An Emergency Department Resource Nurse Checklist

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AN EMERGENCY DEPARTMENT RESOURCE NURSE CHECKLIST

A Scholarly Project to be Submitted to the Graduate School
in Partial Fulfillment of the Requirements
for the Degree of
Doctor of Nursing Practice

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Pittsburg, Kansas

May 2023

Acknowledgements

I wish to express my appreciation to the project committee members Dr. Mandi Alonzo, Dr. Greg Belcher, and Dr. Jennifer Harris for their valuable insights vital for the planning and implementation of this project. I would also like to acknowledge Dr. Kristi Frisbee for the time, and effort she spent to provide quality feedback throughout the steps of this project.

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An Abstract of the Scholarly Project by
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Emergency Departments (ED) across the United States (US) are experiencing high patient populations leading to crowding and poor outcomes (Pines et al., 2009). Healthcare workers must work diligently and as safely as possible. A safety checklist is a tool commonly used to improve safety in the aviation industry and prior to surgical procedures. A checklist serves as a barrier to human error when a task has multiple steps or is performed infrequently (Elmezzi & Deering, 2019). A checklist was developed for the ED resource nurse in a Southwest Missouri hospital to help the nurse complete important tasks to facilitate optimal ED functioning. The purpose of this scholarly project was to create, implement, and evaluate a resource nurse checklist to improve the nurse's productivity and utility to the department.

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INTRODUCTION

In the United States, there were 136.9 million Emergency Department visits in 2015. This high patient volume has been associated with increased mortality, poor patient outcomes and delays in care (Chen et al., 2019). There are many factors that may contribute to this problem, including nurse shortages and aging patient populations (American Association of Critical-Care Nurses 2020). Regardless of the causes, the effect is poorer outcomes for both patients and nurses. Although nurse shortages cannot be remedied overnight, an improvement to ED efficiency could reduce the risks posed by short staffing and high demand. Checklists have been shown to be effective in improving safety in the emergency department (Redfern et al., 2018). This project describes the implementation of a nursing checklist for the ED resource nurse to improve the efficiency of the department and potentially reduce crowding, and help avoid poor patient outcomes.

Clinical Problem

To better understand the phenomenon, a brief description of the current ED process is warranted. The ED in a southwest Missouri hospital has five areas: a patient triage and four Pods. Each Pod has a designated level of patient acuity and is composed of its own team of nurses and physicians. In addition to the Pod nurses, there is a resource

nurse, also commonly known as a float nurse. The resource nurse's role is to circulate between the pods helping nurses not get behind with patient care. The resource nurse also helps with ambulance intake and patient emergencies throughout the unit. The resource nurse could be a tremendous aid to the unit, but the nurse often waits to be needed rather than seeking out ways to assist the department.

To fully utilize the resource nurse position as intended, a checklist was developed to help guide the nurse to be proactive and complete tasks in the department that would benefit staff and patients. This list included tasks such as stocking the trauma bay and supply carts, rounding on patients, posting their phone number in each pod, reviewing, and investigating patient alarms, relieving staff for lunch break, etcetera. Implementation of such a list was to provide a higher degree of consistency from one nurse to the next and keep the nurse more accountable for their productivity while increasing the nurse's benefit to the department.

<div align="center">**Significance**</div>

Significance to Patients

It is no surprise that long wait times and crowding can have a negative impact on patient outcomes. This is confirmed by numerous studies. One such study looked at ED crowding and its effects on cardiac patient outcomes. The study found that patients were more likely to suffer adverse outcomes when the ED census was high (Pines et al., 2009). In addition to the poorer outcomes, patients also experience decreased satisfaction and when wait times are prolonged, patients often choose to leave without being seen (Spencer et al., 2019). The checklist was proposed to potentially reduce wait times and crowding, which would be of great value to patients.

Significance to Nursing

High levels of nursing workload and stress lead to poor job satisfaction, turn-over and burn-out (Goodare, 2017). The float nurse position supports nursing teamwork and reduces nurse stress levels. It stands to reason then, that improving the effectiveness of the float nurse position would be of benefit to the nurses in the unit. To assess this perceived benefit, a survey was conducted before and after implementation of the checklist. The checklist was developed in collaborating with management and content experts, to select meaningful tasks to include in the list. This collaboration was not only intended to create an effective list but could also foster a sense of shared ownership of the checklist and improve job satisfaction. On a grander scale, the Doctor of Nursing Practice (DNP) project could encourage both nurses and department management in other hospitals to observe their departments for similar areas of improvement and adapt the checklist to fit their needs.

Significance to Society

This DNP project has its roots starting in the Emergency Department, but the effects extend into many other problem areas in healthcare such as nursing burnout, nursing turnover, patient satisfaction and patient outcomes. Even a small improvement in these problems could provide a reduction in health care costs and thereby reduce the burden to society. For instance, the average cost of nurse turnover is $52,100 per position. From 2014 to 2018, the average hospital turned over 87.8 percent of its entire workforce (Kelbach, 2020). From 2014 to 2020 the turnover rate of all staff RNs increased from 14.6% to the current 18.7%. Emergency nurses specifically were found to have a higher-than-average turnover rate of 20.0% for 2020 (NSI, 2021). Each percentage

point increase in RN turnover costs a hospital approximately $328,400 (Kelbach, 2020). The costs of decreased patient satisfaction and outcomes are more difficult to quantify, but one can see how a reduction in these areas would benefit society greatly.

Specific Aims and Purpose

The specific aim for this DNP project was to improve the ED resource nurse's value to the ED staff. The project examined nursing staff perceptions of the resource nurse's role before and after checklist implementation via a pre-post survey design. Considering staff suggestions, a carefully designed checklist was implemented to guide the resource nurse to complete tasks of value to the department. The post-checklist survey measured perceived change in the resource nurse's utility. The purpose of this project was to improve resource nurse productivity and thereby improve ED efficiency resulting in improved nursing satisfaction and decreased ED waiting room census. Elevated ED waiting room census has been associated with decreased patient outcomes (Pines et al., 2009). An improvement in the utility of the resource nurse could promote ED efficiency and result in better patient outcomes. A secondary aim of the project was to foster an atmosphere of teamwork, problem solving and collaboration by including input from both staff and management with a common goal of department improvement. The checklist could serve as a starting point to be adapted or modified to fit other department needs. The resulting collaboration and teamwork from sharing and problem solving could be a universal benefit.

