JANANY

JOURNAL OF THE AMERICAN NURSES ASSOCIATION – NEW YORK

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American Nurses Association New York

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Journal of the American Nurses Association – New York (JANANY)

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EDITORIAL

The Persistent Academic Nurse Educator Shortage

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Deputy Editor-in-Chief

On this cold, dreary day in Upstate NY, I fondly remember the amazing opportunity I had to attend the National Forum of State Nursing Workforce Centers conference in 2024 that was held in San Diego, CA. It was an extraordinary opportunity to hear about the state of the nursing workforce across the nation. The news continues to be bleak, I'm sorry to say. Even to this date, the persistent nursing workforce shortage remains at the forefront of the profession. While there was a small rebound post-COVID, the nursing shortage remains a substantial concern for employers, educators, and those working on the front line. Of course, it should and must concern all of us, because a lack of nurses contributes to a reduction in patient safety and quality outcomes. Workforce includes both the recruitment of new nurses and retention of existing nurses. One of the key factors contributing to the nursing workforce shortage is the lack of academic nurse educators. This edition of Journal of the American Nurses Association-New York (JANANY) contains valuable information about recruitment and retention of academic nurse educators (Seibold-Simpson & Pajarillo, In Press, 2025; Bajwa et al. (2025); Brown et al., 2025; Vardaman et al., 2025; Lee et al., 2024; Quay et al., 2023; Vardaman et al., 2024). But much more research is needed on how to retain working nurses.

The National Forum of State Nursing Workforce Centers includes the 40 existing nursing workforce centers that "advance nursing education, practice, leadership and workforce development at the state and local levels using data-driven approaches." Their website notes, "nursing workforce center services include conducting localized research, publishing reports related to supply, demand, and educational capacity of the nursing workforce, and then developing and implementing strategies to improve the nursing workforce in their states (National Forum of State Nursing Workforce Centers, 2021). In New York State (NYS), the designated nursing workforce center is the Center for Nursing at the Foundation of NYS Nurses, Inc. Data collection, analysis, and presentation of findings are conducted by the Center for Health Workforce Studies (CHWS) in Albany, NY.

So, what do we know about the current nursing workforce shortage, you ask? At the national meeting, state after state displayed gaps between the ever-increasing demand for nurses and the inadequate supply. Nationally, nursing workforce data are collected annually by the National Sample Survey of Registered Nurses (NSSRN) through the Health Resources and Services Administration. According to NSSRN data from 2022 (the most recent results), if labor workforce patterns remain the same as today, the demand for RNs in 2036 will exceed supply by 9%, resulting in a shortage of 337,970 full-time equivalent RNs (National Sample Survey of Registered Nurses, March, 2024). Check out the Nursing Workforce Dashboard (2022) to see tables and charts of the most recent data, including state-specific findings.

Recruitment of new individuals into nursing in NYS appears to be holding steady, according to the CHWS, with applications and acceptances into RN programs on the same levels between 2022 and 2023 (Martiniano, 2024). However, steady recruitment does not fill the workforce shortage gap. It is well-recognized that nursing faculty shortages and a lack of clinical sites continue to limit how many potential students can be accepted into nursing programs to become future nurses.

Retention, or turnover, of nurses has been well-studied. However, it remains complex, multifaceted and difficult to resolve. Two key factors that continue to remain associated with retention include salary and burnout (Bae, 2024; Jones et al., 2024; National Center for Health Workforce Analysis, 2024).

The CHWS (Martiniano, 2024) listed the median salary for RNs in NYS in 2022 as $104,230 with a range from $73,583 for new nurses and a high of $119,064 for experienced nurses. They note that salary remains a key driver for RNs changing positions, with 79.5% of hospitals indicating that RNs leave for another employer for higher salary. The situation is even bleaker for nursing homes and adult care facilities and home care agencies.

Burnout has been steadily gaining more attention. There is a substantial body of literature related to burnout, including the phenomenon of quiet quitting (Hungerford et al., 2025) and presenteeism (Min et al., 2022). Speakers at the conference addressed the issue of burnout several times, highlighting that younger nurses were most likely to leave compared to their older counterparts, and that there is a need to implement resilience programs and provide a supportive work environment (Franqueiro, 2024). David Armstrong, from the CWHS spoke on burnout in actively practicing nurses in NYS based on study of approximately 43,000 nurses from 2023 (Armstrong & Martiniano, 2024). The findings are compelling! Again, the age-group most affected by burnout was the 20–29-year-olds, with the majority being in the high burnout category. Additionally, nurses working in inpatient hospital emergency department settings also scored in the high burnout category. Nurses in upstate NY scored higher in burnout than nurses in the New York City/Long Island area, and White nurses were more likely to be burned out compared to their Asian, Hispanic, and Black colleagues.

However, exciting work is being done to mitigate the challenges and address the problem across the nation! One of the benefits of attending national conferences is being able to see current work being done that hasn't made it into academic journals yet. This was one of those conferences. While many presentations defined the problems, other presenters discussed strategies to address the crisis including using academic practice partnerships (Bellot & Hudson, 2024; Swan et al., 2024), legislative changes (Bemis et al., 2024), and improving well-being (Oliveira & Reichhardt, 2024; Gaffney & Soren, 2024). This year's National Forum of State Nursing Workforce Centers Conference will be held June 2 – 4, 2025 in Philadelphia, Pennsylvania, and includes a track on health and well-being of the nursing workforce.

How are you feeling about the nursing workforce shortage in your community? What is your organization doing to address retention and workplace stress? What other information would help you in addressing recruitment and retention? We want to hear from you to inform what data are collected and disseminate what strategies have been found to be effective! Let's continue this important conversation.

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ORIGINAL RESEARCH

Exploring the United Kingdom Nursing Student Perspectives on Diversity, Equity, and Inclusion Through Metaphor: A Service Evaluation Project

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Abstract

Background: There is growing interest in and recognition of diversity, equity, and inclusion in nursing higher education and healthcare in the United Kingdom. However, how this plays out in the United Kingdom university context is underexplored. **Objective:** The objective of this service evaluation was to explore direct-entry Master's nursing student perspectives about diversity, equity, and inclusion using the Stone Soup metaphor in the United Kingdom university context. **Methods:** Three workshops were developed and taught focusing on diversity, equity, and inclusion. At the end of the third workshop, an anonymous online cross-sectional descriptive survey was used to evaluate student learning from the workshops. The descriptive survey consisted of five quantitative questions using a Likert scale, with three open-ended qualitative questions for students to offer narrative comments. As this was a service evaluation, the survey was not piloted and internal consistency (Cronbach's Alpha) of the survey was not measured. In January 2022, a convenience sample of 86 students from two direct-entry Master's nursing programs at two universities in the United Kingdom were invited to complete the online survey. **Results:** The response rate was 40.7% (n=35). Most students reported they enjoyed being part of this approach to learning. They agreed that this approach enabled them to feel that others valued their own personal experience, culture, background, and insights. Students thought listening to their peers' personal stories had made them more culturally aware, and they thought this would enrich and help inform their nursing practice. Overwhelmingly, students valued being called by their correct name and felt comfortable participating in this creative learning approach. **Limitations:** The main limitation is that the data were collected from a simple survey without reliability or validity testing. This was a small-scale service evaluation, and data were collected based on student self-reported data across two different university nursing programs; results may not be generalizable to other education programs or university contexts. **Conclusions and Recommendations:** Diversity, equity, and inclusion were important to nursing students' education to become registered nurses. Using the Stone Soup metaphor illuminated the rich diversity each student brings to their current (and perhaps future) nursing practice. It is recommended that future research is warranted to extend understanding of diversity, equity, and inclusion in nursing student education in the United Kingdom.

Keywords: Creative Learning, Diversity, Equity, Inclusion, Nursing Student, Service Evaluation, Stone Soup metaphor

Exploring the United Kingdom Nursing Student Perspectives on Diversity, Equity, and Inclusion Through Metaphor: A Service Evaluation Project

Introduction

Internationally, many agree that diversity, equity, and inclusion (DEI) positively impact workplace culture, patient experiences, and clinical outcomes (Mayoum et al., 2022; Paric et al., 2021; Tartavoulle & Landry, 2021). This is significant for nursing student education because the presence of DEI in nursing curricula is one way of improving awareness and practice of the future nursing workforce (American Association of Colleges of Nursing, 2024; Australian College of Nursing, 2021; Royal College of Nursing, 2024). In the United Kingdom (UK), there is growing interest in and recognition of DEI in nursing higher education and healthcare (Department of Health and Social Care, 2022).

While there is growing interest in the terms 'diversity', 'equity', and 'inclusion', they are often used synonymously in the literature; however, the three terms do not necessarily have the same meaning. In the United States of America (USA), equity is defined as "the quality of being fair or impartial; fairness; impartiality or something that is fair and just" (County of Marin Department of Health and Human Services, 2021, p. 3). In the UK, the UK's leading professional body, the Royal College of Nursing (RCN; 2024), states equity "recognises that to reach equal outcomes individuals need different levels and kinds of support" (p. 12). Diversity is about recognising the "range of people in an organisation or profession … people of different age, ethnicity, gender, religion, sexuality and people with disabilities" and inclusion means people feel "a sense of belonging to – and being valued by – an organisation or profession … how well the thoughts, contributions, presence, and perspectives of different people are actively valued and integrated into a working environment" (RCN, 2024, p. 12). The American Association of Colleges of Nursing (2024) offers similar defining terms to guide North American nurses and students.

Overall, these concepts are about people, society, culture, and protected characteristics, such as: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, and sex (UK Equality Act, 2010). The intersection of DEI and protected characteristics provides an interesting lens for considering nursing student education in the UK. The intersection and connectedness of these categories are dynamic and contested (Tobbell, 2022), which can present barriers to underrepresented groups' access to and success in higher education (Popoola et al., 2022). Underrepresentation in nursing education commonly refers to minority groups, such as ethnic minority students, male nurse students, lesbian, gay, bisexual, transgender, intersex, queer/questioning, asexual identifying students, and students with disabilities (Coleman et al., 2021; Englund & Lancaster, 2022; Francois, 2020; Popoola et al., 2022; Quinn et al., 2021; Roy et al., 2022; Tartavoulle & Landry, 2021). Studies in Canada (Mayoum et al., 2022), the USA (Englund & Lancaster, 2022; Everett, 2022; Metzger et al., 2020), and South Africa (Popoola et al., 2022) report nursing students from underrepresented groups experience implicit and explicit discrimination and marginalisation by peers, and sometimes nurse educators. For these students, marginalisation can take the form of being 'othered' - that is, they are made to feel invisible, isolated, alienated, powerless, and less than their peers (Englund & Lancaster, 2022; Popoola et al., 2022; Waddell-Henowitch et al., 2022).

Conversely, respect, appreciation, and embracing of diverse points of view are commonly understood to represent inclusive learning and teaching environments, with learners finding and making meaning about what they learn within their cultural understanding (Woodley, 2020), which ultimately strengthens nursing education programs (Quay et al., 2023). According to Hockings (2010), inclusive learning and teaching in higher education refers to "the ways in which pedagogy, curricula and assessment are designed and delivered to engage students in learning that is meaningful, relevant, and accessible to all" (p.1). Inclusive learning and teaching emerged from a growing international university student body, and widening participation initiatives are considered central to delivering equality and equity for and representation of a diverse student body (Schucan Bird & Pitman, 2020; Tobbell, 2022). Recently, inclusive learning and teaching have been directly linked to discourse calling for decolonising of nursing education in Australia (Rix et al., 2024), Canada (Mayoum et al., 2022; Waddell-Henowitch et al., 2022), South Africa (Popoola et al., 2022), UK (Francois, 2020; Schucan Bird & Pitman, 2020), and the USA (Zappas et al., 2021).

Nurse educators can play a crucial role in developing DEI and cultural congruence in student practice through engagement and reflection, mentoring, modelling behaviours, and communication (Paric et al., 2021). Using diverse nurse educator and student cultures by sharing experiences provides opportunities for DEI integration within the learning space (Metzger et al., 2020; Paric et al., 2021; Quay et al., 2023). Mayoum et al. (2022) suggest that conversations must move beyond the superficial to have a meaningful impact on student learning and experience. Diverse student groups need to be heard (Tobbell, 2022), and students want an inclusive environment that will listen to and accept them rather than tolerate them (Metzger et al., 2020). However, how this plays out in the UK university context is underexplored.

Inspired by Woodley's (2020) article, based in the US university context, this service evaluation project explored direct-entry Master's nursing student perspectives about inclusive learning through the 'Stone Soup' metaphor within the UK university context.

Methodology

This project aimed to evaluate the effectiveness of inclusive learning, using the Stone Soup metaphor as a framework rather than following a formal research design.

Building on the recognition of metaphors as valuable teaching tools (Chan & Nyback, 2015), the project opted for the Stone Soup metaphor due to its clarity, relevance to student experiences, and potential to foster engagement. Recognizing the potential for misunderstandings among non-native English speakers (Woodley, 2020), the project opted for the Stone Soup metaphor due to its cultural neutrality. With permission from Woodley (2020), this project replicated her USA project design. The Stone Soup metaphor is commonly understood as a moral regarding the value of sharing, engagement, and productivity. In summary, the metaphor is a story in which a hungry traveler persuades the people of a village to each contribute a single food ingredient to a soup pot that initially contains only water and a stone. The people contribute and co-create a plentiful soup with enough food for all (Woodley, 2020). There are variations on the metaphor, but commonly, the concepts of equal contribution, inclusion, and diversity of food ingredients result in the co-creation of a shared meal.

Teaching Strategy

The teaching strategy took place over 15 weeks in Term 1 of the 2021/2022 UK academic year. At the beginning of the academic year, nursing students from two UK universities were introduced to the service evaluation project. The service evaluation project involved three online workshops embedded within existing curricula focusing on DEI using the Stone Soup metaphor as the framework. Woodley's (2020) design was used to develop the workshops and evaluation design.

The service evaluation project goals were to:
1. Enhance nursing student participation and a sense of belonging, including underrepresented minority students;

2. Establish a culture of inclusive learning based on DEI concepts and reciprocal accountability among faculty and students, and
3. Promote group learning of culturally responsive nursing care through students and faculty sharing personal and professional experiences to enhance inclusive learning.

Workshop One

Workshop one introduced the service evaluation project and the 'Stone Soup' metaphor. The discussion focused on students' collective experiences and engagement. An analogy was provided about lectures and seminars being like a single-ingredient soup, compared to the rich depth of flavours that would arise when students and faculty from various backgrounds 'season' the soup by sharing personal and professional experiences. Faculty modelled this process by sharing an individual 'ingredient' they brought to the service evaluation project. Students were then asked to reflect on what 'ingredient' they might bring to the project. Using a global/diversity map, students and faculty indicated family of origin to highlight the collective diversity (including race, sexuality, gender, religion, and culture) within the learning space and to represent the differing perspectives that might be offered in discussions. Lastly, faculty from both universities assured students that they would learn individual preferred names (and their correct pronunciation), comparable to learning the unique ingredients in a soup. Students were encouraged to introduce themselves when speaking and correct pronunciation until names were learned. Workshop one was conducted by each university with respective students. At workshop one, students were advised that later in the year, there would be an optional anonymous online survey to evaluate the project.

Workshop Two

Workshop two enabled students from both universities to come together and focus on further exploring Stone Soup ingredients, which had been discussed in previous learning sessions. This workshop aimed for students and faculty to share their experiences, health beliefs, and practices related to classroom content or their professional experiences from the clinical setting. The Stone Soup metaphor was revisited to discuss the value of students sharing collective experiences to enrich everyone's learning, and doing so provided a platform upon which discussions of DEI and culturally responsive nursing care could be based. Students from both universities were randomly allocated to four equal-sized groups with a faculty member from each university. Students were invited to introduce themselves and share the 'ingredient' they thought they might bring to the Stone Soup project and why that particular ingredient. Following on, students were invited to discuss how their personal (and family) experiences might compare with a patient's experience (or family expectations) from the same culture/ background. Finally, students were invited to discuss how their personal (and family) experiences might compare with a patient's experience (or family expectations) from a different culture/ background. Faculty provided an example of their own experience to demonstrate to students the nature of discussion.

Workshop Three

Workshop three focussed on culturally responsive care. The workshop commenced with revisiting the metaphor and learning since workshop two. Students were invited to contribute to a discussion about culturally responsive care and what they understood this term to mean concerning their nursing practice. To facilitate and capture the richness of the discussion, students were invited to respond to a PADLET, which provided an anonymous inclusive learning resource added to the teaching materials. Students were invited to share insights and lived experiences about how nurses can provide culturally responsive care to patients from similar and different situations to their own. Students were encouraged to share positive and less than positive experiences of culturally responsive care they may have been directly/ indirectly involved in from clinical practice and to consider if they learnt anything about themselves or their practice and how this might shape future practice. Faculty also shared their own experiences to illustrate to students and co-create discussion. Workshop three ended with a project summary, and details about the optional anonymous survey were provided. This information was also made available on the learning platforms of both universities.

Throughout teaching, students were reminded of the Stone Soup metaphor, their rich life experience and diversity, and the importance of calling each person by the correct name. In the interactive, inclusive learning sessions across all three workshops, students were encouraged to contact the lead person at the respective university if they felt adversely affected by any of the discussions. No student made contact about concerns.

Settings and Participants

Two UK city-based universities provided the setting for this evaluation. The two universities participated in the project based on similar student programs of study identified by two co-authors (TD, BQ) based on previous collaborative learning and teaching work. In total, 86 year 1 students enrolled in direct-entry Master's in nursing programs were invited to complete an evaluation survey. Students (n=46) from King's College London were enrolled in the Master of Nursing Science (Registration as a Mental Health Nurse) studying the first module: *The Practice of Mental Health Nursing 1*. Students (n=40) from Queen's University Belfast were enrolled in the Master of Nursing Sciences (Registration as an Adult Nurse) studying the first module: *Foundation of Adult Nursing Care*. These modules were selected as they were taught at the commencement of the UK academic year for both universities.

Data Collection

The anonymous optional online descriptive survey was administered using MS Forms during the third week of January 2022 in Term 1. This week was selected as both universities had differing module completion dates. The goal was to ensure that students could comment on their experiences over the Term but not have the survey compete with end-of-module evaluations and summative assessments.

Replicated from Woodley's (2020) design, the descriptive survey consisted of five quantitative questions (Table 1). Four questions were mapped against a Likert-type scale, with 1 indicating strongly disagree and 5 indicating strongly agree. The fifth question was mapped against a Likert-type scale from 1, indicating extremely uncomfortable, to 5, indicating extremely comfortable. The survey ended with three open-ended qualitative questions for students to offer narrative comments (Table 1), which built on Woodley's (2020) open-ended question. As this was a service evaluation and not formalized research, the survey was not piloted and internal consistency (Cronbach's Alpha) of the survey was not measured. Face validity of the survey was established with academics from both universities, but validity and reliability were not tested. Woodley (2020) also did not test the validity and reliability of the original survey but permitted it to be used in this project.

Data Analysis

Quantitative data were analysed using MS Forms, reporting descriptive frequencies. Thematic analysis of qualitative data involved familiarizing with the data through to identifying patterns in meaning and grouping these patterns into themes (Braun & Clarke, 2006).

Statement of Institutional Review Board or Ethical Approval

This project was classified as a service evaluation and did not require ethical clearance. Both university ethics offices were consulted about collecting and analysing information routinely collected as part of the teaching service. Participants were students

Table 1

Evaluation Questions

Quantitative questions
1. The story of Stone Soup woven throughout this module helped me feel that my own input into discussions was valuable.
2. Contributions made by my peers enhanced my understanding of culturally responsive nursing care.
3. I believe that discussions were richer because of the tone set by Stone Soup and the global/ diversity map exercise.
4. The teaching and learning and calling me by name enhanced my sense of belonging on the module.
5. Please indicate your comfort level for participating in the module.

Qualitative questions
1. Were there ways the Stone Soup experience could have been improved?
2. Are there other ways we could have woven diversity, equity, and inclusion into your teaching and learning?
3. Please use the space below to tell us something else about your views of the use of the story of Stone Soup within the module.

who used the service as part of the teaching delivered. Both universities ascertained that using data collected this way was permissible as there was no change to the standard service provided (Health Research Authority, 2022). At the beginning and completion of the service evaluation project, students were informed consent to participate was optional and that opting out would not impact their assessments. Rigor was maintained by following principles established by Lincoln & Guba (1985). To demonstrate credibility, co-authors collectively had over 100 years of experience in clinical practice, nursing education, and research; each was involved in the design and implementation, prolonged engagement, and peer debriefing of the evaluation project. To ensure authenticity, all data were collected and analysed anonymously without identifying student demographics, and data were stored online via password protection accessible only to the authors. For dependability and confirmability, an audit trail was established, and co-authors engaged in reflexive discussion throughout the life of the project.

Results

After implementing the Stone Soup workshops, 35 students completed the anonymous optional online survey with a 40.7% response rate. Student demographics were not collected, and to do so potentially made students identifiable; therefore, these data are not reported.

Most students (n=33, 94%) reported they enjoyed being part of this approach to learning; 86% (n=30) of those who responded agreed that this approach enabled them to feel that others valued their personal experience, cultural background, and insights. They reported being able to talk about their experience, ask questions in a safe and inclusive environment, and learn from their peers. Most students (n=33, 94%) agreed that listening to their peer's personal stories had made them more culturally aware, and they thought this would enrich and help inform their nursing practice.

A critical component of using the Stone Soup metaphor was ensuring everyone was called by their correct name and pronounced correctly; 92% (n=32) valued this inclusive, engaging, and enriching approach. Most students (n=31, 89%) reported feeling comfortable taking part in this creative approach to learning and wanted more of this interactive and engaging activity during their nurse education. Just over three-quarters (n=27, 78%) reported that the global/diversity map exercise enabled them to recognise their rich diversity and the diversity among their peers.

Thematic analysis revealed two themes: "Sharing positive lived experiences" and "Sharing negative lived experiences". Students considered that "*sharing lived experiences … both positive and negative*" (SP27) reflected the diversity and their personal experiences of nursing and health care.

Sharing Positive Lived Experiences

Sharing positive lived experiences about the rich diversity and the similar bonds with their peers "*has shown me how similar people are in ways*" (Student Participant [SP]10). Sharing positive lived experiences enabled students to "*think about the type of nurse I want to be*" (SP24). Thinking about the type of nurse students wanted to be proved to be "*thought-provoking to start group discussion*" (SP17). Group discussions were important to students as they enabled sharing about cultural diversity, which was new learning for some: "*One thing that took me by surprise was the sectarianism we experience in hospitals. I think we should be talked to about it before we go on placement. I am aware it is a sensitive topic, but some students were really caught off guard by it*" (SP33). Being caught 'off guard' was considered by some students to be a positive learning experience because "*having peers with diverse ethnic backgrounds from whom they could learn*" (SP12).

A critical component of the Stone Soup metaphor approach was that it enabled each student to recognise and reflect on what they brought to nursing practice: "*I was concerned about my age and lack of experience in care before I started this course, but Stone Soup encouraged me to consider my life experiences and what they could bring*" (SP9).

Sharing Negative Lived Experiences

Most students said they enjoyed the Stone Soup metaphor to inclusive learning; however, sharing negative experiences focused on the metaphor being 'overused' and "*more useful to younger nursing students*" (SP4). While some students were very active in the group discussion, others were less vocal. The more active students shared their experience that "*more engagement from their peers*" (SP21) would have enriched learning about DEI. Sharing negative lived experiences enabled students to illuminate that there was "*little diversity with teaching staff … it's not representative of our community*" (SP29).

As the service evaluation project took place during the global pandemic, most sessions took place online. Students commonly shared negative lived experiences about this style of learning as "*a bit awkward*" (SP7). However, students also recognised that learning online enabled the two student groups from two separate UK cities to come together, which was "*valued*". Several students shared that "*more joint workshops*" between the two universities would be helpful and that the Stone Soup metaphor could be "*woven*" through other modules within the direct-entry Master's nursing programs of both universities.

Discussion

This service evaluation project explored direct-entry Master's nursing student perspectives about DEI through the Stone Soup metaphor within the UK university context.

The results highlight that students enjoyed being part of this DEI approach to learning, which enabled them to feel that others valued their personal experiences, cultural backgrounds, and insights. Furthermore, students were able to share their lived experiences, both positive and negative, ask questions in a safe and inclusive environment, and learn from their peers about DEI. In particular, listening to their peers' personal stories made them feel more culturally aware, and they thought this would enrich and help inform their nursing practice.

A key result of this service evaluation was students being called by their correct name and pronounced correctly, which was valued as an inclusive, engaging, and enriching approach. This made students feel comfortable learning and wanting to know more about DEI and its impact on their nursing education and practice. This is in line with other views in the UK (Francois, 2020; Schucan Bird & Pitman, 2020) the USA (Everett, 2022; Metzger et al., 2020; Roy et al., 2022; Woodley, 2020) that nurse educators learning student names and correct pronunciation, getting to know students, using teaching approaches that are inclusive of student diversity has a positive impact on nursing student education. Openly discussing and acknowledging the experiences, both positive and negative, of student groups is also

considered a useful strategy to address students feeling invisible, isolated, and marginalized (Coleman et al., 2021; Englund & Lancaster, 2022; Everett, 2022; Metzger et al., 2020; Popoola et al., 2022; Quinn et al., 2021). Exclusion, ostracisation, and marginalisation are reflected in health and social care contexts for UK nurses and students (Francois, 2020; UNISON, 2019).

Results also highlight students were aware of the lack of diversity amongst faculty who taught the DEI workshops as part of this service evaluation project. On the surface, this might appear to be accurate, as four of the five faculty members were White. However, beyond physical appearances, diversity was evident within the teaching faculty, with people identifying from various genders, sexual orientations, and cultures. All had differing clinical experiences and expertise across differing countries and achieved the highest academic qualifications at Master (n=1), Doctor of Education (n=1), and Doctor of Philosophy (n=3) levels. Faculty perceived this diversity added to the richness of the service evaluation by enabling a shared understanding of DEI experiences to be embedded within the workshops and curricula to be shared with students. However, as Mayoum and colleagues (2022) suggest, faculty need to provide "space and time to listen and support their students" (p. 466). Nurse educators in Finland emphasize the need to create a common strategy and for faculty to be equally familiar with DEI-taught content and share this with students (Paric et al., 2021). Furthermore, nurse educators in the USA suggest that for strategies to be inclusive, DEI should be developed in collaboration with students (Roy et al., 2022), an approach this UK service evaluation did not adopt.

