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Burnout, Depression and Suicide Prevention for Nursing Staff in High-Intensity Settings

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Burnout, Depression, and Suicide Prevention for Nursing Staff in High-Intensity Settings

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Executive Summary

Nurses working in high-intensity settings experience burnout at higher rates than in other nursing areas. Burnout in healthcare is a problem estimated as high as 70% by the Agency for Healthcare Research and Quality. Burnout can lead to depressive symptoms, which can lead to suicidal ideation in affected healthcare providers, which makes early identification and treatment of utmost importance to the mental and physical wellbeing of these nurses.

The purpose of this project is to examine burnout in nursing staff working in high-intensity areas of the hospital in order to help identify burnout and/or depressive symptoms before they lead to suicidal ideation, as well as creating a mechanism for treatment when these issues are identified. Healer Education, Assessment and Referral program implementation will be the process improvement project implemented to identify nursing staff burnout, depressive symptoms, and suicide risk. Nurses are the healers included in the education on burnout and depressive symptom identification. The nurses will be introduced to an interactive screening program, offered online and anonymously, to voluntarily participants to determine if treatment is necessary to improve depression and remove suicidal ideation.

The main outcome of interest will be improvement in burnout scores on the Maslach Burnout Inventory pre- and post-educational intervention, as well as participation in the online interactive screening survey. The rates of stress recognition on the annual safety attitude questionnaire and nurse turnover rates will also be reviewed for improvements. Other variables to be analyzed in relation to burnout will include age, gender, educational level, work unit, and number of years as a nurse. The overall goal is to see improvements in burnout scores, stress recognition scores and turnover rates of nursing staff.

Section II: Introduction

Burnout in healthcare has been estimated to be as high as 70% in nursing staff, according to the Agency for Healthcare Research and Quality (as cited in Bridgeman, Bridgeman, & Barone, 2018). Nurses working in high-intensity settings experience burnout at higher rates than other nursing areas due to many factors, including fluctuating workloads, reduced staffing, complex procedures, and intense life and death situations (Vasconcelos, Martino, & Franca, 2018). The emergency department (ED) and the labor and delivery (L&D) department are high-intensity departments of the hospital with unpredictable volumes of patients, over-crowding, patients who have experienced trauma, and patients with high-risk conditions requiring quick responses, which creates stress for the nurses (Rozo, Olson, Thu, & Stutzman, 2017). The adult intensive care unit (ICU) and the neonatal intensive care unit (NICU) 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 (Profit et al., 2014). These factors can lead to burnout for nurses in these high-intensity settings.

Problem Description

Healthcare burnout has been described as physical and behavioral symptoms such as anger, frustration, and characteristics seen in those who suffer from depression (Bridgeman et al., 2018). Depression is a mental health disability that accounts for 4.3% of the global health burden, according to the World Health Organization (as cited by Silva Ddos et al., 2015). Untreated depressive symptoms can lead to suicidal ideation in affected healthcare workers. Healthcare staff who are experiencing burnout and/or depressive symptoms have been associated with poorer patient safety outcomes and medical errors, which further perpetuates burnout

(Bridgeman et al., 2018). Burnout, depression, and suicide risk are issues that warrant further attention and treatment in order to ensure provider mental health wellness and safety of patients.

PICOT Question

In order to investigate best practice for identifying and treating burnout, depressive symptoms, and suicidal ideation in healthcare staff, a PICOT question was formulated. This question includes the population of interest, a proposed intervention, what the intervention is being compared to, the desired outcome, and the outcome timeframes. The PICOT question is; in nursing staff in the emergency department, intensive care unit, neonatal intensive care unit, and labor and delivery, how does proactive implementation of nursing staff education on burnout and depressive symptoms, assessment of burnout and depressive symptoms, and referral, compared to not educating or screening staff, affect burnout, stress recognition, and nurse turnover rates within three months of education and implementation of the interactive screening program for suicide prevention.

Available Knowledge

A review of the literature to find interventions to improve burnout, depression, and suicide in healthcare staff was conducted. Although the literature reported many interventions to decrease burnout, only those that included a primary intervention for improving burnout were selected for review. Other literature was reviewed if it included screening tools for depression and suicide risk. The evidence in the literature reviewed was evaluated using the Johns Hopkins Research Evidence Appraisal Tool (see Appendix A).