Theoretical Framework

The theoretical framework used as the foundation for this project is the Helping Art of Clinical Nursing by Ernestine Wiedenbach. She theorized that nursing is composed of identifying the patient's need for help, determining the cause of the problems, determining if the patient can solve the problems themselves, and determining if the nurse should step in and help. Wiedenbach's theory adds a unique perspective to this project due to her definition of the patient. She defines the patient as "any individual who is receiving help of some kind, be it care, instruction or advice from a member of the health profession or from a worker in the field" (Currentnursing.com, 2020, para. 4). From the perspective of a resource nurse, other nurses are also patients because they are receiving help from the resource nurse. The theory defines a need-for-help as "any measure desired by the patient that has the potential to restore or extend the ability to cope with various life situations that affect health and wellness" (Weidenbach, 1963, p. 56). The conceptualization of the resource nurse's helping role is expanded using Wiedenbach's theoretical perspective. The idea that the unit nurses could be viewed as patients brings new meaning and responsibility to the resource nurse role making the resource nurse the nurse's nurse.

Research Questions

- What are the ED staff's perceptions of the resource nurse's utility to the department before checklist implementation?
- What are the ED staff's perceptions of the resource nurse's utility to the department 3 months after checklist implementation?
- Will the implementation of a resource nurse checklist significantly improve staff perceptions of the resource nurse's utility to the ED?

- What are the perceptions of performance variability from one float nurse to the next prior to checklist implementation?

- What are the perceptions of performance variability from one float nurse to the next after checklist implementation?

- Will implementation of a resource nurse checklist significantly reduce staff perceptions of performance variability from one float nurse to the next?

- What is the self-reported productivity of the resource nurse before checklist implementation?

- What is the self-reported productivity of the resource nurse after checklist implementation?

Definitions of Key Terms/ Variables

- Patient- "any individual who is receiving help of some kind, be it care, instruction or advice from a member of the health profession or from a worker in the field" (Currentnursing.com, 2020, para. 4). For the purpose of this project, it will also include fellow RNs.

- Resource Nurse or Float Nurse- A registered nurse whose dedicated role is to help other nurses in the unit.

- Checklist- "A list of items required, things to be done, or points to be considered, used as a reminder" (Oxford English Dictionary, n.d.)

- Emergency Department Crowding- "a situation where demand exceeds the resource supply (i.e., beds, nurses, doctors etc.)" (Eiset et al., 2019, p.1)

- Triage- "the sorting of patients (as in an emergency room) according to the urgency of their need for care" (Merriam-Webster n.d.)

- Pod- a semi-independent area in the ED, staffed with its own dedicated personnel (physicians, nurses, nurse aids, secretary, etc.) and designed to treat and monitor patients sorted by category or acuity.

- Burnout- "an emotional exhaustion, depersonalization and a reduction in perceived personal accomplishment" (Goodare, 2017, p 54).

- Turnover- "the number of persons hired within a period to replace those leaving or dropped from a workforce" (Merriam-Webster, n.d.).

Figure 1

Logic Model

Purpose: To improve utility of the Emergency Department Resource Nurse by implementing a checklist

Inputs	Activities	Outputs	Short Term	Mid Term	Long Term
•Materials for questionnaire- Qualitrics software •Space to conduct the survey •Cooperation and time from managment and staff.	•Collaborate with managment and receive permission to conduct survey. •Conduct survey of ED staff. •Create and implement checklist •Educate staff on the new process •Evaluate effects	• Post-implementation survey will be used to evaluate effects. •Improvement of perceived resource nurse utility. •Successful utilization and completion of checklist	• Receive positive feedback from resource nurses after using checklist •Improved perception of resource nurse utility by staff nurses. •Increased performance accountability. •Provide clear expectations of resource role.	•Improved consistency from one resource RN to the next. • Improved ability of the ED to safely accommodate high census. •Improve nursing teamwork.	•Reduction in nursing stress levels •Improved patient outcomes •Improved ED throughput •Decreased patient wait time.

Context or Conditions: The ED is frequently stretched to the edge of safety due to high census and acuity. Five separated ED Pods discourages nurses from helping nurses in other pods. No formal role or expectations are set for the resource nurse. The nurse is often unaware of how to help the unit.

The logic model provides a visual break down of the project's purpose, required resources for implementation, activities and expected outcomes as well as some context to the ED environment where the project took place. The project required very few resources to implement and used a pre and post implementation survey to measure short-term and midterm outcomes. Measurement of long-term outcomes were not completed due to the time constraints of this project.

Summary

ED staff must be ready to face any challenge that walks in the door, regardless of high patient census or acuity, and healthcare must find innovative ways to meet challenges efficiently, safely, and sustainably. Unit patients and nurses depend on the resource nurse to be available when they need help and if help is not needed, the resources nurse can stay busy and proactive by utilizing the checklist. The checklist was proposed to improve the utility of the role, and short-term outcomes. Any long-term effects of reduced nurse stress, improved ED throughput and decreased patient wait time could translate to decreased nursing burnout, lower turnover, and improved patient satisfaction and outcomes. The project may also serve as starting point for staff to beginning contemplating or sharing their ideas for improvements throughout hospitals and provide a secondary benefit of improved teamwork and collaboration.

CHAPTER II

REVIEW OF LITERATURE AND EVIDENCE

An initial database search using PubMed, ProQuest, Summon®, and Cumulative Index to Nursing and Allied Health Literature (CINAHL) for journals pertaining to "Emergency Department resource nurse checklist" showed zero results relevant to the topic, suggesting this specific checklist may be novel to the current body of literature. A broader approach was then used to search for relevant literature using key terms such as Emergency Department, checklist, human error, ED safety, and checklist barriers. Terms were searched individually and in combination with each other. Searches were limited to peer reviewed scholarly journals from within ten years.

In keeping with the project goal of improving the resource nurse's utility to the ED, it is important to review the literature to understand why checklists are used, what makes a successful checklist, potential barriers to checklist implementation and the current safety concerns within the ED that the checklist will be targeting. Understanding these key areas helped ensure the checklist was implemented in a fashion that promotes success and safety.

