

Effects of Resilience Training on Burnout Levels in Emergency Department Workers

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Burnout among healthcare workers is an issue that is being addressed in the modern era of mindfulness. These professionals often work in high-stress environments, witness traumatic events, and face long, exhausting shifts. Over time, these stressors can significantly impact their mental and physical health, as well as the quality of care they can provide for their patients. Burnout is often characterized by three dimensions: emotional exhaustion, depersonalization of others, and reduced personal accomplishment. Considering that healthcare workers are more vulnerable to experiencing burnout, finding effective ways to reduce these effects is essential. One possible solution is building psychological resilience. When individuals can bounce back from adversity and manage their stress in a healthy way, they are better equipped to handle these challenges. Resilience can also help healthcare workers maintain a sense of purpose and motivation, which may translate into providing higher quality care.

The purpose of the present study was to examine if implementing a resilience training program can reduce levels of burnout, particularly among emergency department (ED) workers. With the intention of better understanding the causal relationship between resilience and the three dimensions of burnout, the current study utilized an experimental design. To measure the effects of resilience training, the sample for this study was split into either a control group or the experimental group.

The following sections will provide an explanation and definition for each of the variables in this study. The expected relationship between the variables will also be presented, including how resilience pertains to the dimensions of burnout. Finally, hypotheses will be stated for each relationship.

Resilience and Resilience Training

Resilience is defined as the ability to recover from stress, adversity, or challenging situations in a productive way (Michael et al., 2024). It involves the use of shifting thoughts, behaviors, and emotions to promote positive outcomes. Resilience has previously been studied in psychology, showing a strong connection to improved physical and mental wellbeing (Michael et al., 2024). There are five protective factors that can foster resilience, including adaptability, self-efficacy, optimism, emotional regulation, and social support (DeSimone et al., 2017). These factors are particularly important in stressful environments, as they may help individuals navigate adversity more effectively.

Resilience training has emerged as a promising intervention tool in both personal development and work environments. A systematic review, by Scheuch et al. (2021), reviewed 48 studies and found that resilience training programs are associated with improved mental health outcomes and increased job performance in various organizational contexts. Previous studies have conceptualized resilience as a trait that changes over time, suggesting that it can be useful in intervention practices aimed at reducing stress and burnout (Chen et al., 2025). A study by Werneburg et al. (2018) demonstrated that a 12-week resilience program significantly improved resilience among healthcare employees, highlighting its potential at reducing stress and anxiety, while improving quality of life and other health behaviors. These findings support the role of resilience training, especially for those in demanding professions.

Burnout

Burnout is a stress-related condition defined by three main dimensions, including emotional exhaustion, depersonalization of others, and reduced personal accomplishment (Lee & Ashforth, 1990). While burnout can affect individuals across many professions, it is particularly common for those working in high-stress environments, such as healthcare. The demanding workload and emotional fatigue of medical work can significantly impact the well-being of

healthcare professionals, as well as those in training. For example, Carrad et al. (2024) found that medical students experience higher levels of depression and burnout symptoms compared to their non-medical peers. Additionally, burnout among healthcare professionals has previously been linked to decreased job performance, higher turnover rates, and poorer patient outcomes (Kabunga et al., 2024). These findings suggest that burnout not only affects the wellbeing of these individuals but presents consequences for the entire healthcare system.

Emotional Exhaustion

Emotional exhaustion is one dimension of burnout that refers to feeling both mentally and physically exhausted or worn out (Michael et al., 2024). This can significantly impact one's ability to effectively manage stress and can lead to severe health consequences such as anxiety, depression, fatigue, and insomnia (Lee & Ashforth, 1990). Healthcare workers often experience feelings of exhaustion and frustration due to heavy workloads, limited resources, and lack of support systems (Kabunga et al., 2024). This suggests that fostering resilience and emotional regulation can improve both mental and physical well-being for those in emotionally taxing professions.

