Journal of Pediatric Nursing 43 (2018) 62–68

Contents lists available at ScienceDirect

Journal of Pediatric Nursing

Feasibility of Online Mental Wellness Self-assessment and Feedback for Pediatric and Neonatal Critical Care Nurses

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ARTICLE INFO

Article history:
Received 12 April 2018
Revised 3 September 2018
Accepted 4 September 2018
Available online xxxx

Keywords:
Burnout
Self-assessment
Resilience
Trauma
Depression
Anxiety

ABSTRACT

Purpose: The primary goal of this study was to test the feasibility of an educational online self-assessment of burnout, resilience, trauma, depression, anxiety, and common workplace stressors among nurses working in a pediatric intensive care unit or neonatal intensive care unit setting. The secondary, exploratory objectives were to estimate the prevalence of psychiatric symptoms in this sample and to identify those variables that most strongly predict burnout.
Design and Methods: Data from optional and anonymous online measures were analyzed for 115 nurses (67.9% aged 25–44; 61.7% Caucasian) working in an urban children's hospital pediatric or neonatal ICU. Multiple linear regressions identified demographic variables and workplace stressors that significantly predicted each of three components of burnout.
Results: Most respondents found the educational assessment and feedback to be helpful. Choosing nursing as a second career was associated with better resilience. Having worked in ICU settings longer and being older were both linked to lower levels of anxiety. Predictors of burnout varied across the three burnout subscales.
Conclusions: Implementation of an online self-assessment with immediate educational feedback is feasible in critical care settings. The variability of predictors across the three burnout subscales indicates the need for tailored interventions for those at risk. Future research may include follow-up of nurses to examine changes in scores over time and expansion of the tool for other medical personnel.
Practice Implications: An educational online self-assessment can be a helpful tool for pediatric critical care nurses experiencing varying degrees of burnout and distress.

Burnout is conceptualized as a psychological response to chronic occupational stress characterized by emotional exhaustion, depersonalization, and a low sense of personal accomplishment (Bianchi, Schonfeld, & Laurent, 2015; Maslach, Schaufeli, & Leiter, 2001). Burnout has been identified as particularly common in care-giving professions in which the heavy interpersonal context of the work increases the risk of a psychological toll and its impact on the quality of services delivered (Maslach et al., 2001). Within this model, specific salient stressors vary by occupation as does the baseline resilience of the individual. In healthcare settings, burnout is cause for concern given its deleterious consequences on quality of care, patient satisfaction, and job turnover (Moss, Good, Gozal, Kleinpell, & Sessler, 2016). Burnout is salient for those working in intensive care units (ICU) given the "high patient morbidity and mortality, challenging daily work routines, and regular encounters with traumatic and ethical issues" (Moss et al., 2016, p. 107).

A systematic review conducted by van Mol, Kompanje, Benoit, Bakker, and Nijkamp (2015) found that, across 40 studies, the prevalence of burnout in ICU nurses ranged from 0 to 70%. However, the construct of burnout might not fully describe the psychological burden for critical care nurses. Mealer, Shelton, Berg, Rothbaum, and Moss (2007) found that 24% of critical care nurses screened positive for symptoms of posttraumatic stress disorder (PTSD), 20% for symptoms of anxiety, and nearly 30% for symptoms of depression, much higher than in the general population. Bianchi and colleagues have highlighted the substantial overlap between depression and burnout, posit that burnout is a form of depression, and caution that conceptualization of burnout should not be narrowly focused on the three definitional components of burnout described above (Bianchi et al., 2015).

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https://doi.org/10.1016/j.pedn.2018.09.001
0882-5963/

Attempts to identify predictors of nursing burnout and psychological distress have focused on targeting stressors common in ICU settings. Burnout and/or distress has been associated with fewer years on the job, younger age, less experience, a difficult work environment, end of life care, high patient mortality rate, conflicts with colleagues both within and across medical teams, long work hours without time off, a heavy work load, night shifts, sleep deprivation, unpredictable hours, moral distress, less emotional intelligence, higher levels of stress and anxiety, a perceived a lack of supervision, difficulty accessing needed information, and time since last vacation (Embriaco et al., 2007; Meltzer & Huckabay, 2004; Meyer, Li, Klaristenfeld, & Gold, 2015; Pradas-Hernández et al., 2018; Rushton, Batcheller, Schroeder, & Donohue, 2015; van Mol et al., 2015). Additionally, burnout in staff members seems to beget burnout among their colleagues (Bakker, Le Blanc, & Schaufeli, 2005). Spiritual beliefs have been associated with less emotional exhaustion and depersonalization; physical well-being has been linked to personal accomplishment; and resilience (the ability to effectively use skills that allow one to cope with adversity without lasting negative consequences) has been found to protect critical care nurses from emotional exhaustion and promotes feelings of efficacy (Meltzer & Huckabay, 2004; Rushton et al., 2015).