Checklists

Checklists are memory aids serving as a barrier to human error. They are most useful when tasks are not performed routinely and or have many steps that are easily forgotten. A checklist is designed to aid a person to complete tasks in a systematic fashion (Dryver et al., 2021). Safety checklists were first introduced by the aviation industry in the 1930s after a test flight crashed shortly after takeoff. An investigation revealed that the crash was a result of pilot error concluding that the experimental aircraft was "too much plane for one man to fly" (Elmezzi & Deering, 2019). The pilots gathered to discussed ways to improve their performance and safety and their solution was the safety checklist. Perhaps the most prominent safety checklist in health care literature is the surgical safety checklist implemented by the World Health Organization (WHO) in 2009. It is composed of 19 items designed to assist surgery teams to remember critical details for operations. The checklist was implemented in over 4000 hospitals worldwide has been found to reduce complications and mortality by 36% (Elmezzi & Deering, 2019).

Recommendations for Success

An article titled "Using Standardized OR Checklists and Creating Extended Time-Out Checklists: Patient safety first" provides tips for creating a successful operating room checklist. The authors describe that a successful checklist (1) Should not be lengthy because an increased number of items increases the chances that an item will be overlooked. (2) Grouping the items into discrete sections can be a helpful strategy to help ensure that items are not omitted. (3). Checklists are more likely to be accepted by staff if they understand its purpose. And (4) Checklists work best when they are evaluated periodically (Hey & Turner, 2016).

A 2014 article by Lisa Spruce "Back to Basics: Implementing the Surgical Checklist" provides more implementation strategies that have been found to improve success. Strategies such as (1) Conducting a pilot testing of the checklist. (2) choosing checklist champions to answer questions and assist staff. (3) Welcome and respond to all staff input. (4) Require staff signature to help with compliance and ownership. (5) Make sure leaders understand and support the checklist. (6) Make sure everyone understands their important role in patient safety (Spruce, 2014).

Potential Barriers to Implementation

Potential barriers to a checklist implementation can also be found in the literature. Fourcade et al. wrote an article titled "Barriers to Staff Adoption of a Surgical Checklist". In the study, surgical staff from 16 centers using the surgery checklist implemented by WHO were interview using a semi structured questionnaire. The surgical staff reported barriers that they experienced using the checklist. The most reported checklist barrier was (1) duplicated check items. Some items were present on a previously existing checklist. This can cause staff to feel that the checklist is not necessary. Another commonly reported barrier was that the checklist was (2) time consuming. Others found the items (3) confusing or ambiguous. Staff also felt that (4) needed items were missing or (5) items on the list were unnecessary (Fourcade et al., 2011).

An article by Bergs et al. (2015) echoes many of the same checklist barriers with a few additional items. Bergs et al. noted that a checklist is less likely to be successfully implemented if staff view it as additional workload. Inadequate training was listed as a barrier causing some staff to not use or misuse the checklist. Lack of communication and support between leadership and staff can also hamper implementation. Leadership must

support the checklist, communicate its importance and be open to receive feedback from staff to adjust the list to fit their real-world needs. The author explains that implementation of a checklist is more than a simple technical intervention requiring a box be checked. It involves complex interactions, cooperation and communication between all members involved (Bergs et al., 2015).

Safety

An understanding of factors effecting ED safety is also necessary to facilitate the creation of an effective checklist that targets problem areas.

ED Nurses Perceptions of Patient Safety

A 2017 research study titled "On the Threshold of Safety: A Qualitative Exploration of Nurse' Perceptions of Factors involved in Safe Staffing Levels in Emergency Departments" was published in the *Journal of Emergency Nursing*. The study surveyed a sample of 26 emergency nurses divided into 3 focus groups. The discussion was guided by the following four questions:

1. "What are emergency nurses' perceptions of safe staffing in the emergency department?"

2. "What are the emergency nurses' perceptions of the components, barriers, and facilitators of safe staffing?"

3. "What are the emergency nurses' perceptions of patient and nurse outcomes of safe staffing?"

4. "What actions do emergency nurses take when they have concerns that the staffing level is inappropriate" (Wolf et al., 2017, p. 152)?

The discussions revealed five themes. "(1) unsafe environments of care; (2) components of safety; (3) patient outcomes: risky care; (4) nursing outcomes: leaving the profession; and (5) possible solutions" (Wolf et al., 2017, p. 152).

Under the "unsafe environments of care" category, the researchers found that patient acuity had a greater impact on the nurse's perception of safety than did patient volumes or nurse to patient ratios. The researchers noted the unpredictability of emergency department acuity and the inherent difficulty to maintain safety. Under the "components of safety," the most frequently reported topic was having a suboptimal nursing skill mix. The large number of new hires, graduate nurses, and agency nurses was particularly unsettling to nurse managers and staff nurses.

Under the "patient outcomes: risky care" category, the participants verbalized that "risky care" resulted in patients returning to the ED because of poorly understood discharge instruction, delayed delivery of care, and not detecting deterioration in patient status. The nurses also reported a feeling of uncertainty about patients when they were not able to assess them regularly due to patient load. Under the "nursing outcomes: leaving the profession" category, one nurse expressed that he was leaving the profession. He had worked in three different EDs and he stated that "I just can't get used to the overwork and stress;" he also commented that he always felt like he was "one step away from making a mistake." The nurses also reported a high degree of moral dilemma at the end of the shift due to not being able to provide good patient care. The managers in the study reported losing large numbers of experienced staff for these same reasons leading to the insufficient skill mix and understaffing.

To help with staffing, nurses suggested increasing retention strategies such as developing a supportive culture (Wolf, et al., 2017). A concept found throughout the participants' comments was the unpredictable access to a resource nurse. It was mentioned several times that there may or may not be a resource nurse to help them during emergencies.

The Wolf study is saturated with rich information that can be used to improve the role of the resource nurse. The study emphasizes the importance of resource nurse availability, particularly when patients present with high acuity. A potential application for this information can be to ensure that the triage nurse communicates when a patient is assigned a high level of acuity so that the resource nurse can respond to the patient's room number. The study also speaks to the unpredictable ebb and flow of patient acuity. It seems essential that the resource nurse be able to support the nurses during the busy times and remain useful in-between. The Wolf study paints a picture of an overworked, short-staffed, and stressed work environment. The resource nurse role as viewed through the lens of the Helping Art of Clinical Nursing, mentioned in chapter 1, is to be the nurse's nurse, helping create an environment that supports nurse's success.

An ED Quality Improvement Project

A 2018 quality improvement article looked at improving patient safety during ER patient transfers. The article is titled "Emergency Room Safer Transfer of Patients (ER-STOP): A quality improvement initiative at a community-based hospital to improve the safety of emergency room patient handovers" authored by Norman et.al. A nursing checklist-based intervention was developed to assess the patient's status and verify that the patient was being transferred to the appropriate floor.