Awa, Plaumann, and Walter (2010) 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 burnout intervention program effectiveness on decreasing burnout. Of the studies reviewed in this systematic review, 14 were randomized controlled trials, 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. In this systematic review, Awa et al. found that burnout interventions were beneficial, and those that were both person- and organization-directed had longer positive effects on burnout.

Davidson, Zisook, Kirby, DeMichele, and Norcross (2018) described a pilot expansion of a proactive suicide-screening program for nurses in order to refer them for mental healthcare. The methods used for this program began by educating nurses on burnout and depression, as well as an introduction to the available online, anonymous risk screening tool. 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, one-hour grand rounds, which discussed the risks of burnout, depression, and suicide in healthcare. The screening program was also introduced to nursing at daily huddles over a two-week period. Results of this program six months after implementation included 7% of the nurses completing the online questionnaires, with 43% identified at high risk and 55% at moderate risk. The outcome included 44% of the screened nurses taking part in counseling and 17 nurses referred for continued treatment. Davidson et al. concluded that online, anonymous, proactive suicide risk screening was an effective way to find nurses at risk and offer counseling to improve their mental health.

Henderson (2015) 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 one-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 increases in commitment, control, and challenge. Henderson found that hardiness education was effective to decrease burnout and to support education and awareness as a solution to decrease burnout in healthcare staff.

Flarity, Gentry, and Mesnikoff (2013) conducted a qualitative study to evaluate the effectiveness of an educational program to decrease both compassion fatigue and burnout symptoms in nurses working in the ED. Emergency department nurses 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 four-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. The ProQOL survey is a 30-item self-report tool that uses three subscales: compassion satisfaction, secondary traumatic stress, and burnout. Flarity et al. found a statistically significant increase in compassion satisfaction, a decrease in burnout, and a decrease in secondary traumatic stress symptoms. Both

pre- and post-intervention results supported the intervention as beneficial to the wellbeing of ED nurses.

Downs et al. (2014) conducted a cross-sectional study of a voluntary depression and suicide prevention-screening program offered to faculty and students at a medical school over a four-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 completed 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 successful at identifying at-risk students and faculty and referring them for treatment (Downs et al., 2014).

The literature reviewed supports educational interventions for healthcare providers to decrease burnout and implementation of a screening tool to identify depressive symptoms and suicidal ideation. 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 to 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 in turn, improve patient outcomes and patient satisfaction, decrease errors, and improve nurse retention rates.

Rationale

The Institute for Healthcare Improvement (IHI) Framework for Improving Joy in Work will be the framework utilized to guide this project. This framework includes the critical aspects of the system that leaders need to focus on to help ensure engaged employees and for employees

to find joy in their work (Perlo et al., 2017). This framework includes nine critical components: physical and psychological safety, meaning and purpose, choice and autonomy, recognition and rewards, participative management, camaraderie and teamwork, daily improvement, wellness and resilience, and real-time measurement. This project will focus on the wellness and resilience component of the framework in order to improve the mental health of nursing staff in high-intensity settings. Wellness in the framework includes the importance of self-care, management of stress, work/life balance, and care of mental health (anxiety and depression), which are all components of wellbeing this project plans to improve.

Specific Aims

The aim of this project is to improve burnout scores on the MBI-HSS (Health Services Survey) for nurses in high-intensity settings pre- and post-educational intervention, as well as to introduce the interactive screening program (ISP) for suicide prevention. This will be accomplished by showing decreased mean scores on the emotional exhaustion and depersonalization section and increased scores on the personal accomplishment section for 80% of participants pre- and post-intervention on the MBI-HSS survey. Improvement in stress recognition scores on the safety attitude questionnaire (SAQ) to the industry median of 45% favorable for the departments that receive the education as well as improvement in the nursing turnover rates will also be proof that the interventions were successful.

Section III. Methods

Context

The objective of this project is to provide education of nursing staff on burnout and depression, as well as to offer screening for depression using an online, anonymous, proactive screening tool. The stakeholders included in this project are registered nurses (RNs) and nurse practitioners (NPs) in ICU, NICU, ED, and L&D. According to the literature review, these nurses are at high risk for experiencing burnout, and including them in self-assessing burnout symptoms will glean information about how prevalent this problem is in each of the departments. With participation voluntary, their openness to assess and create change if burnout exists will be determined by the number of participants who attend the burnout education and their willingness to seek help.