Depersonalization of Others

Depersonalization of others is a form of maladaptive coping where individuals emotionally detach themselves from others by viewing them as objects (Lee & Ashforth, 1990). This defensive mechanism is particularly common in the medical field, where individuals are more involved in caregiving roles and responsibilities (Michael et al., 2024). Although this serves as a way to protect one's emotion, it can have adverse effects. Kjellenberg et al. (2013) found that professionals working with trauma survivors may experience increased feelings of isolation and compassion fatigue, making it increasingly difficult to recover from burnout.

Reduced Personal Accomplishment

Reduced personal accomplishment is a core dimension of burnout that refers to a sense of diminished meaning or value in one's work. It is commonly associated with low self-efficacy, decreased motivation, and negative self-appraisal (Lee & Ashforth, 1990). When individuals constantly feel unable to meet goals or make a meaningful impact, they may begin to feel a sense of helplessness. This symptom is especially concerning among healthcare workers, as individuals may begin to disengage from their daily tasks and responsibilities. Previous studies have shown that individuals with low degrees of self-efficacy are more likely to experience pessimism, poor coping, and emotional withdrawal when faced with challenges (Saxena & Jangra, 2023).

Proposed Impact of Resilience Training on Burnout Outcomes

Resilience and Emotional Exhaustion

Resilience reduces emotional exhaustion by promoting healthy strategies to manage stress and cope with adversity. Individuals with higher levels of resilience typically experience less emotional exhaustion, because they can adapt to challenges and learn from previous experiences (Michael et al., 2024). In times of extreme stress, protective factors, such as emotional regulation, optimism, and high self-efficacy can also encourage individuals to reframe their thoughts and behaviors in a productive way (DeSimone et al., 2017). This is particularly useful in high-stress settings like emergency departments, where exposure to trauma can drain emotional energy. By fostering resilience, individuals who learn to manage their emotions can avoid feelings of emptiness, fatigue, and lack of motivation, which is crucial for emergency department workers (Michael et al., 2024).

Hypothesis 1. Emotional exhaustion is negatively associated with higher levels of resilience. Participants who receive resilience training will experience lower levels of emotional exhaustion compared to those who are in the control group.

Resilience and Depersonalization of Others

Resilience may prevent the depersonalization of others by encouraging individuals to remain emotionally present and seek out social support. For example, programs designed to build resilience often teach participants how to positively cope with traumatic situations while maintaining a meaningful and optimistic outlook on life (Werneburg et al., 2018). Furthermore, DeSimone et al. (2017) found that emotional regulation and social support serve as protective factors that help reduce feelings of psychological distress. This improved sense of connectedness is particularly beneficial for emergency department workers, who may be more likely to detach themselves from patients and coworkers.

Hypothesis 2. Resilience training is effective in reducing depersonalization scores.

Individuals who participate in resilience training will experience less depersonalization of others compared to those who did not receive the training program.

Resilience and Reduced Personal Accomplishment

Resilience may enhance feelings of personal accomplishment by encouraging high self-efficacy, optimism, and positive coping skills. Individuals who are resilient tend to maintain a stronger belief in their ability to succeed and look towards a more positive future (DeSimone et al., 2017). By fostering these positive traits, individuals can recognize their accomplishments and turn to effective coping skills in the face of adversity. For example, Michael et al. (2024) found that resilience is positively associated with self-care and a sense of purpose among medical students. In terms of healthcare, Werneburg et al. (2018) found that resilience training improves job satisfaction and confidence in one's ability to handle workplace challenges.

Hypothesis 3. Individuals who participate in resilience training will have a greater sense of personal accomplishment compared to those who do not. Therefore, there will be a negative relationship between resilience training and reduced personal accomplishment.

Method

Participants

The study's sample consisted of 176 participants; however, a small number of individuals did not complete all the required demographic questions. The participants for this study were all emergency department (ED) workers, including doctors, medical residents, and nurses, in DuPage County, Illinois. Participants ranged in age from 21 to 49 years of age ($M = 27.49$ years, $SD = 5.73$). There were 157 male participants (90.8%) and 16 female participants (9.2%), with 3 individuals declining to respond to the question ($n = 173$). The majority of participants identified as White/Caucasian (70.7%) and Hispanic (19.5%). 6.9% identified as African American, 1.7% as Asian, and 1.1% as a racial identity not listed/other, with two participants not responding ($n = 174$).

