Creating Healthy Work Environments 2019

Effectiveness of the Provider Resilience Mobile Application (PRMA) to Increase Nurses Resiliency

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Background: The demand for nurses is likely to intensify in the wake of the restructuring of our health care system with a concurrent need for primary care services, particularly as baby boomers age. Among the many considerations for securing and maintaining a stable nurse workforce include fostering an ethical work environment, which could promote job satisfaction and diminish moral distress, with a concomitant improved patient care delivery and satisfaction.1 The current shortage of qualified nurses presents a critical challenge to health care administrators within and beyond the borders of the US, who must recruit, and equally important, retain a stable workforce to meet the current demand as well as prepare for the near future.2

The American Nurses Association’s Code of Ethics for Nurses with Interpretive Statements defines moral distress (MD) as “the condition of knowing the morally right thing to do, but institutional, procedural, or social constraints make doing the right thing nearly impossible.”2 Moral distress, the code emphasizes, “threatens core values and moral integrity.”2 MD is pervasive in numerous health care settings and is experienced by nurses in all roles within an organization. At the individual level MD may cause burnout, lack of empathy, and job dissatisfaction, while at the organizational level it may lead to reduced quality of care, increased staff turnover, and poor patient outcomes. 3,4,5

Despite decades of research on moral distress and compassion fatigue few evidence-based solutions to help reduce this phenomenon, and its relationship to ethical climate among nurses, have been proposed for alleviating a problem. 3,4,5,6 Moral resilience (MR) is an evolving concept and is described as “the ability to recover or healthfully adapt to challenges, stress, adversity, or trauma: to be buoyant in adverse circumstances.”7-9 Specifically, MR has been defined as “the capacity of an individual to sustain or restore [her or his] integrity in response to moral complexity, confusion, distress, or setbacks. Health care workers can learn to respond positively to ethically challenging situations by building their capacity for MR, and organizations can support them by creating a culture of ethical practice.10 Much work is needed to identify and test strategies that individuals/systems can use to mitigate the detrimental effects of moral distress and compassion fatigue, while fostering moral resilience.

Purpose: To determine how nurses view the work ethical climate, including the degree of ethics stress they feel, and the adequacy of organizational resources to address their ethical concerns; while controlling for socio-demographics, we also will examine the extent to which these factors affect nurses and their interest in leaving their current position. A secondary aim is to examine the effectiveness of an interactive intervention ‘Provider Resilience Mobile Application (PRMA)’ in determining whether use of the PRMA increases ICU nurses’ compassion satisfaction, while decreasing compassion fatigue, thus improving the overall professional quality of life (ProQOL)12 among nurses working at a Magnet® designated Adult/Children’s medical center.

Design and Methods: A cross-sectional survey design will be used to measure nurse’s perception about the ‘ethical’ work environment, using the Hospital Ethical Climate Survey (HECS) survey. To measure the secondary aim, a descriptive, observational method will be used to prospectively measure the effectiveness of the PRMA application to build resiliency.
Setting and Sample
A 569-bed, Magnet® designated, academic, Level I Trauma Center, including a 156-bed, Children’s hospital, with a Level III NICU. The intervention will take place in the neonatal intensive care unit (NICU); pediatric intensive care unit (PICU); and adult ICU units, totaling 180-beds.

Sample Size. A targeted sample size was computed by an a priori power analysis using the computer-based G*Power 3.1. statistical program.9 The significance level was set at two-tailed $p = 0.05$, power was set at .80, and a medium effect size of .13 was used.

Sample: All registered nurses (RNs) [N=2,100] within the medical center are eligible to take the HECS. Our target sample is N=500+ (estimated 25%) to gain a diverse perspective from RNs working in all care areas across the Adult/Pediatric hospitals. To answer the secondary aim, the minimum sample size computed was (N=120) subjects (40 per each ICU unit) for a multiple regression analysis with four predictors (Compassion Fatigue, Stress/Burnout; Compassion Satisfaction; and Intention to Leave). All NICU/PICU/ adult ICU RNs are eligible to volunteer to test the effectiveness of the PRMA application in reducing MD and in building resiliency.

