Doctor of Nursing Practice   Irene Ransom Bradley School of Nursing

2022

Healthy Work Environment and Outcome Improvements for Nursing

Haley Kepley
Pittsburg State University, hkepley@gus.pittstate.edu

HEALTHY WORK ENVIRONMENT AND OUTCOME IMPROVEMENTS FOR
NURSING

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

Haley Kepley

Pittsburg State University

Pittsburg, Kansas

May 2022

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An Abstract of the Scholarly Project by
Haley Kepley BSN, RN

The purpose of this study was to educate registered nurses about healthy work environments and the importance the relationship of the environment has on nursing outcomes. The project was conducted online using Qualtrics survey software. Data was collected from November 11th, 2021, to December 4th, 2021. Registered nurses currently working in a southeast Kansas hospital participated by completing a two-part survey. The survey consisted of a pretest, an educational resource, and finished with a post-test identical to the pretest except for the demographic questions collected in the pre-test. The data collected from completed surveys were used to measure participant knowledge and perceptions. The study demonstrated an increase in the participants knowledge and perception about healthy work environments through the overall mean scores, but the paired samples t-test only found statistical significance with two of the survey questions. Overall, the projects findings over healthy work environments would indicate that the replication of this study with a larger sample size would be beneficial to further support the data gathered.

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CHAPTER I

HEALTHY WORK ENVIRONMENT AND OUTCOME IMPROVEMENTS FOR NURSING

Healthy work environments are vital for the continuation of providing safe and quality care in the healthcare work setting. Aside from having the necessary tools to provide safe and quality care, the environment in which individuals complete these tasks should also be viewed as an important tool. Healthy work environments affect nurses and patients alike. Positive environments have been linked to an increase in the quality of care received and improved outcomes for nurses within the work setting (Copanitsanou et al., 2017). The relationship between healthy work environments and patient outcomes is also another area of concern.

A systematic review of nursing work environments published in *International Journal of Nursing Sciences* found that nurse work environments, staffing ratio, and the quality of care received by patients correlate significantly. Healthier work environments lead to more satisfied nurses, which results in better job performance and higher quality of patient care, and subsequently improves healthcare organizations' financial viability (Wei et al., 2018). This same study found that the healthier the workplace, the lower the patient's risk for death or failure to rescue from a cardiac event (Wei et al., 2018). The

topic of healthy work environments continues to complement the idea that high-quality patient care is directly related to positive nursing outcomes.

In a healthcare system that prides itself on safe, quality care, healthy work environments should be a top priority. The American Association of Critical-Care Nurses (AACN) found that the promotion of healthy work environments fosters patient safety, improves staff recruitment, and retention and positive outcomes for both nurses and patients (AACN, 2016). Promotion of a healthy work environment can improve outcomes for both nurses and patients alike, resulting in safe, quality care. Unhealthy work environments can be defined as any work environment that does not meet safe work environment standards. These standards include positive staff recruitment, positive staff retention, and functional facilities that encourage collaboration across the board.

Description of the Clinical Problem

Improving the practice environment of nurses in the hospital setting continues to be an area of focus for many studies that surround patient outcomes and nursing outcomes. When there is an environment that is not meeting the healthy work environment goal, it creates a multitude of clinical problems. Some of those problems include lower retention rates, poor quality of nurses' work lives, low productivity, increased job dissatisfaction among nurses, and poor-quality unsafe patient care (Wei et al., 2018). The state of the work environment plays a major part in the retention of nurses. In a recent report, the most common reason for leaving the workplace was dissatisfaction with the work environment (Press Ganey, 2018).

Patient safety and quality care are just two of the major priorities of the healthcare system, if not the most important priorities. Supporting evidence has shown the effects of

work environments on patient outcomes and how an unhealthy work environment can become a detrimental issue to nursing staff and, ultimately, patients. An AACN study about the implementation of healthy work environment standards found patients in hospitals with poor work environments were 16% less likely to survive cardiac arrest (AACN, 2016). When the work environment for nurses is considered unhealthy, quality care can suffer. Quality care has shown a direct correlation with work environments and patient outcomes.

A study conducted in a critical care setting found that, when compared to nurses working in poor environments, nurses in a healthy work environment were 36-41% less likely to report a healthcare-associated infection occurred frequently (HAI) (Kelly et al., 2013). Research also supports the promotion and implementation of a healthy work environment with increased positive productivity (Abdul & Tafique, 2015). The implementation of a healthy work environment can be conducive for all nursing departments involved with patient care. Professional areas in healthcare that directly involve patient care would benefit from healthy work environments by increasing the quality of care given, thereby improving job satisfaction. The evidential support of a positive, healthy work environment highlights the importance of this clinical issue.

The evidence of what a negative work environment can create makes this clinical issue a preventative priority to ensure outcome improvements for both nurses and patients.

Significance

This project measured the knowledge nurses have about a healthy work environment prior to the education of the six essential standards of the AACN healthy

work environment, and the results were compared to those obtained after the education. The significance of this project to nursing is to develop healthy work environments and support the continuation of educating and maintaining healthy work environments. The six essential standards of the AACN healthy work environment provide an excellent approach on how to obtain these outcome improvements for both nurses and patients.

The AACN focuses on skilled communication, true collaboration, effective decision making, appropriate staffing, meaningful recognition, and authentic leadership. Through the education and implementation of these six standards, healthy work environments can be created, leading to higher retention rates, improved nursing job satisfaction, increased productivity, and better patient outcomes (AACN, 2016). In an article in the *International Journal of Nursing Sciences*, researchers reviewed over fifty studies on the nursing work environment and found healthy work environments promote a secure and sufficient workforce, while also promoting "hospital safety, encourage nurse performance and productivity, improve patient care quality, and support healthcare organizations' financial viability" (Wei & Rose 2018, pg.16). Fostering healthy work environments is vital for nursing outcomes, which is being supported by research and correlates with retention rates as well as patient outcomes.

The issue of a healthy work environment is a complex clinical problem within a delicate healthcare ecosystem. This healthcare ecosystem can be influenced indirectly or directly by the environment it occupies. To improve nursing outcomes facilities, need to create healthy work environments that promotes retention, attraction, and productivity.

Specific Aim

The specific aim of this project was to assess nurses' knowledge and perceptions about work environments and provide education surrounding healthy work environments following the six essential standards put forth by the AACN. Educating staff about the six healthy work environment standards can help provide nurses and administrators with further tools necessary to foster a healthy work environment. The result of this project allows nurses and administrators in hospital settings to determine the type of work environment currently in place and, through the education of the six essential standards, be able to improve or achieve a better healthy work environment. With a healthy work environment, nurses and patients will continue to see outcome improvements.

Theoretical Framework

The synergy model of care, a conceptual model similar to the structural contingency theory (SCT), served as the theoretical framework guiding this project (Donaldson, 2014). The synergy model of care (Figure 1, below) explains how the work environment assists in creating a foundation for the synergy between the patient/family and the nurse. The model helps represent the relationship between the patient/family and the nurse. Moreover, the model helps demonstrate how specific competencies between nurse and patient relationships influence outcomes. The use of the synergy model of care provides the option to enlist change within the environment to influence the overall outcomes.

The SCT describes the relationship between the structure and the context of the environment. The state of the structure can heavily influence the environment of the organization. The overall theoretical meaning behind the "contingency theory is

sociological functionalism, explaining the existence of fits between structure and contingencies by their beneficial effects on organizational performance" (Donaldson, 2014, pg. 38). For this specific study, the context will be represented by the hospital and the nursing unit's characteristics, while the nursing work environment will represent structure. The effectiveness will be represented by nursing job retention and satisfaction.