Proposed Interventions

The education provided will include definitions of burnout and prevalence statistics, the relationship of burnout and depressive symptoms, and information to remove the stigma around seeking help when these symptoms are identified. Interventions to avoid burnout and create a balance between work and home life will be presented, and the ISP will be introduced. The target population will be invited via an e-mail announcement and through flyers posted in the individual units. Participation in the nursing staff education will be voluntary. The staff will enroll in the class by notifying their supervisor of their desire to participate. Participants will be paid to attend. The participants will be signed up once their supervisor has arranged for their time off. Participants are also welcome to attend on their day off if they are unable to be scheduled to attend due to staffing challenges.

A gap analysis of current programs to support employee health and wellness in the organization was completed (see Appendix B). The current process for ensuring the wellbeing of hospital employees is not proactive, as the employee assistance program (EAP) is enacted when staff self-identify mental health issues and seek assistance through human resources. Although the hospital explicitly states in the mission statement of the employee health program that the goals are to ensure a safe and healthy work environment while promoting employee wellbeing, there are no programs offered to aid in identifying or improving mental health issues for staff. Employees who enact the EAP benefit are offered three, free, face-to-face counseling sessions with a local counselor, which may not be appealing to some staff.

The county also has an employee wellness program offered to the organization, which includes in-person classes on various wellness topics, with a goal of improving employee health and wellbeing. Employees are eligible for up to 12 hours of release time per fiscal year to attend wellness programs during the workday. Staff nurses responsible for patient care are unlikely to attend, as they cannot be released in the middle of a shift. Also, the classes are not held on the hospital campus, making attendance even more challenging for staff nurses. The classes offered by the wellness program are infrequently utilized by nurses in the organization, which points to a large gap in proactive, accessible services to improve mental health of nursing staff.

An analysis of the organizations strengths, weaknesses, opportunities and threats was completed (see Appendix C). There are several internal strengths of the organization that will be helpful in achieving the project objectives. Frontline and middle management staff are dedicated to providing excellent care to the underserved population, and if interventions help achieve this goal, they will likely be engaged. Senior leadership is supportive of implementing this project, as they are in favor of interventions that will help improve the mental health of staff (see Appendix

D for Letter of Support). This support can be seen in the organization's active participation in IHI's Joy in Work initiative currently underway. Also, senior leadership has agreed that participation in the educational sessions will be paid time and will provide nursing continuing education units, which is always helpful in bolstering attendance.

An internal weakness, which will be potentially harmful to achieving the project objectives, is that the teamwork climate between NPs and RNs in the NICU and ED is currently unfavorable, and nurses may not want to participate in activities alongside the NPs. Also, the relationship with county behavioral health services for ensuring a counselor to run the ISP program has not yet been solidified. Lastly, a contract needs to be implemented with the American Foundation for Suicide Prevention (AFSP), and this process can be very lengthy and could delay this portion of the project.

Opportunities that can add more value include, the fact that there is nothing in place currently to identify burnout or depression in healthcare providers, and there is nothing to screen for suicide risk. This project could also lead to an expansion of behavioral health services to other healthcare providers if the project is successful. Lastly, if staff can identify burnout and implement recommended interventions, or if depressive symptoms are identified in the ISP, an improvement of mental health in nursing could result in improved patient satisfaction scores, decreased medical errors, and improved patient outcomes.

Threats that may interfere with participation in this project include competing priorities with other staff engagement activities currently underway. Also, voluntary participation may not get large volumes of participants, as many staff may not recognize a need for identifying burnout, and when not forced, will not volunteer their participation. Lastly, with staffing being

tight in some units, supervisors may not be able to give employees time off to participate in the education, and staff may not be willing to come to work on their day off to participate.