The need for the checklist was identified by the review of in-hospital emergency responses and adverse events that occurred within 24 hours of patient admission. The checklist assessed patient risk with the Modified Early Warning Score (MEWS), presence of a Foley catheter, nursing concern for patient's safety, and expected needs of the patient 30 minutes after transfer. If the patient was being transferred to a non-critical care floor and scored 3 three or more on the MEWS, or a foley catheter or nursing concern was identified, the nurse was required to contact the physician. The single center unblinded study took place over the course of two years. The first year was used as a control and the intervention was studied during year two. The authors found a significant reduction in medical and surgical floor emergency response risk (OR 4.1, 95% CI 2.17 to 7.77) without increasing ICU admission rates. Secondly, the average ED admission time was reduced from 5.7hrs to 5.5hrs so ED crowding was not adversely affected. Interestingly, the authors found that the improvement to safety was attributed more to promoting a culture of safety that supported the nurse in advocating for the patient, rather than the checklist's ability to predict patient decompensation.

The study is significant in that it demonstrates how a checklist can be used to foster a climate of safety even when census is high. A nursing checklist designed to support patient advocacy builds a safer environment. Norman et al. found that promoting nurses to share their concern for patients creates an environment of safety and can create safer hand offs. The resource nurse is a prime candidate to observe for patient safety due to their migratory role. A free text space on the checklist could be made so nurses can write their concerns noticed throughout the shift where it could be reviewed by the charge nurse.

Summary

While there is a clear gap in the literature concerning a resource nurse checklist, there was enough literature on other checklists such as the WHO surgical checklist to inform this project. It was important to incorporate elements of previously successful checklist implementation strategies while taking steps to avoid previously recognized barriers. The safety concerns of ED staff are important to consider as well, since they are the target population who carried out the checklist items and the ones intended to benefit from the interventions. This same concept may have aided in staff buy-in because while it may have been viewed as an added workload for the resource nurse, it may have also been viewed as a decrease in workload from the other unit nurses. The addition of a line item in future checklists where the nurse could record and share their safety concerns observed during the shift could promote a culture of safety and provide further benefit to the department and patients.

CHAPTER III

METHODS

This project measured ED nurse's perceptions of resource nurse utility before and after implementation of a nursing checklist to evaluate the checklist's impact. This chapter describes the design, sample population, recruitment, inclusion, and exclusion criteria, as well as protection of human subjects. A novel survey instrument, described below, was used to measure change in nursing perception. Project procedure, outcome evaluation and plan for sustainability are also discussed.

Project Design

The project utilized a quantitative, quasi-experimental research before-after study design to evaluate the ED resource nurse checklist. The checklist tool was intended to primarily benefit the ED nursing population by improving the resource nurse utility. A survey of ED nurses was used to evaluate the checklist by answering these study questions:

- Will the implementation of a resource nurse checklist improve staff perceptions of the resource nurse's utility to the ED?

- Will implementation of a resource nurse checklist reduce staff perceptions of performance variability from one resource nurse to the next?

- Will implementation of a resource nurse checklist improve the self-reported productivity of the resource nurse?

Target Population

The southwest Missouri hospital ED is staffed with a maximum of seventy-five clinical nursing personnel including full-time, part-time and PRN RNs and Licensed Practical Nurses. When fully staffed there are nine dayshift nurses, four mid-shift nurses and 11 nightshift nurses, not including the charge nurse. Nurses are assigned to a pod, triage, or resource nurse position at the beginning of each shift by the charge nurse. Any given nurse had the chance to experience the checklist by serving in the resource nurse position or by receiving help from the resource nurse while serving in one of the other positions, all at the charge nurse's discretion. Nurses were given the opportunity to participate in the project by consenting to complete the anonymous questionnaire.

Recruitment

Participants were recruited during the monthly ED department meeting. The necessary sample size calculated using a total population of 75, confidence level of 95%, and a 5% confidence interval is 63 participants. However, there is a discrepancy between total population versus the total number of nurses who worked during the study period. PRN employed nurses may have worked very little or not at all during the study period. Full-time nurses were more likely to work during the study period and interact with the. PRN nurses who did not work or work infrequently during the study period may have falsely elevated the total study population. Using the total number of full-time nurses (34)

as the population decreases the sample size significantly. The actual number of surveyed participants was N =25 for the pre-survey and N =26 for the post-survey.

Financial Analysis

The following are financial considerations for this project.

- Staff are paid by the organization for the time spent at the department meeting which was lengthened by the project presentation and survey. (approx. 10 min)

- To perpetuate the checklist the department manager will need to store and update the checklist master file, adding to his or her responsibilities.

- Questionnaire was be developed by the researcher and delivered via Qualtrics software provided by Pittsburg State University.

- Statistical analysis program was be provided by Pittsburg State University.

Inclusion & Exclusion Criteria

To have been eligible to participate in this project, participants had to be a registered nurse or licensed practical nurse in the selected emergency department.

Protection of Human Subjects

The project was reviewed by the Institutional Review Board (IRB) of both Pittsburg State University and the cooperating hospital. A project that uses surveys is deemed exempt because there is no risk to human subjects and requires no formal IRB review (Moran et al., 2020). Therefore, the application to the IRB was for an exempt review because the project meets exemption criteria four (EX-4). The project used benign interventions and employed the use of surveys. All participants were over the age of 18,

there will be no experiments that put participants at risk. Survey questionnaires were anonymous, and participation was voluntary. There was no deception of subjects or exposure to discomfort or harassment beyond standard experience. The project did not expose participants to physical, mental, or financial risks.

Instruments

The project used a researcher designed nursing questionnaire. The instrument was an electronic Qualtrics survey with two parts. Part one was comprised of five statements and questions with Likert style five-item response sets. Participants selected the answer that best represented the degree to which they either agreed or disagreed with the item. Responses were downloaded from Quartics and analyzed using SPSS software. Part one of the questionnaire was designed to measure nurses' perceptions of the resource nurse role. Part two collected participants demographic data. The survey was administered during a monthly department team meeting following a brief explanation of the project. The checklist was created, reviewed by the project committee then implemented. Three months after implementation of the checklist, staff completed the survey again to measure the amount of change in the perceived resource nurse utility.