Although different contexts, some of the results from this service evaluation reflect similarities within the USA context, where Woodley (2020) used the same Stone Soup metaphor and evaluative approach. As with the results of this UK-based service evaluation, Woodley (2020) also reported that students felt a sense of belonging in discussions and valued their peers' opinions and beliefs, leading to greater cultural awareness. UK nursing students also valued becoming more aware of the cultural diversity stemming from culture, race, sexuality, gender, political views, and in some cases, religious identity. Similar to Woodley's (2020) and Quay et al.'s (2023) USA findings, this UK service evaluation suggests that recognising diverse nursing students and faculty adds to inclusive learning and teaching.

Limitations

There are several limitations to this service evaluation. The main limitation is that the data were collected from a simple survey without reliability or validity testing. Formalized research is needed to test the survey and produce generalizable results. Another limitation is that the data are based on student self-reports, and the results cannot be generalized to other education programs or university contexts. The relatively small sample size is insufficient to properly represent UK nursing programs as data were only collected at two universities. A further limitation of note is timetabling conflicts between the two universities. The first workshop was to mix students from both universities; however, timetabling conflicts meant the first workshop needed to be completed by each university separately. Students and facilitators from each university were to gather for the final workshop; unfortunately, further timetabling conflicts meant each university worked with its respective student groups. This may have negatively impacted the collaborative nature of the project.

Conclusion

Issues of DEI intersect with all members of society, including nursing students. Using the Stone Soup metaphor, a service evaluation project explored UK nursing students' understanding of DEI. Combining various strategies, this educational approach holds promise for fostering a learning environment that embraces all students and centers on their needs. Inclusive teaching strategies are essential for effective nursing education, ensuring all students feel valued and engaged. By anchoring DEI concepts with the Stone Soup metaphor, this approach fosters a learning environment that prepares future UK nurses to provide culturally congruent care to diverse patient populations. Importantly, the results highlight the rich diversity students bring to their current (and perhaps future) nursing practice. Results also show that DEI concepts are important to UK nursing students and their learning.

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ORIGINAL RESEARCH

A Quasi-Experimental Study Exploring Anxiety and Meditation in Healthcare Workers Receiving the COVID-19 Vaccine

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Abstract

Background: Healthcare workers standing at the frontline of the COVID-19 pandemic faced many concurrent sources of anxiety including critically ill patients, nosocomial transmission, and physical exhaustion due to staffing shortages. Our multidisciplinary team recognized the urgent need to assess and support our healthcare providers during COVID-19 vaccine administration in hospital employees. **Objectives:** The purpose of the quasi-experimental study was to pilot a 5-minute guided breath and body meditation designed and recorded by a Meditation Mind-Body Therapist of the researchers' Integrative Medicine Department. The primary research aim of the study was to describe the prevalence of anxiety among healthcare employees during COVID-19 vaccination. The secondary aim was to evaluate the effectiveness of the mind-body meditation for anxiety in reducing reported levels of anxiety. **Method:** A 2 arm, quasi-experimental design was utilized to assign participants to a 5-minute meditation (intervention) during the post-vaccination waiting period at a hospital-run vaccination clinic. Pre-vaccination, baseline anxiety within the last 2 weeks was measured with the General Anxiety Disorder-7 (GAD-7) and current state anxiety with the Visual Analogue Scale-Anxiety (VAS-A). Post-vaccination, anxiety was reassessed using the VAS-A. REDCap was utilized to electronically deliver all study elements on the patient's personal smartphone, including data entry and meditation administration. **Results:** 461 patients enrolled in the study. Pre-vaccination GAD-7 results revealed 17.4% of participants reported moderate-severe baseline anxiety. The meditation intervention had a statistically significant (p < .001) reduction in anxiety (VAS-A) scores from pre- to post-vaccination compared to controls. The mean change in VAS-A scores was -9.5 (95% CI -11.9, -7.1) within the intervention group and -2.6 (95% CI -5.7, 0.5) within the control group. **Discussion:** The use of a brief meditation during the COVID-19 vaccine post-vaccination waiting period decreased anxiety in healthcare workers. The simplicity, scalability, and minimal budget requirements make this non-pharmacological intervention useful in addressing anxiety during vaccination.

Keywords: Meditation, Covid-19, Anxiety, Vaccination, Health Personnel

A Quasi-Experimental Study Exploring Anxiety and Meditation in Healthcare Workers Receiving the COVID-19 Vaccine

Introduction

The COVID-19 pandemic brought harm to the physical and mental health of people around the world. In particular, healthcare workers standing at the frontline of the crisis faced many concurrent sources of anxiety including critically ill patients, nosocomial transmission, and physical exhaustion due to staffing shortages. One in five healthcare professionals reported symptoms of anxiety in a meta-analysis of 33,062 participants (Pappa et al., 2020). The pandemic also eroded typical coping strategies to manage these mentally challenging situations due to fear of transmission leading to isolation and a lack of social support. Rapid deployment of interventions was critical to enhance the psychological resilience of healthcare workers to strengthen the healthcare system's capacity (Bao et al., 2020). Our multidisciplinary team, therefore, recognized the urgent need to assess and support our healthcare providers during the COVID-19 vaccine administration in hospital employees.

In December 2020, the United States Federal Drug Administration (FDA) issued an emergency use authorization (EUA) for the administration of two COVID-19 vaccines as a solution to limit or eliminate virus spread (FDA, 2021). Vaccine accessibility initially targeted healthcare workers, first responders, and residents of long-term care facilities nationwide. Administration for qualifying groups was organized by state health departments and was delivered at designated vaccine clinics. Vaccine scheduling was accessible by state health portals for all qualifying groups and for some was accessible via their employers. Vaccine delivery was scheduled in two doses with the second between 21 and 28 days of the first. The administration of the then-novel COVID-19 vaccine required a 15-minute waiting period to monitor for adverse reactions or 30 minutes if the patient had a history of anaphylaxis.

Anxiety-related adverse events following immunization (AEFI) have been previously observed in mass immunization campaigns and documented by the World Health Organization (WHO). A systematic review of AEFI included seven cohorts of school-aged children and one cohort of adult military reservists who presented with dizziness, fainting, and headache in the immediate post-vaccination period (Loharikar et al., 2018). Anxiety-related AEFI was identified to be disruptive to vaccination programs, increasing the chance that persons offered vaccination would decline based on anecdotal accounts of persons who experienced it (Loharikar et al., 2018). Researcher's recommendations included identifying interventions that may lessen the occurrence and impact of AEFI.

Understanding the actuality of AEFI as a clinical matter was foundational to this study's development. With consideration of the large-scale impact a state-mandated vaccination requirement for healthcare workers would have, we sought an intervention that could mitigate the occurrence of AEFI. The intention was to deliver an intervention in the immediate post-inoculation period, as identified by the literature, and to take action that may support healthcare workers with vaccination requirement compliance.

Meditation techniques have been used with success in healthcare settings as an intervention to relieve symptoms in circumstances known to produce patient anxiety. In a quasi-experimental study aimed at decreasing perceived stress and anxiety for patients in a treatment waiting area, an online meditation-based program was used with success, reporting significantly lower levels of both perceived stress and anxiety among participants (Querstret et al., 2018). A systematic review and meta-analysis of 47 clinical trials found meditation to show moderate improvement in anxiety (Goyal et al., 2014). A second meta-analysis of 15 randomized control trials on the effectiveness of online meditation-based interventions found a beneficial impact on anxiety, stress, and wellbeing (Spijkerman et al., 2016). The experience of the COVID-19 pandemic for healthcare workers was considered to increase their risk for psychological distress. Globally, researchers explored the incidence of generalized anxiety in healthcare workers during the pandemic by measuring anxiety with the GAD-7 screening tool (Barzilay et al., 2020; Mihaylova et al., 2021). To understand the occurrence of anxiety in our sample, the GAD-7 was included in the survey tool.

The purpose of the quasi-experimental study was to pilot a brief, 5-minute guided breath and body meditation designed and recorded by a Meditation Mind-Body Therapist of the researchers' Integrative Medicine Department. The primary research aim of the study was to describe the prevalence of anxiety among healthcare employees during COVID-19 vaccination. The secondary aim was to evaluate the effectiveness of meditation for anxiety in reducing reported levels of anxiety.

Methods

The study was approved by the Institutional Review Board (X21-008). The study used a quasi-experimental design across two separate vaccine clinic spaces operating simultaneously from February 15, 2021, through June 24, 2021. Due to State regulations regarding vaccine eligibility, only employees were included in the initial IRB protocol. Once regulations made patients eligible for vaccination an amendment to the protocol was made and approved on March 8, 2021, opening participation in this study to patients. Those results will be presented in a separate report.

Sample and Recruitment

The two locations where employees received the COVID-19 vaccine were randomized to either receive the brief meditation intervention or a control group. The workflow and physical space of each clinic area were identical, allowing the assignment of one space as the intervention group and the other as a control. Assignment was achieved by creating recruitment flyers color-coded for intervention and control groups with each flyer differing by QR code. This color-coding scheme was blinded to all individuals except for the authors, who distributed the appropriate flyer to the designated clinic space.

Of the approximately 25,000 staff, there were 43,167 appointments made for onsite vaccinations. A convenience sample was chosen from those who entered the two clinic areas during the study period. Recruitment flyers were distributed to every individual upon registration at the COVID-19 vaccine clinic. While waiting to enter an exam room, participants who chose to enroll in the study scanned the QR code leading them to the Research Electronic Data Capture (REDCap) secure research platform which described the study and screened for inclusion criteria. Staff were informed that all responses were anonymous and opting in to participate indicated their consent.

Eligibility criteria included status as an organizational employee, age 18 years or older, English as the preferred language for health care communications, scheduled to receive either the first or second dose of the COVID-19 vaccine during the visit, and the ability to access the internet and listen to audio on a mobile device. Headphones were provided to participants to decrease ambient noise. All participants who met inclusion criteria were assigned a unique identifier in the REDCap Database.

Data Collection Procedures

Generalized and current-state anxiety was collected at baseline via the validated GAD-7 and VAS-A, respectively, prior to vaccine administration. The FDA recommended a 15-minute observation period post-vaccination to monitor for potential adverse effects. Individuals with a history of anaphylaxis were recommended to undergo observation for 30 minutes. During the 15- or 30-minute post-vaccination waiting period, the intervention group listened to the meditation prior to completing the VAS-A again to capture the effect of the meditation on short-term anxiety

while waiting. The control group completed the VAS-A first and was then offered the opportunity to listen to the meditation. This resulted in an approximate 5-minute difference in the VAS-A collection time between the two groups.

Instruments

The GAD-7 is a screening tool for generalized anxiety disorder originally designed for use in the primary care setting (Spitzer et al., 2006). The 7 items ask the respondent how often during the past 2 weeks they have been bothered by the key diagnostic features of the disorder. Responses range from "Not at all" (scored as 0) to "Nearly every day" (scored as 3) giving a possible score of 0 to 21. Typical diagnostic cut points for anxiety are reported as minimal (0-4), mild (5-9), moderate (10-14), and severe (15-21), respectively. GAD-7 validity and reliability testing in the general population demonstrated appropriate and expected differentiation from score distributions in a psychiatric population, with factorial consistency by age and gender and good internal consistency ($\alpha = 0.89$; Löwe et al., 2008).

The VAS-A measures subjective state anxiety by asking the question "How anxious are you right now?" and is scored in REDCap by the respondent moving a horizontal sliding indicator along a 100mm line bounded on the left by "calm" to "anxious" at the right side. The VAS-A has been tested for use as a rapid measure of changing anxiety levels and demonstrates good test-retest reliability ($r = .44$, $p < .001$) and convergent validity with the state subscale of the State-Trait Anxiety Inventory ($r = .60$, $p < .001$) (Abend et al., 2014).

Demographic data collected via REDCap included sex assigned at birth, age grouped by decade of life, self-identified race, whether the participant interacts with patients and works in a clinical or nonclinical role, highest level of education, whether the scheduled vaccine dose that day was their first or second, and the length of their post-vaccination waiting period (i.e., 15 or 30 minutes).

REDCap was utilized for all aspects of study delivery via two separate projects for the control and intervention groups. REDCap required participants to complete the study sections presented to them to advance to the next section, guiding the participant from instruments to meditation as appropriate. Study data were collected and managed using REDCap electronic data capture tools hosted at our institution (Harris et al., 2009, 2019; Majumdar et al., 2023).

Method of Data Analysis

The GAD-7 responses were scored, and total scores were summarized per the cut points in the literature to describe the prevalence of mild, moderate, and severe anxiety in the sample. Pre and post-VAS-A scores were analyzed using a Welch two-sample t-test. All analysis was conducted using R version 4.3.2.

Results

The study was initiated on February 15, 2021 and data collection continued over 4 months through June 24, 2021. During the study period, 507 participants accessed the study via REDCap however 197 enrolled in the control group and 264 enrolled in the intervention group (Figure 1). Collectively, 415 participants completed the GAD-7 pre-vaccination with 24 missing data in the control group and 22 missing data in the intervention group. Additionally, pre-vaccination, 400 completed the VAS-A with 33 missing data in the control and 28 missing data in the intervention group. After vaccination, 331 participants completed the final VAS-A measurement with 46 missing data in the control group and 84 missing data in the intervention group. Participants presented for their first or second dose of vaccine (40.1% and 59.9% respectively), and most were assigned to a 15-minute (89.4%) vs. 30-minute (10.6%) post-vaccination waiting period.

Figure 1

Consort Diagram
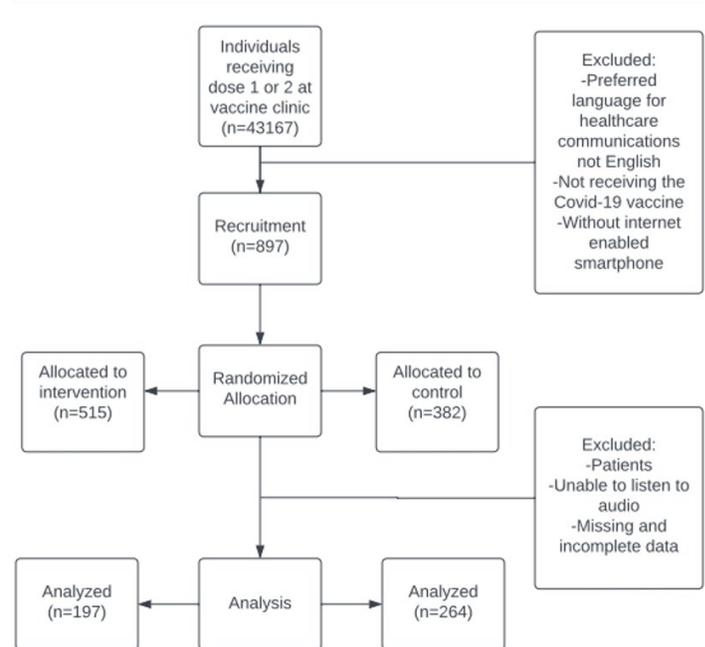
Demographics of the treatment and control arms are displayed in Table 1. There was no difference in vaccine dose, age range, sex assigned at birth, race, education, or job description between the control and intervention groups. A mix of clinical and non-clinical staff who are both patient and non-patient-facing enrolled in the study such as nurses, physicians, clinical researchers, clinical unit secretaries, office staff, etc. GAD-7 results, collected to understand baseline anxiety by assessing anxiety in the past 2 weeks, indicated that 17.4% of participants reported moderate-severe anxiety (scored between 10 to 21). The prevalence of minimal-moderate anxiety (scores between 0-9) and moderate-severe anxiety were similar in the intervention (83.5% and 16.5% respectively) and control groups (81.5% and 18.5% respectively; $p = .60$). No significant difference ($p=0.8$) was found in mean GAD-7 scores between the intervention group (4.64, SD = 4.78) and control group (4.49, SD = 5.22). When stratified by dose ($p=0.8$) or wait time ($p=0.4$), no significant difference in GAD-7 was found. The mean state anxiety scores (VAS-A) pre-vaccination were similar ($p = 0.7$) between the intervention (39.2, SD = 27.7) and control groups (37.9, SD = 29.9).

Both groups had decreases in VAS-A scores between the pre- and post-measurement. The intervention group had a greater decrease compared to the control; the mean (95% CI) within-group change in VAS-A scores was -9.5 (-11.9, -7.1; $p < 0.001$) compared to -2.6 (-5.7, 0.5; $p = 0.09$) in the control group (Table 2). The difference between groups in their pre-to-post VAS-A changes was statistically significant at 6.85 (95% CI: 3.02, 10.67), $p < 0.001$. The effect size (Cohen's d) for this treatment effect was d = 0.39 (95% CI: 0.17, 0.61), demonstrating a modest but significant effect.

Patients receiving vaccine dose 2 had significantly lower pre-vaccine VAS-A (mean 36.32, SD = 27.76) than dose 1 recipients (mean 42.16, SD = 29.54; $p=0.05$). However, overall mean post-vaccination VAS-A scores were not significantly different (31.5 for dose 1 vs. 32 at dose 2, $p=0.9$). The change in VAS-A scores pre- to post-vaccination differed by dose, with a mean change of -9.09 (SD = 19.45) at dose 1 and -4.63 at dose 2 (16.68, $p=0.03$). However, the interaction between the dose and intervention group was not significant, suggesting that the intervention treatment effect was similar for dose 1 and dose 2.

Table 1

Participant Demographics (N = 461)

Variable	Control[a] M(SD)	Intervention[b] M(SD)	P
Vaccine Dose			
Dose 1	80 (40.61)	105 (39.77)	0.9
Dose 2	117 (59.39)	159 (60.23)	
GAD-7			
Minimal	112 (64.7)	139 (57.44)	
Mild	29 (16.76)	63 (26.03)	0.12
Moderate	21 (12.14)	30 (12.40)	
Severe	11 (6.36)	10 (4.13)	
Missing	24	22	
Age, Range (%) years			
18-20	0 (0)	1 (0.59)	
21-29	33 (29.20)	50 (29.41)	
30-30	36 (31.86)	61 (35.88)	
40-49	25 (22.12)	37 (21.76)	0.9
50-59	12 (10.62)	14 (8.24)	
60+	7 (6.19)	7 (4.12)	
Missing	84	94	
Sex, No. (%)			
Female	77 (68.14)	121 (71.18)	0.6
Male	36 (31.86)	49 (28.82)	
Race, No. (%)			
White	55 (48.67)	78 (45.88)	
Black or African American	13 (11.50)	32 (18.82)	
Asian	23 (20.35)	37 (21.76)	0.4
From multiple races	6 (5.31)	6 (3.53)	
Other	5 (4.42)	8 (4.71)	
Prefer not to answer	11 (9.73)	9 (5.29)	
Job Description	32 (28.32)	46 (27.06)	
Clinical/ Direct Patient Care			
Clinical/ No Patient Care	28 (24.78)	30 (17.65)	0.3
Nonclinical/ Direct Patient Interaction	45 (39.82)	74 (43.53)	
Nonclinical/ No Patient Interaction			
	8 (7.08)	20 (11.76)	
Education			
Associate degree	9 (7.96)	8 (4.71)	
Bachelor degree	48 (42.48)	81 (47.65)	
Graduate degree	27 (23.89)	59 (34.71)	
Doctoral degree	12 (10.62)	8 (4.71)	
HS or equivalent	4 (3.54)	5 (2.94)	
Prefer not to answer	2 (1.77)	1 (0.59)	
Some college	11 (9.73)	8 (4.71)	
Missing	84	94	

[a]n=197
[b]n=264

Table 2

Effectiveness of Meditation on Anxiety

Characteristic	Control[a] M(SD)	Intervention[b] M(SD)	P	Effect Size (D)
VAS-A Pre, Mean (SD)	37.93 (29.86)	39.18 (27.73)	0.7	0.39
VAS-A Change Pre/Post, Mean (SD)	-2.64 (19.31)	-9.49 (16.06)	<0.001	

[a]n=197
[b]n=264

Discussion

The aim of this study was two-fold. The first aim was to assess the prevalence of anxiety among healthcare employees receiving the COVID-19 vaccine. The second aim was to evaluate the effectiveness of smartphone-administered meditation in reducing anxiety post-vaccination. We found via GAD-7 a prevalence of moderate-severe anxiety among 17.4% of study participants. These results revealed healthcare workers were not overly anxious during this vaccination campaign. Anxiety rates were in line with rates of moderate to severe anxiety in previous studies of healthcare workers during the COVID-19 pandemic (Barzilay et al., 2020; Mihaylova et al., 2021). Anxiety identified by the GAD-7 screening tool did not impact the effectiveness of this meditation. The intervention resulted in a significant decrease in the pre- to post-VAS-A scores compared to the control, indicating that our findings support the use of a brief smartphone-administered meditation to alleviate anxiety during this COVID-19 vaccine campaign.

In a similar setting and intervention, a randomized quality improvement study focused on patients waiting for chemotherapy infusion found that when patients used a self-care app that included education in self-administered acupressure and meditation, they experienced significant reductions in stress and anxiety (Bao et al., 2019), in alignment with the results of the current study. In addition, meditation has been shown to reduce stress at work (Toniolo-Barrios & ten Brummelhuis, 2023). In a qualitative study, researchers identified that meditation-based stress reduction training in health care professionals can start a positive process of change leading to a more compassionate workplace culture and improved patient care, highlighting the values of meditation in stressful work situations (Knudsen et al., 2023).

This study is significant because it demonstrated a low-cost, non-pharmacologic, and scalable intervention that alleviated anxiety related to vaccine administration. The intervention's effectiveness could create opportunities for healthcare providers to quickly mitigate anxiety in any healthcare setting. Brief online meditations are widely available for free and can be tailored to meet the clinical setting. Administering meditation can be done on an employee's personal device or available equipment within the clinical setting, such as a desktop computer, tablet, or smartphone. In limited resource settings, the meditation can be recorded and delivered on standard audio equipment. A potential benefit of a brief meditation delivered electronically is the on-demand nature of providing the appropriate resource at the appropriate time for staff. This study demonstrated a private setting is not needed for meditation to have a positive impact.

Though the use of a quasi-random method of assigning participants to the invention vs. control groups improved the scientific rigor of the comparison, there were limitations to this single-institution study. Vaccines were mandated by government regulations for healthcare workers caring for patients, impacting generalizability to non-mandated vaccination campaigns. Participants in this study were required to have their internet-capable device with sound to access the study surveys and interventions. It is possible that those individuals who had such devices but may not have been comfortable navigating them opted to not participate and/or failed to complete the study. Participants experiencing technical difficulties lacked technical support which also may have contributed to failing to complete the study. The meditation included audio played through the speakers of the device or personal headphones. Headphones were procured and made available for this study through grant funding to increase participation in the waiting area setting.

This study was completed at a Comprehensive Cancer Center in the US Northeast where COVID-19 may have impacted the population disproportionately compared to other areas of the country. Replicating this study at a full-service healthcare institution in a geographically diverse location will provide insight into a more generalizable population than oncology healthcare providers. Further research is also warranted to study anxiety within patients receiving the COVID-19 vaccine to understand their anxiety levels surrounding COVID-19 vaccination. Outside of the COVID-19 pandemic, the effectiveness of this on-demand, smartphone-delivered intervention should continue to be evaluated in various healthcare settings and populations wherever work-related stress might be heightened.

Conclusion

A brief 5-minute meditation intervention was found to be effective in reducing anxiety for healthcare workers in the waiting period after receiving the COVID-19 vaccine. Implementing an online meditation intervention is simple, non-pharmacological, and low-cost. The results are useful for future vaccine campaigns of healthcare workers to reduce anxiety following vaccine administration. Future research is encouraged to apply this brief meditation to other high-anxiety settings.

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ORIGINAL RESEARCH

Health Profession Students' Experience Working with Refugees: The Need for Trauma-Informed Care

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Abstract

Background: Medical outreach trips are valuable and provide a unique opportunity for health professional students to understand different cultures and situations from their own home country. However, only a few studies identify health professional students on a medical mission trip to refugee camps, their unique experiences, and how it influenced them. It is essential to understand the traumatic experiences of people, their impact on population health, and the importance of caring for them with the principles of trauma-informed care. **Objective and Significance of the Study:** The objective of this research study was to understand the lived experience of health professional undergraduate students who cared for refugee communities in Athens, Greece. The goal was to understand how trauma-informed care influenced the students' perspectives on nursing care. Researchers wanted to understand the student's experiences with the refugee population and how trauma-informed care could potentially impact the care they provide to future patients. **Methodology:** The researchers used qualitative methodology to gain insight through strategic semi-structured interviews using open-ended questions. Ten health professional students (nursing students = 9, non-nursing /health profession student = 1) who went to Athens, Greece, were interviewed via Zoom. The interviews were recorded, and content analysis was used to identify themes and subthemes. **Results:** This analysis identified four major themes related to the medical mission experience of health profession students: (1) Trauma-informed care is essential in taking care of the refugee population; (2) Immersive experience / first-hand experience is essential to understand reality, especially in refugee population; (3) Cultural exposure helped to increase cultural awareness, appreciation, and cultural sensitivity; and (4) The outreach trip increased their humanitarian consciousness and interest in global health nursing. **Limitations:** This study used a convenience sample from one university, and the sample size was small (n=10). **Conclusion and Recommendations:** Medical mission trips are essential in health profession students' education as they provide an immersive experience of reality rather than what is seen in the media. This experience allows students to see life outside their country and comfort zone. These immersive experiences are essential to providing trauma-informed care, cultural sensitivity, cultural humility, and cultural awareness in professional health education. These trips to underserved populations will provide a humanitarian consciousness to serve humanity globally.