Procedure

Hospital administrators in DuPage County, Illinois were contacted via email to request permission to conduct a study focused on reducing burnout. For those who agreed, participants were randomly assigned to participate in either a treatment group or control group. Those in the treatment group received resilience training, while participants in the control group did not.

Participants in the resilience training group met once a week and received five training sessions, lasting one hour each. Each week the resilience training session focused on a protective factor by DeSimone et al. (2017): adaptability, optimism, self-efficacy, emotional regulation and social support. Participants were provided with strategies to apply these factors and manage occupational stressors. They were also instructed to keep a journal to reflect the use of each protective factor in their daily lives.

In contrast, the control group did not receive any structured training. Instead, participants were encouraged to share stories related to their work environment without specific guidance or

instructional content. After the five weeks, participants from both the treatment and control groups were assessed on three dimensions of burnout.

Measures

The three dimensions of burnout were measured for all participants. Following the course of five, one-hour training sessions, a modified version of the Maslach burnout inventory (MBI) was used for these measurements (Maslach & Jackson, 1981). For each dimension of burnout, there were 12 corresponding items used in the scale. Each participant was asked to respond to these 36 items and indicate how often each item is true for them on a 5-point Likert Scale, with 1 = *never* and 5 = *every day*.

An example item from the burnout dimension of emotional exhaustion was, “I feel emotionally drained from my work.” The reliability for the emotional exhaustion subscale was found to be good at $\alpha = .91$. An example item for the depersonalization of others subscale was, “I feel I treat some of my patients as if they were impersonal objects.” The reliability for this subscale of burnout was also found to be good ($\alpha = .82$). An example item from the third dimension of burnout, reduced personal accomplishment was, “I don’t feel like I positively impact people’s lives through my work.” The reliability score from this subscale was found to be acceptable at $\alpha = .66$.

Results

The data gathered from the participants were measured for both the training and the control group sessions on the three dimensions of burnout on a 5-point Likert scale. For emotional exhaustion, the participants' scores ranged from 3.33 - 5.00 with an average score of $M = 4.55$, $SD = 0.40$. For the depersonalization of others, scores ranged from 3.08 - 5.00 with an average score of $M = 4.30$, $SD = 0.43$. For our final dimension of burnout, reduced personal

accomplishment scores ranged from 3.25 - 5.00 with an average score of $M = 4.20$, $SD = 0.34$.

These findings are located in Table 1.

The relationships between the three dimensions of burnout were assessed using the Pearson correlation coefficient (r). There was a significant positive correlation between emotional exhaustion and depersonalization of others ($r = .68, p < .01$). Depersonalization of others and reduced personal accomplishments also had a positive significant relationship ($r = .62, p < .01$). Finally, the relationship between emotional exhaustion and reduced personal accomplishments also had a positive significant relationship ($r = .58, p < .01$). These findings are also presented in Table 1.

Table 1

Descriptive Statistics and Correlations for Burnout Dimensions

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	Correlations		
				1	2	3
Emotional Exhaustion	176	4.55	0.40	(.91)		
Depersonalization of Others	176	4.30	0.43	.68 **	(.82)	
Reduced Personal Accomplishment	175	4.20	0.34	.62 **	.58 **	(.66)

Note. Internal consistency reliability (alpha) values are presented in parentheses along the diagonal.

* $p < .05$. ** $p < .01$.

To compare the effect of resilience training on the three dimensions of burnout, independent-measures t -tests were conducted. As previously stated, Hypothesis 1 proposed a negative relationship between resilience training and emotional exhaustion. Participants in the resilience training group reported lower average scores on emotional exhaustion ($M = 4.53$, $SD = 0.42$) compared to those in the control condition ($M = 4.56$, $SD = 0.37$). Although the relationship was found to be negative, these differences were not statistically significant, $t(174) = -0.49, p = .62$. These findings do not support the previous hypothesis.