Research on the prevention or alleviation of burnout has focused on two constructs: resilience and self-care. Occupational resilience has been defined as the "ability to maintain personal and professional wellbeing in the face of on-going work stress and adversity" (McCann et al., 2013, p. 61). Defining resilience as an amalgamation of skills that interact dynamically to allow individuals to bounce back, cope successfully and function in spite of significant adversity (Tusaie & Dyer, 2004), one might expect that resilience would be protective in high acuity settings. Resilience appears to not only protect clinicians from burnout but to also mitigate the impact of trauma and stress (Mealer et al., 2012). Use of cognitive behavioral skills, self-care practices, and attention to factors such as temperament, family bonds, external support systems, and personal qualities (optimism, faith, striving towards personal goals) have also been related to increased health professional resilience and better outcomes (Mealer et al., 2012; Meldrum, 2010). The implementation of interventions harnessing the construct of resilience and emphasizing the importance of self-care appear to be important for maintaining the well-being of critical care clinicians.

With very few burnout prevention or intervention programs available for pediatric intensive care unit (PICU) and neonatal intensive care units (NICU) nurses, program development is needed to translate current knowledge regarding burnout and distress among nurses working in high acuity settings into evidence-based interventions. The authors of one study focused on nurses caring for terminally-ill or dying children concluded that psychoeducation, environmental supports and work accommodations (i.e. alternating patient assignments) may be key to reducing burnout (Adwan, 2014). Taking a different approach, Gauthier, Meyer, Grefe, and Gold (2015) assessed the feasibility of implementing a 5-minute mindfulness meditation for PICU nurses before each shift and concluded that the intervention was feasible and that its effects on stress were sustainable one-month post-intervention. While potentially helpful to improve resilience via psychoeducation, organizational supports and/or use of an evidence-based coping skill, these programs may not be feasible in all settings over time, as they require planning and administration to maintain. Additionally, offering an intervention that includes only one coping skill might have less of an impact than offering a broader set of potential solutions that is tailored to the interests and needs of the individual. Thus, there is a need to explore new, economical avenues to support the resilience of critical care nurses with evidence-informed self-help approaches adapted for their individual needs. Adding to the argument for early identification of and intervention for distressed nurses, the National Quality Forum (2010) recommends that healthcare institutions better identify and support hospital workers who have been traumatized after an unanticipated adverse patient event, medical error, or patient related injury.

To address the need for early identification and evidence-based support for distressed health professionals, we developed an educational online self-assessment tool with immediate feedback. The tool is comprised of (a) validated measures that allow respondents to anonymously assess their own levels of burnout, resilience, trauma, depression, and anxiety, and (b) a feedback mechanism that allows them to receive immediate psychoeducation about their symptom severity, evidence-informed self-help recommendations, and local referrals. By embedding educational coping and self-help resources into the program, this approach improves upon the utility of self-assessment tools that require the added cost of a clinician monitor (Davidson, Zisook, Kirby, DeMichele, & Norcross, 2018). By linking evidence-based self-help recommendations to the specific risk profile of the nurse, individualized psychoeducation, coping and problem-based skills suggestions, and referral resources become feasible.

The primary objective of this study was to assess the feasibility and acceptability of the educational self-assessment tool among PICU and NICU nurses. Specifically, this objective was intended to inform the potential system-wide implementation of the self-assessment tool among the entire health system workforce by assessing our technical ability to launch the tool, actual use of the tool by targeted nurses, nurses' ratings of helpfulness of the tool, and open-ended comments offered by nurses about the tool. We also developed two secondary, exploratory objectives, to estimate the prevalence of depression, anxiety and posttraumatic stress symptoms in our critical care nurses and to identify those demographic variables and stressors that most strongly predict burnout in order to inform the development of future interventions. Based on the literature and input from local critical care nursing staff, we anticipated that we would find similar rates of symptoms and similar correlates of burnout and distress as has previously been found. We added ethnicity to the demographic section to determine if this, previously unstudied, variable is an important factor to consider for critical care nurses experiencing burnout or distress. We had no a priori hypotheses about which variables would be most salient in our setting and when examined within a regression model.

Methods

Participants

Data were collected from registered nurses (RNs) currently working in an urban children's hospital pediatric or neonatal ICU. Please see Table 1 for more detailed demographic information

Measures

Commonly used and previously validated measures were used to measure burnout, resilience and clinical symptoms. Items were developed for this project in order to measure the frequency of common stressors, to solicit demographic information, and to assess the utility of the intervention.

Abbreviated Maslach Burnout Inventory (aMBI; McManus, Winder, & Gordon, 2002)

Respondents completed the aMBI, an abbreviated version of the widely used self-report tool for burnout, the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986). The aMBI has three subscales: Emotional Exhaustion, Depersonalization (cynicism, emotional disinvestment), and Personal Accomplishment (professional sense of efficacy and competence). In original validation studies, the MBI showed good internal consistency (Cronbach's α: Emotional Exhaustion: 0.90, Depersonalization: 0.79, and Personal Accomplishment: 0.71) and acceptable test-reliability two to four weeks out (Emotional Exhaustion: