 40 most stressful professions and likely the most stressful within the healthcare sector (Dev et al., 2020). Kanowa (2020) demonstrated that nursing is exposed to more stressors compared to other occupations. It has been reported that nurses experience anxiety and stress related to unintended infection from others and providing care for infectious patients. Additionally, work-related conditions such as irregular and full-time schedules, insufficient personal protective equipment, and mandatory additional workloads contribute to occupational stress (Abdollahi et al., 2021; Adriaenssens et al., 2015; Dev et al., 2020; Mohammadi et al., 2020; Rezavandi et al., 2025; Slusarz et al., 2022; Wang et al., 2020; Wing et al., 2015; Wong & Laschinger, 2015; Zhou et al., 2025). Today, occupational stress is recognized as one of the most significant organizational maladies, negatively affecting both physical and mental health while producing adverse outcomes such as distress and turmoil for individuals. It is the most prominent stressor in nursing, leading to reduced quality and quantity of services, which ultimately has detrimental effects on public health (Wang et al., 2020; Wing et al., 2015).

Distress tolerance refers to the ability to experience and endure psychologically negative situations. Distress may arise from physiological and psychological processes but is typically manifested as an emotional state characterized by a desire to react in order to escape the emotional experience (Kutsal et al., 2025; Mattar et al., 2025). Given the numerous adverse effects of anxiolytic and antidepressant medications and their negative impacts on nurses due to limited efficacy, non-pharmacological approaches should be prioritized to alleviate anxiety, depression, and stress in patients (Ensafdar et al., 2022; Falavarjani & Yeh, 2019; Sedighi Arfaee et al., 2021). Among the applicable interventions for improving such patients' conditions are psychological therapies. Recently, third-wave psychological therapies have gained prominence over other therapeutic approaches. Given the high prevalence of psychological health issues among nurses, particularly in high-stress departments such as the ED, compassion-focused interventions have increasingly gained importance. These interventions, including mindfulness-based and self-compassion training programs, have demonstrated significant reductions in occupational stress, emotional exhaustion, and compassion fatigue among healthcare workers (Wang et al., 2020; Wing et al., 2015; Zhou et al., 2025).

In recent years, self-compassion has gained increasing attention as an effective psychological approach to assist nurses in managing stress and its emotional consequences (Rezavandi et al., 2025). Self-compassion comprises three core components: self-kindness (compassionate and supportive treatment toward oneself), common humanity (understanding that suffering and imperfection are part of shared human experience), and mindfulness (balanced, non-judgmental awareness of internal experiences). This construct refers to an individual's capacity to accept themselves, understand negative emotions, and respond healthily to challenging circumstances (Rezavandi et al., 2025).

Furthermore, self-compassion encompasses self-kindness, support, and benevolence toward oneself, acceptance of one's suffering, and adopting a non-judgmental, compassionate attitude toward personal failures, recognizing mistakes as part of shared human experience (Dev et al., 2020). Compassionate behavior activates brain regions such as the prefrontal cortex, anterior cingulate cortex, middle prefrontal cortex, insula, and surrounding gray matter, accompanied by changes in autonomic activation involving neurotransmitters such as oxytocin and

vasopressin (Dev et al., 2020; Rahmati et al., 2021; Rezavandi et al., 2025).

Self-compassion training or self-kindness enhances resilience and, consequently, positive adaptive capacity to stress. Self-compassion activates the self-soothing system, reducing fear and avoidance in individuals. Compassion refers to supporting oneself or others during experiences of suffering or pain, which may stem from personal mistakes, inadequacies, or external life challenges. Individuals with self-compassion possess unique characteristics such as kindness, common humanity, mindfulness, reduced self-judgment, and decreased isolation (Dev et al., 2020; Rahmati et al., 2021; Rezavandi et al., 2025).

