

Fall 12-15-2019

# Burnout, Depression and Suicide Prevention in Healthcare Staff

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## Recommended Citation

Ritchie, April, "Burnout, Depression and Suicide Prevention in Healthcare Staff" (2019). *Doctor of Nursing Practice (DNP) Projects*.  
146.  
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Burnout, Depression, and Suicide Risk in Healthcare Staff

November 16, 2018

### **Abstract**

Burnout can lead to depression and suicidal ideation in healthcare providers. Healthcare leaders must proactively identify staff experiencing burnout and offer interventions for staff wellbeing, which will also, reduce errors, improve patient satisfaction, and patient outcomes. This manuscript provides a review of evidence-based interventions that can help accomplish these goals.

## The Problem

Burnout in healthcare is a major problem and has been estimated to be as high as 70% in nursing staff and 50% in physicians, nurse practitioners, and physician assistants.<sup>1</sup> The healthcare industry, although rewarding, has many challenges, including time constraints, competing priorities, and a lack of control over new processes and regulations.<sup>1</sup> Burnout created by these challenges if left unnoticed or untreated can lead to depressive symptoms in healthcare workers and demands attention by healthcare leaders. The adverse effects on staff experiencing burnout could also have negative consequences on the patients they care for; thus, attention needs to be paid to this mental health issue<sup>10</sup>.

Healthcare burnout has been described as physical and behavioral symptoms, such as anger, frustration, paranoia about one's own career ambitions, and inflexibility in practice, which are characteristics seen in those who suffer from depression.<sup>1</sup> Burnout, when left unnoticed or untreated, can lead to depression and suicidal ideation in healthcare staff, as well as affecting patient satisfaction and patient outcomes.<sup>3</sup> Healthcare staff who experience burnout and/or depressive symptoms have also been associated with medical errors, which further perpetuates the burnout.<sup>1</sup> There are also financial implications to organizations, as burnout has been linked to attrition in nursing staff.<sup>2</sup> Interventions are needed to both identify and mitigate burnout, depression, and suicide risk for healthcare providers in order to avoid the negative consequences associated with these issues.

Burnout and depression occur in work settings where the work environment creates occupational stress due to such factors as short staffing, complex procedures, and a workload that creates fatigue.<sup>4</sup> Healthcare staff working in high-intensity settings experience burnout due to rapidly fluctuating workloads, complex procedures, and intense life and death situations.<sup>4</sup> In

high-intensity departments, such as the emergency department (ED), there is unpredictable patient volume, over-crowding, and patients who have experienced injury requiring quick responses, which creates high stress for the nurses.<sup>5</sup> Critical care units may have somewhat more predictable volumes, yet the patients and families in these units have physical, social, and psychological problems that create extra burden and stress for the nurses providing their care<sup>6</sup> These stressors may lead to burnout in healthcare staff working in these high-intensity departments at a higher rate than other nursing departments.

According to the World Health Organization, depression is a mental health disability that accounts for 4.3% of the global health burden.<sup>7</sup> Untreated depressive symptoms from burnout can lead to suicidal ideation in affected healthcare staff. Therefore burnout, depression, and suicide risk warrant further attention by healthcare leaders. Nursing leaders need to not only be aware of the occupational stressors, they should encourage and support programs that help mitigate burnout and depressive symptoms. Taking a proactive stance will improve staff nurses mental health wellbeing, and has the potential to decrease medical errors, improve patient outcomes, and improve nurse retention rates.

Nurse suicide has not been as well studied as physician suicide in the United States. International studies have reported nurse suicide at higher rates than other occupations.<sup>9</sup> One study links depression to suicide in 82% of British nurses who committed suicide.<sup>8</sup> Factors, such young age, married, working nights, having multiple jobs, and low income, also contribute to depression among nursing staff.<sup>7</sup> Again, healthcare leaders need to not only be aware of these issues, but they also need to find ways to decrease burnout and depression and to implement mechanisms for identifying these symptoms that could lead to suicidal ideation.

When providers are burned out, they have high levels of exhaustion, may have pessimistic attitudes, and show a decrease in personal accomplishment.<sup>3</sup> These characteristics may lead to poor patient interactions and may portray to patients a sense that the provider does not care about the patient, which will negatively affect the patient's satisfaction results. Of concern in today's healthcare environment is that patient satisfaction results affect hospital reimbursement and patient's selection of where to receive care. Salyers and colleagues<sup>10</sup> suggested that nurses are at higher risk to affect patient safety than other health professionals, as nurses have more direct contact and enact the majority of patient care. A focus on burnout in nursing staff has the potential to significantly improve both patient satisfaction and quality of care.