Anticipated costs of this project have been estimated to ensure buy-in with administration (see Appendix E). The cost of implementing the ISP program with AFSP includes \$5,000 the first year and \$2,500 for each subsequent year. Costs associated with the EAP counselors running the website for ISP have not been fully calculated. The costs for staff nurses to attend the two-hour educational sessions will be calculated using the average RN cost per hour, which is approximately \$70. With voluntary participation, it is difficult to know exactly how many staff will attend, so an estimate will be used to calculate these numbers. There are 196 nurses working in the ED, ICU, L&D, and NICU departments. According to the RAND Employer Survey, participation rates in interventions for wellness tend to average 20% or less (Mattke et al., 2013). So, estimates of 20% participation would include 40 nurses attending at \$70 per hour for a two-hour training, for a total salary amount of \$5,600. The total budget for the first year of the project would be \$10,600 plus the costs associated with the EAP counselors completing the online depression surveys, once this has been established.

Proposed Outcomes Measures

The tool that will be utilized to analyze the interventions of this project will be the MBI-HSS (see Appendix F). The MBI-HSS was developed by Christina Maslach and Susan Jackson and has been used extensively to determine burnout in the healthcare setting (Perlo et al., 2017). Those who attend the education will be asked to complete the MBI-HSS at the beginning of class, and this data will be collected for later comparison post-intervention. This survey has 22 items divided into three scales: emotional exhaustion, depersonalization, and personal accomplishment. Emotional exhaustion is measured as feelings of being emotionally strained and

tired due to work. Depersonalization is measured by feelings that service, care, and instruction are impersonal. Lastly, personal accomplishment is measured by one's feelings of personal success and achievement with their work (Perlo et al., 2017). The goal of the project is to see improvements in the burnout scores for those who attend the education.

This survey will be administered electronically using Qualtrics so that calculations of the MBI-HSS scores can be made and given to the participant directly, as well as be available to the investigator of this project. Participants will enter the data into the survey by going to the survey link provided to them and completing the questions electronically. The scores on this survey will provide a baseline of burnout prevalence and can be utilized to determine the impact of the educational intervention.

Another tool that will be utilized to determine if the intervention was successful will be the stress recognition scores on the annual Pascal Metrics SAQ. Questions asked on this survey regarding stress recognition include the following:

I am less effective at work when fatigued.

I am more likely to make errors in tense or hostile situations.

When my workload becomes excessive, my performance is impaired.

Fatigue impairs my performance during emergency situations.

If the intervention improves staff knowledge of how stress impairs performance, there should be elevations in SAQ stress recognition scores.

Another source of data that will be analyzed to determine the effectiveness of this project will be nurse retention rates in the ED, L&D, ICU, and NICU. These numbers have been calculated as a nurse turnover rate utilizing total nurses as the denominator and all nurses departing the facility in the time period as the numerator. According to Nursing Services, Inc.

(2018) from the 2018 survey conducted of hospitals throughout the United States, the current nurse turnover rates rose by 2.0% to 16.8% in 2018. Also reported was that nurses in the ED and step-down units have the highest turnover rates of 27.7%. Nurse retention rates will also be analyzed from the previous fiscal year to determine if the interventions were effective in improving turnover rates.

Three months after participation in the training, nursing staff that attend the healer education will be asked to retake the MBI-HSS to evaluate the effectiveness of this training. Burnout scores prior to the intervention will be evaluated against the post-intervention scores, with the goal of improving burnout scores. Other variables that will be considered will include data such as age, gender, education, work unit, and number of years as a nurse (see Appendix G). The turnover rates for fiscal year 2019 will be compared with the rates from fiscal year 2018 to determine the impact of this project intervention, and the stress reduction results on the SAQ for 2018 will be compared to 2019.

Proposed Analysis

Measurement strategies will include quantitative analysis of MBI-HHS and SAQ stress recognition scores to compare rates of burnout and stress recognition pre- and post-intervention. Descriptive statistics will also be used to describe and summarize the data and will include averages, percentages, and ranges (see Appendix G). These measurement strategies will allow the investigator to compare, describe, and characterize the relationship between burnout and the other demographic variables being collected from study participants to determine if trends exist (Polit, 2010). To ensure data are clean (error-free), the survey will be built in Qualtrics so that every question can be answered with a predetermined response and set up so that all questions must be answered before proceeding to the next question and completing the survey.

Predetermined responses will eliminate outlier responses and the need to exclude responses. The data obtained in the MBI-HSS survey will be quantitative and will give each participant a score in each scale (emotional exhaustion, depersonalization, and personal accomplishment). Higher emotional exhaustion and depersonalization scores contribute to burnout, and higher personal accomplishment scores reduce burnout.