Key Words: refugees, medical mission, trauma-informed care, cultural competency, global health

Conflict of Interest: The authors declare no conflicts of interest.

Health Profession Students' Experience Working with Refugees: The Need for Trauma-Informed Care

The refugee crisis and situations related to the refugee population have been an ongoing problem. According to the United Nations (2024), refugees are people fleeing to escape a conflict in their own country or to avoid persecution and seek safety in another. Many are forced to leave their homes, loved ones, and possessions. They could have been injured or have experienced seeing someone killing their family member. There are 43.4 million refugees worldwide. Out of that, 40 percent are children (United Nations High Commissioner for Refugees, 2024). According to the World Health Organization (2024), an estimated number of 101 million migrants, including 12.5 million refugees, live in the WHO European Region and countries in central Asia.

When people are uprooted from their homes, having to leave everything and flee with whatever they can carry to another country, it can produce major trauma. When working with refugee populations, it is important to understand the existence of their traumatic experiences and the need for trauma-informed care. The experience can be overwhelming for students on a medical outreach trip at a refugee camp. Although no formal training was conducted, trauma-informed care was introduced to the students before meeting the refugees. The researchers of this study discussed with the students the topics of trauma-informed care, conflicts and crisis, before visiting the refugee camps in Athens, Greece.

Background

Trauma

According to the Substance Abuse and Mental Health Services Administration (SAMHSA, 2014), individual trauma occurs because of an event, series of events or circumstances experienced by an individual that is physically or emotionally harmful or life-threatening. This experience can affect the mental, physical, social, emotional, and spiritual well-being of individuals. The three E" (s) of trauma include Events, Experience of Events, and its Effect (SAMHSA, 2014). Events can be anything that cause physical or psychological harm, like violence, wars, or neglect of a child. This can be a single experience or a repeated experience. The individual experience of events can be different for everyone. A traumatic event for one individual may not be perceived by another as traumatic (SAMHSA, 2014). A traumatic experience may be experienced directly or witnessed by a loved one. Trauma can be experienced at the individual, interpersonal, community, or historical level. Trauma can be ecological events like hurricanes and tsunamis, or it can be interpersonal, like child abuse/ neglect, intimate partner violence, sexual abuse, or human trafficking (Greenwald et al., 2023). In war situations and forced displacements, children become orphaned, abandoned, and may be living in sibling-headed households. They may become street children begging or stealing food for survival. They can become victims of substance abuse and crime. These children suffer from chronic traumatization, and some will become child soldiers (Musisi & Kinyanda, 2020). This recurring trauma can lead to developmental disorders. Women survivors of war and displacement may have been sexually abused, raped, or gang-raped (Musisi & Kinyanda, 2020). Morina et al. (2018) conducted a systematic review of psychiatric disorders in refugees and found that post-traumatic stress disorders, anxiety disorders, and depression were common among refugees, especially after armed conflict.

Many of the trauma victims utilized emergency rooms and same-day services rather than primary care (Greenwald et al., 2023). There can be financial stressors related to seeking care. Therefore, healthcare professionals need to understand that the interaction of patients with the healthcare system can be stressful and can trigger the experience of previous trauma (Greenwald et al., 2023).

Trauma Informed Care

According to SAMHSA (2014), a trauma-informed care approach is essential when we care for people who have experienced trauma in their life. The four key assumptions in the trauma-informed approach include the 4 Rs: realizing the widespread impact of trauma, recognizing the signs and symptoms of trauma, responding with compassion and support that takes into account the experiences of trauma survivors, and resisting re-traumatization by actively working to prevent further harm or exacerbating existing symptoms (SAMHSA, 2014). The six principles of the trauma-informed care approach, as outlined by SAMHSA 2014, include safety, trustworthiness, peer support, collaboration, empowerment, culture, historical and gender acknowledgment. The framework of trauma-informed care relies on physical, psychological, and emotional safety, which will help survivors feel empowered and build a sense of control. These principles can be applied in all situations and clinical interactions as a universal principle (Greenwald et al., 2023).

Hales et al. (2018) conducted a trauma-informed care outcome study. They examined the influence of trauma-informed care at the organization level, staff level, and patient outcomes. The study was conducted in a residential treatment facility that provided services to patients who were in recovery from substance use disorders and mental health disorders and those who were homeless or at risk for homelessness (Hales et al., 2018). Trauma-informed care implementation enhanced client engagement, treatment retention, organizational health, and effectiveness (Hales et al., 2018). There was increased staff satisfaction, client satisfaction, and positive changes in the organizational climate (Hales et al., 2018).

Stokes et al. (2017) explored nurses' knowledge and experience related to trauma-informed care. They found that the participants in the study emphasized the need for trauma-informed care in all patient care settings, not only mental health care. They stated that it was basic to nursing practice and was fundamental to nursing goals to provide holistic care (Stokes et al., 2017).

Trauma-informed care has emerged as an important model to address traumatic experiences, as trauma has adverse consequences on physical, mental, and community health. People who experience trauma have increased risks of medical and psychiatric diseases and early mortality. There is increasing recognition of trauma exposure from the context of socioeconomic disparity, historical injustice, cultural aspects, and lack of equitable opportunities (Levy-Carrick et al., 2019). Levy-Carrick et al (2019) state that due to the prevalence of trauma, a "universal trauma precaution" is essential when caring for patients, which will decrease barriers to access to care and reduce re-traumatization when they seek care. Lack of physician sensitivity to history taking can be retraumatizing to patients. A trauma-informed perspective must be introduced in medical school from the first year of education with emphasis on acute and chronic stress and its impact on physical and mental health (Levy-Carrick et al., 2019). This can apply to all health professional students.

Tran and colleagues (2021) studied the impact of medical mission on two trips in Sierra Leone in 2017 and 2019. They found that education-focused mission trips have long-lasting benefits, including a positive impact on local staff and the development of intercultural skills in students (Tran et al., 2021). Their study identified that the mission trip provided a long-term impact on the hospital system by providing new knowledge and improved hospital practice. This trip provided opportunities for students of various health professions to learn how to improve patient care with limited resources and develop intercultural communication skills (Tran et al., 2021).

Richards and Doorebos (2016) conducted a study-abroad program in India. Eighteen students from different health professions attended the three-week program, which focused on health and health care challenges in a low-income country. The

qualitative analysis using guided reflection noted that students increased their knowledge and skills in their own cultural worldview and openness to other cultures (Richards & Doorebos, 2016).

Geraghty et al. (2018) conducted a multidisciplinary medical service trip in Belize. This program helped the students gain firsthand experience immersing themselves in a different culture and building homes for families. It also provided cultural immersion and cultural proficiencies for use in their native country. Lastly, it helped them understand many public health issues in global health (Geraghty et al., 2018).

The researchers reviewed the literature about the current refugee crisis in relation to trauma and its impacts, the need for trauma-informed care for individuals who have experienced any trauma in their lives, and the need to add trauma-informed care teaching for health professional students. The researchers reviewed literature about medical mission trips. The findings related to cultural awareness and increased openness to other cultures was identified. However, there is a gap in the literature regarding health professions students' experience with refugees and how trauma-informed care approaches can help health professions students prepare for future careers.

Research Design

This was a qualitative study to understand the experience of health professions students' interactions with refugees, listening to their stories and how their global health experience might have changed the students. The goal was to understand the experience of students who visited the refugee camp in Athens, Greece, as part of a medical outreach trip, their understanding of trauma-informed care, and how the trip influenced them. Institutional IRB approval was obtained. The researchers approached all the students who were part of the medical mission trip through email, phone calls, and in-person to participate in the research study. Those students willing to be part of this research were asked to sign consent forms and Zoom interviews were conducted. The interviews occurred eight to ten months after the trip to Athens, Greece.

Sample and Setting

Twelve students attended the trip in total: ten nursing students, one pre-physician assistant (PA) student, and one occupational therapy (OT) student. The study sample was ten undergraduate students who participated in the outreach trip. Participants were all female and predominantly Caucasian (8). No additional descriptive data was collected from the participants. This setting was a refugee camp in Athens, Greece. The refugees were from various countries, including Turkey, Kurdistan, Pakistan, Afghanistan, and Syria. The refugees were from different religions and different cultures. The students visited the refugees in the refugee camps and at the refugees' homes. They conducted health education projects with the refugees. They visited maternity and childcare centers where services were provided to the refugee community.

Data Collection

The semi-structured interviews via Zoom lasted thirty minutes to one hour. They were conducted using open-ended questions about the participants' experience at the refugee camp in terms of their interaction, listening to the stories of the refugee population, home visits, art therapy, and the effect of this medical mission trip on their outlook on their profession. Both researchers conducted the interviews together.

The questions were guided by the principles of experiential learning theory. Experiential learning theory is a dynamic and holistic theory explaining the learning process based on the cycle of concrete experience, reflection, conceptualization and active experimentation and involves the whole person (Kolb & Kolb, 2017). The questions were as follows:

1) Tell me about your experiences caring for refugees in Athens, Greece.

2) Tell me about what trauma-informed care means to you now after this experience.

3) How will this experience affect your practice as a healthcare professional?

4) How has this experience changed you as a person, in your attitudes and your global perspectives for healthcare in the future?

The interview focused on these main questions and the researchers allowed the participants to elaborate on their experiences. The students were reflecting on their interactions with different cultures, people who speak different languages, and how everything influenced their thinking and perspectives. Ten interviews were digitally recorded and transcribed verbatim.

Data Analysis

Data analysis was conducted using conventional content analysis using an inductive approach (Krippendorff, 2004; Elo & Kyngäs, 2008). Each researcher read the interview transcripts independently and followed the content analysis methodology. From the data each researcher identified and labeled meaningful extracts independently and systematically. After identifying meaningful data, codes were identified in a code book. The researchers went back into the data and systematically revised the codes together (Kleinheksel et al., 2020). From the codes emerging themes and subthemes were identified. Both researchers discussed the emerging meaning from the interview excerpts, discussed the codes, and reached a consensus about subthemes and themes. (Erlingsson & Brysiewicz, 2017).

Results

Qualitative Themes

This analysis identified four major themes related to the medical mission experience of health profession students: (1) Trauma-informed care is essential in taking care of the refugee population (2) Immersive experience / first-hand experience is essential to understand reality, especially in the refugee population (3) Cultural exposure helped to increase cultural awareness, appreciation, and cultural sensitivity (4) The outreach trip increased their humanitarian consciousness and interest in global health nursing.

Each of these themes had multiple subthemes. The themes and subthemes explained how their experiences with the refugee population changed their outlook and perspectives about the need for trauma-informed care, the need for immersion into the reality of trauma, how reality is different than what is seen in media, and how that experience helped them to understand more about the need of cultural appreciation, sensitivity, and culturally sensitive care. Although their experience with the refugee population was only for ten days, they were able to interact with the refugees, listen to their traumatic stories, do art therapy with children, and do home visits and workshops, which enabled them to look beyond the borders to help and provide health care. Their experience developed a greater interest in global healthcare.

Theme 1: Trauma-Informed Care is Essential in Taking Care of the Refugee Population

The students felt that the refugees experienced a lot of physical and emotional trauma while they were moving from their homes to a different country. After listening to their stories, the students stated that "it is never-ending trauma" that the refugees experienced, and the traumatic experience stays with the refugees.

Subtheme: The Experience of Trauma Can Be Never-Ending. Many of the refugees endured significant hardships, including fleeing from war-torn countries, experiencing violence on various levels, and uncertainty about necessities like shelter and food. All these factors impacted how they viewed the world, and, in turn, the healthcare services provided to them. "I did not

fully appreciate the term 'Trauma-informed care' until I was there to experience it. Never-ending trauma, and when does it end? Is there ever even a time where they might feel safe… emotional trauma is just as significant as physical trauma." The students on the medical outreach trip felt that the refugee situation was different from just knowing the definition of trauma. Many students were shocked to see the effect of trauma on this refugee population. They stated that when they saw it in person, it was different than when they heard about it. "When I saw them there, and I saw that many of them were very traumatized with things that they have gone through …Not being able to be with their families or ones that have lost family members along their journey… it was a little bit different, actually seeing it."

Subtheme: Physical Symptoms may be Associated with Emotional Trauma. Students were reflecting on the effects of trauma, and they were trying to co-relate their clinical experience with what was happening to the refugee population. They began to understand that the underlying cause of physical symptoms may be due to emotional trauma. After listening to their stories, doing workshops with them, and art therapy with children, students had a deeper understanding of trauma, including its effects on physical and psychological aspects of human health. "...It helped me in that aspect as well as the nonjudgmental aspect, like approaching someone wanting to get to know their story before, you know, physically taking care of them. Because, like the emotional domain, obviously controls the physical domain."

Theme 2 Immersive Experience / First-Hand Experience is Essential to Understand Reality Especially in Refugee Population

When students listened to the stories of the refugees, they felt that the realities they were seeing were very different from what they were accustomed to seeing in the media. The experiences of the refugees were more traumatic than what is portrayed in the media.

Subtheme: Firsthand Experience is Essential to Know Reality. Listening to the first-hand accounts of the traumatic experiences of the refugees had a profound effect on the student's perception of the realities of refugee's lives. "These are firsthand experiences of people who have gone through so much and then being right there in front of you and telling you this, affected me emotionally. It is like, as we were there, like we were stepping into the lives of these people. And this was like a daily thing, for this was like the whole life for them, you got like a glimpse of what was going on there."

Subtheme: Reality is Different Than What is Seen in Media. Another subtheme was that reality is different from what we see on television and in the media. For them, seeing the refugee situation was more eye-opening than what they saw in the media.

...I mean, the media portrays it one way, but me personally, I feel that when you're in the situation like once I was in Greece it was way more eye opening and like real. Like it's set into me, this is how these people live. This is how they deal with everything as opposed to you know what you hear.

"It was a very different reality than what I had in my head, which I'm glad it was different. Different than what you see in the social media and the television and the newspaper."

Subtheme: Unique, Eye-Opening Experience When You See It. Most of the students stated that it was a unique revelation that helped them develop different perspectives about caring for the refugee population.

It really was a great eye-opening experience (you get) to see a lot of things, learn new things that you wouldn't have known… You know you wish you could do more. You wish they weren't in their situation. You wish they could have a place to call home. You wish that they were with their families.

Another respondent stated that, "It was astounding because they lack the resources that we have … see the conditions in which they live … the lack of resources. You see everything firsthand."

Theme 3 Cultural Exposure Helped to Increase Cultural Awareness, Appreciation, and Cultural Sensitivity

One of the themes that emerged from the data was that their exposure to different cultures increased their cultural awareness, appreciation, and sensitivity.

Subtheme: Developing Cultural Awareness is Important When Caring for Different Populations. Students learned about the importance of cultural awareness when interacting with different populations. "...You must sit down and talk to someone and understand and try to understand where they're coming from. This helped me to be more competent in transcultural aspects as well as to be nonjudgmental… approaching every patient the same way." "I hope you [Nursing Department] do more trips like this for nursing students. It also allows... [students] to respect different cultures different religions and learn how to be a better person…it was a life changing experience."

Subtheme: Appreciation of other Cultures. This medical outreach trip helped them to appreciate other cultures.

It was really beautiful to see how these people came together and helped each other out and how they were very welcoming to us. But they were very welcoming to us and very hospitable, very kind. So, it was a very beautiful experience, not knowing what I was expecting. I was just very impressed with the hospitality between them and just opening their arms to us. So, I felt that was just so refreshing and just so unexpected. But it was just so amazing to see. I felt so incredibly welcomed by the refugee community that... Why would I have such blinders or reservations to be open to other people and welcoming to other people. If it was so easy for them... I learned that from this experience.

"They have so little, but they're still offering something that they could be keeping for themselves. They're selfless."

Subtheme: Increased Cultural Sensitivity. The interview data clearly identified this experience increased students' cultural sensitivity. "...You're going to be involved with a lot of different cultures, a lot of different habits and customs and having that implemented in a program could help a nurse better be able to provide trauma informed care."

Theme 4 The Outreach Trip Increased Their Humanitarian Consciousness and Interest in Global Health Nursing

Another theme that emerged from the data was about global health. This medical outreach trip experience provided a gateway for the students to global health. They became more conscientious about the need for global health and health care.

Subtheme: Want to Use Their Nursing Education to Help Others Globally. The students who participated in this medical mission trip wanted to take their nursing education experience to help others in need across the world. "I do feel like with this experience I want to go back to Greece or to another country and help and use my skills because that experience in Greece was just so intriguing to me. And I felt that it is a population in need."

It made me realize how amazing nursing is and the perfection, to be able to help people like this, and be trained … use the skills that you learn in school and become licensed and go and make a difference and help the people that need it… And it is just great.

Subtheme: Want to Make a Difference in People's Lives. After this medical outreach trip, many students expressed a desire to take their education to help people who do not have access to health care and emphasized the need for collaboration among healthcare professionals.

I think that being here and having the access to healthcare that we do we also have to think like there are people here that still don't have access to health care that they should. There's got to be some sort of way for nurses and doctors, all health care professionals to be able to kind of work together and help where they can. Take what you learn and take that education and bring it elsewhere because some places lack that.

Subtheme: Increased Humanitarian Consciousness. This trip increased the student's humanitarian consciousness towards others. After listening to the refugees' stories, the students were very moved. They wanted to help them in every way possible. The faculty debriefed multiple times to help them cope with the emotional experiences they were going through and to help them to identify ways they could help in the future.

Actually, going to a place and learning their stories personally... because when somebody tells you about it. It's just another story. You do not get it. You do not get that feeling behind it. You feel sympathy and empathy when you experience the story of somebody who went through it. When you hear them talk about it, it becomes different.

So, I definitely think of them, and I pray for them, and I definitely feel like this trip gave me a new sense of appreciation for what I have. I do feel like with this experience I want to go back to Greece or to another country and help out and use my skills.

Discussion

In this study, health profession students had the opportunity to work with refugees in refugee camps, visit the homes of the refugee population, listen to their stories, do art therapy with the children, and provide health education. Though the trip was only ten days, it made a big impact on all the students. The students stated that this trip changed their perspectives and changed them forever (Joseph & Varghese, 2022).

This study provided valuable information about the need to incorporate medical outreach trips into the health profession students' curriculum to provide an understanding of trauma-informed care and the need for first-hand experience from the people who experienced it. The stories of the refugees were heart breaking. For example, during art therapy, many children drew airplanes and bombs falling from the plane. The Adverse Childhood Experiences (ACE) study findings showed that the more negative events a child experiences, the higher the likelihood of suffering from health and behavior problems, including alcoholism, drug use, depression, chronic pulmonary diseases, and many more (Felitti et al., 1998).

There is a need to teach trauma-informed care to students in the health profession. "Trauma informed care is a strength-based framework that is grounded in the understanding of and responsiveness to the impact of trauma that emphasizes physical, psychological and emotional safety for both providers and survivors and that creates opportunities for survivors to rebuild a sense of control and empowerment (Hopper et al., 2010, p.82).

Medical outreach trips like this can help students gain a deeper understanding of trauma-informed care. Listening to stories from trauma survivors profoundly affected students' perspectives. Further teaching on the topic of trauma-informed care will benefit all health professions students.

Many students stated that they started appreciating other cultures, developed cultural sensitivity, and wanted to learn more about different cultures when they came home. In this research, the students interacted with the refugee population and learned about different cultures and their cultural values. Data showed that the students on this medical outreach trip developed more cultural sensitivity, appreciation, awareness, and desire to practice culturally sensitive competent care.

Another theme identified was about increased humanitarian consciousness and interest in global health among students who participated in this medical mission trip. They wanted to do more global health nursing, for the population in need. This points toward WHO's vision about social determinants of health (SDOH) and how they impact the health of individuals (WHO, 2024). The students who participated in this study had an opportunity to understand more about SDOH and its impact on health. After finishing their degree many research participants wanted to go back to Greece or any other country where there is need for care.

Limitations

There were some limitations to this study. The sample size was small (n= 10 students). There was also a larger representation of nursing students, so it is difficult to generalize this study to the larger health profession students. Data were collected six to eight months after the outreach trip, and convenience sampling was used.

Conclusion

This study contributes to the importance of medical outreach trips to underserved areas and how it impacts health profession students' understanding of cultural diversity, cultural sensitivity, and cultural humility. This medical outreach trip provided an awareness about trauma and its impact on human beings. Students understood that reality is different than what one sees in the media. The students felt that trauma-informed care is essential in health profession education. Many students became more aware of the need for global health and wanted to do more for humanity with their education. Some students continue to have contact with volunteer agencies to provide help for the refugee population.

This research affirmed the need for medical mission trips to provide students with an immersive experience to the realities of people who are suffering, especially refugee populations. This experience enhanced their professional and educational advancement. These types of trips will support learning about SDOH and in working toward equitable healthcare.

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ORIGINAL RESEARCH

An Integrative Review on Nursing Burnout Related to COVID-19 and the Effects of Health Promotion Strategies

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Abstract

Background: Nurses and healthcare professionals have played a significant role during the "coronavirus disease 2019" (COVID-19) pandemic. With the increase in the number of hospital admissions, lack of supplies to care for the sick, risk of contracting the virus, and the controversy as to whether to get vaccinated or not put nurses in stressful situations. All of this played a part in the challenges nurses had to face on a daily basis that led to increases in nurse burnout. **Objective:** This integrative review brings to light the increase in nursing burnout experienced during the COVID-19 outbreak. It also discusses Jean Watson's Theory of Human Caring to help reduce stress while caring for patients during this crucial time. This paper ascertains answers to the following four questions: What were the psychological effects experienced by nurses working in the COVID-19 pandemic? Was there a significant relationship between the psychological effects nurses felt during the COVID-19 pandemic and nursing burnout? What were the health promotion strategies used by nurses to decrease stress related to the COVID-19 pandemic? What were additional ways nurses could reduce stress while working in the COVID-19 pandemic? **Methods:** A library search was conducted that explored scholarly sources mainly from the Cumulative Index to Nursing and Allied Health Literature (CINAHL) database published during the period of 2020-2021 using Whittemore and Knafl methodology. Seventeen articles met the inclusion criteria of English, full-text, peer-reviewed, and actual research studies that occurred in an acute-care setting. **Results:** Five major themes were found within the 17 articles that met the inclusion criteria. These themes included: challenges nurses experienced during the COVID-19 crisis, stressors on nurses during COVID-19 pandemic, psychological impacts on nurses' experiences, nursing burnout due to the COVID-19 pandemic, and health promotion strategies used by nurses. **Limitations:** This review focused solely on acute care settings due to how stressful and heavily impacted these areas of care were and continue to be. One limitation was that there is no definitive number of nurses or health care workers who have either experienced nursing burnout in general, or have experienced nursing burnout and left the profession. There were other physical and psychological effects from the pandemic that were not represented in this review as the articles covered the timeframe 2020-2021. **Conclusion:** Nurses encountered many situations involving high levels of stress and faced many challenges on a daily basis during the COVID-19 pandemic. Awareness of this suggests that there is a need for the implementation of health promotion strategies with a focus on self-care in acute care settings, and that this should be a priority intervention worldwide. The issue of nursing burnout can be detrimental to not only nurses' health but the safety, health, and well-being of patients as well.

Key Words: Burnout, Nursing Burnout, COVID-19, Coronavirus, Stress

An Integrative Review on Nursing Burnout Related to COVID-19 and the Effects of Health Promotion Strategies

The "coronavirus disease 2019" (COVID-19) outbreak was first identified in Wuhan, China and was found to be caused by SARS-CoV-2 illness (World Health Organization [WHO], 2022). The spread of the illness was and continues to be from breathing the air of an infected person (Centers for Disease Control and Prevention [CDC], 2022). Most people who contract the disease have mild symptoms (usually respiratory/mild cold symptoms), but others (elderly and individuals with underlying conditions) may have severe symptoms that require hospitalization (CDC, 2022). According to Mathieu et al. (2020) between February 2020 and July 2022 the U.S. had the highest number of hospitalized COVID-19 patients at 140,000 being the highest with the lowest at 10,000. The United Kingdom had a high of 40,000, Spain had over 20,000, Italy close to 40,000, France was 30,000, Canada and Belgium less than 10,000, and Israel and the Netherlands had very few. The COVID-19 pandemic came on abruptly and caused much of the world to shut down. Stress levels increased for all.

As the outbreak spread throughout the world, and the number of hospitalized patients increased, an incredible amount of stress was experienced by everyone, but especially those in the healthcare field. The heightened influx of patients and lack of staffing increased the physical and emotional exhaustion nurses felt leading to burnout (Murat et al., 2021). Nursing burnout is a condition that can develop when nurses are both physically and mentally exhausted due to being overworked (Jose et al., 2020). Due to the increased volume of patients as a result of the COVID-19 pandemic, nurses had a higher workload with decreased staffing and supplies, along with having to deal with the fear of contracting the virus and having to isolate themselves from family and friends (Chen et al., 2021; Jalili et al., 2021; Labrague & de Los Santos, 2021; Ma et al., 2021; Manzano García & Ayala Calvo, 2021; Murat et al., 2021; Soto-Rubio et al., 2020; Talaee et al., 2020; Wang et al., 2020). Particularly, the emotional stress for nurses was increased causing overwhelming feelings and pressures. Nurses were being pulled in many directions between family responsibilities and caring for patients, and patients' family members, "working long hours under harsh, fatiguing conditions" (Dincer & Inangil 2021, p. 109). This increased workload had the highest level of influence on nursing burnout among nurses working in the COVID-19 pandemic (Murat et al., 2021). In addition, the stressors introduced by the pandemic caused a number of mental disorders, which required a variety of health promotion strategies to be implemented for the safety of the nurses (Brockopp et al., 2021; González-Gil et al., 2021; Sampaio et al., 2021; Soto-Rubio et al., 2020; Turale et al., 2020). Health promotion is thus described as the process of enabling people individually and collectively, to increase control over the determinate of health and thereby improve their health (WHO, 2022).