Professional burnout negatively affects patient quality of care and creates poor health outcomes, which in turn can cause additional provider burnout.<sup>10</sup> Providers who suffer emotional exhaustion may need to utilize the energy they have to focus on the most necessary and pressing tasks and may overlook vital details, thus compromising the quality of care delivered.<sup>3</sup> Provider burnout may also impair cognitive abilities and lead to poor memory and attention to details, which puts them at risk of making errors.<sup>3</sup>

Salyers and colleagues<sup>10</sup> conducted a meta-analysis to evaluate the relationship between burnout of professionals and safety and quality in healthcare. They included 82 studies in the analysis, which included 210,669 healthcare participants. Salyers et al<sup>10</sup> found that there was a negative statistical significance between the study variables of burnout and both safety and quality of healthcare. Perceived quality, including patient satisfaction with care, quality indicators, and perceptions of care, had a negative relationship with burnout. The components of burnout were further analyzed, and emotional exhaustion was found to have the strongest

association with quality, followed by depersonalization, and lastly job performance. Emotional exhaustion impairs brain function and may lead to impairments of memory and attention to details, making the person susceptible to errors.<sup>10</sup> This meta-analysis points to the importance of focusing on improving burnout in nursing staff in order to decrease errors and improve patient outcomes.

Financial consequences of healthcare provider burnout occur when staff are frequently absent, display poor productivity, and leave the organization completely. It has been estimated that costs to the organization for each nurse who leaves, on average, is \$62,000 to \$67,000.<sup>11</sup> In organizations with high turnover and low retention rates, burnout could be the culprit and could cost the organization millions of dollars as they continue to rehire and retrain nurses. Nursing staff attrition contributes to nursing shortages in departments and makes it difficult to provide adequate staffing levels and negatively affects patient care. It has been estimated that the rates of attrition for nurses is 25% to 30%, which can be attributed to stress, burnout, and other factors.<sup>2</sup> With all the negative consequences of burnout and depression, it is apparent that interventions are needed to improve and remove this issue for the betterment of staff and patients.

### **Evidence-based Interventions**

A review of the literature for interventions to improve burnout and depression and to prevent suicide of healthcare staff was conducted. A search using the Cumulative Index of Nursing and Allied Health Literature (CINAHL) database using the following keywords, *burnout, depression, burnout interventions, and suicide prevention* to find English language studies published between 2008 and 2018 was conducted. Although the literature reports many interventions, a focus on those that included a primary intervention or included screening tools for depression were reviewed (see Appendix A).

Awa, Plaumann, and Walter<sup>12</sup> conducted a systematic review and meta-analysis of 25 primary intervention studies, which included pre- and post-intervention assessment. These studies were not specific to nurses and included other healthcare professionals, dentists, social workers, and police officers. The goal of the study was to evaluate the effectiveness of burnout intervention programs on decreasing burnout. Of the studies reviewed in this systematic review, 14 were randomized controlled trials (RCT), nine were quasi-experimental, five were non-randomized, and two had no control groups. Interventions were either person-directed (individual/groups) or organization-directed. Cognitive-behavioral interventions, which aimed to enhance personal coping skills, social support, or relaxation exercises, were considered person-directed. Changes in work procedures aimed to decrease job demands and increase control over the job were considered organization-directed interventions. Findings of this systematic review showed that burnout interventions are beneficial, and those that are both person- and organization-directed had longer positive effects on burnout.<sup>12</sup>

Flarity, Gentry, and Mesnikoff<sup>13</sup> conducted a qualitative study to evaluate the effectiveness of an educational program to decrease both compassion fatigue (CF) and burnout (BO) symptoms in nurses working in the ED. Nurses working in the ED at a university hospital, with a Level II trauma and primary stroke center designation, were invited to participate in the intervention. The self-selected convenience sample of nurses completed a 4-hour seminar on compassion fatigue and resiliency. Pre- and post-intervention surveys using the Professional Quality of Life (ProQOL) survey test were collected from participants. This survey is a 30-item self-report tool that uses three subscales, compassion satisfaction (CS), secondary traumatic stress (STS), and burnout (BO). Results of the surveys included a statistically significant increase in CS, a decrease in BO, and a decrease in STS symptoms. Evaluations were also collected after

the intervention, and responses were very positive. Both pre- and post-intervention results support the intervention as beneficial to the wellbeing of ED nurses and other hospital staff.<sup>13</sup>