Ethical Considerations

This project was excused from investigational review board (IRB) oversight, as it is a quality improvement initiative (see Appendix H). There are no other programs offered in the organization of this type; although, the Joy in Work project is being implemented in the ICU, which should complement this program rather than being a conflict of interest. Oversight of this project will be done by the DNP student in collaboration with the quality assurance department and the leaders of the included nursing units (see Appendix I. Responsibility/Communication Plan). The timeline and work for this project will be determined in collaboration with quality assurance and the department leaders (see Appendix J. Gantt Chart and Appendix K. Work Breakdown Structure).

Having participants utilize their employee identification numbers instead of their names when completing the MBI-HSS will ensure privacy of participants. The ISP is completed anonymously via a secure website and allows a safe way for individuals to connect with a mental health professional for assessment and referral. Participation is completely voluntary and anonymous, which may help the participants feel comfortable admitting their concerns and asking questions.

Provision 6 in the American Nurses Association (ANA) Code of Ethics states, “The nurse, through individual and collective effort, establishes, maintains, and improves the ethical

environment of the work setting and conditions of employment that are conducive to safe, quality health care” (ANA, 2015 p. 23). Ensuring mental health wellbeing of nurses in high-intensity settings aligns with this provision, as healthy nurses are better able to provide safe, quality care when they are not burned out or suffering from depression due to working conditions.

Jesuit core values, as described in the University of San Francisco’s (n.d.) mission statement, that relate to this project include, “Full development of each person and all persons, with the belief that no individual or group may rightfully prosper at the expense of others” (para. 5). Ensuring mental health wellbeing of nurses caring for patients means that we are not healing patients at the expense of the care providers. Also, the Jesuit value of creating a culture of service that respects and promotes the dignity of every person is at the core of this project, ensuring that both the nurse’s and the patient’s health are promoted, thus ensuring dignity to everyone.

Section IV. Discussion

Limitations

Potential barriers to implementing this project include the process of securing a contract with AFSP to implement the ISP program. Currently, the EAP contract is up for renewal, and a *request for performance* was created to generate bids to provide EAP services, which will include counselor management of the ISP. The target date for the contracted agency selection is January 1, 2019, yet the details of how the contracted counselors will be trained are yet to be determined. Should the ISP portion of this project not happen, the project will continue with a focus on burnout education and introduction to available county resources, such as the three face-to-face counseling sessions and the county wellness class offerings.

Conclusions

In conclusion, this project to evaluate and improve burnout and depressive symptoms and to identify suicide risk will improve the wellbeing of nursing staff in high-intensity settings of the hospital, which in turn should improve patient satisfaction and outcomes and decrease errors. Utilizing the MBI-HSS, the stress recognition domain on the SAQ, and turnover rates will not only allow participants the ability to evaluate their own risk of burnout and depression, it will also allow the investigator to evaluate outcomes by department and other demographic variables. Based on the findings and correlations made between outcome and demographic variables, further education can be provided to other groups or areas of the hospital to improve the wellbeing of all healthcare providers.

To ensure sustainability of this project, outcome measures will be shared with senior administration and medical staff, so that the benefits can be seen and the HEAR program can become regular practice for all healthcare providers. Should this project be a success in reducing

burnout, identifying depressive symptoms, and referring those in need, this could become part of the county's wellness program by including other high-risk professionals, such as social workers, police officers, and other professionals who potentially suffer due to the stressful nature of their chosen profession. Overall this project will be a valuable asset to not only the healthcare staff, but also the organization and can become regular practice to ensure we are aligned with the mission to ensure a safe and healthy work environment while promoting employee wellbeing.

