

Physical Exercise as Self-care Intervention for Compassion Fatigue in Emergency Nurses

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Key Project Findings:

- A 12-week physical activity intervention improved professional quality of life among emergency department staff
- Burnout scores decreased from 25.47 to 21.44, representing the largest improvement across domains
- Secondary traumatic stress decreased from 22.84 to 19.48 across the intervention period
- Compassion satisfaction increased from 37.9 to 39.9 by week 12
- Staff participation and retention remained high with only 5% attrition
- Flexible, low- cost physical activity interventions were feasible in a high-acuity emergency department
- Physical activity demonstrated potential as sustainable strategy to improve staff well-being and workforce resilience

Background

Compassion fatigue and burnout are increasingly prevalent among emergency department nurses due to continuous exposure to trauma, high patient acuity, and demanding workloads. These occupational stressors negatively impact clinician well-being, workforce sustainability, and patient outcomes. Compassion fatigue is associated with emotional exhaustion, decreased job satisfaction, increased absenteeism, and staff turnover (Ma et al., 2022). Furthermore, burnout has been classified by the World Health Organization as an occupational phenomenon characterized by emotional exhaustion, depersonalization, and decreased professional accomplishment (Murphy et al., 2022).

Emergency department nurses are particularly vulnerable to compassion fatigue due to frequent exposure to critically ill patients, workplace violence, staffing shortages, and emotional demands (Xie et al., 2023). These stressors contribute to decreased quality of care, increased medical errors, and reduced patient satisfaction (Ma et al., 2022). Additionally, nurses often report limited time for self-care, further exacerbating occupational stress (Udod, 2023).

Physical activity has demonstrated benefits for improving mental health, reducing stress, and improving professional quality of life among healthcare workers (Das & Adams, 2021). However, research evaluating structured physical activity interventions targeting compassion fatigue in emergency department nurses remains limited.

This project aligns with Healthy People 2030 physical activity goals and the Quadruple Aim framework, which includes improving patient experience, improving population health, reducing costs, and improving healthcare provider well-being (Healthy People 2030, 2018; Sikka et al., 2015).

Purpose

The purpose of this Doctor of Nursing Practice quality improvement project was to evaluate whether a structured physical activity intervention could reduce compassion fatigue and improve professional quality of life among emergency department staff. The project aimed to implement an evidence-based physical activity program to improve compassion satisfaction, reduce burnout, and decrease secondary traumatic stress.

Methodology

This quality improvement project utilized a 12-week pre- and post-intervention design conducted in a 350-bed community hospital emergency department in Eastern North Carolina. The Plan-Do-Study-Act (PDSA) model guided project implementation and evaluation. Twenty emergency department staff members voluntarily enrolled in the project. Participants included registered nurses, patient care technicians, and registration staff. The sample was predominantly female (90%), with ages ranging from 24 to 56 years. Participants represented varying levels of experience and workload exposure.

Participants were encouraged to complete at least 90 minutes of moderate-intensity physical activity per week for 12 weeks. Exercise options included walking, gym workouts, strength training, and group exercise activities. Intervention components included: education on compassion fatigue and burnout, weekly motivational messages, optional group workouts, incentive drawings, an activity tracking application, and midpoint and endpoint feedback surveys.

Professional quality of life was measured using the validated Professional Quality of Life Scale (ProQOL), which assessed compassion satisfaction, burnout, and secondary traumatic stress. Data collection occurred at baseline, week 4, week 8, and week 12. Descriptive statistical analysis was used to evaluate trends across the intervention period. Mean score comparisons were used to evaluate directional changes in professional quality of life outcomes.

Results

The 12-week physical activity intervention demonstrated positive trends in professional quality of life outcomes. Compassion satisfaction scores increased modestly from baseline to week 12, indicating improved professional fulfillment among emergency department staff. Several participants demonstrated clinically meaningful improvements. Burnout scores demonstrated the greatest improvement, decreasing from 25.47 at baseline to 21.44 at week 12. This reduction suggested decreased occupational stress and improved emotional well-being. Secondary traumatic stress scores also decreased from 22.84 to 19.48, indicating improved emotional resilience among participants.

Participation remained high throughout the intervention, with minimal attrition. Staff feedback indicated improved mood, increased energy, and improved workplace engagement. Overall, findings suggest that structured physical activity may improve staff well-being and reduce compassion fatigue in high-acuity clinical settings.

Strengths and Limitations

Several strengths that supported successful implementation and meaningful outcomes included an evidence-based intervention grounded in current literature supporting physical activity as a strategy to reduce compassion fatigue and improve professional quality of life. The use of the validated Professional Quality of Life Scale (ProQOL) strengthened measurement reliability and enhanced the credibility of findings. Additionally, participant engagement remained high throughout the 12-week intervention period, with minimal attrition, suggesting the feasibility and acceptability of the intervention among emergency department staff. Another strength of the project was its low-cost, flexible, and self-directed nature, which allowed

participants to engage in preferred forms of physical activity while accommodating variable work schedules. Leadership support within the emergency department also contributed to successful implementation by promoting staff participation and reinforcing organizational commitment to workforce wellness.

Several limitations should be considered when interpreting the findings of this project. The sample size was relatively small, which may limit the generalizability of the results to other emergency department settings or healthcare populations. Additionally, physical activity participation and professional quality of life measures were self-reported, which may introduce response bias or social desirability bias. Variability in shift schedules, staffing demands, and personal stressors may have influenced participation and outcomes throughout the intervention period. External factors such as increased patient acuity, seasonal illness trends, and workload fluctuations were not controlled and may have contributed to variability in participant responses.

Implications

The findings from this project demonstrate that structured physical activity may serve as a practical and effective strategy to reduce compassion fatigue and improve professional quality of life among emergency department staff. Improved staff well-being has the potential to positively impact patient care outcomes by enhancing attentiveness, empathy, and clinical decision-making. Reduced burnout and secondary traumatic stress may also contribute to decreased medical errors, improved patient satisfaction, and enhanced overall quality of care.

At the organizational level, implementing wellness initiatives such as structured physical activity programs may improve staff retention, reduce turnover, and promote workforce stability. Supporting clinician wellness aligns with healthcare system priorities focused on improving

provider satisfaction and sustaining a resilient workforce. Integrating wellness initiatives into department culture reinforces the importance of addressing compassion fatigue as a systemic responsibility rather than solely an individual responsibility.

Additionally, this project supports the broader healthcare system's goal of promoting workforce resilience through low-cost and scalable interventions. Emergency department staff who maintain psychological well-being are better equipped to meet the needs of high-acuity patient populations and deliver safe, compassionate care. These findings support the integration of structured wellness programs into healthcare settings to promote long-term sustainability and improved patient outcomes.

Recommendations

Recommendations for future implementation include expansion to include a larger sample size with inclusion of objective activity tracking, integrating team-based accountability structures to enhance adherence and engagement, examine long term retention outcomes correlating activity adherence and professional quality of life improvement and replication in other high-acuity settings would further strengthen generalizability.

Conclusion

This quality improvement project demonstrated that structured physical activity improved professional quality of life among emergency department staff. Burnout and secondary traumatic stress decreased, while compassion satisfaction increased. These findings support physical activity as a feasible, low-cost intervention to improve staff well-being and workforce resilience.

References

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