Significance of Problem

This pandemic not only caused those infected with this disease harm, but also those who worked hard to care for them. This crisis caused an immense amount of pain and suffering due to the isolation protocols put in place keeping family members away from their loved ones during times of sickness and death from this virus (Whitehead, 2021). The stressors brought on by the COVID-19 pandemic introduced a number of mental disorders upon the nurses including anxiety, depression, sleep deprivation, feelings of isolation, and overall stress (Brockopp et al., 2021; González-Gil et al., 2021; Sampaio et al., 2021; Soto-Rubio et al., 2020). These events ultimately resulted in poor quality of care for patients as nurses were unable to care for themselves properly. When nurses suffer from the stress of their jobs it puts them at risk for not only mental health conditions, but physical as well that can contribute to burnout. Eventually there will be fewer and fewer nurses to care for those in need, which has been and continues to be an issue worldwide (Brockopp et al., 2021). In addition, this is a critical concern when nurses are not fully focused while at their job as poor-quality care can be detrimental to a patient's life. For this reason, the focus of this integrative review is on nurses and the effects COVID-19 had on them personally and professionally. The research questions guiding this integrative review include:

Research Questions

1. What were the psychological effects experienced by nurses working in the COVID-19 pandemic?
2. Was there a significant relationship between the psychological effects nurses felt during the COVID-19 pandemic and nursing burnout?
3. What were the health promotion strategies used by nurses to decrease stress related to the COVID-19 pandemic?
4. What were additional ways nurses could reduce stress while working in the COVID-19 pandemic?

Methods

A comprehensive library search was performed to retrieve the resources used to conduct this integrative review using Whittemore and Knafl (2005) methodology. This framework provides a synthesis of research to guide and inform practice allowing for inclusion of diverse research methods (Whittemore & Knafl, 2005). The following databases were searched: Cumulative Index to Nursing and Allied Health Literature (CINAHL), ERIC, PubMed, and MEDLINE. Keywords (burnout OR nursing burnout) AND (COVID-19 OR pandemic OR coronavirus) AND (nurse OR nursing OR nursing profession) AND (occupational stress OR psychological stress) AND (stress management OR prevention) AND (mental health) were used and 81 articles were identified. The search method and included keywords were reviewed by the college librarian and two of the authors, Hanley and Van Patten conducted the search. A title and abstract review of the 81 articles revealed 28 articles for full text review. The mentioned authors conducted the reviews independently and shared their findings. If there was a disagreement, the authors reviewed the article together to come to a consensus. A quality appraisal tool was not utilized because there was a small number of articles at the time of this review and all articles that met the inclusion criteria were included.

After a full text review of all 28 articles, 17 met the inclusion criteria of written in English, peer-reviewed, primary research studies, the research occurred in an acute-care setting, and the studies were conducted between 2020 and 2021. There were eleven studies that were omitted as they did not meet the inclusion criteria and were conducted in homes, schools (academia), other medical facilities other than an acute care setting, and those that were written outside of 2020-2021. A hand search of reference lists and Google Scholar was conducted, and no additional studies were revealed. The process for detailed record search and selection is outlined in Figure A using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis diagram (Moher et al., 2009).

Results

Study Characteristics

The sources utilized represent research from 10 countries including the United States, Spain, China, Turkey, Iran, India, Philippines, Pakistan, Italy, and Portugal. Only articles that discussed nurse burnout related to the COVID-19 pandemic, psychological effects that nurses encountered in acute care settings, and health promotion strategies (methods for stress reduction) were included, since that was the main focus of this review. The research represents diverse methodologies which include 14 quantitative, two qualitative, and one mixed method studies. Other sources, such as systematic reviews, were utilized

for evidence-based practice information and were included in the background of this review. Table 1 outlines details of the final 17 articles included in this review.

Included literature was synthesized and five key themes were identified: challenges nurses experienced during the COVID-19 crisis, stressors on nurses during the COVID-19 pandemic, psychological effects nurses experienced, nursing burnout due to the COVID-19 pandemic, and health promotion strategies used by nurses. Thematic findings were identified following a data analysis process and respond to the research questions posed in this review (Whittemore & Knafl, 2005). These themes ultimately suggest that the burnout nurses experienced during the COVID-19 pandemic were valid. The challenges nurses experienced were worldwide and all stressors that included an increase in workflow, high patient load, inadequate staffing, a lack of organization and supplies, among others. These challenges led to specific psychological effects, which ultimately led to nurses experiencing burnout. Nurses who took part in health promotion activities such as taking a walk during break and meditating experienced decreased rates of burnout (Pinho et al., 2021). Many studies encompass more than one theme due to the correlation between the challenges and stressors that nurses experienced leading to nurse burnout or explained health promotion activities used by nurses during COVID-19 and are discussed in more detail below.

Figure A

Preferred Reporting Items for Systmatic Review and Meta-Analysis (PRISMA) flowchart reporting the process for selection of literature
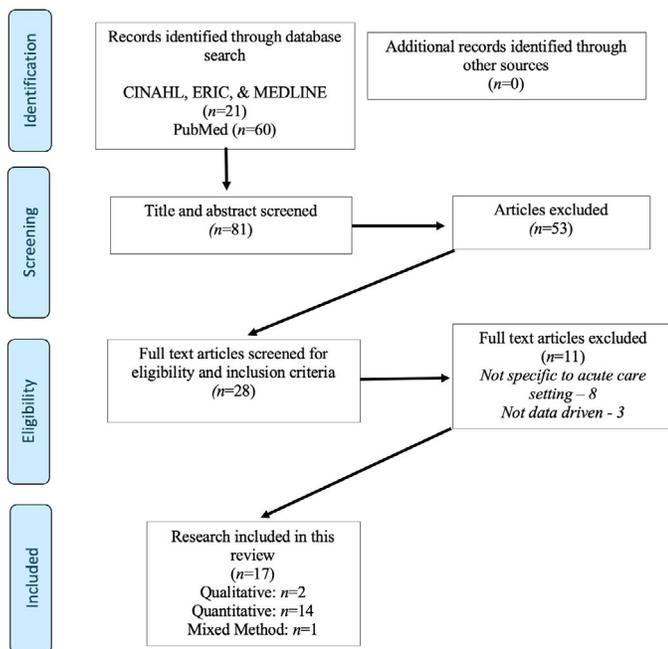
Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G., (2009). Preferred Reporting items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. Journal of Clinical Epidemiology, 62(10), 1006-1012. https://doi.org/10.1016/j.jclinepi.2009.06.005

Challenges Nurses Experience During the COVID-19 Crisis

Nurses experienced many challenges during the COVID-19 pandemic including lack of organization, lack of authority or direction when dealing with work overload, inadequate staffing, unsafe nurse-to-patient ratio, increase in safety risks, among others (Cadge et al., 2021; Ma et al., 2021; Tokac & Razon, 2021). Well established in the literature was the fear nurses experienced at the threat of contracting COVID-19 (Gonzalez-Gil, et al., 2021; Labrague & De Los Santos, 2021; Manzano & Ayala Calvo, 2021; Soto-Rubio et al., 2020). This fear for their own health and well-being coupled with dealing with the separation from family and loved ones, and the possibility of spreading the virus further as they cared for their sick patients increased nurses reports of burnout (Young, M. 2021).

In response to the challenges, literature shows that during the COVID-19 pandemic, nurses experienced physical symptoms, such as anxiety, depression, and sleeping disorders (Cadge et al., 2021; Ma et al., 2021; Tokac & Razon, 2021). Interestingly, Tokac and Razon (2021) examined stressors and challenges that nurses faced working during the COVID-19 pandemic through a lens of experience. The results of this study demonstrated that the nurses who had more work experience had a decrease in work impairment, but experienced higher levels of anxiety, depression, and burnout levels. Ultimately, it was concluded that the hardships nurses faced, such as work impairment and mental health issues, were not reduced in those who had more years of experience but were handled better within the field as opposed to those with fewer years of experience (Tokac & Razon, 2021).

When exploring stressors and challenges nurses faced during COVID-19, Cadge et al. (2021), and Ma et al. (2021) both found that a variety of challenges were related to institutional level leadership. Cadge et al. (2021) uncovered themes such as challenges of working with new co-workers and teams; challenges of maintaining existing working relationships; role of nursing leadership in providing information and maintaining morale; and importance of institutional-level acknowledgement of their work. In response to these leadership level stressors, Ma et al. (2021) found that by implementing a nurse servant leader who essentially was the nurse's assistant and aided in making sure all occupational and personal growth/needs were met, the challenges were then less of a struggle while working in the pandemic. The findings of this study indicate servant leaders helped reduce stress by providing aid/assistance with tasks and mindfulness. These findings allude to several new policy implications at the organizational, state, and federal levels and ultimately call for clinical nurse representation within these leading bodies.

Stressors on Nurses During COVID-19 Pandemic

Many studies discussed the stressors nurses experienced due to the COVID-19 crisis that affected not only their psychological well-being, but also their physical health (Brockopp et al., 2021; González-Gil et al., 2021; Sampaio et al., 2021; Soto-Rubio et al., 2020). The stressors that were found include role frustration, increased and unsafe patient-to-nurse ratio, lack of supplies and organization, etc. They also discovered why it is so important for healthcare workers to practice self-care and recognize early signs of burnout.

Emotional and physical exhaustion was found to be a common occurrence as a result of stressors nurses experienced during the pandemic. Brockopp et al. (2021) and Giménez-Espert et al., (2020) found stressors such as increased workflow (more patients and fewer nurses), poor organization, and not enough supplies led to role frustration, and emotional and physical exhaustion in critical care nurses. Both studies yielded significant results in how the quality of work, such as patient care, diminished or decreased due to increased workflow. While the studies differed in method (phenomenology vs. descriptive correlational) and had small sample sizes, (10 nurses vs. 92 nurses), the two studies both assessed how stressors, namely increased workflow for nurses, affected their psychological health and quality of work.

Because of the severe symptoms COVID-19 caused, nurses who worked in critical care and emergency departments were categorized as a vulnerable population due to the increased amount of stress they experienced while caring for patients. The literature explored nursing stressors specific to the unit where the nurses worked. González-Gil et al. (2021) and Giménez-Espert et al. (2020) both examined nurses who worked in critical care units to explore the stressors of caring for critically ill patients during the COVID-19 pandemic. González-Gil et al. (2021) found that out of 557 responses, 37.5% of the critical care nurses reported fear of becoming infected, and 28.2% reported an increased

workload. These studies showed how stressors such as safety hazards, organizational problems, and health risks affected nurses working in these units during the COVID-19 pandemic.

Nurses were also found to have suffered from physical symptoms such as anxiety, depression, and sleep disturbances as a result of stressors experienced during the pandemic (Sampaio et al., 2021) and how it related to nurses experiencing burnout (Murat et al., 2021). Sampaio et al. (2021) conducted a study measuring the work stressors that 829 Portuguese nurses endured while working during the COVID-19 pandemic from March 31 to May 4, 2020. The results yielded a significant correlation between the stressors nurses dealt with working during the COVID-19 pandemic, and their sleep patterns, and symptoms of anxiety and depression. Furthermore, in the study of 705 nurses Murat et al. (2021), examined the stressors nurses dealt with working in the COVID-19 pandemic and how it related to nursing burnout. The results concluded that an increased workload and decreased staffing led to the highest level of stressors that nurses felt during the COVID-19 pandemic.

Staffing, workload, and fear of contracting the virus were common stressors found in the literature that contributed to nursing burnout during the pandemic (Soto-Rubio et al., 2020; Wang et al., 2020). Soto-Rubio et al. (2020) conducted a study including 125 Spanish nurses from 3 hospitals in Valencia, Spain, measuring the impact stressors, such as increased workload (a higher patient-to-nurse ratio), lack of supplies and essential gear, longer hours worked, lack of social and emotional support offered, and overall, the imminent fear of contracting the virus they dealt with while working during the COVID-19 pandemic. The results yielded a significant correlation between job satisfaction, and quality of care due to an increase in work stressors. While Wang et al. (2020) found healthcare workers reported moderate to severe stress due to the fear of becoming infected with this lethal virus.

Psychological Effects Nurses Experienced

Dincer and Inangil (2020), Gimenex-Espert et al. (2020), and Gonzalez-Gil et al. (2021) studied the psycho-social-emotional issues nurses felt during the COVID-19 pandemic. Dincer and Inangil (2020) researched 147 nurses from a university hospital in Turkey who were working during the COVID-19 pandemic. The participants demonstrated the following psychological effects: increased stress, anxiety, depression, and sleep deprivation that researchers measured using Wolpe's Subjective Units of Distress Scale (Dincer & Inangil, 2020). The psychological effects not only affected their quality of care for their patients, but also resulted in a lack of self-care (Dincer & Inangil, 2020; Gimenex-Espert et al., 2020; Gonzalez-Gil et al., 2021). Gimenex-Espert et al. (2020) and Gonzalez-Gil et al. (2021) found the same psychological effects after Gimenex-Espert et al. (2020) assessed 92 nurses working in Spain and Gonzalez-Gil et al. (2021) studied 557 CCU and emergency nurses in Spain (Table 1).

Nursing Burnout due to the COVID-19 Pandemic

Researchers found nursing burnout was a major issue during the COVID-19 pandemic that was brought on by the stress, anxiety, depression, and sleep deprivation resulting in emotional and physical exhaustion (Chen et al., 2021; Jalili et al., 2021; Labrague & de Los Santos, 2021; Ma et al., 2021; Manzano García & Ayala Calvo, 2021; Murat et al., 2021; Soto-Rubio et al., 2020; Talaee et al., 2020; Wang et al., 2020). While Chen et al. (2021) studied 12,596 nurses working in hospitals during COVID-19 in mainland China and Taiwan Jalili et al. (2021) conducted a similar study using Maslach Burnout Inventory (MBI) scale that examined the burnout of 615 healthcare workers in Iran. In addition, Jose et al. (2020) conducted a comparable study measuring the burnout in 120 frontline nurses working in the emergency department in North India. All three studies found that nurses and health care workers had high levels of emotional exhaustion due to the effects of the pandemic. Categorizations such as age, gender, marital status, having children, hospital job category, experience, and workload had major influences on the varying levels of burnout in nurses and healthcare workers (Jalili et al., 2021). Particularly, Jalili et al. (2021) found that out of the 615 healthcare workers that participated, 326 (53%) experienced high levels of burnout, the average score of emotional exhaustion was 26.6 (scale 0-36), depersonalization scored 10.2 (scale 0-20), and lack of personal accomplishment was 27.3 (scale 0-32). Overall, these studies demonstrate the validity of how the COVID-19 pandemic negatively affected healthcare workers, nurses in particular, and ultimately led to nursing burnout (Chen et al., 2021; Jalili et al., 2021; Jose et al., 2020).

An increase in burnout was also due to the fear of becoming infected with this deadly virus that "moderated the relationship between social support at work and burnout" (Manzano García & Ayala Calvo, 2021, p. 832). Labrague and de Los Santos (2021) measured burnout in 261 nurses working on the frontlines in Philippine hospitals while Manzano Garcia and Ayala Calvo (2021) examined 771 nurses working in 10 hospitals in Spain and also found an increase in fear of becoming infected with this life-threatening disease in addition to increased workloads that added to nurse burnout. Mental health illnesses such as anxiety, depression became more prevalent. As a result, these studies concluded that working conditions took a toll on nurses working on the frontline during the COVID-19 pandemic and affected morale, patient care quality, and physical/mental health (Labrague & de Los Santos, 2021; Manzano García & Ayala Calvo, 2021).

Murat et al. (2021) focused their study on 705 nurses from Turkey and concluded that increased workload and decreased staffing had the highest level of influence on nursing burnout among nurses working in the COVID-19 pandemic. The heightened influx of patients and lack of staffing increased the physical and emotional exhaustion nurses felt leading to burnout.

Similarly, Soto-Rubio et al. (2020) and Wang et al. (2020) found a significant correlation between the psychosocial risks brought on by COVID-19 and burnout, job satisfaction, and the healthcare workers overall health. Soto-Rubio et al. (2020) studied 125 nurses from Spain, while Wang et al. (2020) examined 1208 participants from China. Wang et al. (2020) found that nurses who were married had higher stress levels than those who were not. They also found nurses feeling moderate to severe stress related to the disadvantages of wearing personal protective equipment (PPE), such as poor vision. In addition, Soto-Rubio et al. (2020) and Murat et al. (2021) found the need to develop intervention programs for nurses to promote health and psychological well-being crucial. While Ma et al. (2021) concentrated on the burnout of 3579 nurses working in Pakistan and concluded that the role of leadership during this pandemic significantly reduced stress and nurse burnout and promoted psychological safety.

Health Promotion Strategies used by Nurses

This review of the literature also found that health promotion strategies that nurses took part in during the pandemic were useful in combating feelings of stress and decreasing burnout (Ma et al., 2021; Pinho et al., 2021). Pinho et al. (2021) found some of the daily health promotion strategies that were practiced by healthcare workers were physical exercise, going on a walk during break times, meditating, or speaking to someone about their work experience (both positive and negative). Implementation of these strategies yielded a decrease of stress and anxiety symptoms six months after the COVID-19 lockdown. Additionally, other health promotion strategies that were effective in reducing stress included a healthy diet, adequate water intake, breaks between work shifts, maintenance of remote social contacts, and verbalization of feelings/emotions also decreased feelings of stress and anxiety (Pinho et al., 2021).

Health promotion strategies also contributed to a decrease in burnout as examined by Ma et al. (2021). In this study, researchers implemented a nurse servant leader who essentially was the nurse's assistant in making sure all occupational and personal growth/needs were met. They found that these servant leaders helped reduce stress by providing aid/assistance with tasks and mindfulness. This form of a health promotion tactic ultimately

decreased stress and led to a decrease in nursing burnout among these nurses. These studies found culture and leadership can be important to reducing nurses' stress and burnout. Additionally, the implementation of health promotion strategies during times of crisis can be part of a daily routine in the workplace, thus significantly reducing nurse stress and burnout, and promoting psychological safety.

Discussion

The COVID-19 pandemic had a major effect on nurses around the world which clearly led to a number of mental health issues and overall burnout in healthcare workers. Issues like the increase in workflow, understaffing, poor organization, and lack of role/leadership led to feelings of anxiety while working during the pandemic. In addition, feelings of isolation and depression were a common result of the fear of contracting this virus that also played a major role in the burnout that many nurses acquired.

As each source was considered, a consistent pattern of findings emerged between each article. There seemed to be the greatest number of similarities between articles researching the stressors that transpired due to the COVID-19 pandemic and their influence on nursing burnout. There were a number of articles that discussed how nursing burnout was a common conclusion for nurses caring for COVID-19 infected patients. Due to the fact that after enduring the amount of stress that was put on our healthcare workers, they felt that they had nothing more to give (Brockopp et al., 2021). These articles ultimately demonstrate how brutal the COVID-19 pandemic was and still is on healthcare workers, nurses in particular, and why certain regulations and protocols (such as setting aside time for breaks, including leadership roles to aid in completing nurse's tasks to reduce role overload, etc.) need to be put in place should something like this pandemic occur again.

The results ultimately signify not only the physical and emotional toll put on the nurses working during COVID-19, but also the mental exhaustion. This research provides a plethora of evidence as to why changes need to be made within the healthcare system in order to protect those who put their lives at risk to help care for the sick and vulnerable. Research has demonstrated how the lack of mental and physical support have resulted in poor quality of care. Chen et. al. (2021) found 15.2% of nurses working in intensive care units caring for COVID-19 patients as experiencing an increase in posttraumatic growth. As a result, they found that this yielded a decrease in the quality-of-care nurses provided. The decrease in quality of care was found to be a result of poor psychological well-being. The WHO (2022) suggests nurses and health care workers should partake in self-care strategies and be attentive to their mental and physical health. According to Chen et al. (2021), "as psychological health and safety of nurses are crucial to providing quality care for the general population, identifying and instituting effective treatment strategies to improve psychological outcomes for nurses is essential" (p. 114).

As a result of the many stressors and psychological strain placed on nurses, studies were conducted to demonstrate a variety of health promotion strategies that were used to relieve stress. The health promotion strategies previously discussed, such as physical activity, relaxation, recreational activity, healthy diet, adequate water intake, breaks between work shifts, maintenance of remote social contacts, and verbalization of feelings/emotions (Pinho et al., 2021) were proven to reduce stress and provide nurses with coping mechanisms during the pandemic. Another strategy discussed includes implementing a nurse servant leader who essentially was the nurse's assistant in making sure all occupational and personal growth/needs were met (Ma et al., 2021). This provides a strong foundation for the therapeutic alternatives in which healthcare providers should be using within the workplace and outside the work environment. This relates to the benefits of health promotion strategies which coincide with Jean Watson's theory on caring science and her ten Caritas Processes.

Implications for Nursing Practice

This review identified a number of health promotion strategies that should be implemented in order to protect nurses from nursing burnout (Ma et al., 2021; Pinho et al., 2021). The importance of taking care of yourself so you will be better equipped to care for others has always been emphasized during nursing school. Jean Watson's Theory of Human Caring (2008) focuses on self-care. Dr. Watson created the Caritas Processes as ways in which individuals, such as nurses can care for themselves in order to be healthy and provide the proper care for their patients.

Jean Watson is one of the most influential nurse theorists and is well known within nursing for her focus on self-care in order to care for others (Jean Watson, 2008). Watson's Caritas Processes are a significant part of her Human Caring Theory that value the practice of self-care and the transpersonal caring moment that occurs between two individuals, such as in a patient/nurse encounter that occurs in one moment in time (Watson, 2008). Watson's Ten Caritas Processes include:

1. Sustaining humanistic-altruistic values by practice of loving-kindness, compassion and equanimity with self/others.
2. Being authentically present, enabling faith/hope/belief system; honoring subjective inner, life-world of self/others.
3. Being sensitive to self and others by cultivating own spiritual practices; beyond ego-self to transpersonal presence.
4. Developing and sustaining loving, trusting-caring relationships.
5. Allowing for expression of positive and negative feelings - authentically listening to another person's story.
6. Creatively problem-solving-'solution-seeking' through caring process; full use of self and artistry of caring-healing practices via use of all ways of knowing/being/doing/becoming.
7. Engaging in transpersonal teaching and learning within context of caring relationship; staying within other's frame of reference-shift toward coaching model for expanded health/wellness.
8. Creating a healing environment at all levels; subtle environment for energetic authentic caring presence.
9. Reverentially assisting with basic needs as sacred acts, touching mindbodyspirit of spirit of other; sustaining human dignity.
10. Opening to spiritual, mystery, unknowns-allowing for miracles (Watson Caring Science Institute, 2022, para 10).

Watson discusses the science of caring and how to implement this within the profession of nursing. She deems caring science as viewing the patient as a whole, including their mind, body, and spirit; in turn, this will allow the foundational relationship between a nurse and patient (Watson, 2008). With this relationship, the nurse gains a better understanding of what the patient needs in order to heal. Watson discusses how effective caring promotes healing, wellness, health, and individual growth, which is an important factor when providing care for a patient as a whole. This practice includes all aspects of caring, such as listening to the patient, understanding their medical needs, along with their spiritual needs in order to care for the whole person, not just their diagnosis.

Watson discusses the importance of incorporating caring science into a nurse's personal and professional life. Caritas Process #1 and #3 point out how important the practice of self-care is for nurses so they are able to deliver the best care to others (Watson, 2008). The Caritas Processes include building trusting relationships, authentically listening when others speak, and creating a healing environment, all with a focus on mind/body/spirit (Watson, 2008). This can include mediums, such as meditation for the soul; eating healthy food and exercising for the body; and reading and listening to music. These are simple activities to be done to become more centered and in touch with one's self. These mediums can also be implemented within the nursing profession and can ultimately improve the quality of care. Researchers Pinho et al. (2021) also found "The use of mental health promotion strategies is cardinal to reduce stress, anxiety, and depression symptoms" (p. 7).

Watson's theory of caring has been implemented in the profession of nursing; however, this review of literature shows it was lost during the COVID-19 pandemic. The majority of nurses were overwhelmed and overworked with the number of patients they had to care for and the lack of necessary supplies needed to provide proper care made their work exceedingly difficult. During this time period of crisis nurses had little to no emotional and professional support that contributed to the increasing number of nurses leaving the profession due to nurse burnout (Jose et al., 2020; Pinho et al., 2021). Due to the lack of the implementation of caring science, nurses suffered a great deal of mental and physical symptoms as a result of stress from the workplace and little to no time for the practice of self-care. Nurses working long shifts had minimal to no time to incorporate healthy therapeutic measures to cope with the stressors they were dealing with due to the COVID-19 pandemic.

The quality of care had been declining all throughout the COVID-19 pandemic, which is a result of a number of hardships faced by the nurses (Chen et. al., 2021; Giménez-Espert et al., 2020). However, there could also be a correlation between the lack of care for nurses and the quality-of-care nurses provided. It is difficult, as suggested in the research, to provide adequate care for a patient when dealing with work stressors, with little to no mental, physical, and emotional stamina due to the lack of self-care nurses practiced. In addition, when dealing with an increased workload (dangerous patient-to-nurse ratios), it is difficult to build that foundational relationship to fully understand the kind of care that patient will need. For example, the differences between the nurse and patient's spiritual beliefs can affect the care of a patient. The nurse may be unaware of this due to the number of patients and procedures needed for each patient; this can in turn diminish the care the nurse provides. Some practices, such as implementing a healthy diet, relaxation activities, and breaks during work shifts were implemented in a few sources that demonstrated an increase in quality of care and an overall decrease in stress for nurses (Pinho et al., 2021; Ma et al., 2021). Ma et al. (2021) found that there is a need to monitor nurses mental well-being. They discovered having well trained servant leaders who develop empathy reduces nurses' emotional exhaustion and burnout. Nurses feel supported as they build trusting relationships with their leaders so they can work together for positive patient outcomes. Murat et al. (2021) and Soto-Rubio (2020) stress the importance to improve the mental health of nurses and maintain their well-being investments in psychological interventions should be organized and implemented.