Figure 1

Synergy model for patient care
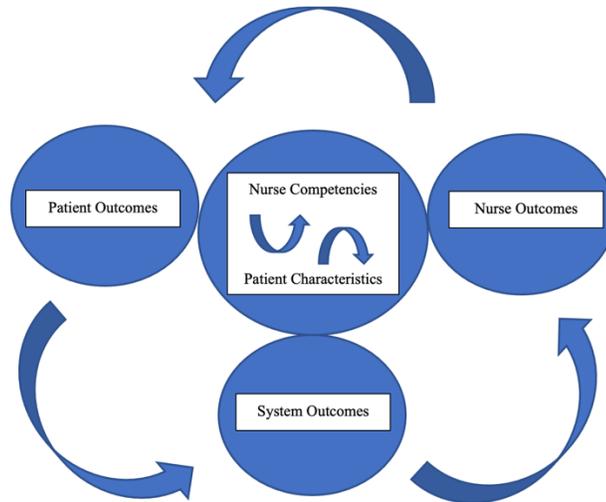
Project Questions

Will the implementation of education about the AACN's six essential standards of a healthy work environment increase awareness overall about the AACN healthy work environment standards, as evidenced by a statistically significant increase in the mean?

Will the perception of the importance of a healthy work environment change after viewing an educational PowerPoint about the AACN's six essential standards of a healthy work environment?

Healthy Work Environment Standards

The standards of a healthy work environment, according to the AACN (2016), are as follows:

Skilled communication: Nurses must be as proficient in communication skills as they are in clinical skills.

True collaboration: Nurses must be relentless in pursuing and fostering true collaboration.

Effective decision making: Nurses must be valued and committed partners in making policy, directing, and evaluating clinical care, and leading organizational operations.

Appropriate staffing: Staffing must ensure the effective match between patient needs and nurse competencies.

Meaningful recognition: Nurses must be recognized and must recognize others for the value each brings to the work of the organization.

Authentic leadership: Nurse Leaders must fully embrace the imperative of a healthy work environment, authentically live it, and engage others in its achievement. (p.1)

Definition of Key Terms

- **Healthy Work Environment**

Conceptual definition: A work environment that is secure while promoting and maintaining an environment that is conducive for healing. The work environment is civilized and respectful of the rights, responsibilities, essentials, and contributions of nurses, patients, and their family units.

- **System Outcomes**

Conceptual definition: The product of nursing outcomes that directly or indirectly affect the entire system. Those factors can include but are not limited to nurse satisfaction, staffing costs, resource utilization and patient charges, multidisciplinary teamwork and satisfaction and cross system innovation

- **Nursing Outcomes**

  Conceptual definition: An aspect of patient or client health status that is influenced by nursing intervention and recorded at specific times for an episode of care; it is measured by the resolution status of each nursing diagnosis as being either resolved or not resolved (Nursing Outcomes, 2022).

  Nurse Satisfaction

  Conceptual definition: Nurse Satisfaction is defined as the feeling of satisfaction about the duties one fulfills in one's nursing profession.

- **Nurse Job Retention**

  Conceptual definition: Nurses who remain in their nursing profession at an organization.

- **Staffing Adequacy**

  Conceptual definition: The number of nurses required to adequately provide safe quality care in a secure environment.

- **Professional Practice**

  Conceptual definition: The respectful conduct of an individual in their perceived field of practice.

- **External Environment**

  Conceptual definition: The composition of all outside influences or factors that affect the process and action of a business. Factors can include but are not limited to laws and regulations.

- **Hospital Characteristics**

Conceptual definition: All the influencing factors within the hospital that impact the work environment. Factors can include but are not limited to necessary equipment, proper staffing, ancillary staff, non-ancillary staff, and a safe work environment.

- **Nursing Unit Characteristics**

  Conceptual definition: All influencing factors within the nursing unit that impact the work environment.

- **Administrative Outcomes**

  Conceptual definition: The results from external factors that affect the outcomes within the administration. Those factors can include but are not limited to rules/regulations, overall financial goals needing to be met.

- **Patient Outcomes**

  Conceptual definition: The results from external factors that affect patient outcomes directly or indirectly. Patient outcomes can include but are not limited to overall health and wellbeing from external factors, including support and resources.

Logic Model

The logic model is a SCT-based conceptual model (Figure 2, below) demonstrating the intricate ecosystem of a healthcare system and its many influencing factors. The environment is at the top right, signaling its position in the influential reaction chain. Moreover, the forward arrows signal the forward flow of the healthcare ecosystem. Like in many ecosystems, important components, such as the environment for this specific study, can influence or affect the outcomes either directly or indirectly. This model supports the importance of the environment in the workplace as the context of the

environment can affect the structure and the overall effectiveness of the whole ecosystem.

The external environment represents the influences surrounding the work environment. The hospital and nursing unit characteristics represent the work environment specific to the hospital and unit. The staffing adequacy reflects the relationship between the three and, based on the overall structure, moves the relationship forward. Professional practice can be seen as a representation of nursing job satisfaction and retention. The forward influence from both staffing adequacy and professional practice results in the outcomes of both the administration, including nurses and patients.

Another relationship noted for this model but not included, is the loop relationship between staffing adequacy and professional practice. The loop relationship between these two variables is heavily studied and is comprehensively influential in the healthcare ecosystem. The depiction of this loop relationship was omitted to further highlight the purpose of this study but the influence should be noted.

Figure 2

SCT logic model
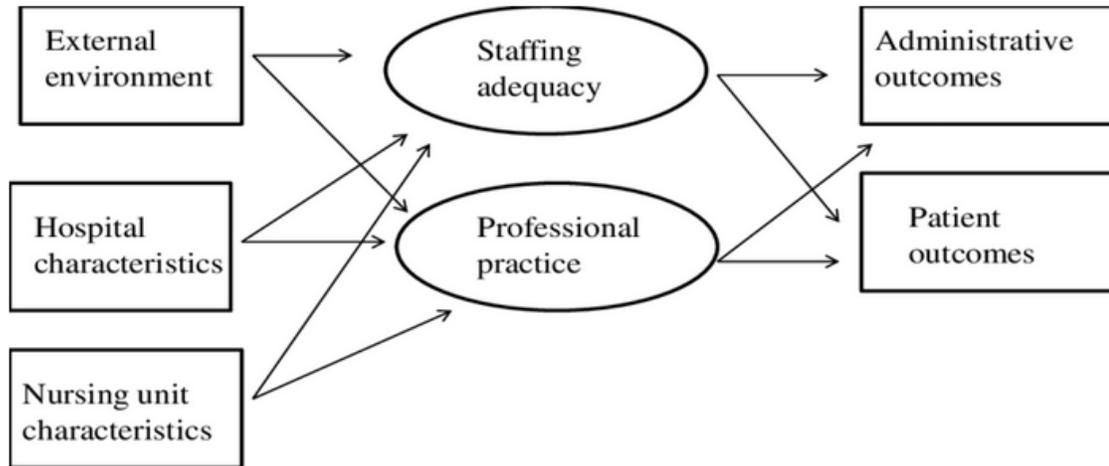
(A healthcare system and its many influencing factors)

Summary

The state of a work environment can heavily influence the outcomes of both nurses and patients. The work environment can also affect the effectiveness of the organization. Organizations may not know the status of the work environment in which nurses and patients coinhabit. Knowing the status of the work environment can help foster the development or improve the work environment, thus improving the overall outcomes experienced by both the patients and nurses. Education about the benefits of having a healthy work environment and the detriments to not having a healthy work environment can create change within the organization.