Henderson<sup>11</sup> conducted a quasi-experimental study by providing hardiness education to reduce burnout in nursing staff. The population included a convenience sample of nurses working in the medical-surgical department in a children's hospital in a large metropolitan city. Data on burnout were obtained with pre-test and post-test surveys using the Maslach Burnout Inventory (MBI), and personality hardiness were assessed using the Personal Views Survey. The educational intervention included stress management and effective coping strategies in a 1-hour training session. The MBI pre- and post-intervention surveys showed a statistically significant difference in the scores in all three subscales, which included emotional exhaustion, depersonalization, and personal accomplishment. The personal inventory survey scores pre- and post-intervention showed increased scores in all three categories, which included, commitment, control, and challenge. Overall, the results of this study, which showed that hardiness education is effective to decrease burnout, supports education and awareness as a solution to decrease burnout in affected healthcare staff.<sup>11</sup>

Davidson et al<sup>9</sup> described a pilot expansion of a proactive suicide-screening program to nurses in order to make appropriate referrals for mental health care. The methods used for this program began with the education of nurses on burnout and depression, as well as an introduction to the available online, anonymous, risk screening being offered. The population included all nurses at the urban medical center who were invited to participate in the screening via e-mail. Education was provided in three 1-hour grand rounds, which discussed the risks of burnout, depression, and suicide in healthcare. The program was also introduced to nursing staff in the hospital's huddle topic fact sheet that was delivered at in-person huddles during change of

shift over a 2-week period. The chief nursing officer invited all nursing staff in the organization to take the online screening via an e-mail invitation. Results of this program six months after implementation included 7% of the nurses completing the online questionnaires. Of those nurses who completed the questionnaire, 43% were high risk, and 55% were moderate risk for depression and suicide. Of the nurses completing the survey, another 7% reported current thoughts of self-harm, as well as 11% who reported a history of suicide attempts. Forty-four nurses took part in counseling and 17 nurses accepted referral for continued treatment. Davidson et al<sup>9</sup> concluded that online, anonymous, proactive suicide risk screening is an effective way to find nurses at risk and to offer counseling to improve their mental health. Burnout was not evaluated in this study, as the focus was on implementing the suicide screening program to identify nurses at risk for suicide.

Downs et al<sup>14</sup> described a cross-sectional study of a voluntary depression and suicide prevention screening program offered to faculty and students at a medical school over a 4-year period. This program offered online anonymous depression screening utilizing the Patient Health Questionnaire (PHQ-9), with additional questions to evaluate for suicide risk. The healer education, assessment, and referral (HEAR) program was the title of this intervention, which was taken by 44% of the students and identified 8% of the students to be at high/significant risk. Overall, the implementation of the HEAR program was a success at identifying at-risk students and referring them for treatment.<sup>14</sup>

## **Discussion**

With high rates of burnout and depressive symptoms reported in the literature, it is apparent that attention needs to be paid to this healthcare problem. Since burnout and depression can lead to suicide risk, it is also apparent that suicide screening is an effective way to identify

healthcare providers at risk and refer them for appropriate treatment. Providing education on burnout and depression, as well as offering suicide risk screening, will help contribute to the wellness and resilience of healthcare staff, which will improve patient outcomes and satisfaction, decrease errors, and improve retention rates. Overall, the literature supports educational interventions for healthcare providers to decrease burnout and implementation of a screening tool to identify depressive symptoms and suicidal ideation.

Interventions discussed in the literature included a wide range of topics to improve burnout. The similarities of these interventions were that they all focused on individuals proactively in order to identify and improve burnout. Whether the intervention was a writing workshop, mindfulness training, offsite retreat, compassion fatigue training, or other holistic measures, they all positively affected healthcare staff burnout. There is a need for organizations and nurse leaders to be proactive in implementing burnout interventions, as well as in actively engaging staff to be part of these meaningful resources to improve mental health. From the review of literature on burnout, depression, and suicide rates in healthcare, it is apparent that healthcare leaders must take this problem seriously and need to identify and offer interventions to improve staff wellbeing. A priority must be made to address these problems in order to ensure provider health and safe patient outcomes, as well as for the financial viability of organizations. Until organizations take a proactive stance to ensure the wellbeing of its healthcare providers, the safety and outcomes of patients will continue to be at risk and staff will suffer in silence. Leaders in healthcare organizations need to advocate for staff by insisting that there is as much focus on healthcare staff wellbeing as there is on patient satisfaction scores, core measures, and financial outcomes. Once the health of staff become a priority in every healthcare organization, we will

see burnout, depression, and suicide in healthcare staff significantly decline, with the possibility of ameliorating this problem altogether.