Procedure

The project was proposed and approved by the project committee then sent to the Pittsburg State University IRB and the cooperating hospital's IRB for approval. The project was deemed "exempt." Next, the researcher prepared the pre- implementation questionnaire in conjunction with the project committee members. The checklist was then developed and reviewed by a focus group of content experts. Experts were nurses from

the ED with 8 or more years of experience. The checklist was examined for any unnecessary, ambiguous, or missing items. The questionnaire was then used to survey staff nurses during one of the monthly department meetings after providing a brief presentation of the project. The department meeting was an ideal setting to conduct the survey because nurses from all shifts were present. The department meeting involved three identical meetings held on different days of the week and at different times giving all staff an opportunity to attend. Surveys were presented in an online format using Qualtrics survey software. The checklist was then implemented. The implementation phase was approximately three months. The checklist was printed on a single paper sheet located in the red pod nurse's station. In addition to the department staff meeting a department email and poster in the break room was used to inform nurses that the checklist process has started and provided instructions for use. Staff were resurveyed at the next department meeting following the close of the implementation phase.

Few physical or financial resources were needed for implementation of this project. Qualtrics and statistical software were the only resources required and were provided by PSU. The survey was conducted in the nurse's breakroom and took than 10 minutes, including the project presentation. Time and creative resources were needed from the researcher to create the questionnaire and checklist tool and perform analysis of data. Staff members were needed for the completion of the questionnaires and to use the checklist tool. Outcome data was collected via the questionnaire.

Treatment of Data/Outcomes/Evaluation Plan

Survey data was downloaded to an excel spreadsheet and stored on a password protected computer and will be deleted after 3 years. Data was coded and analyzed using

SSPS software to measure change in perceptions of resource nurse utility. Resource nurse

utility was evaluated by measuring the following objectives using the questionnaire.

Table 1:

Objectives, Measurements, Outcomes, and Analysis

Objective	Measurement	Outcome	Analysis
Resource nurse performance variability will decrease.	Questionnaire responses will indicate decreased variability between resource nurses.	Each resource nurse will perform similarly due to using the same checklist.	T-test
Nurses will report increased support from resource nurse.	Questionnaire responses will indicate perceptions of increased support from the resource nurse when the checklist is used.	Nurses will feel supported because the resource nurse dependably completes tasks	T-test
Resource nurse will spend less time waiting to be needed.	Questionnaire will indicate down time was decreased by utilizing the checklist	Resource nurse will complete checklist items instead of waiting to be needed.	T-test
Questionnaire responses will indicate some agreement between nurses	Questionnaire responses variability will be evaluated.	Questionnaire will detect a statistically significant change	Variance – Mean, mode, median

Plan for Sustainability

If the department manager decides to continue use of the checklist due to

improvement in resource nurse utility or is of value to resources nurses, the checklist can

be permanently implemented. Because the project was designed to capitalize on existing

human and physical resources, it would require relatively few resources to maintain over

time. It is also important to consider any potential effects the project may have on hospital policy. No policy edits were required to sustain the checklist, but they may be beneficial. If permanently implemented, the organization may decide to alter policies or job descriptions to include tasks needed to update and maintain the checklist. For instance, the master file of the checklist would be kept perhaps by the department manager who would update it periodically as needs change in the department. Nurses can suggest edits to the checklist at previously instituted department meetings. Another potential step to encourage continued future use would be to require the resource nurse to sign and turn in the checklist to the charge nurse at the end of shift; however, this was not a requirement during the study period.

Summary

A resource nurse checklist was implemented in a southwest Missouri hospital ED. The checklist was evaluated by a pre-post survey of nursing ED staff members. Nurses consented to participate voluntarily, and no identifying information was collected to protect participant identity. All participants were 18 years of age or older and there was no deception or risk beyond what staff are customarily exposed to under normal conditions. The project required few resources to implement. The time and space needed for the presentation and survey were already in place. Resources needed to evaluate and sustain are negligible. The project results are discussed in chapter four.

CHAPTER IV

RESULTS

The purpose of this scholarly project was to create, implement, and evaluate a resource nurse checklist to improve the nurse's productivity and utility to the department. The project aimed to answer the following research questions. What are the ED staff's perceptions of the resource nurse's utility to the department before and after checklist implementation? Will the implementation of a resource nurse checklist significantly improve staff perceptions of the resource nurse's utility to the ED? What are the perceptions of performance variability from one float nurse to the next before and after checklist implementation?

Descriptions of Sample

An anonymous, volunteer, pre and post survey was used to collect data. The checklist was created and evaluated by a focus group of content experts prior to implementation. Twenty-five pre-surveys and twenty-six post-surveys were collected. The survey consisted of four demographic questions and five Likert style five-item response questions to evaluate perceptions of the resource nurse. The largest group of individuals who were a part of this study indicated they had 11+ years (33.3%) of nursing experience while the largest portion of participants indicated they had only been in this

ED for 1-3 years (27.5%). The next largest group had worked in this ED for 11+ years

(23.5%). Two surveys (3.9%) were completed by LPNs, 49 (96.1%) were completed by

RNs. Most participants (74.5%) indicated they had filled the role resource nurse while

25.5% had never filled the role.

Table 2. Demographics

How many years have you worked in this Emergency Department?						
	Frequency	Percent	Pretest Freq	Pretest Percent	Posttest Freq	Posttest Percent
<1 year	8	15.7	4	16.0	4	15.4
1-3 years	14	27.5	6	24.0	8	30.8
4-5 years	6	11.8	3	12.0	3	11.5
6-10 years	11	21.6	5	20.0	6	23.1
11+ years	12	23.5	7	28.0	5	19.2
Total	51	100.0	25	100.0	26	100.0

How many years of you been practicing nursing?						
	Freq	Percent	Pretest Freq	Pretest Percent	Posttest Freq	Posttest Percent
< 1 year	8	15.7	6	24.0	2	7.7
1-3 years	9	17.6	4	16.0	5	19.2
4-5 years	4	7.8	2	8.0	2	7.7
6-10 years	13	25.5	4	16.0	9	34.6
11+ years	17	33.3	9	36.0	8	30.8
Total	51	100.0	25	100.0	26	100.0

Are you an RN or LPN?						
	Freq	Percent	Pretest Freq	Pretest Percent	Posttest Freq	Posttest Percent
RN	49	96.1	24	96.0	25	96.2

	Freq	Percent	Pretest Freq	Pretest Percent	Posttest Freq	Posttest Percent
LPN	2	3.9	1	4.0	1	3.8
Total	51	100.0	25	100.0	26	100.0

Have you filled the role of resource nurse? (also referred to as "floating")						
	Freq	Percent	Pretest Freq	Pretest Percent	Posttest Freq	Posttest Percent
YES	38	74.5	19	76.0	19	73.1
NO	13	25.5	6	24.0	7	26.9
Total	51	100.0	25	100.0	26	100.0

Project Variables

The project aimed to improve resource nurse productivity by implementing a nursing checklist serving as the independent variable. Evaluation of staff nurses' perceptions of the resource nurse performance before and after implementation was accomplished with a survey. The survey contained five rated response items that served as the dependent variables for the study. Response items and results are found listed below in Table 3. Research questions concerning the same concept differentiated by before and after checklist implementation will be discussed as one question for simplicity.