Understanding the importance of the work environment can help nurses and organizations focus on their environment. This can help highlight the strengths and weaknesses within their organization. Focusing on the work environment and ensuring it follows the AACN six essential standards is a key component for improving outcomes. With the knowledge and education surrounding the AACN's six essential standards,

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nurses can continue to provide safe quality care in an environment that fosters and

supports this goal while improving outcomes for all.

CHAPTER II

REVIEW OF LITERATURE

This literature review summarizes important findings surrounding healthy work environments and the effect it has on nursing outcomes. The literature describes the importance of a healthy work environment and how favorable nursing outcomes lead to improved patient outcomes, creating a positive environment for all involved. The literature highlights the correlation between healthy work environments and environments that are less favorable. The data collected through the studies conducted provides positive evidence supporting the need to ensure and maintain healthy work environments.

A literature search was conducted using relevant databases, including CINAHL, PubMed, and others provided by Pittsburg State University's library services. Initial searches to retrieve articles included work environments in the health care systems and nursing outcomes. From the initial search, several articles surrounding work environments and nursing were gathered. The articles provided information on the essentials of a productive work environment for nurses, healthy work environment and healthcare-associated infections, nurses' perception of the work environment, and patient satisfaction. Secondary sources were used to gather further information, including the AACN and the National Institutes for Health.

Key words used for the initial search results included:

- Nursing Outcomes

- Healthy Work Environments

- Clinical Practice Guidelines

- Productive

Healthy Work Environments and Nursing outcomes

A healthy work environment can ensure successful outcomes for nursing. In 2019, the AACN released the results of the "Critical Care Nurse Work Environment 2018: Findings and Implications." The findings showed how a healthy workplace could affect everything in a unit, from nurse engagement and retention to patient outcomes (Ulrich et al., 2019). The connection between the state of a work environment and those that are involved directly and indirectly can be seen in the data provided through the AACN's study. The relationship with nurse engagement and retention and patient outcomes can all be viewed as measurable factors. These measurable factors can display and support a healthy work environment, or the lack thereof can be seen as an unhealthy work environment.

The AACN's systemic review of studies from 2005 to 2017 about nurse work environments highlighted five major themes supporting the connection between work environments and their influence over nursing outcomes. The five themes that emerged from the literature support the connection between work environments influencing nursing outcomes:

1. Impacts of healthy work environments on nurse outcomes

2. Associations between healthy work environments and nurse workplace interpersonal relationships, job performance and productivity.

3. Effects of work environments on patient care quality

4. Influences of healthy work environments on hospital accidents (medication errors, nurse injuries from sharps)

5. Relationship between nurse leadership and healthy work environments (Ulrich et al., 2019, pg. 68).

Healthy Work Environments, Nursing Retention, and Job Satisfaction

Healthy work environments are a critical aspect when it comes to outcome improvements for nursing and overall patient care. "A healthy work environment in nursing can be viewed as an environment in which employees take care of the needs of the patients and their families, and at the same time reach the goals of the unit/department/organization where they work" (Lorber, 2018, pg. 148). The connection between each aspect of the work environment is directly affected by one another, meaning if the work environment is not healthy, it will affect the components around it, including nursing retention, nursing satisfaction, patient outcomes, and overall safety. If a healthy work environment cannot be achieved, it can affect the overall goal of the unit, department, and organization.

A study referenced in an article titled "The Relationship Between Healthy Work Environments and Retention of Nurses in a Hospital Setting" published by the *Journal of Nursing Management* "nurses who expressed that their practice environment met their expectations upon graduation also reported higher appreciation of job characteristics and management style, emphasis on quality of customer service, higher satisfaction with

benefits, higher organizational commitment and increased job satisfaction" (Ritter, 2011, pg. 30). Retention in nursing has been studied extensively in research, and the data collected has helped researchers understand the concept further. The overall aspect of a healthy work environment can be linked back to many things associated with retention rates. Those aspects include interpersonal communication, staffing, resources, education, and management. Retention is directly related to healthy work environments and best practices.

Positive work environments and job satisfaction are two key areas that have been shown to strongly influence and impact retention rates (Ritter, 2011). Retention rates can also be seen as a direct correlation to job satisfaction. Influencing aspects related to retention rates have found "Work environment factors such as nurses' autonomy, control over their practice and nursing leadership on the ward were statistically significant predictors of job satisfaction" (Duffield et al., 2009, pg. 2). A 2018 AACN study about Critical Care Nurse Work Environments found that 54% of nurses who participated in their study had the intent to leave their current position within 12 months to 3 years. The study concluded:

> For participants who expressed an intent to leave their position in the next 12 months or the next 3 years, significant differences were found in many areas[6 HWE standards] compared to those [participants] who did not express an intent to leave, such as in the indicators [areas] for all 6 HWE standards, quality of care on the work unit, the overall effectiveness of the frontline nurse manager, health and safety, and frequency of moral distress (Ulrich et al., 2019, pg. 79).

Quality Care and Patient Outcomes

Quality of care in the healthcare setting has been discussed in the literature for several years. Many studies have led to quality care improvements that have benefited patients, nurses, and hospital organizations. The environment in which care is given can also affect the level of quality received. Mortality rates have been associated with the health of the work environment. "One multistate study conducted found that patients in hospitals with poor work environments had a 16% lower likelihood of surviving a cardiac arrest when compared to patients in hospitals with better work environments" (Ulrich et al., 2019, pg. 68). The quality of care can also be measured when looking at readmission rates among patients. More readmissions in a short duration post-discharge can be related to lower quality of care. "The quality of nurse work environments and nurse staff adequacy were significantly associated with readmissions" (Ulrich et al., 2019, pg. 69). The effects of nurse work environments can be related directly back to patient outcomes.

When a work environment is not healthy, safe, and positive, patient outcomes can decrease or be left vulnerable. A mixed-method study about nurse work environment and the findings and implications published in the journal *Critical Care Nurse* concluded:

> 1 standard deviation increase in the work environment score on the Practice Environment Scale of the Nursing Work Index had an 8.1% decrease in the odds of death. When looking at safety, a 1 standard deviation increase in the safety climate score was associated with a 7.7% decrease in the odds of death. When the researchers modeled nurse work environment and safety climate together, nurse work environment remained a significant predictor of death, whereas safety climate did not (Ulrich et al., 2019, pg. 68).

Best Practice Guidelines

        The AACN's Healthy Work Environment Standards are considered the leading evidence-based practice guidelines when it comes to healthy work environments. The six essential standards incorporate skilled communication, true collaboration, effective decision making, appropriate staffing, meaningful recognition, and authentic leadership. The AACN provides a screening tool to measure the state of a work environment against the six essential standards. The screening tool allows leadership and management to take an anonymous survey that can be sent to all those in the work environment. Once the survey has been completed, a report will be generated based on the answers provided by the survey. The report then recommends steps to improve the health of the work environment by providing education and resources (AACN, 2020).

        The evidence-based practice guidelines were created after studies continued to provide supporting evidence that work environment conditions contributed to medical errors, ineffective delivery of care, and conflict and stress among health care professionals (AACN, 2016). The practice guidelines were created by doctors with experience in the field of nursing research. The data gathered to create these standards were extensively reviewed by these individuals. The first edition of the Healthy Work Environment standards was published in 2005. Since the first publication, a second edition was released in 2016. The original six essential standards remain, but further evidence has been added that supports the implementation and continued examination of workplace environments in health care (AACN, 2016).