Moreover, studies have supported inverse relationships between self-compassion and occupational stress (Dev et al., 2020) and stress (Abdollahi et al., 2021). Similarly, a cross-sectional study of nurses in a New Zealand hospital demonstrated that higher levels of self-compassion were associated with lower levels of work-related stress and occupational burnout, as well as higher quality of life (Abdollahi et al., 2021). Therefore, based on the aforementioned, the primary research question of this study is whether compassion-focused therapy is effective in reducing occupational stress and enhancing distress tolerance among emergency department nurses.

2. Methods and Materials

2.1. Study Design and Participants

This study was designed as an applied research with a quasi-experimental pretest-posttest design with a control group. The statistical population comprised all emergency department nurses working in Rasht county hospitals in 2025. Using convenience sampling, 40 nurses (accounting for potential attrition) were selected based on inclusion and exclusion criteria, specifically those who scored above 50 on occupational stress and below 30 on distress tolerance in the pretest, and were randomly assigned (via lottery) to the experimental group (20 participants) and the control group (20 participants).

Inclusion Criteria

- Full-time official or contractual ED nurses
- Minimum of six months continuous work experience in the ED
- Age range of 20 to 55 years

Exclusion Criteria

- Active diagnosis of severe psychiatric disorders (psychosis, bipolar disorder, substance abuse)

- Participation in any supportive or psychological therapy within the past three months or during the study
- Long-term leave (>1 month) or significant shift changes during the intervention
- Absence from more than two therapy sessions

The procedure involved the following steps: Both the experimental and control groups completed the aforementioned questionnaires. The experimental group received eight weekly sessions, twice a week (2 hours each), at the Rasht hospital under the supervision of a clinical psychologist (the current researcher). No intervention was applied to the control group, and a non-therapeutic friendly meeting was conducted with this group once a week.

2.2. Measures

Krishna's Occupational Stress Questionnaire: The Occupational Stress Questionnaire was developed by Krishna and Srivastava and translated into Persian by Diniy et al. (2009). This 25-item questionnaire has five subscales: 1) Excessive responsibility (items 1–5), 2) Responsibility for others (items 6–10), 3) Excessive involvement (items 11–15), 4) Decision-making affecting others (items 16–20), and 5) Self-perception as not fully competent or adequate (items 21–25). The questionnaire uses a 5-point Likert scale (strongly disagree = 5 to strongly agree = 1). The total score ranges from 25 to 125, with lower scores indicating less stress and higher scores indicating greater stress. Krishna and Srivastava reported a split-half reliability coefficient of 0.84 in a sample of 200 participants and a test-retest reliability of 0.93 in a sample of 100 participants. Concurrent validity was established with a correlation coefficient of 0.257 with job satisfaction and 0.228 with psychological well-being in a study involving 75 participants. The reliability and validity of this questionnaire in Diniy et al.'s (2012) study were 0.93 and 0.84, respectively.

Emotional Distress Tolerance Questionnaire (DTS): This self-report measure of distress tolerance was developed by Simmons and Gaher (2005). The scale consists of 15 items and four subscales: 1) Tolerance of distress (items 5, 3, 1), 2) Absorption by negative emotions (items 15, 4, 2), 3) Cognitive appraisal of distress (items 12, 11, 10, 9, 7, 6), and 4) Regulation of efforts to alleviate distress (items 8, 13, 14). Scoring uses a 5-point Likert scale (strongly agree = 1 to strongly disagree = 5), with item 6 scored in reverse. Higher scores indicate greater distress tolerance. In Simmons and Gaher's (2005) study, Cronbach's alpha coefficients for the

subscales were 0.72, 0.82, 0.78, and 0.70, respectively, and 0.82 for the total scale. Intra-class correlation after six months was 0.61. The scale demonstrated good convergent validity and criterion validity. It showed a positive correlation with acceptance of emotional experiences and negative correlations with alcohol and marijuana use for coping purposes. In Andami Khosh’s (2013) study, the total scale Cronbach’s alpha was 0.86. Azizi, Mirzai, and Shams (2009) reported a Cronbach’s alpha of 0.67 and test-retest reliability of 0.79 for this questionnaire.