What are the ED staff's perceptions of the resource nurse's utility to the department before and after checklist implementation?

This research question was evaluated by the survey response items "the resource nurse position is an efficient use of nursing staff" and "the resource nurse position could be a more efficient use of nursing staff if implemented differently."

Will the implementation of a resource nurse checklist significantly improve staff perceptions of the resource nurse's utility to the ED?

This research question was evaluated by comparing the pre and post survey responses of any or all the five rated response survey items. Data was compared using t test analysis to determine any significant change after implementation of the resource nurse checklist.

What are the perceptions of performance variability from one float nurse to the next before and after checklist implementation?

This research question was evaluated by the response item "the productivity of the resource nurse depends on the individual filling that role."

Table 3. Rated Response Items

Response to rated items for all	Mean	SD	Pretest Mean	Pretest SD	Posttest Mean	Posttest SD
*The resource nurse position is an efficient use of nursing staff	1.57	.831	1.56	.917	1.58	.758
*The resource nurse position could be a more efficient use of nursing staff if implemented differently.	2.12	.864	2.08	.862	2.15	.881
*The productivity of the resource nurse depends on the individual filling that role.	1.16	.505	1.20	.645	1.12	.326
#When I need help, I call the resource nurse.	2.75	.997	2.60	.913	2.88	1.071
#As a resource nurse, how often do you find that you are waiting to be utilized? (leave blank if you have not filled the role of resource nurse).	4.57	2.211	4.76	2.314	4.38	2.137

*Note: 1= strongly agree, 2= somewhat agree, 3= neither agree or disagree, 4= somewhat Disagree, 5= strongly disagree

Strongly Agree	Somewhat Agree	Neither Agree or Disagree	Somewhat Disagree	Strongly Disagree
1.0 - 1.49	1.50 – 2.49	2.50 – 3.49	3.50 – 4.49	4.5 – 5.0

#Note: 1= always, 2= most of the time, 3= about half the time, 4= sometimes, 5= never

Always	Most of the time	About half the time	Sometimes	Never
1.0 - 1.49	1.50 – 2.49	2.50 – 3.49	3.50 – 4.49	4.5 – 5.0

Nurses strongly agree (M= 1.16, SD= .505) that the productivity of the resource nurse depends on the individual filling the role. The next statement that had the most agreement was "the resource nursing position is an efficient use of nursing staff (M = 1.57, SD =.831). Nurses somewhat agreed (M =2.12, SD =.864) the resource nurse position could be a more efficient use of nursing staff if implemented differently. Nurses reported that they were never (M =4.75, SD =2.211) waiting to be utilized.

Table 4. t Tests

Comparing pre and post test	t	df	Sig. (2-tailed)	Mean Difference
The resource nurse position is an efficient use of nursing staff	-.072	49	.943	-.017
The resource nurse position could be a more efficient use of nursing staff if implemented differently.	-.302	49	.764	-.074
The productivity of the resource nurse depends on the individual filling that role.	.594	49	.555	.085
When I need help, I call the resource nurse.	-1.020	49	.313	-.285
As a resource nurse, how often do you find that you are waiting to be utilized?	.602	49	.550	.375

There were no differences between the pre and post measurements on implementation of the resource nurse checklist.

Analysis of Research Questions

In chapter one (pg. 5) five project questions were proposed to be answered by this study. Question one asked what are the ED staff's perceptions of the resource nurse's utility to the department before checklist implementation? Nurses somewhat agreed the resource nurse is an efficient use of nursing staff but also somewhat agreed the role could be improved if implemented differently. Question two asked what are the ED staff's perceptions of the resource nurse's utility to the department 3 months after checklist implementation? After implementation of the checklist perceptions remained the same. Question three asked if the implementation of a resource nurse checklist would significantly improve staff perceptions of the resource nurse's utility to the ED. The checklist did not change perceptions of the resource nurse's utility to the ED. Question four asked what are the perceptions of performance variability from one float nurse to the next prior to checklist implementation? Nurses reported they strongly agreed that the productivity of the resource nurse depends on the individual filling the role. Question five asked what are the perceptions of performance variability from one float nurse to the next after checklist implementation? Perceptions of performance variability did not change with implementation of the checklist.

Summary

The purpose of this project was to improve resource nurse productivity and discover nursing perceptions of the resource nurse role. The data show ED nurses feel the resource nurse is an efficient use of staff, but they strongly agree that the nurse productivity is highly dependent on the nurse filling the role and somewhat agree the role could be more efficient if implemented differently. This suggests the role may need some

revision to improve productivity. The pre and post survey did not detect a change in nursing perceptions with implementation of the checklist.

CHAPTER V

DISCUSSION

Relationship of Outcomes to Research

The project utilized a quantitative, quasi-experimental research before-after study design to answer five research questions. Findings from this study neither support nor refute previous research as there were no other studies of this type found in the literature at the time of the literature review. The study did utilize advice gleaned from previous studies that were useful in the development and implementation of the checklist. For instance, the focus group of content experts scrutinized the checklist for barriers to implementation that were identified in the literature.

Observations

The ED in this study was staffed with seventy-five nursing personnel. Twenty-five pre-surveys and twenty-six post-surveys were collected. Although the survey analysis did not show improvement of nurse opinions the study was successful in answering the proposed research questions. The nurse survey results show room for improvement in the resource nurse productivity. This is evidenced by nurses strongly agreeing (M= 1.16, SD= .505) that the productivity of the resource nurse depends on the individual filling the role and nurses somewhat agreeing (M =2.12, SD =.864) the resource nurse position could be a more efficient use of nursing staff if implemented

differently. Nurses reported when they needed help they only called the resource nurse

only about half the time (M =2.75, SD =.997). This suggests nurses are not fully utilizing

the resource nurse. About 25% of nurses surveyed had never been selected to be a

resource nurse. This may be due to charge nurse preference. The charge nurse may base

the decision on the individual's work ethic, seniority, or some other factor.