Summary

A healthy work environment is key to ensuring positive nursing outcomes. The work environment is an intricate system with many factors influencing each other. The state of the work environment directly affects nursing outcomes, patient outcomes, and organizational outcomes. Through the education and implementation of the AACN's six essential standards, work environments can create and foster positive workspace. The six essential standards provide evidence-based practice guidelines supported by research for the benefit of the work environment.

Ensuring a healthy work environment is seen as a gold standard for providing and delivering safe quality care. To improve and maintain nursing outcomes, the work environment needs to be seen as a priority. This priority is the responsibility of all those who are involved in the health care system, from nurses to management. "From the resolution of conflicts to appropriate staffing, to retention of nurses, and effective decision-making, tackling the challenge of ensuring an HWE matter" (Ulrich et al., 2019, pg. 83).

CHAPTER III

METHODOLOGY

Healthy work environments are essential to sustain positive outcomes for employees and the business. The purpose of this study was to evaluate the knowledge and attitude of nurses on a medical surgical unit before and after an educational presentation. The six essential standards of a Healthy Work Environment were used in an educational manner to evaluate not only the nursing knowledge of what a healthy work environment is but also the facility and how it rates according to the six standards. Understanding the six healthy work environment standards helps nurses to function optimally while improving nurse outcomes, which ultimately benefits the environment and facility. Understanding the six essential standards helps improve and promote safe quality care of the patients.

Design

For this study, a multi methodology, cross-sectional study design was used. The tool that was applied was the AACN's six essential standards for a healthy work environment. The pre-test and post-test were distributed using employee email. An educational PowerPoint was included for the participants to view after the pre-test. The post-test was given after the participants viewed the educational PowerPoint. Moreover, the pre-test and post-test allowed for quantitative data to be collected. The design of the

pre-test and post-test was to assess the knowledge about healthy work environments prior to the education and to evaluate the gained knowledge after the educational PowerPoint. The quantitative data were used to determine if the educational presentation increased the knowledge of the nurses about healthy work environments. Statistical analysis was utilized with the quantitative data results.

The pre-test was used prior to the educational PowerPoint to determine the knowledge about healthy work environments and what makes up healthy work environments. Basic demographics was collected during this phase of data collection. The pre-test and post-test were identical, minus the first three demographic questions which were not collected on the post-test. (Appendix A/B).

Sampling

The project was implemented through email. The participants included registered nurses who are actively working in a local southeast Kansas hospital. The demographic information collected included age, gender, and the number of years of experience. Inclusion criteria included male and female licensed nurses currently employed in a hospital in southeast Kansas and working on the medical surgical floor, out-patient surgery, emergency department, obstetrics, surgery, float, and intensive care. Exclusion criteria included LPNs and non-English speaking nurses. Recruitment was done through employee email and the education for the voluntary study was done through employee work email.

Instrumentation

The pre-test was used to assess the RN's knowledge about healthy work environment standards before the educational PowerPoint. The pre-test was also used as

the post-test to gauge the knowledge gained from the educational PowerPoint that outlined the AACN's six standards for healthy work environments. The six standards of care were created by the AACN. The pre-test utilized 22 items and the post-test 19. Some items included demographics and prior knowledge of Healthy Work Environments. The educational PowerPoint (Appendix C) provided the six standards on a healthy work environment and the importance of healthy patient and nurse outcomes. The timeline for this project was four weeks. The study was purely a volunteer-based participation survey that allowed the participant time to complete both pre-test and post-tests as well as the educational PowerPoint on their own time.

Procedure

The Institutional Review Board (IRB) approval was obtained through Irene Ransom Bradley School of Nursing at Pittsburg State University. The facility accepted the outside IRB assessment and granted its approval. This study was exempted as the participants were over the age of 18, and no vulnerable populations were used. The risks involved with this study were extremely low as no harm was expected by participating in the pre-test and post-test surveys. The fear associated with the poor evaluation of the unit was a low risk that could have affected data gathering.

Implied consent was assumed if the participants submitted data to the study. Results of the study will be kept for a minimum of three years at Irene Ransom Bradley School of Nursing and then deleted.

Analysis Plan

The data gathered from the pre-test and post-test survey results measured the knowledge both before and after the educational PowerPoint. The nurses' perceptions

over healthy work environments were measured, as well as the knowledge gained. The data were reviewed and evaluated using the data analysis software Qualtrics, SPSS and Excel. Areas of weakness were reviewed as well as the areas of strength. This study evaluated the effectiveness of the educational PowerPoint and whether it has increased the registered nurses' knowledge of the six standards of healthy work environments.

Assumptions

Assumptions in this study included that all participants would be kept anonymous and confidential and that their choice to not continue with participation at any time would be respected. Another assumption of this study was that the educational level of the participants allowed them to understand the pre-test and post-test and educational material. The AACN'S Healthy Work Environment Standards was assumed to be appropriate for this study's setting as the standards were created and implemented in the United States.

Summary

Healthy work environments are key for positive outcomes for both the patients, nurses, and facilities in which these individuals operate. Previous studies suggest the positive outcomes associated with healthy work environments compared to other, less healthy work environments. The purpose of this study was to increase knowledge about healthy work environments and the importance in healthcare. The data collected were analyzed to assess pre-existing understanding about healthy work environments and the knowledge gained after participating in an educational activity about said work.

CHAPTER IV

RESULTS

The purpose of this study was to evaluate the knowledge registered nurses had regarding healthy work environments before and after an educational presentation and their perceptions on the importance of healthy work environments. The study aimed to examine and understand the basic knowledge registered nurses had about healthy work environments and their relationship to nursing outcomes including perceptions. Understanding what a healthy work environment is and fostering a healthy work environment is vital for positive nursing outcomes. The scholarly project aimed to answer the following questions:

1. Will the implementation of education about the AACN's six essential standards of a healthy work environment increase awareness overall about the AACN healthy work environment standards, as evidenced by a statistically significant increase?

2. Will the perception of the importance of a healthy work environment change after viewing an educational PowerPoint about the AACN's six essential standards of a healthy work environment?

Demographics

The total number of participants included 13 licensed registered nurses currently in practice in a Southeast Kansas hospital. The demographic information collected included, gender, area of nursing practice, number of years' experience and race. Inclusion criteria included male and female registered nurses, currently working in a hospital setting within the specific Southeast Kansas hospital and whose native language was English. Exclusion criteria included licensed practical nurses, non-English speaking nurses and registered nurses outside the Southeast Kansas hospital.

Recruitment was done through employee email provided by the Southeast Kansas department head of nursing. Data was collected in the Fall 2021 over the course of one month in which the email was sent to 50 nurses with a response of 13 nurses taking the survey; however only nine respondents answered all pre-test and post-test questions. One hundred percent of the respondents were female. The percentage of respondents who had 0-5 years of nursing experience was 23.08%, 30.77% had 6-10 years, 30.77% had 11-15 years and 15% had 16-19 years. The number of respondents who identified as Caucasian included 92.31% while only 7.69% identified as other. The clinical areas of the respondents mostly consisted of medical surgical nurses at 66.67%, emergency department at 16.67%, float at 8.33% and surgery at 8.33%. Refer to Table 1 for the demographical data of the respondents.