Limitations

This literature review looked at several studies that brought attention to the pressing issues related to nursing burnout that not only occurred in the United States but also in other countries around the world. One limitation was that there is no definitive number of nurses or health care workers who have either experienced nursing burnout in general, or have experienced nursing burnout and left the profession. There was little to no indication of any policy changes made within acute care settings that implemented or encouraged health promotion strategies in most of the studies. Only a few hospitals and health care facilities discussed and/or encouraged the implementation of health promotion strategies mentioned earlier, such as taking time to go for a walk, exercise, meditating, etc. In addition, there were a number of medical settings that were not represented in this paper. This review focused solely on acute care settings due to how stressful and heavily impacted these areas of care were and continue to be. Along with the articles that discussed nurse burnout related to the COVID-19 pandemic, psychological effects that nurses encountered in acute care settings, and health promotion strategies (methods for stress reduction), there were other physical and psychological effects from the pandemic that were not represented in this review. The scope and standards of practice and protocols from the studies from other countries may differ from those of the United States. Lastly, the articles included in this review were peer reviewed, qualitative, quantitative, and mixed method studies, specifically from nursing journals; this omits a number of articles that discuss similar issues from other medical and healthcare journals.

Conclusion

This study demonstrates a global view of the health risks that nurses and other healthcare workers faced during the COVID-19 pandemic, and the major psychological impact that this pandemic had. These findings also emphasized the importance of providing coping mechanisms and other health promotion strategies in situations like this to make sure that the healthcare workers are being properly taken care of.

The reviewed research evaluated nurses and nurse burnout as a result of the many stressors encountered during the COVID-19 pandemic. These findings suggest the need for the implementation of new policies in regards to the self-care nurses and other healthcare professionals take part in on a daily basis. Due to their all-consuming high stress jobs it leaves little time to practice health promotion strategies. Research found that there needs to be a change in protocols to protect health care workers from mental and physical exhaustion.

There is a further decline in the number of nurses to care for the hospitalized patients as a result of the stressors and burnout nurses encountered. Future studies need to be conducted to measure the impact new protocols will have on issues like poor mental and physical health. By implementing health promotion strategies for nurses and other healthcare workers this will in turn decrease stress and provide a healthier and happier work environment. In addition, this literature review also illuminates the importance of being better prepared for future crises in order to prevent the loss of nurses and other healthcare professionals to either burnout or other mental and physical illnesses.

Table 1

Summary of Reviewed Literature

Author/Year/ Country	Aim	Research Type/ Sample	Theme	Key Findings	Limitations
Brockopp, D. et al. (2021) USA	To investigate the role that stressors played on critical care nurses during the COVID-19 pandemic.	Qualitative phenomenological study using Heidegger's approach/ 10 critical care nurses (CCN) caring for COVID-19 patients on 1 critical care unit at a 434-bed Magnet redesignated community hospital in Southeastern United States.	2	Stressors such as increased workflow (more patients and less nurses), poor organization, not enough supplies, etc. led to role frustration, emotional and physical exhaustion in critical care nurses.	• One critical care unit • Not generalizable due to qualitative method • Researchers lack experience interviewing • Potential researcher bias
Cadge, W. et al. (2021) USA	To understand the challenges nurses face providing care for patients hospitalized in intensive care units due to COVID-19.	Qualitative Exploratory study using semi-structured questions following an interview guide/ 16 nurses (practiced in 2 different units in same hospital in Boston, MA; half from ICU, half from other units)	1	The results yielded four specific themes: challenges of working with new co-workers and teams, challenges of maintaining existing working relationships, role of nursing leadership in providing info and maintaining morale, and importance of institutional-level acknowledgement of their work.	• Small sample size • Lacked diversity among sample (mostly white, female at urban hospital)
Chen, R. et al. (2021) China	To investigate and assess the burnout, trauma, posttraumatic growth, and associated factors for nurses working during the COVID-19 pandemic.	Quantitative Cross-sectional large-scale survey using the self-report questionnaire The Trauma Screening Questionnaire; Maslach Burnout Inventory Scale; Post-traumatic Growth Inventory short form/12,596 nurses in mainland China and Taiwan, from intensive care, pulmonary medicine, infectious disease, emergency department	4	The average scores of burnout were in the low-moderate range. The average score for emotional exhaustion was moderate. Nurses working in critical care units had significantly higher levels of emotional exhaustion.	• Cross-sectional design due to correlation of units and not causation of COVID-19 • Due to sudden onset of COVID-19 the psychological and physiological conditions of the nurses were not assessed prior
Dincer, B. & Inangil, D. (2021) Turkey	To measure and assess the psychological changes in the nurses working during the COVID-19 pandemic.	Quantitative randomized controlled trial/147 nurses from university hospital in Turkey	3	Increased levels of stress, anxiety, depression and sleep deprivation were measured in the Subjective Units of Distress Scale (SUD).	• In order to confirm results this study should be replicated • Study would be stronger if checklist and SUD scores with interviews were replicated
Giménez-Espert, M.D.C., et al. (2020) Spain	To evaluate the impact COVID-19 had on nurses in regard to psychosocial risks such as worker's health, productivity, and efficiency.	Quantitative descriptive correlational study using surveys (Psychosocial risks scales to measure demand and consequence factors & an ad-hoc questionnaire that was constructed due to COVID-19)/92 nurses from two public hospitals in Valencian Community.	2, 3	As workflow increased, the quality of work e.g. patient care) diminished or decreased. Stressors, such as increased workload for nurses, has (negatively) affected their psychological health and quality of work.	• Small number of participants • Short period of time to collect data [March 29-April 8, 2020]

Author/Year/ Country	Aim	Research Type/ Sample	Theme	Key Findings	Limitations
González-Gil, M. T., et al. (2021) Spain	To identify the safety, communication, organizational decision-making, and psycho-social-emotional needs perceived by the CCU and emergency nurses.	Mixed Method sequential research design (Cross Sectional Study-Qualitative Phenomenological) using a questionnaire developed by the research team/557 nurses working in 26 public hospitals in Madrid, Spain	2, 3	Critical care and emergency nurses may be categorized as a vulnerable population during the COVID-19 pandemic due to feelings of insecurity for fear of contracting this life-threatening virus because of overexposure. -Nurses experienced increased workloads under stressful and precarious conditions, as well as an increase in autonomous decision-making and psychological and emotional issues. Communication with their immediate managers was not perceived as productive and they expressed difficulty in meeting patients' needs, particularly at psycho-socio-emotional level. This study examined how stressors such as safety hazards, organizational problems, health risks, etc. affected nurses working in the COVID-19 pandemic.	• Questionnaire was designed in reference with others modified to Spanish context • -Does not take into account for discrimination • -Sampling method not generalized
Jalili, M., et al. (2021) Iran	To measure and assess the prevalence of burnout among nurses who are working during the COVID-19 pandemic.	Quantitative Cross-sectional study using a two-part instrument for data collection-1st tool asked questions pertaining to sociodemographic and work-related characteristics & the second tool was a translated version of Maslach burnout inventory for human services survey/ 615 healthcare workers (specialists, interns, nurses, and other) at six university-affiliated hospitals in Iran.	4	Categorizations such as age, gender, marital status, having children, hospital job category, experience and workload had major influences on the varying levels of burnout in nurses.	• Convenience sampling • Study may not have assessed all factors contributing to burnout in the healthcare workers • Unable to formulate causational inferences due to observational design
Jose, S., Dhandapani, M., & Cyriac, M. C. (2020) India	To assess burnout that the nurses on the frontline had encountered during the COVID-19 pandemic.	Quantitative Cross-sectional descriptive study used Maslach burnout inventory general survey and the Connor-Davidson Resilient Scale/ 120 frontline nurses working in the emergency department of a Tertiary Care Center in North India	4	Nurses in the emergency department during the pandemic suffered moderate-severe level of burnout in emotional exhaustion. Mental health illnesses such as anxiety, depression, etc. arose. Working conditions took a toll and affected morale, patient care quality and physical/mental health as a result morale decreased and patient care quality decreased.	• Credibility of online survey • Demographic: only nurses in the ED were participants of this study where other nurses faced similar conditions in other units.

Author/Year/ Country	Aim	Research Type/ Sample	Theme	Key Findings	Limitations
Labrague, L. J., & de Los Santos, J. A. A. (2021) Philippines	To illuminate the importance of investigating and assessing the health risks and workplace risks during crisis times for future reference.	Quantitative Cross-sectional research using five scales: The Fear of COVID-19 Scale, The Job Stress Scale, The Job Satisfaction Index, Two single-item measures of turnover intention/261 nurses working in the Philippines hospitals	4	Nursing burnout resulted not only from increased workloads during the COVID-19 pandemic but an increase in fear of becoming infected with life threatening disease led to decrease in job satisfaction.	• Sample size-only had nurses from one province of the country • Sample lacked variability • Research design used cannot establish a causal link between variables under investigation • Other organizational variables, such as work environment, staffing adequacy, hospital management and leadership, may play a role in explaining nurses fear, but were not studied.
Ma, Y. et al. (2021) Pakistan	To examine the role of servant leadership through strategies of psychological safety in identifying nurses' burnout during the COVID-19 pandemic.	Quantitative Cross-Sectional research using three separate survey forms that the researchers created/ 3579 nurses working in Pakistan's five public sector hospitals	1, 4, 5	The role of leadership during this pandemic significantly reduced stress and nurse burnout and promoted psychological safety after the implementation of a nurse servant leader. Nurse servant leaders helped reduce stress by providing aid/assistance with tasks and mindfulness.	• Cross-sectional limits its ability to offer causal inferences • Data was collected from a single source yielding non-generalized results • Suggests future study to include supervisors, peers, and patients, to avoid biases.
Manzano García, G., & Ayala Calvo, J. C. (2021) Spain	To evaluate the effect the threat of COVID-19 has on work resources and demands on burnout.	Quantitative Cross-Sectional study using collaborative software Google Forms and evaluated using the Spanish Burnout Inventory/771 nurses working in 10 hospitals in Spain in emergency, intensive care, and pneumology units.	4	The perceived threat of Covid-19 had a major impact on burnout in nurses. Psychological mental diseases including depression and anxiety arose due to the fear of becoming infected with this deadly virus and 'moderated the relationship between social support at work and burnout.'	• Convenience sample 90% participants were female • Online questionnaire • Cross-sectional design does not prove all causal relations • Nurses from a single country (Spain) were participants in this study
Murat, M., Köse, S., & Savaşer, S. (2021) Turkey	To determine the levels of stress, depression, and burnout among nurses working on the frontline during COVID-19.	Quantitative Cross-Sectional descriptive study using the personal information form, the Perceived Stress Scale, Beck Depression Inventory, Maslach Burnout Inventory/705 nurses working in nine education and research institutions, where COVID-19 cases were admitted between May-July.	2, 4	Increased workload and decreased staffing had the highest level of influence on nursing burnout among nurses working in the COVID-19 pandemic. The heightened influx of patients and lack of staffing increased the physical and emotional exhaustion nurses felt leading to burnout.	• Not enough time passed to measure depressive symptoms (study was conducted in the beginning of the pandemic and occurred over a short period of time [May-July, 2020]) • The study was limited to the measurements of the specific tools that were used.
Pinho, L., et al. (2021) Portugal	To evaluate ways in which nurses deal with the factors attributing to burnout and how to prevent and cope with these emotions using mental health promotion strategies.	Quantitative cohort study using an online survey & snowball sampling/199 nurses working in clinical practice in Portugal Data collected from March 31- April 14, 2020	5	Implementation of health promotion strategies including physical activity, relaxation activity, recreational activity, healthy diet, adequate water intake, breaks between work shifts, maintenance of remote social contacts, and verbalization of feelings/ emotions yielded a decrease of stress and anxiety symptoms six months after the COCID-19 lockdown.	• Sampling method attracts respondents already interested in topic and can sway results • Various measuring tools were utilized when collecting data

Author/Year/ Country	Aim	Research Type/ Sample	Theme	Key Findings	Limitations
Sampaio, F., Sequeira, C., & Teixeira, L. (2021) Portugal	To evaluate the impact that COVID-19 had on the sleep patterns of the nurses in Portugal in addition to their symptoms of anxiety, depression, and stress.	Quantitative Prospective cohort study using Depression Anxiety Stress Scales/ 829 Portuguese nurses. Data collected from March 31-May 4, 2020	2	There was a significant correlation between the stressors (increased workload, longer hours, poor staffing, poor supplies) nurses experienced during the COVID-19 pandemic and their sleep patterns, symptoms of anxiety and feelings of depression.	• Sampling method-bias • Data was collected using the same measuring system-no data collected before the COVID-19 pandemic =nothing to compare to
Soto-Rubio, A. et al. (2020) Valencia	To measure the correlation between emotional stressors, anxiety, and depression in the workplace for nurses during the COVID-19 pandemic and the nursing burnout that nurses are experiencing.	Quantitative Cross-Sectional study using Trait Meta-Mood Scale, UNIPDICO Battery, Frankfurt Emotional Work Scale, Questionnaire for the Assessment of Workplace Burnout Syndrome/125 Spanish nurses from 3 hospitals in Valencia, Spain	2, 4	There was a significant correlation between the psychosocial risks brought on by COVID-19 and burnout, job satisfaction, and nurse health. The researchers used this evidence to discuss the beneficial therapeutic measures that can be implemented to improve nurse health.	• Transversal study-hard to establish relations between variables • Translation of languages (Spanish English) • Study conducted during pandemic with little to no evidence collected prior to measure the differences
Tokac, U. & Razon, S. (2021) USA	To investigate the effects, such as work impairment and mental health issues, that the COVID-19 crisis had on nurses with years of experience.	Quantitative study using online surveys (The Impact of Event Scale-Revised (IES-R includes 22 Likert-scale scored items 0-4) / 83 nurses in the military on active duty. Participants were identified via the student and alumni listserv of a College of Nursing at an urban midwestern university.	1	Nurses who had more work experience had a decrease in work impairment, but experienced higher levels of anxiety, depression, and burnout levels compared to nurses with fewer years of experience.	• Small sample size • Study does not apply to nurses who work in hospital/clinical settings, schools, homes, and correctional institutions • Not comparative (pre vs. post COVID-19)
Wang, H. et al. (2020) China	To measure the stressors that healthcare workers dealt with during the COVID-19 pandemic and the effect that it had on their mental health in regards to nursing burnout.	Quantitative Cross-Sectional descriptive study using a self-designed questionnaire, The Stress Scale of Caring for Highly Infectious Disease Patients/1208 participants were utilized in the study conducted from February to March 2020 in Wuhan, the capital city of Hubei province in China.	2, 4	Participants experienced moderate to severe stress due to workplace issues related to the COVID-19 pandemic. The main stressor found were fear itself of becoming infected with this lethal virus as well as physical and emotional exhaustion from the increased workload and lack of staffing/ supplies.	• The study was conducted during the middle-later stages of the pandemic while all hospitals were on high alert and better precautions were taking place • Only conducted investigation in hospitals with patients on high alert • Convenience sampling was used and can make the sample bias

Themes: 1- Challenges nurse's experience during the COVID-19 crisis; 2- Stressors on nurses during COVID-19 pandemic; 3- Psychological effects nurses experienced; 4-Nursing burnout due to the COVID-19 pandemic; 5- Health promotion strategies used by nurses

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ORIGINAL RESEARCH

Identifying Barriers to Catheter-Associated Urinary Tract Infection (CAUTI) Prevention in the Intensive Care Unit (ICU)

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Abstract

Background: Catheter-associated urinary tract infection (CAUTI) is one of the significant healthcare-associated infections in acute care settings, particularly in critical care. The research site continues to experience CAUTI despite the CAUTI preventive measures and protocols. These findings highlight the necessity for further assessment of the contributing factors to CAUTI. **Objective:** This qualitative evidence-based practice (EBP) research aimed to evaluate the nurses' perceptions of the research site's CAUTI preventive measures and identify barriers and opportunities for improving the efficacy of CAUTI prevention in the critical care units. **Methods:** A semi-structured online survey comprising one closed-ended and four sets of open-ended questions was posted from February 14, 2022, to February 28, 2022. The survey was done through Google Forms and results were transferred to NVivo for the analysis of thematic response patterns using Clarke and Braun's 6-step method. The survey was completed by a purposive sample of 17 registered nurses. **Results:** The nurses' responses revealed three main themes. The first theme, Reasons for Effectiveness, included nurse accountability and autonomy. The second theme, Barriers to Program Effectiveness, highlighted physician resistance and the knowledge gap among patient care staff. The third theme, Recommendations for Improving Effectiveness, included enhancement of staff knowledge through staff training and education, modification of existing procedures, and the reduction of nurse workload to improve compliance with the existing CAUTI preventive measures. **Conclusion:** CAUTI preventive measures at the research site are effective in preventing CAUTIs in the ICUs. However, due to the physician resistance and knowledge gap among the new staff, eradicating CAUTI remains a challenge. Staff education, modification of operating procedures, and reduced nurse workload are crucial for enhancing CAUTI prevention outcomes in critical care units.

Identifying Barriers to Catheter-Associated Urinary Tract Infection (CAUTI) Prevention in the Intensive Care Unit (ICU)

Background

Catheter-associated urinary tract infection (CAUTI) is a urinary tract infection (UTI) involving any part of the urinary system, including the urethra, bladder, ureters, and kidney, primarily caused by an indwelling urinary catheter (IUC). CAUTI is among the most common types of healthcare-associated infection, accounting for around 9% of acute care hospital infections (Van Decker et al., 2021). The Centers for Disease Control and Prevention (CDC) (2022) revealed 20,237 CAUTIs in 2022, with 3,780 of those cases occurring in hospitals. Hospitals have fought for guidelines and nurse-driven protocols to reduce CAUTI significantly; but despite the preventive efforts, CAUTI continues to thrive.

This qualitative evidence-based practice (EBP) research was done at a Magnet-designated hospital. This research site had an annual CAUTI rate of 1.37 in 2019, 1.07 in 2020, and 0.51 in 2021. By comparison, the National Database of Nursing Quality Indicators (NDNQI) showed annual average CAUTI rates of 0.96 in 2019, 0.93 in 2020, and 0.96 in 2021 (Lake et al., 2024). The elevated infection rates at the research site indicated the need for an examination to identify practice gaps.

The clinical site had an existing policy on indwelling urinary catheter (IUC) insertion and care, which included the nurse-driven protocol for safe discontinuance. In addition to that, the facility's education department conducted annual IUC care competency as a part of the institutional effort to maintain the nursing staff's ability to deliver safe and effective nursing care. Despite these collaborative interventions, CAUTI still occurred, especially in care units where most patients had a high acuity. Figure 1 compares the research site's CAUTI rate with the Nursing Quality Indicators Database (NDNQI) mean annual average of CAUTI from 2019 to 2021.

Figure 1

Research Site and NDNQI's Mean Annual Average CAUTI Rate: 2019 to 2021

Research Site and NDNQI's Mean Annual Average CAUTI rate: 2019 to 2021

■ Hospital's Average Annual CAUTI Rate at the Project Site
■ NDNQI Mean Annual Average of CAUTI
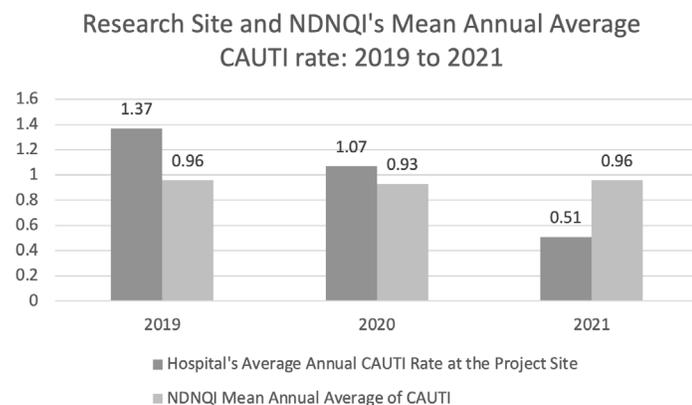
Objective

The purpose of this qualitative evidence-based practice (EBP) research was to evaluate and improve the current program implemented to help meet the hospital's goal of a lowered CAUTI rate. This EBP research had two goals: To increase an understanding of nurse perceptions of current CAUTI preventive measures and to generate recommendations to improve existing measures. Most CAUTI cases occur in the critical care units. Therefore, it was imperative to investigate the intensive care nurses' perceptions of the research site's CAUTI preventive measures and to identify gaps and other practice-related concerns. As end-users, bedside nurses may be uniquely aware of ways to improve the CAUTI prevention initiative. Considering these

factors, this research served as a program evaluation to obtain nurse feedback and recommendations useful to improve current CAUTI preventive measures.

The Population-Interest-Context (PICO) method was used for this EBP research study. The population of focus was the nurses in the intensive care units at the research site. The phenomenon of interest was the barriers to the CAUTI preventive measures and nurses' recommendations to improve the current CAUTI program. The context was the setting of the ICUs (e.g., Medical ICU and Cardiovascular ICU). The clinical question for this research was "What are the factors that nurses consider as barriers to the CAUTI preventive measures and nurses' recommendations to improve the existing CAUTI prevention program in the ICUs?"

Literature Review

Critical patients in the ICU are at higher risk for developing hospital-acquired infections due to the invasive devices that might be needed to monitor their status and deliver the necessary treatment (Meddings et al., 2020). In response, the CDC (2024), the Joint Commission (JC) (2024), and other leaders in modern health care have initiated protocols to mitigate the patients' risk for hospital-acquired infections. CAUTI, one common hospital-acquired infection, has been considerably high in the modern era, reaching around 9% of hospital-acquired infections (Van Decker et al., 2021). It is still considered a significant threat as it increases morbidity and mortality rates, cost of care, as well as the administration of unnecessary anti-infective medications (Na et al., 2024). CAUTI is preventable and treatable; however, despite the implementation of evidence-based standards and nurse-driven protocols in modern times, it continues to be a considerable problem in healthcare institutions nationwide.

The literature identified barriers to effective CAUTI prevention. Some issues included staff non-adherence to prevention guidelines, inadequate staff training, patient-related factors, and communication barriers. These barriers contributed to the deficiencies in CAUTI prevention strategies and will be explored in detail in this section.

Non-Adherence to Evidence-Based Guidelines

One common barrier to CAUTI prevention was the staff's lack of adherence to evidence-based guidelines. Research studies revealed that while the basic catheter care insertion and maintenance guidelines are satisfactorily documented, compliance with CAUTI preventive measures are often suboptimal. Some patient care staff failed to follow the basic infection prevention protocols in IUC management, such as proper hand hygiene (Al-Sayaghi et al., 2023), proper insertion and maintenance, and shorter duration of use (Atkins et al., 2020). Patient care staff also reported that due to the high acuity of patients, removal of IUCs would not be their priority (Quinn et al., 2020).

Modern evidence-based practice involves the use of a nurse-driven protocol (NDP) to reduce CAUTI risk. The protocol was designed to facilitate the provision of effective and timely patient-centered IUC care (Barto, 2019) by allowing the nurses to independently discontinue the unneeded IUCs without physicians' orders (DePuccio et al., 2020). The NDP minimized the duration of IUC use, thereby reducing the CAUTI risk of patients. However, barriers to its implementation include nurses' reliance on physicians' orders, physicians' resistance, ineffective communication among providers (DePuccio et al., 2020), care recipients' preference for retaining IUC, and the unnecessary insertion in the ED (Krein et al., 2013). DePuccio et al. (2020) identified interventions to address this gap, such as staff education on how to implement the NDP, careful examination of the IUC during rounds, reminders to the care providers about the protocol, and establishing buy-in for the NDP.

DePuccio et al. (2020) emphasized the importance of involving physicians in CAUTI prevention. They found that physicians deferred IUC removal despite clinical indications for removal. This was significant because the hesitancy of physicians hindered nurses from following the NDP. This resistance left nurses feeling disempowered and uncomfortable in making independent decisions in removing the IUC (DePuccio et al., 2020). Therefore, it is very crucial for the physicians to fully understand the NDP as an evidence-based tool to mitigate the risk for CAUTI.

Knowledge Gaps

Reviewing the literature revealed several knowledge gaps among staff in IUC care. Mong et al. (2022) discovered that only 21.6% of the nurses in their study were aware that IUC is not indicated for incontinence management. Furthermore, one-third of the nurses incorrectly believed that IUC is necessary to monitor the patient's urinary output and obtain urine culture samples (Mong et al., 2022). This knowledge deficit on the appropriate indications of IUC use can result in unnecessary IUC insertions, thereby putting the patients involved at higher risk of CAUTI (Mong et al., 2022).

Poor Interdisciplinary Communication

Quinn et al. (2020) considered poor communication as a key barrier to CAUTI prevention as it significantly delays the removal of IUCs. In their study, a resident physician reported that IUCs were only discussed when complications arose (Quinn et al., 2020). Rounds provide the nurses with an opportunity to review the CAUTI guidelines with the physicians involved, but due to high workloads and rounds conducted during shift changes, nurses often cannot find the time to participate (Quinn et al., 2020). Additionally, physicians also reported that their heavy patient workloads and limited time further hinder discussions about the IUC care plans (Quinn et al., 2020).

Method

The purposive sampling process was used to recruit nurses for this project and applied the following inclusion criteria: Had at least one year of critical care experience; treated at least one patient with an indwelling urinary catheter (IUC); and actively involved in bedside care. The exclusion criterion was nurses in administrative or leadership roles and nurse residents who had not completed a 6-month residency orientation. Of the 113 registered nurses working in either the medical ICU or cardiovascular ICU who met the inclusion criteria for this EBP research, a total of 17 nurses agreed to participate. The number of participants was sufficient sample size to reach saturation.

This project used Clarke and Braun's (2013) 6-step analysis to conduct a thematic analysis of the open-ended responses. The six steps include: Familiarization of data; generating preliminary codes; searching for themes; reviewing the themes identified; defining themes; and generating a report (Clarke & Braun, 2013).

Data Collection

Data were collected after receiving the full approvals from the University's Institutional Review Boards (IRB) (case number 1CD1-28F) and hospital's IRB (tracking number 20216205). Participants were recruited from the intensive care units. Prior to participating in the survey, each participant was asked to review and electronically sign the informed consent form online. Participants were assured of anonymity and confidentiality and provided an alphanumeric value denoted as P1 through P17. In addition to the survey questions, participants were asked to provide basic demographic data regarding age, gender, education, and number of years of critical care experience.