Measures
Demographic data will include: age, sex, unit, education, certifications, and whether nurses have received ethics training.
Hospital Ethics Climate Survey (HECS) tool8 was developed to help organizations measure the ethical climate in hospitals as perceived by RNs. The instrument was developed/validated to measure ethical climate to help organizations initiate change to improve ethical practices and retain nurses.8. Internal consistency reliability, using Cronbach’s alpha, was 0.91 for the 26-item instrument for the HECS.
The Professional Quality of Life (ProQOL) Survey11 has three subscales of 10-items each: Compassion Satisfaction (CS), burnout (BO) and secondary traumatic stress (STS). Rating is on a 5-point Likert scale ranging from 1 (never) to 5 (very often). Cronbach’s alpha for the three subscales is .88, .75, .81, respectively.12 The ProQOL will be administered (pre-and-post) to the targeted ICU RNs.

Provider Resilience Mobile App (National Center for Telehealth & Technology)
The Provider Resilience Mobile Application (PRMA) is available for free to practitioners for android or iPhone users. The purpose of this mobile application is to provide practitioners with a tool to keep themselves productive and emotionally healthy. The home screen gives a snapshot of the user’s overall resilience rating which is generated through self-assessments and a reminder clock showing the last day taken off. Compassion fatigue, burnout, and secondary traumatic stress ratings can be viewed in graphs. This allows users to monitor their quality of life over time. The app also features stress-busting and compassion satisfaction building tools which can be viewed daily. It also provides stretches, daily reflection cards and comics to give users a break from daily stress. The PRMA was developed by psychologists at the National Center for Telehealth & Technology part of the Defense Department. Participants will be asked to use the PRMA app a minimum of 10 times during the 60-day data collection period.

Procedures
Human subject approval is underway from institution’s Institutional Review Board (IRB).
Marketing and Recruitment Strategies: For each study phase, an intranet Banner announcement inviting all RNs to participate for both surveys (HEC/ProQOL) will be posted, with a live link directly to each survey, where all RNs can complete the informed consent, and proceed directly to each survey questions. Phase I is 30-days; while Phase II is 60-days.

Statistical Analysis
Data was analyzed using IBM-SPSS v. 25.0 (SPSS, Inc.; Chicago, IL, USA). Descriptive and inferential statistics will be used to analyze the study characteristics and variables. Correlations, along with use of a correlation matrix will be constructed to identify the potential for multicollinearity. If there is no multicollinearity found, a Pearson’s $r$ will be used to detect a possible relationship between the five key variables and the impact of the intervention on reducing stress and building resiliency. Finally, multiple
regression analysis will be used with five predictors (Compassion Fatigue; Compassion Satisfaction; Stress/Burnout and Intention to Leave).
Statistical significance was set at $\alpha = 0.05$, two-tailed.

Results
This study is underway, and results are pending.

Implications: By describing the hospital ethical climate we can start to improve the ways we support our bedside nurses. The use of a novel app such as the PRMA, may increase resilience in nurses and decrease burnout rates and increase compassion satisfaction. By securing and maintaining a stable nurse workforce include fostering an ethical work environment, this could promote job satisfaction and diminish moral distress, with a concomitant improved patient care delivery and satisfaction.11

Objectives
Participants will learn:
1. How to recognize ethical dilemmas that can lead to moral distress, stress and compassion fatigue, along with key strategies to build resiliency and reduce burnout.
2. How to recognize ethical dilemmas in the work place and learn how to seek departmental, and organizational support to diffuse situations that may lead to moral distress, burnout and intention-to-leave.
3. Understand how to utilize the Provider Resilience Mobile Application (PRMA) interactive mobile application to diffuse high stress situations, and to build resiliency skills to manage self-care.

Title:
Effectiveness of the Provider Resilience Mobile Application (PRMA) to Increase Nurses Resiliency

Keywords:
Hospital Ethical Climate, ICU Nurses and Resilience

References:
Abstract Summary:

A descriptive, observational method will be used to prospectively measure the effectiveness of the Provider Resilience Mobile Application (PRMA) to build resiliency in intensive care nurses.