Table 1

Characteristics and demographics of respondents

Characteristics	N	%
Gender		
Male	0	
Female	13	100%
Race		
African American	0	
Caucasian	12	92.31%
Asian or Pacific Islander	0	
Other	1	7.69%
Years of Experience		
0-5 years	3	23.08%
6-10 years	4	30.77%
11-15 years	4	30.77%
16-19 years	2	15.38%
20 or more years		
Specialty		
Medical Surgical	8	66.67%
Obstetrics		
Emergency Department	2	16.67%
ICU		
Out-patient Surgery		
Float	1	8.33%
Surgery	1	8.33%

Quantitative Results

Data analysis was completed using Microsoft Excel, Qualtrics and SPSS. The pre-test survey questionnaire given to the registered nurses included 22 multiple choice items including demographic data, perceptions, and knowledge of healthy work environments while the post-test utilized 19 items omitting the demographical questions. The pre-test was used to assess the RN's knowledge about healthy work environment standards before the educational PowerPoint and nurses' perception and knowledge about healthy work environments. The post-test was used to gauge the knowledge gained from the educational PowerPoint outlining the AACN's six standards for healthy work

environments and to see if the education impacted the nurses' perceptions over healthy

work environments.

Research Question One: Will the implementation of education about the AACN's six essential standards of a healthy work environment increase awareness overall about the AACN healthy work environment standards, as evidenced by an increase in the assessment mean score?

The respondents were given the six essential standards and were asked to match them to the correct phrases. The data from the pre-test questions 14 through 19 were compared with the data of the post-test questions 36-41to calculate the mean between the pre-test and post-test. The scoring was set up by giving one point to the correct phrase and zero to all other options. The questions were identical for both pre-test and post-test. The respondents were asked to choose the phrase that best matched the AACN's essential standards based on current knowledge of healthy work environments and then again to gauge the knowledge gained.

Pre-test and post-test mean per item of knowledge is shown below in Table 2.

Table 2

Pre-test and post-test mean scores individual items on knowledge

Questions	Pre-Test Mean	Pre-Test SD	Post-Test Mean	Post-Test SD
14&36. "Be as proficient in this skill as you are in clinical skills."	61.54%	0.91	100%	0
15&37. "Be relentless in fostering true teamwork."	92.31%	1.07	90.91%	0.29
16&38. "Be committed partners in making policy directing and evaluating clinical care and leading organizational operations."	46.15%	1.45	100%	0
17&39. "Must ensure the effective match between patient needs and nurse competencies."	84.62%	0.36	100%	0
18&40. "Be recognized and recognize others for the value each brings to the organization."	92.31%	0.27	100%	0
19&41. "Fully embrace the imperative of a healthy work environment authentically live it and engage others in this achievement."	84.62%	1.44	100%	0

Comparing the pre-test and post-test mean scores the data suggests there is an increase in knowledge per individual item regarding the six essential standards as seen in Table 2. The mean was also collected for each individual item and used to compare the overall mean shown below in Table 3. With the overall increase in mean scores post educational PowerPoint the mean response demonstrated respondents had an increase in knowledge post education.

Table 3

Overall mean scores healthy work environment standards

	Mean Test Score
Pre-test	76.93%
Post-test	98.49%

A paired samples t-test was also examined per individual item regarding the six essential standards. Data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded. The paired samples t-test was done on every item but only for nine respondents. Table 4 below examines all the questions regarding the six essential standards.

Individual items over the six essential standards are discussed below in Table 5, Table 6, Table 7, Table 8, Table 9, Table 10.

Table 4

Paired t-test knowledge

Questions	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
14& 36. "Be as proficient in this skill as you are in clinical skills."	1.51	0.17	0.88	0.44	0.44	-0.23/1.12
15&37. "Be relentless in fostering true teamwork."	X	X	X	2.00	X	X
16&38. "Be committed partners in making policy directing and evaluating clinical care and leading organizational operations."	1.00	0.08	1.50	1.00	1.00	-0.15/2.15
17&39. "Must ensure the effective match between patient needs and nurse competencies."	-1.00	0.35	0.33	-0.11	0.11	-0.37/0.15
18&40. "Be recognized and recognize others for the value each brings to the organization."	1.00	0.35	0.33	0.11	0.11	-0.15/0.37
19&41. "Fully embrace the imperative of a healthy work environment authentically live it and engage others in this achievement."	-1.00	0.35	1.33	-0.44	0.44	-1.47/0.58

Note X unable to analyze Paired T-Test because standard error of difference is 0.

Table 5

Paired t-test question 14 and 36

Questions	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
14&36. "Be as proficient in this skill as you are in clinical skills."	1.51	0.17	0.88	0.44	0.44	-0.23/1.12

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "Be as proficient in this skill as you are in clinical skills" on average the scores were better before education (M=1.44, SD= 0.88) than after education (M=1.00, SD=0.00). The difference, 0.44, 95% CI (-0.23, 1.12) showed no statistical significance, (t=1.51, p=0.17).

Table 6

Paired t-test question 15 and 37

Questions	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
15&37. "Be relentless in fostering true teamwork."	X	X	X	2.00	X	X

Note unable to analyze paired t-test because standard error of difference is 0.

The survey question "Be relentless in fostering true teamwork" could not be analyzed using a paired t-test as the standard error of the difference was zero. This is because the variance of zero means all the differences in the data were the same. This occurrence is most likely related to the small sample size.

Table 7

Paired t-test question 16 and 38

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
"Be committed partners in making policy directing and evaluating clinical care and leading organizational operations."	1.00	0.08	1.50	1.00	1.00	-0.15/2.15

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "Be committed partners in making policy directing and evaluating clinical care and leading organizational operations" on average responses before education (M=4, SD=1.50) increased after education (M=3.00, SD=0.00). The difference, 1.00, 95% CI (0.-15, 2.15) showed no statistical significance, (t=2.00, p=0.08).

Table 8

Paired t-test question 17 and 39

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
"Must ensure the effective match between patient needs and nurse competencies."	-1.00	0.35	0.33	-0.11	0.11	-0.37/0.15

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "Must ensure the effective match between patient needs and nurse competencies" on average responses before education (M=3.89, SD=0.33) increased after education (M=4.00, SD=0). The difference, 0.11, 95% CI (-0.37, 0.15) showed no statistical significance, (t=-1.00, p=0.35).

Table 9

Paired t-test question 18 and 40

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
"Be recognized and recognize others for the value each brings to the organization."	1.00	0.35	0.33	0.11	0.11	-0.15/0.37

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "Be recognized and recognize others for the value each brings to the organization" on average responses before education were better (M=5.11, SD=0.33) than after education (M=5.00, SD=0). The difference, 0.11, 95% CI (-0.15, 0.37) showed no statistical significance, (t=1.00, p=0.35). This could be related to a decrease in participants perception of knowledge over the topic.

Table 10

Paired t-test question 19 and 41

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
"Fully embrace the imperative of a healthy work environment authentically live it and engage others in this achievement."	-1.00	0.35	1.33	-0.44	0.44	-1.47/0.58

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "Fully embrace the imperative of a healthy work environment authentically live it and engage others in this achievement" on average responses before education (M=5.56, SD=1.33) increased after education (M=6.00,

SD=0). The difference, 0.44, 95% CI (-1.47, 0.58) showed no statistical significance, (t=-1.00, p=0.35).

Research Question Two: Will the perceptions of a healthy work environment change before and after the educational PowerPoint over the AACN's six essential standards of a healthy work environment?

The respondents were given varying questions over thoughts and perceptions regarding the importance of a healthy work environment and their basic knowledge. Questions five through 13 and 20-22 included the pre-test questions while questions 27-35 and 42-44 included the post-test questions. The questions were identical for both the pre-test and post-test. The questions were arranged using a five-point Likert scale including strongly agree, agree, neutral, disagree, and strongly disagree. The pre-test data and post-test data in Table 11 included questions over perceptions regarding the importance of a healthy work environment.