To examine the effect of resilience training on the depersonalization of others, an independent measures *t*-test was conducted as well. To reference Hypothesis 2, a negative relationship was predicted between resilience training and depersonalization of others. As stated in Table 2, participants in the resilience training group reported higher average scores for depersonalization of others ($M = 4.32$, $SD = 0.44$) compared to the control group ($M = 4.27$, $SD = 0.42$). The relationship was found to be positive and was also found to be not statistically significant, $t(174) = 0.64$, $p = .53$. As there was no statistical significance, these findings do not support Hypothesis 2.

To assess the relationship between resilience training and reduced personal accomplishment, an independent measures *t*-test was conducted. As stated previously, Hypothesis 3 proposed that individuals who participate in resilience training will have a greater sense of personal accomplishment compared to those who did not receive training. As seen in Table 2, participants in the resilience training condition reported lower average scores on reduced personal accomplishment ($M = 4.16$, $SD = 0.35$) compared to the those in the control condition ($M = 4.25$, $SD = 0.35$). The relationship was found to be negative $t(173) = -1.57$, $p = .12$. The relationship was also found to not be statistically significant; therefore, these findings do not support the hypothesis.

Table 2
Comparison of Means

Variable	Resilience Training Condition	Control Condition	Test for Equality of Means
Emotional Exhaustion	$M = 4.53$	$M = 4.56$	$t(174) = -0.49$
Depersonalization of Others	$M = 4.32$	$M = 4.27$	$t(174) = 0.64$
Reduced Personal Accomplishment	$M = 4.16$	$M = 4.25$	$t(173) = -1.57$

* $p < .05$. ** $p < .01$.

Discussion

Implications

The present study assessed the effectiveness of a five-week resilience training program in reducing burnout symptoms among emergency department workers. While previous literature has identified resilience as a protective factor against burnout, the results of this study did not show statistically significant differences across the three dimensions.

Individuals who participated in the resilience training program showed slightly lower scores of emotional exhaustion and reduced personal accomplishment than those in the control group. Though not statistically significant, these findings are consistent with existing research emphasizing the benefits of resilience training on reducing stress and promoting wellbeing in healthcare settings (Werneburg et al., 2018). Another noteworthy finding is that the treatment group reported higher levels of depersonalization of others compared to the control group. This outcome aligns with previous research suggesting we cannot control the role of social and environmental factors. For example, Michael et al. (2024) found that the culture and norms of the hospital might encourage medical students to emotionally detach from their work as a protective factor. Therefore, the impact of social support, and other factors of resilience may not prevent the feelings of depersonalization of others.

Strengths and Limitations

One strength of the present study is the use of an experimental design. By randomly assigning participants to either the control group or treatment group, independent variables were able to be manipulated and controlled. This method also supports causal interpretations of the effects of resilience training. Additionally, the reliability of the modified version of the Maslach Burnout Inventory (MBI) adds credibility to the three assessments of burnout – emotional exhaustion, depersonalization of others, and reduced personal accomplishment.

The present study also has its limitations. First, the subscale for reduced personal accomplishment had lower internal consistency ($\alpha = .66$) than the other subscales, which may have affected the reliability of the results. Considering that this dimension of burnout almost reached statistical significance, this could potentially explain the lack of a significant finding. Another limitation is that the control group did not receive an alternate intervention beyond being asked to share their workplace stories. By providing a journal or other form of self-assessment, this may allow future studies to make more meaningful comparisons between the control group and treatment group.

Future Directions

By adding a pre-test at the beginning of the experiment would help the study increase its internal validity. This baseline created by the pre-test could show how the treatment may have affected the participants by seeing if there was a dramatic change in the scores before and after the treatment. It would also show in the participants, if the treatment improved their individual levels of burnout. Since the study was completed as a between subject's design, individual differences could affect the scores between the two conditions. Adding a pre-test would add a level of control, which in turn would increase the internal validity of the study.

Research in resilience can help not only existing healthcare workers but also it could help medical students who want to become healthcare professionals. Even though the study was found to be not significant, future research in resilience and systems around resilience training could benefit employees in high stress jobs. The application of resilience in the workplace could improve efficiency in workers and keep people from feeling burnt out. Another direction this research could take is in the applied field of counseling. Educating people to recognize their feelings and know how to be resilient to life's challenges in general would be beneficial to the populus.

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