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VI. Appendices

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	Depression & suicide risk	Suicide risk screening using 9-item Patient Health Questionnaire (PHQ-9) & additional	7% or 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	Strengths: Well received from nursing staff as a needed resource for those suffering. Limitations:

			multisite health system.		questions done anonymously online.		them for treatment.	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 years) 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 &	Pre-tests - 52% had low to moderate compassion satisfaction, 59% had mod to high levels of burnout, 60% had mod-	Hardiness education can lower burnout scores for participants. Also this education can improve hardiness scores. There is an	Strengths: Low cost of education with good return of a healthier workforce. Limitations: Convenience

					Microsoft Excel for demographic data analysis.	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 ($p=0.001$)	inverse relationship between hardiness and burnout.	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

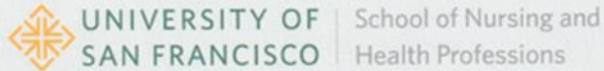
Appendix B. Gap Analysis

REF NO.	ITEM	CURRENT STATE	DESIRED STATE	ASSIGNED TO	ACTION ITEMS	PRIORITY	RISKS	COMPLETE
1	EAP not proactive	Enacted when staff self-identify mental health issues and seek assistance through HR	Program to proactively identify mental health issues	A. Ritchie	Create project plan	High	Lack of buy-in by staff as participation is voluntary	No
2	Wellness program not well attended	Classes currently during daytime in the middle of nursing shifts	Classes held on campus after nursing shifts	Wellness Program Director	Collaborate with county wellness program to help modify schedule	Medium	Lack of resources for wellness classes and county may not be willing to offer at the hospital	No
3	Burnout not systematically evaluated	SAQ does not include burnout survey questions	Annual SAQ to include burnout survey questions	Senior Admin.	Collaborate with senior admin team to add burnout questions to SAQ	High	Lack of buy-in from admin staff to add these measures to the SAQ due to increased costs	No
4	Suicide risk not evaluated	There is no mechanism to identify depression or suicidal ideation in staff	Implementation of ISP for all healthcare staff in the hospital	A. Ritchie	Ensure contract approved by county & ISP program managed by EAP counselors	High	Lack of involvement by EAP services contracted vendor	No

Appendix C. SWOT Analysis

Internal	
Helpful To achieving objective	Harmful To achieving objective
<p>Strengths - What unique benefit does the organization have or provide?</p> <ul style="list-style-type: none"> • Passionate frontline and middle management staff dedicated to providing excellent care. • Support of senior leadership to implement the HEAR program at Natividad. • Staff feel that working at Natividad is like being part of a large family and are dedicated to providing safe care. • Participation in education will be paid time and will provide Nursing CEUs. 	<p>Weaknesses – What needs remain unfulfilled?</p> <ul style="list-style-type: none"> • Teamwork climate in NICU not favorable at this time. • Relationship with county behavioral health services to implement the ISP portion of the HEAR program not yet solidified. • Implementation of contract with AFSP to implement ISP is an unknown variable, this can be a lengthy process with county contracts.
External	
Opportunities How can you add more value? How can weaknesses be overturned?	Threats Where might you lose participation?
<ul style="list-style-type: none"> • No current program to identify burnout, depression, & suicide risk. • Expansion of behavioral health services to nursing staff and other healthcare providers. • Potential to improve patient outcomes and decrease medical errors due to improved mental health of participating staff. 	<ul style="list-style-type: none"> • Competing priorities with multiple employee engagement projects underway (IHI - Joy in Work, Beta Heart - Care for the Caregiver) • Inability to fully engage staff as participation will be voluntary. • Staff may not be able to attend if unit cannot spare them and they have to attend on their day off.

Appendix D. Organization Letter of Support



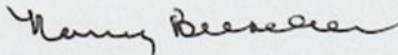
Date: October 1, 2018

RE: Support of DNP Project at Natividad

To Whom It May Concern:

This letter is acknowledging support of the DNP project plan of April Ritchie, Director of Women & Children's Services here at Natividad, in collaboration with the University of San Francisco's Executive Leadership DNP program. We support the project to implement education of nursing staff in ED, L&D, ICU and NICU on burnout and depression and the introduction to the Interactive Screening Program (ISP), which will be implemented in collaboration with the American Foundation for Suicide Prevention and the County of Monterey at Natividad. We support this evidence-based change in practice project that aims to improve the delivery of care and improve the mental health and well being of nurses in the organization. If this work is published we are comfortable with the following statement as it pertains to the project; "This project was undertaken as an Evidence-based change of practice project at Natividad Hospital and as such was not formally supervised by the Institutional Review Board".