Table 11

Pre-test and post-test perceptions

	Mean Pre-test	SD Pre-test	Mean Post-test	SD Post-test
5&27. I am familiar with the concept of Healthy Work Environments.	3.69	0.85	4.09	0.65
6&28. I work in a facility that outlines what a Healthy Work Environment is.	3.46	0.52	3.72	0.65
7& 29. A Healthy Work Environment is important for nursing staff.	4.61	0.65	4.8	0.42
8&30. A Healthy Work Environment is important for patient safety and outcomes.	4.69	0.48	4.8	0.42
9&31. I know what a Healthy Work Environment consists of.	3.92	0.76	4.36	0.50
10&32. Communication can affect the work environment.	4.85	0.38	4.72	0.47
11&33. Appropriate staffing can affect the work environment.	4.85	0.38	4.9	0.30
12&34. Meaningful recognition can affect the work environment.	4.62	0.51	4.72	0.47
13&35. Authentic leadership can affect the work environment.	4.85	0.38	4.9	0.30
20&42. Collaboration can affect the work environment.	4.69	0.48	4.9	0.30
21&43. A healthy work environment directly affects the organization it represents.	4.75	0.67	4.9	0.30
22&44. The environment affects your satisfaction or intention to stay at your job.	4.85	0.38	5	0

Note. For observed means, 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree

Using a five-point Likert scale from strongly disagree to strongly agree responses to each individual item on perception were analyzed. Responses were evaluated by the by the following sores: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5). The pre-test means responses fell between 3.69 and 4.86 and the

post-test responses fell between 3.72 and 5. The data based on the Likert scale demonstrates the respondents' perceptions of the importance of healthy work environments as being Agree (4) to Strongly Agree (5).

The overall mean scores over respondents' perceptions of healthy work environments are compared in Table 12 below. The pre-test summative mean (4.48) indicates respondents perceptions Agree (4) when it came to healthy work environments and their basic knowledge. The post-test summative mean (4.65) shows respondents had an increase of 0.17 points indicating respondents had an increase in positive perception regarding healthy work environments and their basic knowledge.

Table 12

Overall mean scores on perceptions

	Mean	SD
Pre-test	4.48	0.16
Post-test	4.65	0.18

A paired samples t-test was also analyzed between pre-test and post-test questions to evaluate the respondents' perceptions over healthy work environments. Questions based on perceptions and perceptions of knowledge were compared. Data analysis for the paired samples t-test was done with nine out of the 13 respondents' data. The remaining four respondents' surveys were incomplete their responses were excluded. Table 13 below examines all the questions regarding perceptions over healthy work environments and the paired samples t-test results.

Individual items regarding perceptions over healthy work environments are discussed below in Table 14, Table 15, Table 16, Table 17, Table 18, Table 19, Table 20, Table 21, Table 22, Table 23.

Table 13

Paired t-test perceptions

Questions Pre-Test/ Post-Test	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
5 &27. I am familiar with the concept of Healthy Work Environments.	2.29	0.05	0.73	0.56	0.55	-0.03/1.11
6 &28. I work in a facility that outlines what a Healthy Work Environment is.	1.0	0.35	0.67	0.22	0.23	-0.29/0.74
7&29. A Healthy Work Environment is important for nursing staff.	1.0	0.35	0.35	0.13	0.12	-0.17/0.42
8 &30. A Healthy Work Environment is important for patient safety and outcomes.	X	X	X	1.13	X	X
9 &31. I know what a Healthy Work Environment consists of.	2.5	0.04	0.53	0.44	0.44	0.04/0.85
10 &32. Communication can affect the work environment.	-1.0	0.35	0.33	-0.11	0.11	-0.37/0.15
11&33. Appropriate staffing can affect the work environment.	X	X	X	1.11	X	X
12 &34. Meaningful recognition can affect the work environment.	1.0	0.35	0.33	0.11	0.11	-015/0.37
13 &35. Authentic leadership can affect the work environment.	X	X	X	1.11	X	X
20 &42. Collaboration can affect the work environment.	2.0	0.08	0.50	0.33	0.33	-0.05/0.72
21 &43. A healthy work environment directly affects the organization it represents.	1.0	0.35	0.67	0.22	0.22	-0.29/0.74
22 &44. The environment affects your satisfaction or intention to stay at your job.	1.0	0.35	0.33	0.11	0.11	-0.15/0.37

X= Paired T-Test unable to be computed because standard error of difference is 0

Table 14

Paired t-test question 5 and 27

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
5 &27. I am familiar with the concept of Healthy Work Environments.	2.29	0.05	0.73	0.56	0.55	-0.03/1.11

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

Specifically looking at the survey question "I am familiar with the concept of health work environments" on average, responses before education were better (M=2.22, SD =0.83) than after education (M=1.67, SD =0.71). The difference, 0.55, 95% CI (-0.03, 1.11) was statistically significant, (t=2.29, p<0.05). This score could have decreased because the respondents' perceptions after education changed from "I am somewhat familiar" to "I am not as familiar as I had thought".

Table 15

Paired t-test question 6 and 28

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
6 &28. I work in a facility that outlines what a Healthy Work Environment is.	1.0	0.35	0.67	0.22	0.23	-0.29/0.74

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "I work in a facility that outlines what a healthy work environment is" responses before education were better (M= 2.56, SD=0.53) than after education (M=2.33, SD= 0.71). The difference, 0.23, 95% CI (-0.29, 0.74) was statistically insignificant, (t=1.00, p= 0.35). This score could have decreased because the

respondent's perception on working in a facility that outlines what a healthy work environment also decreased.

Table 16

Paired t-test question 7 and 29

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
7&29. A Healthy Work Environment is important for nursing staff.	1.0	0.35	0.35	0.13	0.12	-0.17/0.42

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "A healthy work environment is important for nursing staff" on average responses were better before education (M= 1.25, SD= 0.71) than after (M=1.13, SD= 0.35). The difference, 0.12, 95% CI (-0.17, 0.42) was statistically insignificant, (t=1.00, p=0.35).

Table 17

Standard error of the difference

Questions	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
8 &30. A Healthy Work Environment is important for patient safety and outcomes.	X	X	X	1.13	X	X
11&33. Appropriate staffing can affect the work environment.	X	X	X	1.11	X	X
13 &35. Authentic leadership can affect the work environment.	X	X	X	1.11	X	X

Note unable to analyze paired t-test because standard error of difference is 0.

The survey questions "A healthy work environment is important for patient safety and outcomes", "Appropriate staffing can affect the work environment", and "Authentic

leadership can affect the work environment" could not be analyzed using a paired t-test as the standard error of the difference was 0. This is because the variance of zero means all the differences in the data were the same which is most likely related to the very small sample size.

Table 18

Paired t-test question 9 and 31

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
9 &31. I know what a Healthy Work Environment consists of.	2.53	0.04	0.53	0.44	0.44	0.04/0.85

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "I know what a healthy work environment consists of" was better before education (M=2.11, SD= 0.78) than after education (M=1.67, SD= 0.50). The difference 0.44, 95% CI (0.04, 0.85) was statistically significant, (t= 2.53, p=0.04). This score could have decreased because the respondent's perception after education changed from "I know what a healthy work environment consists of" to "I am not sure I know what a healthy work environment consists of".