2.3. Intervention

The intervention protocol consisted of eight weekly, 2-hour sessions of compassion-focused therapy (CFT), adapted from Gilbert’s (2009) manual, designed to enhance self-compassion among emergency department nurses. Each session systematically addressed core components of self-compassion—self-kindness, common humanity, and mindfulness—through structured activities including guided breathing exercises (Session 1), cognitive restructuring of self-critical thoughts (Session 2), non-judgmental

acceptance of errors (Session 3), self-worth affirmation practices (Session 4), positive imagery and compassion-focused visualization (Session 5), cultivation of compassionate self-talk (Session 6), internal dialogue exercises resolving conflicting self-aspects (Session 7), and compassionate self-letter writing for integration (Session 8), with pre- and post-assessment administered at baseline and conclusion.

2.4. Data analysis

To compare the results between the experimental and control groups, multivariate analysis of covariance (MANOVA) was employed before and after the intervention, with the results analyzed using SPSS-27.

3. Findings and Results

The demographic characteristics of participants, including gender, marital status, age, education level, and work experience, were examined. Table 1 presents the frequency distribution of participants based on these variables.

Table 1

Frequency distribution of participant characteristics by age, marital status, gender, education, and work experience

Gender	Marital Status	Age	Education	Work Experience
Female (75%)	Single (38%)	20–30 years (30%)	Bachelor’s (86%)	1–5 years (43%)
Male (25%)	Married (42%)	30–40 years (51%)	Master’s (14%)	5–10 years (32%)
	Divorced (16%)	40 years and older (19%)		10–15 years (17%)
	Widowed (4%)			15 years and older (8%)

As shown in Table 1, the most prevalent characteristics among participants were female gender (75%), married status (42%), age 30–40 years (51%), bachelor’s degree (86%), and 1–5 years of work experience (43%).

Table 2 presents the mean, standard deviation, maximum, and minimum values for each variable (occupational stress and distress tolerance) at pretest and posttest.

Table 2

Descriptive statistics for occupational stress and distress tolerance before and after compassion-focused therapy

Variable	Scale	Group	Statistic	Pretest	Posttest
Occupational Stress		Control	Mean	84.50	84.47
			Standard Deviation	10.30	10.50
			Maximum	114	115
		Experimental	Minimum	60	59
			Mean	96.40	84.27
			Standard Deviation	13.43	9.11
Distress Tolerance		Control	Maximum	114	114
			Minimum	61	53
			Mean	28.53	28.53
		Experimental	Standard Deviation	3.14	3.14
			Maximum	45	45
			Minimum		

Experimental	Minimum	18	18
	Mean	38.43	32.21
	Standard Deviation	8.34	6.82
	Maximum	58	58
	Minimum	32	21

As indicated in Table 2, for both occupational stress and distress tolerance, the mean score in the experimental group decreased at posttest compared to pretest. However, no significant change was observed in the control group from pretest to posttest.

The Shapiro-Wilk test results indicated that the distributions of occupational stress (pretest = .710, posttest = .430) and distress tolerance (pretest = .536, posttest = .550) were normal. Additionally, Levene’s test confirmed homogeneity of variances for occupational stress (pretest = .720, posttest = .598) and distress tolerance (pretest = .143, posttest = .620). Regression coefficients homogeneity

results also showed non-significant values (occupational stress: .026–.128; distress tolerance: .086–.087), all exceeding .05. Thus, all assumptions for conducting MANCOVA were satisfied.

The primary hypothesis of the study, concerning the effectiveness of compassion-focused therapy on occupational stress and distress tolerance among emergency department nurses, was tested. Multivariate analysis of covariance (MANCOVA) was employed to test the primary hypothesis. Table 3 presents the between-subjects effects results, indicating which variable (occupational stress or distress tolerance) exhibited significant differences.