Sincerely,



Nancy Buscher, RN, DNP, Chief Nursing Officer

&



Gary Gray, DO, Chief Executive Officer

Appendix E. Budget / Cost Baseline

ITEM / TASK	% COMPLETE	BASE COST	COST	ESTIMATED COST	ACTUAL COST
First year contract with AFSP for ISP	0%	\$5,000	\$5,000	\$5,000	TBD
Subsequent year contract with ASFP for ISP	0%	\$2,500	\$2,500	\$2,500	TBD
Nurse Education Attendance (2 hours) 196 INVITES- 20% participation	0%	\$70/ hour	\$140	\$5,600	TBD
EAP to manage ISP (Current is \$18/year/FTE)	0%	TBD	TBD	TBD	TBD
Per participant cost of EAP managing surveys	0%	TBD	TBD	TBD	TBD

Appendix F. Maslach Burnout Inventory Human Services Survey

Data Collection Tool

MBI-Human Services Survey for Medical Personnel

Sample Questions
I feel emotionally drained from my work
I have accomplished many worth wile things in this job
I don't really care what happens to some patients
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Appendix G. Outcomes Table

Demographic Variables of Study Participants	ED	L&D	ICU	NICU
Gender <ul style="list-style-type: none"> • Male • Female 				
Age, median (range)				
Education <ul style="list-style-type: none"> • Diploma • ASN • BSN • MSN • Other 				
Area of Current Practice <ul style="list-style-type: none"> • Emergency Department • Labor & Delivery • Adult Critical Care • Neonatal Critical Care 				
Number of years as RN, median, (range)				
MBI-HSS Summary Statistics				
*Scale	ED (n=)	L&D (n=)	ICU (n=)	NICU (n=)
Pre-Intervention Burnout <ul style="list-style-type: none"> • Emotional exhaustion • Depersonalization • Personal accomplishment 				
Post-Intervention Burnout <ul style="list-style-type: none"> • Emotional exhaustion • Depersonalization • Personal accomplishment 				
*Burnout: Emotional exhaustion (range, 9-63; higher=more burnout) Burnout: Depersonalization (range, 5-35; higher = more burnout), Burnout: Personal accomplishment (range, 8-56; lower = more burnout)				
Turnover Rates	ED	L&D	ICU	NICU
<ul style="list-style-type: none"> • Pre-Intervention • Post-Intervention 				
SAQ Stress Recognition Scores				
<ul style="list-style-type: none"> • Pre-Intervention • Post-Intervention 				

Appendix H. Statement of Non-Research Determination Form



EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

Project Title:	YES	NO
The aim of the project is to improve the process or delivery of care with established/accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	✓	
The specific aim is to improve performance on a specific service or program and is a part of usual care. ALL participants will receive standard of care.	✓	
The project is NOT designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does NOT follow a protocol that overrides clinical decision-making.	✓	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does NOT develop paradigms or untested methods or new untested standards.	✓	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does NOT seek to test an intervention that is beyond current science and experience.	✓	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	✓	
The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	✓	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, student's and/ or patients.	✓	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: "This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board."	✓	

ANSWER KEY: If the answer to ALL of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is NO, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

STUDENT NAME (Please print): April Ritchie

Signature of Student: April Ritchie **DATE** 7/15/18

SUPERVISING FACULTY MEMBER (CHAIR) NAME (Please print): Elena Capella

Signature of Supervising Faculty Member (Chair): _____ **DATE** _____



Appendix I. Responsibility / Communication Plan

COMMUNICATION TYPE	DELIVERABLE	DESCRIPTION	DELIVERY METHOD	FREQUENCY	OWNER	AUDIENCE
Presentation	PowerPoint presentation	Presentation to introduce project	In-person	One time	A. Ritchie	Senior Administration
Presentation	PowerPoint presentation	Presentation to introduce project	In-person	One time	A. Ritchie	Hospital Committee Members
Meetings	Agenda and goals	Group meetings to discuss project	In-person	Bi-monthly	A. Ritchie	Hospital Committee Members
Meetings	Updates on project plan & timelines	Discussion	In-person	Bi-monthly	A. Ritchie	Chief Nursing Officer
Meetings	Project plan & timelines	Discussion	Zoom	Weekly	A. Ritchie	DNP Committee Chair
Correspondence	Report	Project plan in APA	E-Mail	Per chair recommendation	A. Ritchie	DNP project Committee

Appendix K. Work Breakdown Structure