Table 19

Paired t-test question 10 and 32

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
10 &32. Communication can affect the work environment.	-1.0	0.35	0.33	-0.11	0.11	-0.37/0.15

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "Communication can affect the work environment" on average responses before education (M= 1.11, SD= 0.33) increased after education (M=1.22, SD= 0.44). The difference 0.11, 95% CI (-0.37, 0.15) was statistically insignificant, (t= -1.00, p=0.35).

Table 20

Paired t-test question 12 and 34

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
12 &34. Meaningful recognition can affect the work environment.	1.0	0.35	0.33	0.11	0.11	-015/0.37

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "Meaningful recognition can affect the work environment" on average the responses were better before education (M=1.33, SD= 0.50) than after education (M=1.22, SD= 0.44). The difference, 0.11 95% CI (-0.15, 0.37) was statistically insignificant, (t=1.00, p=0.35).

Table 21

Paired t-test question 20 and 42

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
20 &42. Collaboration can affect the work environment.	2.0	0.08	0.50	0.33	0.33	-0.05/0.72

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "Collaboration can affect the work environment" on average responses were better before education (M=1.33, SD=0.50) than after education (M=1.00,

SD= 0.00). The difference, 0.33, 95% CI (-0.05, 0.72) was statistically insignificant,

(t=2.00, p= 0.08).

Table 22

Paired t-test question 21 and 43

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
21 &43. A healthy work environment directly affects the organization it represents.	1.0	0.35	0.67	0.22	0.22	-0.29/0.74

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "A healthy work environment directly affects the

organization it represents" on average responses were better before education (M= 1.22,

SD=0.67) than after education (M= 1.00, SD=0.00). The difference, 0.22, 95% CI (-0.29,

0.74) was statistically insignificant, (t=1.00, p= 0.35).

Table 23

Paired t-test question 22 and 44

Question	T Value	P Value	SD	Mean	Mean Difference	Confidence Interval
22 &44. The environment affects your satisfaction or intention to stay at your job.	1.0	0.35	0.33	0.11	0.11	-0.15/0.37

Note data analysis for the paired samples t-test was done with only nine out of the 13 respondents' data gathered. The remaining four respondents' surveys were incomplete their responses were excluded.

The survey question "The environment affects your satisfaction or intention to

stay at your job" on average responses were better before education (M=1.11, SD= 0.33)

than after education (M= 1.00, SD= 0.00). The difference, 0.11, 95% CI (-0.15, 0.37) was

statistically insignificant, (t=1.00, p=0.35).

Summary

The mean scores were calculated for individual items to assess the knowledge of the respondents regarding the AACN's six healthy work environment standards both before and after the educational PowerPoint. The average scores between the pretest and post-test were then examined to compare the knowledge gained. The average pretest score was 76.93%. The average post-test score was 98.49%.

The data would suggest a 21.56% increase in respondents' knowledge. The respondents' perceptions of healthy work environments were calculated using a Likert scale. The mean score and standard deviation were calculated per individual item both pretest and post-test. The post-summative mean (4.65) shows respondents had an increase of 0.17 points, indicating an increase in positive perception regarding healthy work environments and their basic knowledge.

The statistical significance evaluated through the paired samples t-test only showed a statistical difference in question five "I am familiar with the concept of healthy work environments" ($t=2.29$, $p= 0.05$) and question nine "I know what a healthy work environment consists of ($t=2.53$, $p= 0.04$). The remaining questions showed no statistical significance through the paired sample t-test. Because of the small sample size, there is a high likelihood of a type 2 error, indicating further research should be done with a larger sample.

CHAPTER V

DISCUSSION

The specific purpose of this project was to evaluate nurses' perceptions and knowledge about healthy work environments before and after the educational PowerPoint. Evaluation and understanding nurses' knowledge and perceptions surrounding healthy work environments can lead to positive nursing outcomes. Through education and through the implementation of healthy work environment standards, healthy work environments can improve nursing outcomes.

Relationship of Outcomes to Research

Two research questions were examined in this project. The first question was "Will the implementation of education about the AACN's six essential standards of a healthy work environment increase awareness overall about the AACN healthy work environment standards, as evidenced by an increase in the mean score?" This question was answered by comparing the pre-test and post-test surveys evaluating the AACN's six standards of a healthy work environment. The respondents were asked to match the phrases to the correct definition. The correct answer was keyed with a numerical value of one.

The mean score for each individual item was collected both before and after the educational PowerPoint. The mean score for each individual item was compared to both

pre-test and post-test to evaluate whether there was an increase in knowledge after the healthy work environment education. The data suggests that the respondents had an increase in the mean knowledge. The increase in scores was calculated by taking the difference between the pre-test and post-test. The 21.56% improvement in mean scores suggests knowledge increased over the education of the six standards. However, when considering statistical significance, only two questions were found to have statistically significant change.

The statistical significance evaluated through the paired samples t-test only showed a statistical difference in question five "I am familiar with the concept of healthy work environments" ($t=2.29$, $p= 0.05$) and question nine "I know what a healthy work environment consists of ($t=2.53$, $p= 0.04$). The remaining questions showed no statistical significance through the paired sample t-test. The second question was, "Will the perceptions of a healthy work environment change before and after the educational PowerPoint over the AACN's six essential standards of a healthy work environment?" This question was examined a different way by using a Likert type scale. The respondents were given the five-point Likert scale from "strongly disagree" to "strongly agree".

No numerical number was given to the respondents during the time of the survey, but during data analysis the options were scored from 1-5 starting at "strongly disagree" to number five "strongly agree". The mean scores for each individual item on the pre-tests and post-test were calculated and showed an increase in perception based on the overall mean score as shown in Table 11. The pre-test summative mean (4.48) compared to the post-test summative mean (4.65) showed respondents had an increase of 0.17,

indicating an increase in positive perception regarding healthy work environments and their basic knowledge. The data analysis collected from Qualtrics survey software included demographics.

The highest group of respondents included Caucasian individuals at 92.31%. One hundred percent of the respondents for this study were female. The average number of years of experience fell between six and fifteen years. Most of the respondents' specialty included the medical surgical floor at 66.67%. Age was not collected for this survey.

Observations

The simplicity of the study made for easy data collection. The study outline used AACN's Healthy Work Environment Standards, which have been studied for years and show evidence-based data supporting positive nursing outcomes. The survey indicated increased knowledge and an increase in personal perception on importance of a healthy work environment and its ability to influence nursing outcomes. Questions nine on the pre-test and 31 on the post-test, "I know what a healthy work environment consists of" showed an increased mean score from 3.92 to 4.36. The paired samples t-test also showed statistical significance over ($t=2.53$, $p=0.04$).

This question suggests that the respondents of this survey have an increased perception on what a healthy work environment is after education of the AACN's six standards. The increase in knowledge gained can better help the nurses achieve healthy work environments and positive nursing outcomes. The data supports the simplicity of educating nurses about healthy work environments and the improved perceived importance to create and foster healthy work environments for the future.

Evaluation of Theoretical Framework

The data from this study supports the theoretical frameworks used to help guide this project. The synergy model of care, which is a type of conceptual model based on structural contingency theory (SCT) (Donaldson, 2014). The synergy model of care explains how an environment assists in creating a foundation for the synergy between the patient/family and the nurse. The assumption of the framework in this study shows the perceived importance of the environment and its perceived ability to affect nursing outcomes. The SCT describes the relationship between the structure and the context of the environment.

The state of the structure can heavily influence the environment of the organization. For this specific study, the context was represented by the survey questions surrounding the perceptions of healthy work environment and the relationship to nursing outcomes.