Table 3

Between-subjects effects results for the primary hypothesis

Variable	Source	Sum of Squares	df	Mean Square	F	Sig.
Occupational Stress	Pretest	24.950	1	24.950	2.928	.099
	Group	375.931	1	375.931	6.230	.020
	Error	1511.009	25	60.440		
Distress Tolerance	Pretest	1.324	1	1.324	.156	.696
	Group	682.329	1	682.329	79.473	.001
	Error	214.372	25	8.575		

From Table 3, it is evident that after controlling for pretest effects, significant differences existed between the two groups for both occupational stress and distress tolerance. Specifically, a significant difference was found between the experimental and control groups for occupational stress (p = .020, F = 6.230) and for distress tolerance (p = .001, F = 79.473).

Given the significance of the therapy effect on both variables after controlling for pretest, the primary hypothesis was confirmed. With 99% confidence, it can be concluded that compassion-focused therapy significantly reduced occupational stress and enhanced distress tolerance among emergency department nurses.

4. Discussion

This study examined the impact of compassion-focused therapy on occupational stress and distress tolerance among emergency department nurses. Results indicated significant differences between groups after controlling for pretest effects. Specifically, a significant difference was observed

between the experimental and control groups for distress tolerance (p = .001, F = 79.473) and occupational stress (p = .001, F = 15.604). Thus, compassion-focused therapy effectively reduced occupational stress and increased distress tolerance among nurses.

These findings align with prior studies (Abdollahi et al., 2021; Dev et al., 2020; Farzan, 2024; Neff, 2003; Rahmati et al., 2021; Rezavandi et al., 2025; Wang et al., 2020).

Interpretation of these results suggests that compassion-focused therapy sessions emphasize cognitive restructuring through self-compassion to reduce occupational stress. Occupational stress often stems from rigid self-evaluations of performance and fear of judgment or failure. Compassion-focused therapy directly addresses "self-punishment," a key predictor of occupational burnout, by fostering self-kindness (compassionate and accepting responses to failures and shortcomings). When nurses view unavoidable emergency department errors as part of shared human experience and respond with self-kindness rather than self-punishment, cognitive and emotional stress burdens decrease. This

supportive perspective enhances psychological resilience and prevents the internalization of negative work experiences as chronic stressors, consistent with Neff (2003) and broader research, particularly Hsiao (2025), on psychological support for healthcare workers.

The current findings, demonstrating significant increases in distress tolerance, strongly align with the compassion-based emotional regulation theory. Emergency departments are replete with stimuli inducing high levels of emotional arousal and distress. Compassion-focused therapy, emphasizing self-kindness and self-compassion, teaches nurses to experience intense emotions and negative thoughts associated with stress within a context of internal acceptance and support, rather than avoidance or impulsive reactions. This active acceptance, as opposed to suppression, prevents acute experiences from becoming chronic stressors and enhances individuals' capacity to "hold" and effectively manage severe distress (a core requirement of emergency nursing). This mechanism aligns with Neff's (2023) findings on compassion's role in enhancing adaptive coping capacity. Compassion is defined as the quality of being in touch with one's own suffering and injuries and feeling a desire to help alleviate one's own problems, accompanied by positive psychological components such as friendliness, kindness, and joy. Self-compassion specifically refers to a kind and accepting response toward oneself in the face of failures and shortcomings (Rezavandi et al., 2025; Wang et al., 2020). This trait enhances adaptive coping behaviors by reducing self-punishment, increasing emotional acceptance, and strengthening feelings of self-worth, while preventing engagement in risky behaviors.

5. Conclusion

Key components of self-compassion, such as self-kindness, common humanity, and mindfulness, serve protective roles; self-compassion as a protective mechanism can reduce negative emotions and help individuals view failures and challenges as opportunities for growth and improvement rather than self-punishment. Self-compassion promotes psychological well-being, enabling individuals to better tolerate and manage psychological and emotional pressures. Those who treat themselves more kindly are better equipped to handle emotional stressors. Individuals experiencing self-compassion are more likely to seek healthy solutions for problems and stressors and less likely to resort to reality-avoidance or temporary relief strategies such as substance use.

The primary limitation was the use of an inactive control group and the self-report nature of the data. The key recommendation is to integrate this therapy into standard nurse support programs and conduct longitudinal randomized controlled trials (RCTs) to assess the durability of effects in the future.

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.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical 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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