The participants were asked if they thought the hospital's nurse-driven protocol was effective in preventing CAUTI, barriers to CAUTI prevention, actions to be taken to address the barriers,

and interventions that should be considered to make the nurse-driven protocol more effective (See Table 1). Google Forms was used to collect the participants' responses. All data obtained from Google Forms were automatically converted to Microsoft Excel and transferred to NVivo 12 for analysis and interpretation.

Table 1

List of Questions to the ICU Nurses

Question Set	Questions Asked
1	In your opinion, do you think the hospital's indwelling urinary catheter nurse-driven protocol is effective in preventing CAUTI? What do you think makes it effective or ineffective?
2	The hospital still has patients who developed CAUTI. What do you think are the barriers to the hospital's CAUTI prevention measures? Why do you consider these as "barriers?"
3	In relation to clinical practice, what actions do you think should be taken to address the barriers you face in CAUTI prevention?
4	What other intervention do you think should be added to the existing nurse-driven protocol to make it more effective and efficient?

Results

The research sample comprised 17 critical care registered nurses (RN). The majority of whom were female. Ages ranged in age from 20 to 60, with most being 40 and younger. Experience ranged from 1 to 30 years, with most reporting less than 5 years of experience in critical care nursing. Most participants earned a Bachelor of Science in Nursing (BSN), two held either a diploma degree in nursing or associate's degree in nursing (ADN), and two held a doctorate (PhD or DNP). About half were certified to provide direct care to acutely and critically ill patients. The demographic breakdown suggests that most participants were young and had limited experience as critical care nurses (See Table 2).

Table 2

Participant Demographics

Demographics	Number of Participants
Gender	
Male	3
Female	14
Age	
20-30	7
31-40	7
41-50	2
Over 50	1
Years of Experience	
Less than 5	12
6-10	4
11-20	3
Over 20	2
Specialty Certification	
Yes	9
No	8
Degree	
Diploma/AND	2
Bachelors/BSN	13
Doctorate/PhD, DNP	2

The overarching goal of this EBP research study was to examine nurse perceptions of the current CAUTI prevention program and to generate recommendations for improving the existing program at the participating hospital site. A thematic analysis of a semi-structured online survey identified three themes, each with subthemes including Theme 1: Reasons for effectiveness (nurse accountability, nurse autonomy); Theme 2: Barriers to Program Effectiveness (physician resistance, knowledge gap); and Theme 3: Recommendations for improving Effectiveness (enhancement of staff knowledge through staff training and education, modification of existing procedures, and the reduction of nurse workload to improve compliance with the existing CAUTI preventive measures). Table 3 contains the responses and themes provided by the participants.

Table 3

Themes Identified During Data Analysis

Theme	Number of Contributing Participants	Example Quote from Survey
Nurse accountability	4	Yes, I believe it is effective because it drives us to remove foleys. - P11
Nurse autonomy	3	Ultimately, the CAUTI Protocol is effective in the setting of critical care because of the autonomy critical care nurses acquire. – P17
Physician resistance	6	Not removing catheters due to needing urology clearance. – P16
Knowledge gap	3	Newly hired nurses unfamiliar with CAUTI prevention strategies. – P1
Staff training	13	Since there is a high turnover and new grad hires in the organization, the new onboarding staff should be oriented very well in terms of the correct and appropriate measures that are highlighted in the policy to prevent CAUTI. – P7
Alter procedures	6	We should look for alternative cleaning methods for foley care. – P15
Decrease nurse workload	7	Involve PCTs to reduce the perceived burden on nurses with getting patients to the commode and hourly rounding. – P14

Reasons for Effectiveness

A majority of participants agreed that the CAUTI prevention program at the research site (indwelling urinary catheter nurse-driven protocol) was effective in preventing CAUTI. This signifies the importance of enriching the nurses' accountability and autonomy in decision-making. Of the few participants who did not feel the CAUTI prevention program was effective, no explanation was offered.

Nurse Accountability.

Among those who felt the current intervention was effective, most participants felt that the current protocol was effective, and they described the protocol as able to enhance nurse accountability and autonomy. Four participants suggested that the CAUTI prevention program drove the nurses to be diligent about the timely removal of catheters. According to the participants, decreasing delays in catheter removal reduces the risk of urinary tract infections. P6 stated that "nurses' accountability protects patients" and that this accountability was what made the program effective. P7 described the program as working to make "nurses diligent about removing the catheters on time or as soon as

possible when clinically appropriate." P11 also offered a similar response, aligning with P7, describing the benefits of removal of Foley catheters as the best way to prevent UTIs. According to P11, "The program is effective because it drives us to remove Foleys." This participant also stressed that "the best way to prevent a CAUTI is to not have a Foley at all." Finally, P15 stressed that the most effective part of the prevention protocol was the "Foley care and nurse-driven removal protocol."

Nurse Autonomy.

Three of the participants indicated that the CAUTI prevention program was effective because it gave the nurses greater autonomy and control over catheters than they had before the program. This autonomy allowed nurses to do what they believe is in the best interests of their patients, rather than needing to seek physician approval prior to acting. P9 "finds this protocol effective in preventing CAUTI for the population that is incontinent and would otherwise have a catheter remain in place as per MD order." P10 expressed the benefit of autonomy very clearly by saying, "Ultimately, the CAUTI Protocol is effective in the critical care setting because of the autonomy acquired by critical care nurses." P17 also discussed the benefits of nurse autonomy. According to this participant, "the fact that nurses can take initiative to manage, maintain and remove as indicated by the protocol, is incredibly useful."

Barriers to Program Effectiveness

This theme established the core of the project since the barriers to program effectiveness were the areas of focus that can be addressed using the results of this research. These responses were specific to this unit and organization and provided valuable insight for project site leadership and stakeholders as to where improvement steps can be focused upon. The participants stated the barriers they believed impacted the effectiveness of the CAUTI program. The survey question informed the participants that patients continued to develop CAUTI in the hospital. They were asked to list what they considered as barriers to the hospital's CAUTI prevention measures in the facility. The subthemes that were most repeated include physician resistance and knowledge gap.

Physician Resistance.

Six participants indicated that physician resistance to the program was the primary barrier to the CAUTI prevention program. P2 expressed this simply by saying "physician preference." Similarly, P14 also indicated that "difficulty with physician engagement" was a barrier to the program. Other participants indicated that most physicians wanted to keep the catheter in place longer than the program dictated. P5, for example, noted that there was "resistance from residents and doctors to remove Foley." According to P9, "there is major pushback from MDs [physicians] who want strict I&O [intake and output], particularly in the HF [heart failure] population." P16 indicated that "they could not follow the program's protocol due to a lack of permission from the supervising doctor." P16 stated that "they could not remove catheters due to needing urology clearance." Finally, P17 reported similar experiences, and suggested that if doctors prefer to leave it in, [they] don't allow us to remove it, nor do they document why it needs to remain."

Knowledge Gap.

Three participants indicated a lack of training in the program's protocols. P8 simply indicated that "education" was a major barrier to the program. However, P1 and P6 both indicated that lack of training was most apparent among newly hired staff. P1 said that "Newly hired nurses who were unfamiliar with CAUTI prevention strategies" were barriers. P6 indicated that the "newly hired nurses who were new to practice policy" were the primary barriers to the program.

Improving the Effectiveness

Participants provided recommendations for how the program

could be made more effective. The first question asked the participants to state actions they thought should be taken to address the barriers faced in CAUTI prevention. The second survey question asked what other interventions they thought should be considered to make the hospital's CAUTI prevention more effective and efficient. Themes related to improving the effectiveness of the CAUTI prevention program include staff training, altering procedures, and decreasing nurse workload.

Staff Training.

Thirteen participants indicated that staff training was an important action that should be taken to address the barriers nurses face in CAUTI prevention. Training ranged from reminding existing staff about following hygiene procedures to providing more in-depth instruction for new staff. P1 indicated that "repetition of CAUTI prevention strategies during huddles to remind all staff members" would help overcome barriers to CAUTI prevention. P2 thought that training for physicians "would help physicians be less resistant to following the CAUTI prevention program." P7 indicated that high staff turnover and constantly having new staff that was new to the protocol, exacerbated the problem. According to this participant, the high turnover rate and hiring of new graduates compromised knowledge of the correct policies and practice measures to prevent CAUTI infections.

P17 also believed that staff training was the key to overcoming barriers with the program. They also suggested that new medical residents could specifically benefit from training. According to P17, "We should be teaching the providers and residents to understand the importance of removal and that 'bladder training' is not part of the protocol."

Alter Procedures.

Six participants indicated that a change in operating procedure at the facility may help to decrease the risk of CAUTI. According to P15, a potential solution to CAUTI would be to use "alternative cleaning methods for Foley care." P11 also believed that altering cleaning procedures would decrease CAUTI risk although they also believed that some infections were inevitable. P11 believed that the ways to prevent CAUTI were to clean the Foleys twice a day with wipes made specifically for Foleys and to remove them when not clinically necessary.

P3 also believed that better oversight of the Foleys would improve the infection rate. P3 indicated that they should "make [cleaning] a routine part of AM/PM [morning or night] care." Rather than recommended cleaning procedures, P9 believed CAUTIs could be directly impacted by reducing the use of Foley catheters on patients. P9 indicated that the "ER should stop putting Foley's in everyone. Doctors should only be able to order strict intake and output for 24 hours or while on continuous IV diuretics." Similarly, P16 also believed that the key barrier was the liberal use of Foleys. P16 indicated that the hospital should "require a note from urology stating why the catheter must remain" if the time of use extended beyond the standard time period.

Decrease Nurse Workload.

Of the several participants who believed that work was needed to strengthen CAUTI prevention efforts, 7 of the participants believed that the nursing staff was currently overburdened and that decreasing nurses' workload would help reduce the CAUTI rate. Responses, such as a "lighter patient load" was needed (P4), and changing staffing ratios (P13), would help prevent CAUTI cases. Several of the participants felt that including patient care technicians (PCTs) in catheter care would help reduce the workload burden of nurses, while also keeping patient care high. P17 specifically suggested that the hospital should allow PCTs to clean Foleys with wipes at least once a shift." The hospital can also utilize PCTs to reduce the perceived burden on nurses by getting patients to the commode and hourly rounding.

Reducing unnecessary tests would also decrease the burden on nurses (P8), allowing them to focus more on patient care rather than collecting samples. The facility needs to send urine cultures only if a clinically suspected source of infection is suspected. A similar sentiment was also expressed by P16, who argued that the workload would be lifted if cultured samples were restricted to Foleys placed within 24 hours.

Discussion

The thematic findings Reasons for Effectiveness (nurse accountability and nurse autonomy), Barriers to Program Effectiveness (physician resistance and knowledge gap), and Recommendations for Improving Effectiveness, (enhancement of staff knowledge through staff training and education, modification of existing procedures, and the reduction of nurse workload to improve compliance with existing CAUTI preventive measures) are presented in narrative and graphic forms.

Reasons for Effectiveness

Most of the respondents considered the current prevention measures effective in preventing CAUTI. However, they were likely to cite the ability to provide nurses with the opportunity to independently remove catheters as a reason for success in reducing the infection rate.

One nurse explained that "nurses' accountability protects patients" and makes the CAUTI preventive measures effective. Some nurses mentioned that the NDP gave them a greater sense of control over catheters than they had before the program. This autonomy allowed them to do what they believed was best for their patients, rather than seeking physician approval before discontinuing the IUC. The freedom for nurses to limit the use of catheters directly mitigates CAUTI risk.

Barriers to Program Effectiveness

Six participants considered physician resistance the primary barrier to CAUTI prevention in the ICU. One participant emphasized the need to teach the providers about the importance of IUC removal and that bladder training is not a part of the protocol. This is a misconception that has hindered staff and providers from adhering to the nurse-driven protocol. This training is particularly important for attending and resident physicians who are new to providing IUC care in the unit.

According to three participants, the lack of training in the CAUTI protocols was a significant barrier to providing effective CAUTI prevention care. Two participants mentioned that this knowledge gap was most apparent among newly hired nursing staff. One nurse indicated that new nurses were "unfamiliar with the CAUTI prevention strategies, the existing nurse-driven protocol, and IUC care policies."

Recommendations for Improving Effectiveness

Thirteen participants indicated that staff training was an important action that should be taken to address the barriers nurses face in providing CAUTI prevention care. Education reinforces the importance of adhering to the nurse-driven protocol. One participant suggested that CAUTI prevention strategies could be repeated during huddles to remind all staff members how to overcome barriers to CAUTI prevention. Another barrier is the high staff turnover, which exacerbates the problem.

According to one participant, there is a need to actively involve patient care technicians (PCTs) in delivering IUC care. The PCTs at the research site already play an important role in IUC care and can reduce the burden placed on nurses during hourly rounding. The yearly competency for PCTs consists of skills exclusively for IUC care and management. The nurse educators verify the PCT's knowledge of CAUTI prevention standards. Their skills are monitored in properly managing the IUC, maintenance of proper drain, perineal care using meatal cleansing products (i.e., Sage M-Care or Sage Essential Bath Washcloths), and the operation of a Stat-Lock securement device.

Six of the participants felt that physician resistance to the program was the primary barrier to CAUTI prevention. Some

participants emphasized that most physicians wanted to keep the catheter in place longer than the program dictated. One participant reported the need to inform and educate the medical team about the nurse-driven protocol and that a "bladder training" is not a part of it.

Two participants indicated that there was a need to avoid unnecessary insertion of IUCs in the ER. One of the participants mentioned that a follow-up with IUC care is beneficial in managing IUCs. This hand-off IUC care allows the nurses to collectively decide on the need for the IUC device to be removed or remain inserted.

Educational Interventions

The participants indicated that there is a need for resident and attending physicians to support and adhere to the nurse-driven protocol (NDP). The primary investigator formulated an educational tool to improve resident physician engagement in the NDP to address this identified need. This educational tool was influenced by the Agency for Healthcare Research and Quality (AHRQ) Making it Work Tip Sheet: Engaging Physicians in Preventing CLABSI and CAUTI (AHRQ, 2022), which contains information about practice strategies designed to enhance the physicians' involvement in infection prevention. The educational tool was integrated into the Post-Graduate Year (PGY) 1 resident orientation.

The primary investigator was given the opportunity to educate the 24 new resident physicians about the research site's infection prevention measures. The primary investigator provided each resident with an education packet that contained information about the hospital's hand hygiene policy and other materials related to infection prevention in the hospital. The primary investigator also emphasized the purpose of the IUC care policy and NDP and encouraged the new physicians to be actively involved in CAUTI prevention. The session was successful, with the primary investigator answering all the residents' questions.

Implication for Practice and Future Research

This section presents takeaways from the findings as well as their implications for practice. Key points include physician involvement, avoiding unnecessary IUC insertion in the ER, and staff awareness. Also discussed are potential future investigations for DNP students, hospital staff, and nurse residents to further reduce the CAUTI risk across the units in the hospital, including medical-surgical, post-anesthesia care unit, emergency department, mother-baby unit, and labor and delivery. The primary investigator's intervention focused on addressing "physician resistance" through education is limited to improving new physicians' knowledge on the nurse-driven protocol and other CAUTI prevention initiatives in the hospital. It does not guarantee full compliance with these protocols.

Physician Involvement

There is a need to involve physicians in CAUTI prevention efforts. The AHRQ's (2015b) recommendations on involving resident physicians as "champions" in mitigating the patients' risk for hospital-acquired infections may help simplify this process. According to the AHRQ (2015a), interdisciplinary collaboration is essential in enhancing patient safety and in preventing infections and other sentinel events. With the research site as a Magnet-designated teaching hospital, resident physicians must be actively involved in hospital-wide quality improvement initiatives. The AHRQ (2015b) identifies at least two major opportunities for residents to examine the need for the devices and the risks brought about by their use. First, along with the review of basic patient data and care outcomes, the junior resident should also evaluate the patient's need for invasive medical device(s) that are unnecessary or may impose a risk for complications (AHRQ, 2015b). Second, during their daily rounds, the senior resident can act as the "champion" (AHRQ, 2015b). Senior residents can ask the team the questions recommended by the AHRQ (2015b): "Are

there any devices in use? Is there a continued need for the device? Do we have any safer alternatives?"

These reflection questions are not exclusively for the physicians but are appropriate for all patient care staff to ask. These are meaningful Champion Questions that can facilitate the prevention of unnecessary insertion and early removal of IUCs.

Unnecessary IUC Insertions in the ER

Krein et al. (2013) concluded that the solution to the unnecessary IUC insertions in the ER was to provide education about appropriate monitoring of catheter use. Some hospitals had successfully adopted ED-based initiatives, which appeared to be effective in reducing the use of IUCs in the ED. This intervention can also be adopted by the ED management at the research site. The primary goal is to avoid unnecessary insertions, considering alternative measures to IUC, such as Texas catheters for male and Purewick devices for female patients.

Greene et al. (2018) also identified three effective interventions to avoid unnecessary insertions of IUCs in the ER, of which may also be applicable to other departments. These interventions included: Establishing facility guidelines for IUC use, enhancing staff knowledge through education on appropriateness criteria, and designating physician and nurse champions to promote the adherence to evidence-based guidelines (Greene et al., 2018).

Staff Awareness

The research findings signify the importance of regularly reminding staff about the proper IUC care. The charge nurses and patient care coordinators (PCC) in the ICUs must continue to conduct their daily investigations and monitoring of IUC use. Staff should also discuss the proper IUC care protocol during huddles to ensure that all the nurses and PCTs are aware of the number of patients with IUCs, available resources for IUC care, and measures to prevent CAUTI. During the daily administrative meetings, the PCCs and charge nurses should present reports to the administration detailing the number of IUCs in use, reasons for use, and plans for their discontinuation.

Conclusions

The CAUTI preventive measures at the research site prevent CAUTI in the ICUs. However, physician resistance and knowledge gaps among the new staff continue to be key CAUTI prevention barriers. Addressing these barriers requires an interdisciplinary and multifaceted approach. The components of an effective strategy include staff training (i.e., physicians and other patient care staff), modification of specific IUC care operating procedures (i.e., nurse-driven protocol, IUC care, avoiding unnecessary IUC insertions in the ER), and decreasing nurse workload (i.e., more PCT involvement). Selection of CAUTI champions (i.e., physicians and nurses) who can help monitor the patients with IUCs and enhance appropriate discontinuance as per protocol may also be helpful. Implementing these measures can enhance CAUTI prevention efforts and improve patient outcomes.

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ORIGINAL RESEARCH

Examining Immigrant Health Literacy as a Social Determinant in an Immigrant Population

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Abstract

Background: Immigrants continue to be an increasing population in the United States (U.S.) and are navigating the healthcare system in greater numbers. Health literacy is considered a health determinant that impacts health outcomes. **Objective:** This study aimed to examine the effect of health literacy on clinical outcomes among immigrants in a primary care environment. Access to care and resources must be addressed so that all people residing in the U.S. can achieve and maintain health and well-being. **Methodology:** A non-experimental, descriptive, design was used to present a health literacy screening tool to 25 Hispanic and Asian immigrant patients with English as a second language at two primary health clinics in Fort Worth, TX. **Results:** Kruskal-Wallis tests found significant findings indicating participants with more education ranked themselves as needing less help reading and understanding information. Mann-Whitney U tests examined the difference between self-reported health status, health literacy and chronic health conditions. Participants with a chronic illness were reported to have an increased need for assistance with health literacy and reported a lower reading level. **Limitations:** The coronavirus outbreak led to a decreased data collection period and sample size. The lack of a certified interpreter led to some participants asking family members or staff to translate the survey for them which may have compromised the accuracy of the measurement of health literacy. Self-report survey may compromise data integrity. **Conclusions and Recommendations:** Nurses must address health literacy as a general barrier for all populations, not only immigrants or English as a second language individuals. This study highlights the importance of health literacy training and the inclusion cultural competence content within the nursing curricula before graduation and licensure. Digitalization of information should be considered. Information regarding available resources for immigrants is discussed.

Key Words: Health Literacy, Social Determinants of Health, Immigrants

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IRB Statement: This study received initial IRB approval from Troy University IRB on November 14, 2019.

Examining Immigrant Health Literacy as a Social Determinant

The ability to read, write and understand a given language has often been thought to constitute an individual as being literate. However, this belief may not transfer to health. Health literacy is defined in Title V of the Affordable Care Act as "the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions" (Centers for Disease Control and Prevention [CDC], 2022, para. 1). Within the United States (U.S.), health literacy is considered a health determinant that impacts health outcomes. A lack of health literacy can negatively affect patient understanding of health information, medical costs, and resources to gain access to care (Fernández-Gutiérrez et al., 2018).

Immigrants encounter many socioeconomic difficulties when migrating, such as obtaining employment and as a result, the ability to obtain necessities needed for daily living, such as food, housing, and adequate healthcare. Poverty further ignites the issue of lack of resources. Thus, the sociocultural issues mirrored with the economic issues leave immigrants at a great disadvantage when attempting to obtain healthcare (Khullar & Chokshi, 2019; Mas & Jacobson, 2019). In addition, a lack of knowledge by healthcare providers regarding culture, rarely seen illnesses, and language barriers also compound these social injustices faced by immigrants attempting to navigate the U.S. healthcare system. With the increasing population of diverse immigrants entering the U.S., these individuals deserve consideration, because health literacy is associated with better health (Nutbeam, 2017).

Immigrant migration and the care of these individuals have been recognized in recent years as a global issue that must be addressed. Accordingly, in 2015, the United Nations developed four sustainable development goals (SDGs) that aimed to protect non-nationals and displaced individuals through its global framework. Among the stated goals were identifying vulnerable populations such as immigrants and advocating for every individual's right to health (Brolan et al., 2017). Immigrants have poorer health, increased hospital admissions, decreased medical regiment compliance, and decreased use of health resources (Fernandez-Gutierrez et al., 2018). While the literature demonstrates that health literacy among immigrants is an issue, there is no consensus regarding interventions that would eliminate the problem.

Significance

Immigrants continue to be an increasing population within the U.S. with immigrants and their families projected to account for 88% of the U.S. population growth through 2065 (Budiman, 2020). As a result, they are navigating the healthcare system in greater numbers (Department of Homeland Security, 2022). This requires attention to the cultural background and needs of immigrants entering the U.S. (Yoon et al., 2017). In addition, it requires education regarding medical issues that may not have previously been familiar to most healthcare providers. It also requires looking at familiar medical issues from a different perspective as immigrant health decreases with age (Mantwill & Schulz, 2017). The aim of this study was to examine the effect of health literacy on clinical outcomes among immigrants in a primary care environment.

Methods

Sample

The target sample consisted of 25 men and women who were patients at two primary health clinics in Fort Worth, TX. Both clinics are owned and managed by the same physician provider. The inclusion criteria included individuals who were (a) immigrants (b) whose first language was not English, (c) age 18 or older, and (d) of Hispanic or Asian ethnicity.

Setting

The project was conducted at two primary care clinics located in Fort Worth, TX. More than 17% of Texas residents are foreign-born with 12% of Texans born in the U.S. living with at least one immigrant parent (American Immigration Council, 2024). The provider is a family medicine physician (MD) who also owns the clinics and is fluent in Chinese. The staff includes a receptionist, two medical assistants (MAs), and a medical records/benefits coordinator. Both MAs and the medical records staff were fluent in Spanish. During the duration of this project until being forced to close due to the coronavirus pandemic, the clinics were open every day, except Wednesday and Sunday, 9 am – 6 pm. The provider saw approximately 50-60 patients per week of all ethnicities, though the majority of the population was Hispanic. Because immigrants are such an integral part of Texas, this location was chosen for the study.

Design

A quantitative, non-experimental descriptive design was used for this study. This design was chosen because it helps to describe the sample and the main study variable, health literacy (Siedlecki, 2020).

Procedures

Institutional Review Board (IRB) approval was obtained from Troy University for the study. While the patient was waiting to be seen, the recruitment script was read to potential participants by either the principal investigator or one of the medical assistants (MAs). Agreeable patients were then asked to sign an informed consent form. Next, each participant completed the BRIEF screening tool.

The BRIEF is an open access 4-item screening tool that can be self-administered and measures an individual's health literacy (Haun et al., 2012). Participants were instructed to circle a number along the 5-point Likert scale, with five indicating their highest level of agreement and one indicating their greatest level of disagreement with the statements presented. Each item was worth 1-5 points and the value for each was then totaled together, which ranged from a minimum of 4 to a maximum of 20. The BRIEF then levels the scores as follows: a) limited (4-12); b) marginal (13-16); and c) adequate (17-20) literacy (Haun et al., 2012). Therefore, the higher the score, the higher the level of health literacy.

According to Haun et al. (2012), the validity of the BRIEF was established in a study of 378 individuals of varying ethnicities, and ages ranging from 18-64. The reliability and validity of the BRIEF suggest reasonable and well-grounded psychometric components. The BRIEF resulted in a 0.77 Cronbach's alpha. The combined items were noted to have more sensitivity when measuring limited health literacy than any one item alone (Haun et al, 2012).

In addition, participants provided the following demographic data: age, gender, race/ethnicity, education level, language, employment status, country of birth, year of arrival to the U.S., self-reported reading level, and health status.

Finally, the principal investigator obtained data from the electronic health record (EHR) including chronic illness diagnosis, U.S. Immigration Medical Exam labs, body mass index (BMI), and hemoglobin A1C (HgbA1c). Additional information was obtained to determine whether the participants were current on their immunizations.

Results

Data were compiled into a dataset and analyzed using IBM SPSS version 22. Fifty-four percent (54%) of the participants were men and 75% of all participants were employed. The majority of participants (58%) reported having received a high

school education or less. Greater than 70% of the participants identified as Hispanic, Spanish-Speaking, and immigrating from Mexico. Tables 1, 2, and 3 describe the demographic characteristics of the sample (N = 24).