Evaluation of Theoretical Framework

The theoretical framework used as the foundation for this project was the Helping

Art of Clinical Nursing by Ernestine Wiedenbach. Her theory successfully captures the

essence of the resource nurse by exposing the complex decision-making process of

identifying a need for help, determining the cause of the problems, determining if the

patient, (or nurse in this case) can solve the problems themselves, and determining if they

should step in and help. The resource nurse completes these steps unconsciously with

every task they complete.

The difference in productivity from one resource nurse to the next can be

explained by the difference in this decision-making process from one nurse to the next.

One resource nurse may identify a task need completed and step in to help and another

may decide the staff nurse can complete the task themselves, so no intervention is

needed. Another nurse may not identify a need for help at all. The checklist was intended

to help resource nurses identify the same needs for help. The resource nurse then could

prioritize the needs on the checklist and choose which ones they would step in and do and

in what order.

Evaluation of Logic Model

The logic model provided a visual break down of the projects purpose, required resources for implementation, activities and expected outcomes as well as some context to the ED environment where the project took place. The project did follow the activities and steps displayed in the logic model. The logic model assumed that the resource nurse roll was not functioning as efficiently as possible. The survey results confirm this when nurses strongly agreed the productivity of the resource depends on the individual filling the role and somewhat agreeing that the role could be more efficient if implemented differently. The project required very few resources to implement and used a pre and post implementation survey to measure short-term and midterm outcomes. Measurement of long-term outcomes were not completed.

Limitations

There are many factors that could have affected the checklist utilization which may have negated any impact on resource nurse productivity. The study could have been limited by lack of staffing for the resource nurse position during the study period. To monitor checklist usage nurses were instructed to turn in their checklist at the conclusion if their resource nurse shift. Unfortunately, the completed checklist envelope went missing from the unit. After the envelop was replaced, twelve checklists were turned in over the course of 25 days indicating nurses were using the checklist at intervals of approximately every other day. Errors in checklist utilization could have impaired checklist function. If the nurse filled out the checklist at the end of the shift there would not be improved nurse productivity. It is also worth noting a slight difference in the surveyed population. The pre-survey participants largely consisted of nurses with 11+

years of experience while the post-survey participants had primarily 1-3 years of experience. The cause of this sampling difference is unknown. During the study period the department had a change in management which could also have led to a shift in nursing morale or staff meeting attendance which could have altered survey responses.

The study used an unvalidated survey. The survey may have lacked adequate sensitivity to detect improvement in nursing perceptions. After analyzing survey data, a discrepancy should be noted. In the last survey question that participants were asked to rate how often they are waiting to be utilized as resource nurses. They answered "never" (M=4.57, SD 2.211). This question may have elicited a biased response by asking them to rate their own down time. It would have elicited less biased response if they were asked to rate their perceptions of other resource nurses down time.

Although the checklist (appendix A) was designed with input from a focus group of content experts the checklist could benefit from additional checklist items. Resource nurses were asked to write in additional items they completed during their shift. These items could be reviewed and added to future versions of the checklist.

Recommendations for Future Research

Further research is needed to identify if alterations in the checklist design could improve utility. Studies should be done to produce a validated survey to evaluate resource nurse performance or use a more objective form of measurement. Future efforts could also be directed towards increasing the rate staff nurses are calling the resource for help. There are currently no studies in the literature evaluating ED resource nurse checklists. Similar research should be conducted to build upon this study and determine if findings are consistent from one hospital to the next.

Conclusion

The resource nurse position is a valuable role in a Southwest Missouri ED and nurses strongly agree the role is an efficient use of staff. Nurses also indicated there is room for improvement in the position. The role is highly variable from one nurse to the next and nurses only called the resource nurse about half the time when they needed help. While the study was unable to detect significantly improved perceptions of the role after checklist implementation the study has revealed valuable insight into the ED resource nurse role and provided direction for future research.

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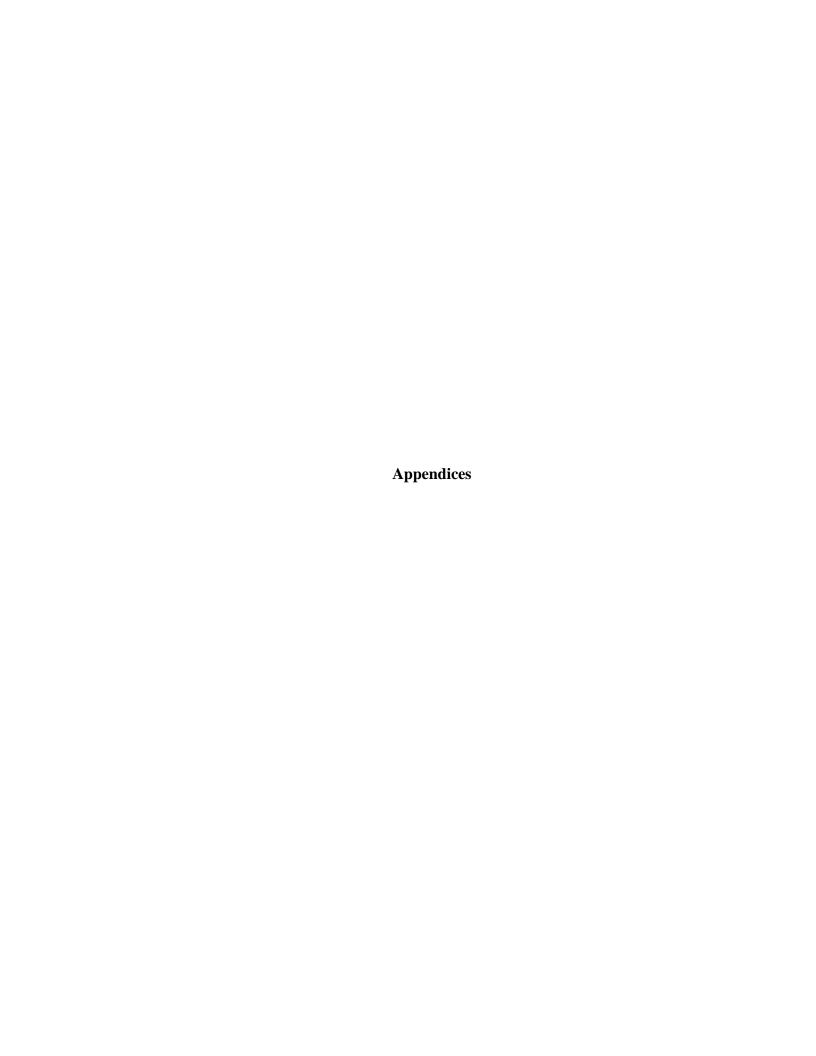NSI Nursing Solutions, Inc. (2021). *2021 NSI national health care retention & Rn

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Appendices

Appendix A

Float nurse Checklist

Note- the priority of the float nurse is to assist fellow nurses with patient care. This checklist is a reminder to help you continue to benefit the department in between helping with patient care/ambulances/traumas as time allows. You are encouraged to write in additional tasks you complete that are not listed. They may be added to future checklists. When finished, place sheet in the envelop in the red pod wall basket with trauma bay checklists.