Content Outline:

I. Introduction
A. The demand for nurses is likely to intensify in the wake of the restructuring of our health care system with a concurrent need for primary care services, particularly as baby boomers age. Among the many considerations for securing and maintaining a stable nurse workforce include fostering an ethical work environment, which could promote job satisfaction and diminish moral distress, with a concomitant improved patient care delivery and satisfaction
B. Moral distress, the code emphasizes, “threatens core values and moral integrity.” MD is pervasive in numerous health care settings and is experienced by nurses in all roles within an organization. At the individual level MD may cause burnout, lack of empathy, and job dissatisfaction, while at the organizational level it may lead to reduced quality of care, increased staff turnover, and poor patient outcomes.

II. Body
A. Main Point #1: To determine how nurses view the work ethical climate, including the degree of ethics stress they feel, and the adequacy of organizational resources to address their ethical concerns
   a) Hospital Ethics Climate Survey (HECS) tool was developed to help organizations measure the ethical climate in hospitals as perceived by RNs. The instrument was developed/validated to measure ethical...
climate to help organizations initiate change to improve ethical practices and retain nurses
b) How to recognize ethical dilemmas in the work place and learn how to seek departmental, and organizational support to diffuse situations that may lead to moral distress, burnout and intention-to-leave.

B. Main Point #2: To examine the effectiveness of an interactive intervention ‘Provider Resilience Mobile Application (PRMA)’ in determining whether use of the PRMA increases ICU nurses’ compassion satisfaction, while decreasing compassion fatigue, thus improving the overall professional quality of life (ProQOL) among nurses

a) The Professional Quality of Life (ProQOL) Survey has three subscales of 10-items each: Compassion Satisfaction (CS), burnout (BO) and secondary traumatic stress (STS). Rating is on a 5-point Likert scale ranging from 1 (never) to 5 (very often).

b) The Provider Resilience Mobile Application (PRMA) is available for free to practitioners for android or iPhone users. The purpose of this mobile application is to provide practitioners with a tool to keep themselves productive and emotionally healthy.

c) The app also features stress-busting and compassion satisfaction building tools which can be viewed daily. It also provides stretches, daily reflection cards and comics to give users a break from daily stress.

III. Conclusion

A. By describing the hospital ethical climate we can start to improve the ways we support our bedside nurses.

B. The use of a novel app such as the PRMA, may increase resilience in nurses and decrease burnout rates and increase compassion satisfaction.

C. By securing and maintaining a stable nurse workforce include fostering an ethical work environment, this could promote job satisfaction and diminish moral distress, with a concomitant improved patient care delivery and satisfaction.

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**Professional Experience:** Lisa Smalling has been a nurse for 16 years, working as a bedside nurse, clinical educator and nurse practitioner on a Pediatric Hematology/Oncology Unit. She now works as an adjunct nursing professor for California State University, Long Beach. She has had National accreditation for both Pediatric Oncology and Family Nurse Practitioner. She continues to practice as a Nurse Practitioner at Children's Hospital Los Angeles in the Surgical Admitting Department.

**Author Summary:** Lisa Smalling is a clinical instructor for California State University, Long Beach and Nurse Practitioner at Children's Hospital Los Angeles. She worked for many years on the Pediatric Hematology/Oncology Unit from a bedside nurse, clinical educator and nurse practitioner but now focuses on helping to teach, nurture and support nursing students in the field of Pediatrics.

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**Professional Experience:** Dr. Melissa Dyo PhD, FNP-C, Associate Professor, California State University, School of Nursing. Dr. Dyo received her Doctorate of Philosophy in Nursing, at Azusa Pacific University, 2011. She is currently the Director of the Undergraduate Nursing program, along with teaching in graduate and doctoral programs. She has been part of the faculty of the nursing research EBP Fellowship program for the past 7 years, in partnership with MemorialCare Long Beach Medical Center. She is a highly recognized educator and researcher. Her program of research is improving the quality of life for heart failure patients. Dr. Dyo well published and has spoken at many professional organizations, regionally and nationally presenting her research, as well as volunteering her time among these associations.

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