Table 1

Description of the Sample (N = 24)

Demographic Variables	n	%
Race		
Caucasian	1	4.2
African-American	1	4.2
Asian	3	12.5
Hispanic	18	75.0
Other	1	4.2
Gender		
Males	13	54.2
Females	11	45.8
Education		
Less than high school graduate	8	33.3
High school graduate	6	25.0
College	2	33.3
Did Not Answer	2	8.3
Employment		
Unemployed	4	16.7
Employed	18	75.0
Did Not Answer	2	8.3

The mean length of time that participants reported being in the U.S. was 19.15 years (SD = 11.62) with a range of 0-43 years.

Table 2

Description of the Sample (N = 24)

Descriptive Variables	n	%
Country of Birth		
Columbia	2	8.3
Mexico	15	62.5
Nepla	1	4.2
Sri Lanka	2	8.3
U.S.	4	16.7
Native Language		
English	4	16.7
Spanish	17	70.8
Other	3	12.5
Type of Visit		
Initial Visit	3	12.5
Follow-Up Visit	11	45.8
Immigration Visit	10	41.7

Table 3 notes the country of birth, among other demographic characteristics, of the sample. While some participants (n=4) listed U.S. as their country of birth, they were able to meet the inclusion criteria as country of birth was not an inclusion criterion.

Table 3

Mean, SD, & Range for Age (N = 24)

Variable	M	SD	Range
Age	19.15	11.62	0-43

Table 4 presents frequencies of self-reported questions from the BRIEF regarding participant health literacy. It was noted that 45.8% of participants reported needing assistance with filling out hospital materials occasionally, sometimes, or always. Additionally, 45.8% reported problems understanding their medical condition with written communication and 54.2% reported problems when their medical conditions were explained by a healthcare worker. Finally, 41.7% reported varying lack of confidence when filling out medical paperwork without assistance.

Kruskal-Wallis tests (Table 5) were also conducted with significant findings that indicate participants with more education ranked themselves as needing less help reading hospital materials and understanding information about their medical condition. Additionally, participants with more education were more confident in filling out forms by themselves.

Mann-Whitney U tests were conducted to examine the difference between self-reported health status and health literacy and whether participants experienced a chronic health condition. None of the tests were statistically significant, although clinically significant findings are noted in Table 6. Participants with a chronic illness were found to rank themselves with an increased need for assistance with all health literacy questions, and also reported a lower reading level. However, there were no differences found in the clinical outcomes that were assessed and the level of health literacy. This is consistent with findings that suggest no association between health literacy and clinical outcomes (Rohringer et al., 2021).

Discussion

Health literacy requires an ability to read health information, understand disease processes, and calculate quantities of medication, to name a few of the needed skills to be literate regarding one's health. As a result, there are populations that are more likely to experience health literacy deficits. These groups include but are not limited to, women and children, immigrants, and racial/ethnic groups other than Caucasian (Mas & Jacobson, 2019; Nutbeam & Jacobson, 2021). Patients with health literacy deficits are more likely to misunderstand health information and experience decreased health outcomes. In fact, the American Medical Association found that poor health literacy is a stronger predictor of health than any other demographic factor (Nutbeam, 2017).

Overall education level is a critical determinant of health for patients. Previous studies have shown that health literacy has been associated with health outcomes (Mas & Jacobson, 2019; Nutbeam & Lloyd, 2021). The current sample found that individuals with increased education levels had better overall health, such as BMI and pulse pressure. Additionally, individuals with diagnosed chronic illnesses self-reported that they had lower reading levels and an increased need for assistance with understanding health information. Individuals with self-reported higher levels of education denied the need for assistance and reported that they were confident about their understanding of health forms when required to complete them. These findings are consistent with literature that notes strong relationships between health literacy and education levels (Nutbeam & Lloyd, 2021). Additionally, the current sample gave significant support that women are more likely to report that they need assistance with understanding hospital material.

The findings gathered from this sample, though small, are reflective of current research on health literacy. Over the last 10 years health literacy has become a major topic of focus within health care; surveys such as the BRIEF used within this study routinely show alarming deficits that adversely affect health (Samerski, 2019). Thus, continued research regarding the correlation between education and health literacy should be conducted.

Limitations

Health literacy is a public health issue that must be addressed.

Table 4

Frequencies of Literacy Items (N = 24)

Variables	Never		Occasionally		Somtimes		Often		Always	
	n	%	n	%	n	%	n	%	n	%
How often do you have someone help you read hospital materials?	13	54.2	3	12.5	5	20.8	0	0	3	12.5
How often do you have trouble learning about your medical condition because of difficulty understanding written information?	12	54.2	5	20.8	5	20.8	0	0	1	4.2
How often do you have a problem understanding what is told to you about your medical condition?	11	45.8	8	33.3	2	8.3	2	8.3	1	4.2
How confident are you in filling out medical forms by yourself?	0	0	3	12.5	2	8.3	4	16.7	14	58.3

Table 5

Kruskal-Wallis Tests of Education, Self-Reported Health Status, and Literacy

	<HS (n=8)	Mean Rank HS (n=6)	College (n=8)	h	df	p
How often do you have someone help you read hospital materials?	15.06	13.42	6.50	9.308	2	.010*
How often do you have a problem understanding what is told to you about your medical condition?	15.50	10.50	8.25	6.143	2	.046*
How confident are you in filling out medical forms by yourself?	9.38	9.00	15.50	6.494	2	.039*

*p<.05

Table 6

Mann-Whitney U Tests of Any Chronic Health Condition and Self-reported Literacy

Chronic condition	Mean Rank		U	Z	P
	Yes (n=9)	No (n=15)			
How often do you have someone help you read hospital materials?	15.00	11.00	45.00	-1.473	.141
How often do you have problems learning about your medical condition because of difficulty understanding written information?	13.56	11.87	58.00	-.624	.533
How often do you have a problem understanding what is told to you about your medical condition?	14.33	11.40	51.00	-1.057	.291
How confident are you in filling out medical forms by yourself?	9.17	14.12	37.50	-1.912	.073

However, health literacy remains a national challenge for many healthcare providers. It has been a continuous issue as reflected by the objectives associated with improving health literacy in both The National Action Plan to Improve Health Literacy and the Healthy People 2020 initiatives (Mas & Jacobson, 2019). The current study met challenges in meeting these objectives as well. The biggest barrier was the small sample size that was directly related to the outbreak of the coronavirus, thus bringing the study to an unanticipated end only ten weeks into data collection and limiting generalizability. With the setting taking place in Texas, the governor told residents to stay at home for the month of April 2020 due to the coronavirus pandemic (Svitek, 2020). The decreased data collection period also influenced the diversity of the sample population. The dates chosen for data collection limited variation in participants as the patients in the clinic were both established patients and those being seen for immigration physicals. While the established patients may have been immigrants at one point, their time in country may have influenced health literacy levels (Mantwill & Schulz, 2017). Another barrier that was encountered was the lack of a certified interpreter to communicate with study participants. The survey was written in English and participants stated they could read it; however, the primary investigator later observed some participants asking family members or medical staff to translate the survey for them. This indicates that the self-report methods utilized may not accurately reveal the true health literacy of all participants. This may also point two other issues: (a) whether cultural pride is a barrier to individuals requesting assistance when they lack understanding of health-related materials, and (b) whether proficiency in reading the English language should be considered when assessing their health literacy.

The descriptive design of this study does not allow for the manipulation of the variables of interest. However, other studies aimed at evaluating health literacy in specific populations have used similar research designs (Ahmed et al., 2021; Putri & Mujiyono, 2022; Trout et al., 2014). As used in similar studies, self-reported levels of health literacy can lead to issues of data integrity or bias (Ahmed et al., 2021; Putri & Mujiyono, 2022; Rohringer et al., 2021). The survey questions may prompt the participant to not provide a clear self-reflection, but rather a likeness of how he or she desires to be (Brenner & DeLamater, 2016).

Recommendations for Nursing Practice

The Institute of Medicine identified health literacy as an area of focus over a decade ago. However, current initiatives focus on improving the measures which evaluate health literacy (Haun et al, 2012). The BRIEF survey utilized within this study has demonstrated evidence of reliability as a tool, however, the method of self-report must be used cautiously. Therefore, nurses must address health literacy as a general barrier for all populations, not only immigrants or English as a second language individuals. Nurses must ensure all patients are educated about their health condition and can give a return demonstration of their understanding (Nutbeam & Lloyd, 2020). Additionally, nurses should strongly push for primary care physicians to have licensed nurses as part of their staff to ensure best practices are implemented regarding patient teaching. Nurses have a critical role in educating patients about vital health information necessary for their care as their relationship can improve health and quality of care. Therefore, we should not have any patient population that does not have the benefit of proper teaching from a licensed nurse. Another way that nursing can address this issue is to incorporate health literacy training and the importance of cultural competence within the nursing curricula provided before licensure. High-risk groups, such as immigrants, highlight the importance of nursing students having training in evaluating and teaching individuals with low health literacy (Saunders et al., 2019).

The National Resource Center for Refugees, Immigrants, and Migrants (NRC-RIM) (www.nrcim.org) provides support to health care providers who work with refugees, immigrants, and migrants (NRC-RIM, 2024). This population is likely to have health outcomes influenced by social determinants of health. The NRC-RIM offers toolkits for clinicians, community health workers, schools, and other community organizations. The resources include materials such as "Tips for Translating Materials", "Identifying Community Partners", and "Guidance and Checklist for Content Validation."

With the increasing use of digital health information, the availability of electronic health education materials could reduce barriers to access as well as increase immigrant health literacy (Zysset et al., 2023). The cost of digitization is relatively inexpensive, allows for health information to be readily available in multiple languages, and makes the information available 24/7. This can also decrease reliance on local information sources if well-vetted sources from other countries are linked, increasing immigrant confidence in the resource provider.

Health literacy is imperative for individuals to be empowered to act upon their health concerns and be an advocate for their health. Further strides must be made to acknowledge health literacy deficits and to actively combat this barrier to positive health outcomes. In redefining health literacy, the ever-increasing evidence of the correlation between poor health literacy and poor health outcomes emphasizes the role that healthcare providers have in improving these factors and ultimately, patient health (Saunders et al., 2019). Healthcare providers must be the catalyst for establishing evidence-based practices to improve the health literacy of the populations they serve.

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New York Organization for Nursing Leadership Best Practice Winners 2023: Leadership Across New York State

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Introduction

The New York Organization for Nursing Leadership (NYONL) represents the integrated voice of nursing leaders with the vision to influence the future of healthcare in New York and beyond. With over 600 members, NYONL members represent health care organizations, institutes of higher learning, and health-related agencies and businesses. There are 6 regions (Western, Finger Lakes, Central, Northeast, Northern Metropolitan, and Greater New York, Nassau, Suffolk). Each region provides opportunities for nursing leaders at all levels to connect and share challenges, innovations, and best practices. The NYONL mission is to engage, inspire, and advance the practice of New York nurses and emerging leaders. At the regional and state level there are several committees that focus on a particular specialty or area of interest within nursing leadership. One of these committees is the Best Practice Committee.

The NYONL Best Practice Committee identifies, promotes, and disseminates best practices from our six regions. The NYONL Annual Conference provides an opportunity to showcase the valuable work of the members of our state's regions.

The first best practice presentation was at the 2007 NYONL annual meeting. The Claire Murray Best Practice Award was established in 2016. Claire Murray was a chief nursing office in the Capital Region and the second executive director of NYONL from 2004 to 2015, leading the organization through several important changes and championing the BSN in 10 legislation.

In 2023, the committee reviewed a total of 59 submissions for consideration for the Claire Murray Best Practice Award. The quality and impact of the collective works submitted made scoring difficult. After careful consideration, the committee chose the following 5 winning regional abstracts. These awardees received recognition and presented their work at the NYONL Annual Conference. The Journal of the American Nurses Association-New York (JANANY) will begin to publish the abstracts of the awardees beginning from the 2023 NYONL Annual Conference:

- Communication Openings: Serious Illness Communication Framework - Catherine Mann, EdD, RN, CNS
- Cultivating a Healthy Ethical Climate: Insights from a Nursing Leadership Pilot Program - Michele Baker, DNP, MS, RN, CNL, CCRN, NEA-BC
- The Development and Impact of a Psychiatric Nurse Residency Track- Julie Mosher, MS, RN, NPD-BC, NEA-BC and Katie Fowler, MS, RN, CCRN, NPD-BC
- Integrating Nurse-Led Virtual Visits in the Home Health Setting, a Strategy to Achieve Quadruple Aim Objectives. - Kimberly Ross, DNP, RN, NE-BC, TCRN
- Strategies to Increase Nurse Resiliency - Mary Deady-Rooney, DNP, MSN, CCRN, NEA-BC and Christopher Wilson, MSN, RN, CNML, CENP, NEA-BC, FACHE

One element of the recognition is support and mentorship for publication. The best practice work co-author by Dr. Mann "Communication Openings: Serious Illness Communication Framework" has been accepted for publication as cited below.

Sullivan, S. S., Mann, C. M., & Wittenberg, E. (2023). Communication openings: A novel approach for serious illness communication in homecare. *Journal of Gerontological Nursing*, 49(11), 33–41. https://doi.org/10.3928/00989134-20231011-02

Expanded abstracts of other awardees appear below.

Cultivating a Healthy Ethical Climate: Insights from a Nursing Leadership Pilot Program

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Abstract

Objective/Significance: An ethical decision-making climate is instrumental in unifying and strengthening nursing. Nurses and leaders should work together to establish a healthy work environment that supports nurses by providing a mechanism for dealing with ethical dilemmas, thereby reducing moral distress. In addition, there is a need to ensure that those experiencing moral distress have the resources to address these situations. Through education and reflective practice, nursing leaders can support staff in ethical decision-making, reducing moral distress and increasing well-being. **Methodology:** Strong Memorial Hospital is an 886-bed acute care, Level 1 trauma center, located in Rochester, New York. The adult critical care nursing department consists of six ICUs and one progressive care unit. In order to support staff experiencing ethical and moral distress, it was identified that nursing leaders needed additional education and resources regarding ethical concepts. To meet this need, a pilot program was developed and presented to 10 Assistant Nurse Managers (ANMs). The program included an ethics self-assessment, healthcare ethics concepts overview, case studies, and an introduction of the 'one to five method'. The 'one to five method' is a mode for reflective ethical practice. It provides a framework for ethical communication in five steps: telling the story about the situation; reflections and dialogue concerning the emotions involved; formulation of the problem/dilemma; analysis of the situation and the dilemma; and searching for a choice of action or approach. (Fischer-Gronlund, et al, 2021). **Results:** Following the pilot program, participants were asked to voluntarily complete a follow-up survey. Results of the survey demonstrated that approximately 40% of participants reported increased knowledge of ethical concepts and reflective practice. Additionally, participants expressed further interest in practicing the 'one to five' method. Therefore, monthly reflective practice sessions were implemented and facilitated by a Nurse Ethics Liaison. The results of this pilot also led to two additional learning opportunities for nursing leaders. First, in collaboration with the institution's Department of Health Humanities & Bioethics, an ethical climate survey (Olsen, 1988) was distributed to all nurses and Advanced Practice Practitioners (APPs) across the system. Secondly, based on the ethical climate survey results, a nursing ethics sub-council will be launched in 2024, This sub-council will be a part of the institution's nursing shared governance structure and involved those members of the original pilot group. Goals for the sub-council will be the distribution of information at the unit, service, or department level in the hope of building an ethical culture. In addition, the sub-council members will participate in activities focused on increasing nursing competence in healthcare ethics. **Conclusion and Recommendations:** The results of the pilot program demonstrated an increase in knowledge of ethical concepts that relate to patients and staff, and the methods used to navigate dilemmas that occur. Additionally, the pilot uncovered the need for additional resources throughout the nursing department regarding ethics. This led to the ethical climate survey and the development of the nursing ethics sub-council. Future recommendations are to focus on educating nursing leaders on ethical concepts and methods to navigate ethical dilemmas. The goal of these recommendations is to support staff in ethical decision-making, reduce moral distress and increase staff well-being. To follow up on the effectiveness of interventions based on feedback from the survey, a repeat ethical climate survey will be done at the one-year interval.

Keywords: Moral Distress, Ethical Dilemmas, Reflective Practice, Moral Dilemmas, Nursing Leaders

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The Development and Impact of a Psychiatric Nurse Residency Track

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Abstract

Background: For newly licensed nurses (NLNs) successful transition into practice programs are critical. This is especially true for NLNs interested in the psychiatric specialty who are often eager to start as a psychiatric nurse. However, many organizations do not provide this opportunity for NLNs. In 2022, Glens Falls Hospital (GFH) observed a decline in experienced nurse applicants to the Behavioral Health and Crisis Stabilization Unit (BHU/CSU). At that time, the existing hiring practice did not allow NLNs to apply to the BHU/CSU. A decrease in experienced nurse applicants required nurse leaders to use agency nurses as a costly alternative while exploring new ways to attract psychiatric nurses. Within GFH existed a nationally accredited Nurse Residency Program (NRP) for Medical-Surgical, Critical Care, and Emergency Department. This program offered nurse leaders an existing framework to build a new psychiatric nurse residency specialty track. The goals of the new track were to decrease agency nurse utilization rates, reduce registered nurse (RN) vacancy rates, improve recruitment strategies, and standardize the transition to practice of NLNs in the BHU/CSU. **Objective/ Significance:** To develop and implement a structured, evidence-based nurse residency psychiatric specialty track to support the transition of NLNs to the BHU/CSU. **Methodology:** The Nurse Residency Program Coordinator completed a literature review to determine critical elements of transition for NLNs into a psychiatric inpatient setting. Unfortunately, the review produced minimal relevant, current evidence regarding NLNs transition into a psychiatric setting. To ensure the success of this specialty residency track, a position for a dedicated full-time nurse with expertise in caring for psychiatric patients was created. With the Psychiatric Clinical Outcomes Specialist Nurse (PCOSN) position filled, a multidisciplinary steering committee was formed. This committee included BHU/CSU Nurse Leaders, the NRP Coordinator, PCOSN, and the Psychiatric Medical Director. This committee reviewed the literature summary, Practice Transition Accreditation Program standards (ANCC, 2020), current NRP structures/processes, and desired specialty track outcomes. The group identified several priorities: align current NRP processes to enculturate the NLNs into the organization and specialty, design and build a competency-based curriculum, develop a competency evaluation tool to align with American Psychiatric Nurses Association (APNA, 2022) scope and standards of practice, outline the orientation structure and tools, and plan support and mentorship for the NLNs. The NRP Coordinator and PCOSN collaborated weekly to accomplish these initial priorities. Prior to recruiting the initial cohort, the pair presented the program to the steering committee and educated BHU/CSU staff on key elements of the program. One year after program implementation, the NRP Coordinator, PCOSN, BHU/CSU Nurse Leaders, NLNs, Preceptors, and other key stakeholders held a focus group to review program evaluation data and provide feedback to make improvements for future cohorts. **Results:** The Psychiatric Nurse specialty track of the GFH NRP was implemented in August 2022. All the original goals of the program have been met. The program has helped recruit and support the transition to practice of six NLNs. Most importantly the retention rate of these nurses is 100% as of January 8, 2024. This retention rate speaks to the structure, support, and education offered within the program. Furthermore, the development of this specialty track has contributed to a 35.7% decrease in agency nurse utilization and a 45% decrease in the psychiatric RN vacancy rate. In addition, the focus group identified opportunities to improve by adding further curriculum and simulations relevant to this practice setting, aligning with the new ANCC PTAP manual (2024), and developing additional preceptor tools to help standardize teaching of high-risk skills. **Limitation:** Minimal current, relevant evidence was found from the literature search, despite collaboration with the organization's Medical Librarian. **Conclusion and Recommendations:** Recruiting experienced nurses can be problematic. To address this issue, developing a Psychiatric Nurse specialty track creates a way to foster the growth of NLNs. This publication showcases best practices and demonstrate quality outcomes in the transition to practice of NLN psychiatric nurses.

Keywords: Psychiatric Nursing, Nurse Residency, Newly-licensed Nurses, Transition to Practice

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Integrating Nurse-Led Virtual Visits in the Home Health Setting: Strategy to Achieve Quadruple Aim Objectives

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Abstract

Background: The Institute for Healthcare Improvement (IHI) challenges healthcare organizations to develop care delivery models that support triple aim objectives of simultaneously reducing care delivery costs, improving the patient experience, and optimizing population health (2022). Recognizing employee engagement as a key driver of these triple aim objectives, Bodenheimer & Sinsky (2014) conceptualized the IHI framework to include employee experience as a fourth objective, defining the quadruple aim. In the home health setting, a recent shift towards value-based purchasing has challenged home health agencies to reexamine existing care delivery models and consider strategies that embrace and achieve these quadruple aim objectives. In response to the COVID-19 pandemic, we saw a tremendous increase in the integration and utilization of telehealth and virtual services across all disciplines of healthcare. In home health, these visits are recognized to support improved clinical outcomes, patient experience, and nursing satisfaction, while simultaneously reducing healthcare expenditures. **Objective/Significance:** In 2021 the certified home health agency (CHHA) serviced more than 300 Medicare beneficiaries with congestive heart failure (CHF) and had a 30-day readmission rate of 27.3%, compared to a national average of 18.39%. Clinical outcomes for this patient population, including improvement in oral medication management (73.8%) and dyspnea severity (79.1%), also fell below national benchmarks. The same year, an employee engagement survey revealed unfavorable employee engagement scores related to the nurse's perception of reasonable workloads and manageable stress levels, rated at 54.5% and 45.5%, respectively. The purpose of this quality improvement (QI) project was to implement nurse-led virtual visits for patients with CHF in the CHHA setting as a strategy to achieve quadruple aim objectives of improving clinical outcomes, patient satisfaction, and the employee experience, while reducing per capital healthcare costs. **Methodology:** The setting for this QI project is a CHHA affiliated with a large, metropolitan, academic healthcare system. All newly admitted Medicare beneficiaries with a primary diagnosis of CHF were eligible for participation. During the implementation phase, nurse-led virtual visits were incorporated into the nursing plan of care and were used as an adjunct to traditional in-person home care visits. Patient participation was voluntary; 24.49% of eligible patients participated in the program. The program considered all four elements of the quadruple aim and was evaluated using both qualitative and quantitative methods. Clinical outcomes, including improvement in oral medication management and dyspnea severity, were measured using the standardized Outcome and Assessment Information Set (OASIS). Discharge phone calls were used to elicit feedback from patients and their caregivers. Similarly, semi-structured interviews were used to gain insight into the perspective of the registered nurses who performed virtual visits. The discharge phone calls and nursing interviews were analyzed for themes using inductive coding. **Results:** Patients that participated in virtual visits had high quality clinical outcomes for the management of oral medications, 85.4%, and dyspnea severity, 92.8%. Most patient- or caregiver- participants (66.67%) expressed a positive patient experience with virtual visits and an average likelihood to recommend virtual visits of 8.13, on a scale of 0-10. All nurses described virtual visits as positively impacting their workflow, specifically scheduling, flexibility, and efficiency. Most notably, the 30-day rehospitalization rate for the virtual visit population is 9.1% compared to an agency wide rehospitalization rate of 20.9% and a national benchmark of 18% for the like population. **Limitation:** The results of this QI project are limited by the small number of patient participants. In addition, the rate of participation (25.49%) was significantly less than expected. The most significant barrier identified was patient apprehension with technology. **Conclusion and Recommendations:** This QI project focused on developing a new, innovative care delivery model that marries telehealth and in-person care, successfully achieving quadruple aim objectives. Opportunities to expand and diversify the scope of these services should be explored further. In addition, advocacy efforts, at the state and federal level, are needed to ensure permanency of these valuable, home health-based telehealth services.

Keywords: Telehealth, Home Care, Congestive Heart Failure, Quality Improvement, Nursing

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Strategies to Increase Nurse Resilience

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Abstract

Background: The national average turnover rate for registered nurses increased from 22% in 2020 to 27.1% in 2021. The average cost for a staff nurse turnover is $52,350 (NSI Nursing Solutions, 2023), costing the average hospital between $6.57million to $10.53million (NSI Nursing Solutions, 2023). Even before the pandemic there were concerns regarding nurse resilience, as one in five nurses left their first job within 12 months (Elsevier, 2020), 15% of nurses were disengaged, and many nurses experienced compassion fatigue and burnout. **Objective/Significance:** To improve nurse resilience through implementation of strategies that address nursing recruitment and retention, recognition, and wellness. **Methodology:** The support of the organization's Chief Executive Officer (CEO) and the Chief Nursing Officer (CNO) focused on the following strategies from July 2022 through December 2023 to improve nurse resiliency. These strategies addressed recruitment and retention, recognition, and wellness. First nurse recruitment and retention were addressed. Changes in recruitment and orientation included: monthly recruitment fairs on site, streamlined the onboarding process, biweekly nursing orientation, hired additional nurse educators for specialty areas, increased critical care orientation courses, and quarterly preceptor workshops. Strategies to improve nurse retention included: new nurses paired with strong preceptors for orientation, new nurse graduate residency program, CNO and senior leaders greeted all new hires during orientation, informal lunch with CNO upon completion of orientation to solicit feedback and identify opportunities for improvement. Strategies for nurse recognition included: Recruitment, Retention and Recognition (R3) Shared Governance Council presented monthly DAISY Nurse awards, quarterly DAISY Nurse Leader awards, and monthly Sunflower awards for ancillary staff. All certified nurses are recognized annually on Certified Nurses' Day March 19th. Nurse Excellence Awards are presented to nominated nurses during Nurses' Week in May. Finally, activities to address wellness included Unit/Department wellness rounds conducted by Helping Healers Heal (H3) peer support champions, Wednesday wellness walks by the East River, weekly Zumba class on Tuesdays, Dance for Life movement classes on Fridays, and quarterly Schwartz Rounds, which provides a safe space for staff to express their feelings and experiences. The CNO rounded on all units to meet with staff, and conducts "Chit Chat with Chris" quarterly to solicit feedback from staff and identify opportunities for improvement. Leadership rounds and presence on the unit is considered essential to provide support to all nursing staff. **Results:** There was increased nurse retention in Medical /Surgical units from 20% in Q1 2022 to 100% in Q2 2023 with all vacancies filled. Internal promotions included 14 out of 18 nurse leadership positions. NDNQI-RN engagement survey participation increased from 73% in October 2022 to 90% in June 2023. Many units scored higher than the mean comparison group for nurse autonomy, professional development, and staffing and resource adequacy. **Limitations:** There were staffing challenges related to the pandemic, retirements, and resignations. Travel nurses were difficult to recruit for specialty areas, such as Emergency Department, Intensive care Unit, Neonatal Intensive Care Unit, Labor & Delivery, Operating Room, and Behavioral Health. Time constraints existed related to numerous recruitment fairs and frequent rounding, however, the nursing leadership team were committed to increasing nurse retention and engagement. **Conclusion and Recommendations:** While continuing the changes above, there are future plans for wellness rounds during the night shift, and a focus on nurse leader resilience to reduce burnout among nurse managers. Because studies have shown that there is a strong correlation between nurse manager transformational leadership and mentoring to support nurses' resilience and engagement, there will be a focus on Shared Governance, creating a healthy work environment, and demonstrating gratitude.