☐ Write phone number in each pod and triage

☐ Follow ambulances to rooms to assist with pt. check in

☐ Check the trauma bay for red pod

☐ Stock med rooms - IV tubing, flushes, syringes etc.

☐ Relieve lunches

☐ Assist with discharges- watch for the yellow "ready" in Meditech

☐ Help with Transfers- watch for clean ICU and TCU rooms

☐ Investigate patient alarms - IVs, monitors, call lights etc.

Ultrasound

    ☐ Plugged in next to the trauma bay

    ☐ stocked with gel. Discard expired gel.

☐ Fill blanket warmers

☐ Help protocol and draw labs in triage (especially if they don't have a second nurse)

☐ Put up stock from shipment- Boxes are often sitting in the hall or by Bob's office.

Total hours spent as a resource nurse this shift. _____

Rms Targeted to ICU

[ ]

Please write in additional items you complete

☐

☐

☐

☐

Pre/Post Survey

How many years have you worked in the Freeman Emergency Department?

- ○ <1 year
- ○ 1-3 years
- ○ 4-5 years
- ○ 6-10 years
- ○ 11+ years

How many years of you been practicing nursing?

- ○ < 1 year
- ○ 1-3 years
- ○ 4-5 years
- ○ 6-10 years
- ○ 11+ years

Are you an RN or LPN?

- ○ RN
- ○ LPN

Have you filled the role of resource nurse? (also referred to as "floating")

- ○ YES
- ○ NO

The resource nurse position is an efficient use of nursing staff

- ○ Strongly agree
- ○ Somewhat agree
- ○ Neither agree nor disagree
- ○ Somewhat disagree
- ○ Strongly disagree

The resource nurse position could be a more efficient use of nursing staff if implemented differently.

- ○ Strongly agree
- ○ Somewhat agree
- ○ Neither agree nor disagree
- ○ Somewhat disagree
- ○ Strongly disagree

The productivity of the resource nurse depends on the individual filling that role.

- ○ Strongly agree
- ○ Somewhat agree
- ○ Neither agree nor disagree
- ○ Somewhat disagree
- ○ Strongly disagree

When I need help, I call the resource nurse.

- ○ always
- ○ Most of the time
- ○ About half the time
- ○ Sometimes
- ○ Never

As a resource nurse, how often do you find that you are waiting to be utilized? (leave blank if you have not filled the role of resource nurse).

- ○ never
- ○ Sometimes
- ○ About half the time
- ○ Most of the time
- ○ Always

FREEMAN
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June 28, 2022

Aaron Tucker, DNP
18022 County Road 290
Asbury, MO 64832

NEW Protocol: An Emergency Department Resource Nurse Checklist

Dear Mr. Tucker:

The Freeman Health System (FHS) Institutional Review Board (IRB) received your request to review the above titled **protocol** on **June 27, 2022.**

The **protocol** was examined by the FHS IRB Steering Committee under **EXPEDITED** review on **June 28, 2022 and approved**. You are granted permission to conduct your study immediately without restrictions using the approved documents.

As a condition of your one-year approval, please send your results to *FreemanIRB@freemanhealth.com* **by June 27, 2023,** unless the study is closed before that date. **If you plan to publish your results**, you will need to **submit them for approval prior to your publication**. The committee invites you to present your results at a future IRB meeting. Please contact us at the above address to get on the agenda for a future committee meeting.

The FDA requires you to notify the IRB of any new advertisement, recruiting material, change of investigator, study site location, SAE (serious adverse event), and protocol amendments.

This IRB is in compliance with the regulation of the FDA (Food and Drug Administration) as described in 21 CFR parts 50 and 56, as well as the ICH (International Conference Harmonization), GCP (Good Clinical Practice) and IRB guidelines.

Sincerely,

Scott Goade, PharmD, BCNSP
IRB Chairman
bw

VII. Certification and Approval

Verification of Assurance

PRINCIPAL INVESTIGATOR ASSURANCE

I understand that as Principal Investigator, I have ultimate responsibility for the protection of the rights and welfare of human subjects and the ethical conduct of this research for which this application has been submitted.

I agree to comply with all PSU policies and procedures, as well as with all applicable federal, state, and local laws regarding the protection of human subjects in research, including, but not limited to, the following:

- Title 45, Part 46 of the Code of Federal Regulations.
- The Belmont Report, *Ethical Principles and Guidelines for the Protection of Human Subjects and Research.*

I also agree that the following criteria will be met:

- The project will be performed by qualified personnel according to the research protocol.
- Copies of all questionnaires, survey instruments, interview questions, data collection instruments, and information sheets for human subjects will be maintained in the respective department.
- Necessary review by the PSU Institutional Review Board will be sought if a) changes are made in the research protocol which may result in the research no longer meeting the original approved criteria, or b) Continued Review at the appropriate time.
- All study investigators have completed the approved ethics training, and a copy of the valid completion certificate is attached to this application.
- The Principal Investigator and all research personnel have read and understand the PSU Assurance Handbook concerning human subjects research protocols.

Aaron Tucker   07/22/2022

Signature of Investigator   Date

_____   _____

Faculty Sponsor: If the Investigator is a student, the Faculty Sponsor (e.g. thesis director, research supervisor, etc.) must approve this application.

I certify that this project is under my direct supervision and that I accept the responsibility for ensuring that all provisions of approval are met by the investigator   .

_____   9/29/22
Signature of Faculty Sponsor   Date

Department Reviewer: I acknowledge that this research is in keeping with the standards set by our department, university, state and federal agencies. I assure that the principal investigator has met all departmental requirements for review and approval of this research, and that this application is complete and correct.

_____   9/29/22
Signature of Department Representative   Date