Evaluation of Logic Model

The SCT-based conceptual model used for this study outlines the intricate ecosystem of a healthcare system and its many influencing factors. Like in many ecosystems, important components, such as the environment for this specific study, can influence or affect the outcomes either directly or indirectly. This model supports the importance of the environment in the workplace as the context of the environment can affect the structure and the overall effectiveness of the ecosystem. This is supported by the data shown in the overall perception of healthy work environments and their ability to influence nursing outcomes. The project results over nurses' perceptions when compared between the pre-test and post-test show an increase in perception on the overall influence a work environment can have on nursing outcomes.

This is evidenced by questions seven "A healthy work environment is important for nursing staff" and question eight "A healthy work environment is important for patient safety and outcomes". Scores for question seven increased from 4.61 to 4.8 and scores for question eight increased from 4.69 to 4.8. The statistical significance using a paired samples t-test for question seven showed no statistical change of value while question eight could not be computed as the standard error of difference was zero. These findings are highly suggestive of a type 2 error related to the small sample size.

Limitations

The method chosen for the respondents was a one-group pre-test, and post-test design that looked at descriptive statistics, mean and standard deviation. One limitation of this study included lack of participation of this optional survey. The participants were recruited through work email to partake in the optional survey during a pandemic for which staffing, and burnout were at an all-time high in health care. This type of scenario could be a limiting factor in the participation of this study. Another limitation was participants finishing the survey in one whole setting and completing all the questions as well as the small sample size of participants.

The responses were missing on certain questions, which can alter the data collected when comparing pre-test and post-test answers. The study topic over healthy work environments also created a limitation. Finding facilities to participate was difficult and could be contributed to the continuing COVID-19 pandemic at the time of the study. Facilities might have been reluctant to participate at that time as facilities and nursing staff were dealing with stressful environments because of the COVID-19 pandemic.

Implications for Future Projects and Research

  Understanding healthy work environments is essential for positive nursing outcomes. Evaluation of nursing perceptions and baseline knowledge of healthy work environments are important for improving health care and health care related outcomes. Health care systems are intricate ecosystems with multiple moving parts. Ensuring healthy work environments ensures an ecosystem with positive nursing outcomes. Future project designs could incorporate additional assessments of the status of a particular health system.

  The AACN has an assessment tool to rate an assess the work environment both before and after the implementation of the six standards. Many variables could be reviewed and examined both before and after the implementation of the standards and improve the health care ecosystem. To improve the design of this project, the author could increase the interval time for data collection and improve participation numbers.

Implications for Practice, Health Policy, and Education

  The results of this study show a relationship between perceived influence of outcomes and the importance of healthy work environment outcomes. The results demonstrate the ability to educate staff and improve perceptions about healthy work environments and their importance in nursing outcomes. Recommendations for nursing practice include outlining and educating healthy work environment standards and implementing them to fit the ecosystem they serve. Including nurses in helping establish and implementing these standards to benefit the work environment and nursing outcomes may improve patient outcomes.

Conclusion

The purpose of this study was to evaluate the basic knowledge and perceptions surrounding healthy work environments and nursing outcomes. The study focused on the AACN's Healthy Work Environment Standards and educating nurses about the importance of healthy work environments and to understand the basic knowledge and perceptions the nurses had surrounding healthy work environments both before and after the educational PowerPoint. Through the education and understanding on the effects work environments can have on nursing outcomes the future of nursing can continue to improve when it comes to the safety of its nurses and the safety and quality of care patients receive. With this knowledge, intricate health care ecosystems can create and foster an environment that acknowledges and appreciates the positive outcomes associated with ensuring a healthy work environment.

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APPENDIX

Appendix A

PRE-Examination for Healthy Work Environments
1.   What gender do you identify as?

- Male

- Female

- OTHER

2.   How many years of experience do you have as an RN?

- 0-5 years

- 6-10 years

- 11-15 years

- 16-19 years

- 20 or more years

3.   What race do you identify as?

- Caucasian

- African American

- Asian or Pacific Islander

- Other

4.   What specialty unit do you work in?

- Medical Surgical
- Obstetrics
- Emergency Department
- ICU
- Out-patient surgery
- Float
- Surgery

5.   I am familiar with the concept of Healthy Work Environments.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

6.   I work in a facility that outlines what a Healthy Work Environment is.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

7.   A Healthy Work Environment important for nursing staff.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

8.   A Healthy Work Environment important for patient safety and outcomes.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

9.   I know what a Healthy Work Environment consists of.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

10.   Communication can affect the work environment.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

11.   Appropriate staffing can affect the work environment.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

12.   Meaningful recognition can affect the work environment.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

13.   **Authentic leadership can affect the work environment.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

14.   **Match the phrase to the Healthy Work Environment Standard Definition.**

"Be as proficient in this skill as you are in clinical skills."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

15.   **Match the phrase to the Healthy Work Environment Standard.**

"Be relentless in fostering true teamwork."
- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

16.   **Match the Praise to the Healthy Work Environment Standard.**

"Be committed partners in making policy directing and evaluating clinical care and leading organizational operations."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

17.   Match the phrase to the Healthy Work Environment Standard.

"Must ensure the effective match between patient needs and nurse competencies."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

18.   Match the phrase to the Healthy Work Environment Standard.

"Be recognized and recognize others for the value each brings to the organization."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

19. **Match the phrase to the Healthy Work Environment Standard.**

"Fully embrace the imperative of a healthy work environment authentically live it and engage others in this achievement."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

20. **Collaboration can affect the work environment.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

21. **A healthy work environment directly affects the organization it represents.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

22. **The environment affects your satisfaction or intention to stay at your job.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

Appendix B

POST-Examination for Healthy Work Environments
1.   What specialty unit do you work in?

- Medical Surgical
- Obstetrics
- Emergency Department
- ICU
- Out-patient surgery
- Float
- Surgery
- Other

2.   I am familiar with the concept of Healthy Work Environments.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

3.   I work in a facility that outlines what a Healthy Work Environment is.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

4.   A Healthy Work Environment is important for Nursing staff.

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

5.   **A Healthy Work Environment is important for patient safety and outcomes.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

6.   **I know what a Healthy Work Environment consists of.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

7.   **Communication affects the work environment.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

8.   **Appropriate staffing affects the work environment.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

9. **Meaningful recognition affects the work environment.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

10. **Authentic leadership affect the work environment.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

11. **Match the phrase to the Healthy Work Environment Standard.**

"Be as proficient in this skill as you are in clinical skills."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

12.   **Match the phrase to the Healthy Work Environment Standard.**

"Be relentless in fostering true teamwork."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

13.   **Match the Praise to the Healthy Work Environment Standard.**

"Be committed partners in making policy directing and evaluating clinical care and leading organizational operations."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

14.   **Match the phrase to the Healthy Work Environment Standard.**

"Must ensure the effective match between patient needs and nurse competencies."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

15.   Match the phrase to the Healthy Work Environment Standard.

"Be recognized and recognize others for the value each brings to the organization."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

16.   Match the phrase to the Healthy Work Environment Standard.

"Fully embrace the imperative of a healthy work environment authentically live it and engage others in this achievement."

- Skilled Communication

- True Collaboration

- Effective Decision Making

- Appropriate Staffing

- Meaningful Recognition

- Authentic Leadership

17. **Collaboration affects the work environment.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

18. **A healthy work environment directly affects the organization it represents.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree

19. **The environment affects your satisfaction or intention to stay at your job.**

- Strongly Agree

- Agree

- Neutral

- Disagree

- Strongly Disagree