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Appendix A. Evidence Evaluation Table

Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Variables Studied	Measurement of Major Variables	Data Analysis	Study Findings	Appraisal of Worth to Practice
Awa et al. (2010)	None	Systematic review with meta-analysis	25 primary intervention studies, which included pre- and post-intervention assessment. Participants included healthcare professional, dentists, social workers, and police officers.	Burnout intervention programs	Burnout intervention effectiveness & prevention of burnout. 14 studies were RCTs, 9 quasi-experimental, 5 non-randomized, and 2 had no control groups. Effect size using ANOVA.	68% were person-directed, 8% were organization-directed, & 24% were both. Strong evidence was attributed to outcomes where a significant positive or negative intervention effect was measured ( $p=0.05$ ). Non-significant positive or negative intervention effects ( $p > 0.05$ ) were regarded as limited evidence.	Results of non-RCTs had similar positive outcomes as the RCTs. Person-directed interventions reduced burnout in <6 months, combo interventions had longer positive effects of >12 months. Burnout interventions are beneficial & those that are both person- and organization-directed had longer effects.	Strengths: Majority of studies were RCTs & quasi-experimental. Positive intervention effects despite effect size variations. Limitations: Only English and German studies were included. Wide range of study designs limits direct comparability of results. No evaluation of the quality of each study was done. Critical Appraisal Tool & Rating: Level III, B
Davidson et al. (2018)	None	Cross-sectional descriptive	Voluntary participation for all nurses working in an urban medical-teaching multisite health system.	Depression & suicide risk	Suicide risk screening using 9-item Patient Health Questionnaire (PHQ-9) & additional questions done anonymously online.	7% of nurses took surveys, 43% of those were moderate-risk & 55% were at high-risk.	Encrypted, anonymous proactive suicide risk screening is effective to identify at-risk nurses & refer them for treatment.	Strengths: Well received from nursing staff as a needed resource for those suffering. Limitations: ISP not validated, low turnout at grand rounds introducing ISP & low response rate. Limited generalizability due to being at one site. Critical Appraisal Tool & Rating: Level III, B

Downs et al. (2014)	None	Cross-sectional	Voluntary participation for medical students & faculty at a school of medicine over a 4-year period.	Depression & suicide risk	Suicide risk screening using 9-item Patient Health Questionnaire (PHQ-9) & additional questions done anonymously online.	34% of medical students took surveys, 8% of those were at high/ significant risk.	Implementation of the HEAR program was effective in identifying suicide risk in medical students and referring for treatment, therefore improving mental health of medical students.	Strengths: Noteworthy number of participants (13) were suicidal and received treatment Limitations: Long length (4 yrs) may have impacted results. Susceptible to cohort effects from study design. Limited generalizability due to being at only one site. Critical Appraisal Tool & Rating: Level III, B
Flarity et al. (2013)	None	Cross-sectional, qualitative	Voluntary participation of 73 ED nurses in 2 EDs in Colorado.	4-hour education program, compassion fatigue, burnout symptoms	Pre/post test on the ProQOL survey and demographic data. SPSS Version 20 for ProQOL & Microsoft Excel for demographic data analysis.	Pre-tests - 52% had low to moderate compassion satisfaction, 59% had mod to high levels of burnout, 60% had mod-high levels of secondary traumatic stress. After intervention, statistical significance in compassion satisfaction ( $p=0.004$ ), decrease in burnout ( $p=0.001$ ) and decrease in secondary traumatic stress ( $p=0.001$ )	Hardiness education can lower burnout scores for participants. Also this education can improve hardiness scores. There is an inverse relationship between hardiness and burnout.	Strengths: Low cost of education with good return of a healthier workforce. Limitations: Convenience sample threat to external validity and generalizability to other ED nurses. Low survey return rate. Short interval to return surveys will not show long-term improvement. Critical Appraisal Tool & Rating: Level III, B

Henderson (2015)	Stress appraisal and coping theory	Quasi-experimental	Convenience sample of RNs in med-surg unit in a large children's teaching hospital in a large metropolitan city.	Hardiness education & burnout	Demographic data, Maslach Burnout Inventory & Personal Views Survey.	Statistically significant improvement in burnout scores for emotional exhaustion, depersonalization & personal accomplishment after intervention implementation. Also increases all sections in hardiness scores.	Hardiness training could create healthier staff with decreased burnout, increased performance and productivity, job satisfaction and patient outcomes.	Strengths: Low-cost of intervention & surveys Limitations: Convenience sample limits generalizability. Self-reports may have bias due to Hawthorne effect. Selection bias due to non-randomization of participants. Critical Appraisal Tool & Rating: Level III, B
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