Keywords: Nurse Turnover, Nurse Retention, Nurse Resilience, Nurse Burnout, Compassion Fatigue

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ORIGINAL RESEARCH

A National and Collaborative Approach Addressing the Nurse Educator Shortage: Resolution Statements to set an Action Agenda

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Abstract

Background: The cyclical and persistent shortage of nurses globally is directly related to the shortage of academic nurse educators (ANEs). There is not enough ANEs to educate the current and future nurses in the country. It will only get worse with faculty who are baby boomers retiring in 2025, and very few nurses are pursuing higher degrees in nursing education specifically. **Purpose:** The purpose of this research is to identify collaborative strategies that can mitigate this shortage of ANEs through the intentional cooperative actionable work of five stakeholders in healthcare, namely: educational institutions, healthcare organizations, policymakers, professional nursing associations, and the public and business sectors (consumers of healthcare). **Methods:** A qualitative, modified nominal group technique was utilized. Nurse educators acting as participatory action researchers took part in the study. Participants identified stakeholder specific courses of action based on an extensive review of the literature, a SWOT analysis and personal experiences. **Findings:** Each stakeholder subgroup identified overarching themes. Through intentional collaborations, all stakeholder groups came up with actionable strategies to mitigate the shortage of ANEs. Additionally, resolutions were written by each stakeholder group and presented in this manuscript to serve as the action plan. **Conclusion:** The synergistic effects to be undertaken by the five stakeholder groups to collaboratively address the ANE shortage will be impactful, sustainable and scalable in addressing the lack of ANEs.

Keywords: Resolutions, shortage, academic nurse educators, actionable statements

Addressing the Academic Nurse Educator Shortage: Resolution Statements to set an Action Agenda

In April of 2023, a group of 45 nurse educators responded to a post on the social media platform of a national organization calling for a group to come together to address the nurse educator shortage. Initial meetings began in May 2023 and focused on establishing a variety of strategies to address the academic nurse educator (ANE) shortage. By June 2023 and to date, twenty-five members committed to actively participate and contribute to this initiative. Originally called the National League for Nursing (NLN) Task Force on Nurse Educator Workforce Crisis, this group has become NC-ANE, or the National Consortium of Academic Nurse Educators. Their mission is to "to advocate for academic nurse educators as advanced practice nurses, who are competent in their specialty, through research endeavors and collaboration with other professional organizations and partnerships with various stakeholders (NC-ANE, 2024)."

The first tangible outcome of NC-ANE was the development of a series of resolution statements directed towards five stakeholder groups, which is the focus of this article. At the initial meeting, the stakeholder groups seen as most likely to address the shortage were identified as (1) educational institutions, (2) healthcare organizations, (3) nursing professional organizations, (4) policy makers and legislators, and (5) consumers of health care (represented by the public and business sectors). While the ANE shortage has been in existence for decades, action plans were isolated and non-collaborative in nature, resulting in the problem persisting and even worsening (Bakewell-Sachs et al., 2022; Mariani, 2023). The resolution statements developed out of a series of activities undertaken by NC-ANE with the goal of developing a structured, systematic and holistic approach to addressing the nurse educator shortage crisis. The research problem was defined as understanding the factors contributing to the shortage of academic nurse educators (ANEs), from both a recruitment and retention standpoint, and identifying opportunities for stakeholder groups to address these challenges.

Methods

The development of the resolution statements utilized a qualitative paradigm, specifically the modified nominal group technique [NGT] (Mullen et al., 2021). The four NGT steps were completed over several meetings (Figures 1 and 2). Data generation, the first step, involved gathering data relevant to the research question.

Data were collected by sharing personal and professional experiential anecdotes and describing various scenarios to describe the severity of the faculty shortage and by conducting a literature review (Vardaman et al., 2024). Data organization, the second step, consisted of two activities. First, participants listed their respective contributions into a strength, weaknesses, opportunities, and threats (SWOT) analysis. Next, participants developed an annotated bibliography of all the relevant research about the topic. Then the large group transitioned to discussion and prioritization, the third NGT step. Each of the 5 major stakeholder groups met to develop a resolution addressing their respective stakeholders with recommendations to address the nurse educator shortage. Discussions and prioritization occurred at the subgroup level until each resolution was established with realistic and relevant recommendations. The resolutions are intended to be action plans for stakeholder groups to implement and evaluate. Once the subgroups completed their respective resolutions, the entire group membership reconvened and continued additional discussion and prioritization of each completed resolution until there was consensus, the final step of the NGT. At the beginning of the research study, the group decided on 100% consensus on each resolution considering the significance of the topic.

Results

Each of the groups identified key issues contributing to the ANE shortage for their stakeholder groups. Once the issues were clearly identified, then action statements were developed. These action statements took the shape of resolution statements.

Sample

Participants' employment status varied; all worked in either an educator and/or academic administrator role, with some working full-time and others working part-time. Some, but not all, were in tenure-track positions. Of the 25 participants, 23 (92%) were female, with teaching experience ranging from 5 to 45 years (Vardaman et al., 2024). While this convenience sample is overwhelmingly female, this aligns with the composition of the nurse faculty workforce nationally, in that males comprised 7% of ANEs in 2022 (Hand & Reid, 2022).

Educational Institutions

The educational institutions subgroup reached consensus regarding issues that impact the ANE shortage as well as potential actions that could positively impact the issue (see Resolution for citations). Participants agreed that problems facing ANEs include 1) lack of recognition of ANEs as advanced practice nurses, 2) benefits and compensation not comparable to clinical practice, 3) lack of formal orientation and mentorship for newly hired ANEs, 4) lack of awareness and dissemination of available funding to students in nurse educator programs, 5) lack of ANE targeted hiring strategies for faculty positions, 6) lack of recruiting students for faculty roles, 7) low levels of faculty confidence, and 8) terminal education degrees not recognized to be important (i.e., EdD).

Professional Organizations

The professional organization subgroup identified four overarching themes contributing to the ANE shortage (see Resolution for citations). These themes included: 1) the need for increased collaboration among healthcare agencies, public entities, and governmental agencies; 2) lobbying for increased compensation; 3) promotion of the nurse educator as a viable specialty within the nursing profession; and 4) recognition that ANEs require specialized training above and beyond a master's degree in nursing.

Healthcare Organizations

Two overarching themes were identified by the healthcare organizations subgroup: support and collaboration (see Resolution for citations). It was agreed that leaders of healthcare organizations (HCOs) need to provide support to staff nurses who could become ANEs. Workplace culture appears to encourage nurses to pursue graduate educational degrees in advanced clinical practice and nursing leadership rather than in nursing education. Logistical, emotional, and financial support from HCOs is needed by nurses when they pursue educational preparation to become nurse educators.

However, support from leaders in HCOs needs to occur in collaboration with leaders in academic nursing programs. Study participants spoke of the existing challenges in academic nursing education. In relation to HCOs, ANEs continue to struggle to secure sufficient hands-on clinical learning opportunities for nursing students. In addition, not all HCO have resumed pre COVID-19 levels for clinical placements for nursing students. Consensus discussion and the scholarly literature provide evidence and examples for strengthening collaboration between academic nursing programs and HCOs. Two themes emerged for when collaboration best occurs. Collaboration is evident when HCOs have: 1) dedicated education units, and 2) formal partnerships with academic nursing programs. Specific examples

Figure 1
Schematic Representation of the Nominal Group Technique Method Used
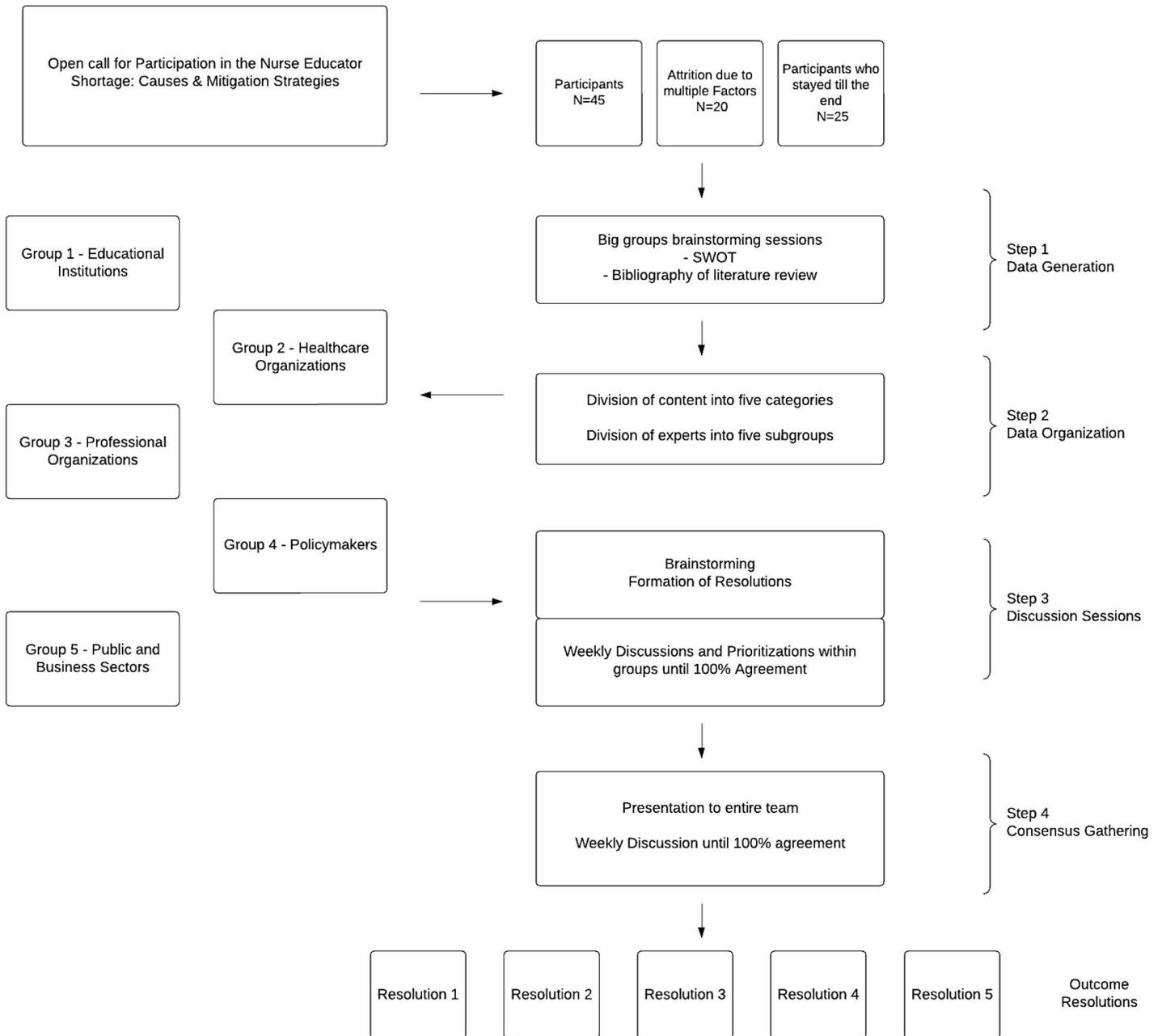
of formal partnerships include simulation partnerships, shared orientations, joint appointments, nurse residency programs, and novel nurse educator residency programs.

## Policy Makers and Government Organizations

The policy makers and government organizations subgroup prioritized five themes to address the academic nurse educator shortage (see Resolution for citations). The themes include: 1) enhanced and sustained funding for recruitment and retention of academic nurse educators; 2) targeted preparation of academic nurse educators to reduce attrition; 3) sustained and formalized academic-practice partnerships; 4) the creation of a national center for nursing education; and 5) upgrading the role of the academic nurse educator commensurate to education, knowledge and skill requirements and scope of responsibilities.

Public and Business Sector

The public and business sector subgroup analyzed solutions proposed in the literature, as well as developed creative and compelling actions which go beyond the literature. Five major themes for the solutions included the need to 1) engage the media in exposing the relationship of the ANE shortage with the nursing shortage, 2) encourage lobbying activities with legislators to take immediate action to resolve the ANE shortage, 3) elevate personal life experiences of patients who suffered negative effects of the nursing shortage, 4) lobby local, state and federal legislators to incentivize higher education of nurses to become ANEs, and 5) implore the public and business sectors to collaborate with advocacy groups, professional organizations, educational institutions, HCOs, and private and non-profit foundations. This call to action empowers the public and business sectors/business owners to use their bully pulpit as levers of change and provides opportunities to elevate the human experience in healthcare.

Discussion and Implications

Figure 2
Process of Generating Common Themes Used by the Educational Institutions Stakeholder Group
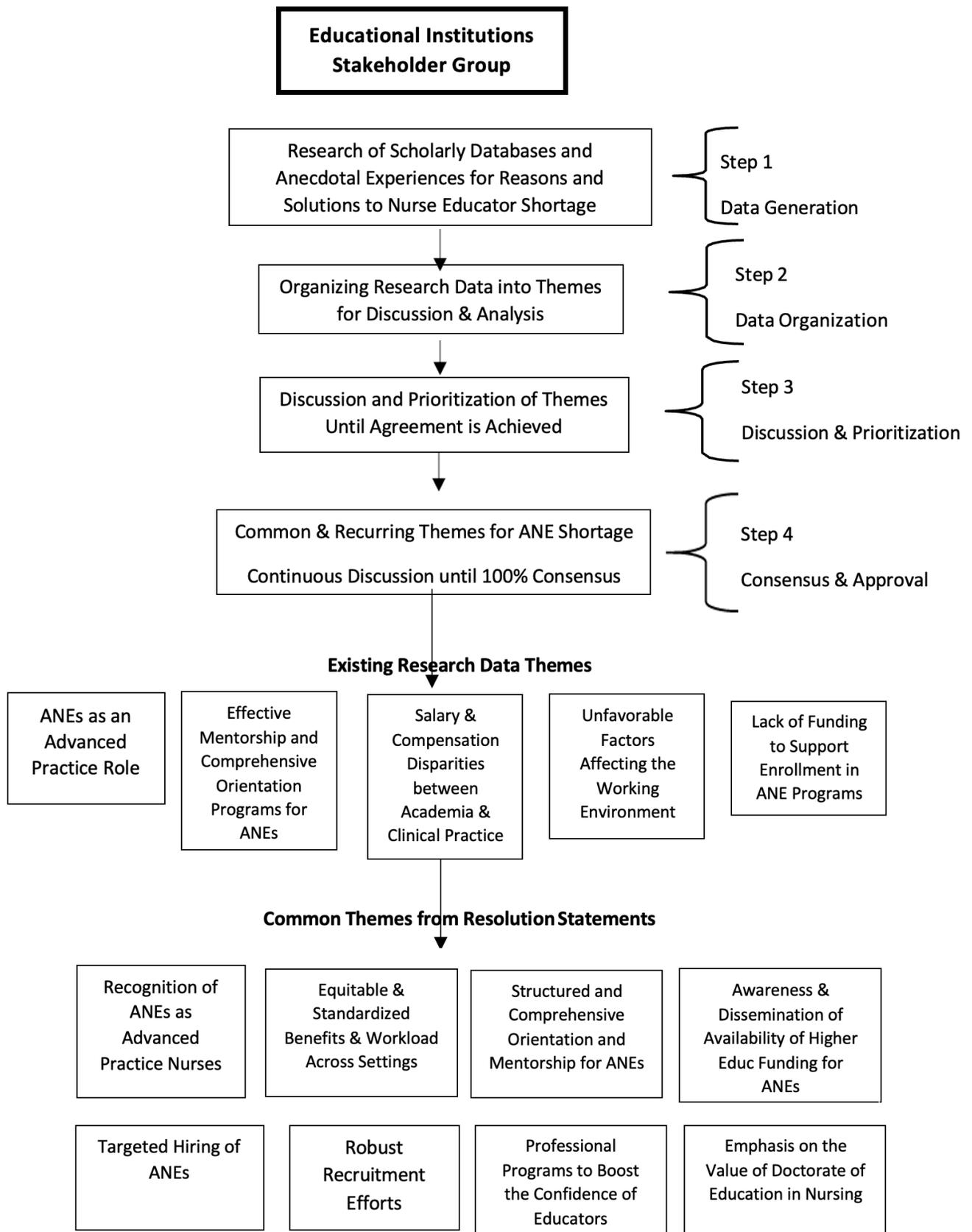
Note: ANEs: Academic Nurse Educators

This study addressed the question of what factors contribute to the shortage of ANEs and what actions can be taken to respond to the factors from the perspective of five stakeholder groups. Given the breadth and depth of the issue, a multifaceted response is essential. It was identified early on that the focus needed to be on both recruitment and retention of ANEs. Some overlap was seen across the stakeholders groups, therefore, refining the key strategies that need to be undertaken is required. Underlying the issue of sufficient ANEs is acknowledgement that without adequate numbers of ANEs, generating the next generation of clinical nurses will continue to be stalled (Bakewell-Sachs et al., 2022; Mazinga, 2022). While not the only factor associated with the nursing shortage, preparing new nurses to care for patients across populations is central.

Foundational concerns need to be addressed. Without increased compensation, along with more robust benefits, it is likely that the number of ANEs will remain less than desired (Jarosinski et al., 2022). Highlighting the role of the ANE as a valuable specialty within the nursing profession, commensurate with other advanced practice degree holders is needed to support the need for increased compensation (Gazza, 2019). Until compensation is comparable to what nurses can make in other specialty areas, academic nursing will suffer. The provision of increased compensation is known to be a complex issue. However, there are other steps that can be taken to recruit and retain ANEs above and beyond this single issue.

Increased collaboration among educational institutions, healthcare agencies, public entities, and governmental agencies is required to address the shortage of ANEs. The United States would benefit from the creation of a national center for nursing education (Blakewell-Sachs et al, 2023) to continue to coordinate a focused response as well as a proactive plan to continue assuring the nursing workforce continues to grow and thrive.

Regarding recruitment, the following recommendations were identified. It is necessary to identify prospective ANEs early on in a nurse's career (Boamah et al., 2021). Nursing students who show interest and promise to become educators can be identified and supported in this role. Practicing nurses who develop skills in mentoring and educating new nurses can also be supported in becoming clinical nurse educators as well as ANEs. Support can and must include enhanced and sustained funding for engaging in nurse educator programs (Gazza, 2019), accompanied by ongoing increased awareness and dissemination of available funding to nurse educator students.

It must also be noted that ANEs require specialized training in pedagogy and other specialized skills (Richter et al., 2020). Having an advanced degree in nursing is not enough to be an effective ANE. Not only do nursing education programs need to continue to provide this essential knowledge, there also needs to be alternative pathways to receiving the necessary knowledge to be effective, such as post-graduate certificate programs (McNelis, et al., 2019).

Retention strategies for ANEs must include formal orientation and mentorship for newly hired ANEs to improve faculty confidence and morale (Ephraim, 2021; Young-Brice et al., 2022). This means that educational institutions must have targeted hiring strategies for faculty positions to ensure there are experience faculty members to provide mentoring and role-modeling as well as contribute to curriculum development and remain at the forefront of teaching and learning strategies (Richter et al., 2021). Promotion and tenure should include factors that have been shown to contribute to being an advanced practice nurse, including certification as an ANE (Gazza, 2019). Research continues to be needed to continue to explore what is most effective to educating the new generation of nurses in our everchanging healthcare arena.

Limitations

The convenience sample of 25 self-selected participants may not fully capture the full perspective of nurse educators from various regions, settings, and types of nursing programs, limiting the generalizability of the results. With the research study taking place for several weeks, the sample size decreased from the original 45 participants to 25 who remained working within subgroups, potentially biasing the outcomes.

Conclusion

The evidence from this research demonstrates the need for stakeholder groups to concentrate their efforts on the recruitment and retention of ANEs. Implementing these recommendations may help attract qualified nurses to become ANEs. Consequently, implementation of the recommendations can increase the number of practicing ANEs, allowing larger numbers of qualified applicants to enter nursing programs. The ultimate positive outcome will be placing more nurses into the workforce, therefore, helping to ease the critical shortage of nurses.

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Each resolution began with a standard opening statement. This is the statement for the educational institutions' subgroup; each resolution reflected the specific subgroup stakeholder being addressed.

We, members of a representative group of diverse nurse educators from all over the country, are concerned with the number, adequacy, and preparation of clinical and academic faculty who will educate and serve as role models to a steady stream of professional nurses. These future nurses are needed to fill the ongoing demand for nurses and meet the needs of today's challenging healthcare environment. An analysis of the nursing faculty shortage in current research and literature was conducted in order to collaboratively and collectively make recommendations to address this complex and multi-faceted problem on the part of educational institutions. Similar resolutions have been written by other subgroups of this committee to holistically address this issue from different perspectives of various stakeholder groups to include healthcare organizations, professional organizations, policy makers, as well as the public and business sectors.

Each resolution statement ended with acknowledgement of the NC-ANE team members and a glossary of terms contained within the resolution statements.

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Notes:

Nurse Educators teach in a variety of roles and settings for a variety of purposes. Their titles and labels used for them often reflect their purpose or setting. This variability across healthcare can cause confusion.

For the purposes of this document, and to facilitate clarity, this glossary of terms is included. NOTE: there is also great variety in the responsibilities and job descriptions within these titles. The terms defined in this document are not intended to be all inclusive rather, are examples of the language used in this document.

Academic Nurse Educators[1] (ANE) are licensed registered nurses with an advanced degree (Master's or doctorate) that are employed by a university, college, or school of nursing. ANEs educate nursing students in the classroom and clinical settings, simulated learning laboratory, and distance and/or other settings to meet program learning outcomes. ANEs facilitate the professional development and socialization of nursing students as part of the interdisciplinary healthcare team to provide safe and effective care. ANEs are responsible for development of curriculum, evaluation of program outcomes, engagement in scholarship, and functioning as a change agent and leader within healthcare.

Nursing Professional Development Educators[2] (NPDE)- are licensed registered nurses with a Bachelor's degree or higher (and often specialty certification) that are employed by a healthcare organization such as, but not limited to, a hospital or clinic. NPDEs are employed in a variety of roles and positions (hospital or unit-based) to support and develop the skillset of registered nurses and to ensure optimal patient care and population health. NPDEs typically teach in nursing orientation or nurse residencies and provide instruction to new nurses transitioning into practice or changing clinical practice settings. Many also have the responsibility of coordinating specialty instruction (e.g. IV placement, chemotherapy, ECG Monitoring, CPR, etc.) to promote staff development and maintenance of competencies.

Assistive Personnel (AP)/Unlicensed Assistive Personnel (UAP)[3]: Any assistive personnel trained to function in a supportive role, regardless of title, to whom a nursing responsibility may be delegated. This includes, but is not limited to, certified nursing assistants or aides (CNAs), patient care technicians, certified medical assistants, certified medication aids, and home health aides.

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RESOLUTION

Resolution Addressing Educational Institutions on the Shortage of Nurse Educators

WHEREAS, the subgroup on the Nurse Educator Shortage wrote this resolution, to address the shortage of qualified nursing faculty and the impact it has on the nursing shortage;[1-3]

WHEREAS, the subgroup on the Nurse Educator Shortage recognizes the academic nurse educator (ANE) as an advanced practice nurse based on published role-specific competencies;[4,5] this despite the current classification that advanced practice nurses (APRNs) only include nurse practitioners, nurse anesthetists, nurse midwives, and clinical nurse specialists;

WHEREAS, nursing education program administrators are now reporting a deterioration of the nursing education workplace climate due to overwork and burnout;[6]

WHEREAS, there is an increased number of nursing schools relative to previous time periods which caused an increase in competition for a limited pool of qualified academic nurse educators and clinical sites;[2,7]

WHEREAS, inconsistencies exist across settings regarding benefits of ANEs to include compensation, workload, and work-life balance among practice sites and educational institutions;[8-10]

WHEREAS, effective formal orientation and formal faculty mentorship, collegiality, and communication are of great importance for those new to the ANE role;[11-14]

WHEREAS, there are restrictive financial resources and lack of communication of available funding for advanced degree programming for ANEs;[2,5]

WHEREAS, there needs to be a more targeted and systematic approach for the recruitment of the ANE role to sustain the nursing profession;[14,15]

Therefore, be It:

RESOLVED, that academic institutions seek to promote the nurse educator opportunities available to students seeking advanced nursing education;[16]

RESOLVED, that all educational institutions adopt the role-specific nurse educator competencies for all nurse educators;[13,16,18,19] that ANEs obtain certification to ensure evaluations, tenure, and promotion guidelines, in order for nurse educators to be consistent with other APRN roles;[5,17]

RESOLVED, that all educational institutions be called upon to review its employee or faculty benefits, including compensation, workload, and work-life balance, and ensure they are standardized and comparable to practice sites;[9,12]

RESOLVED, that educational institutions provide new and prospective academic nurse educators with formal orientation and mentorship related to pedagogical and other teaching and learning processes;[12]

RESOLVED, that educational institutions increase awareness and dissemination of available funding for advanced degree programming for academic nurse educators;[5]

RESOLVED, that educational institutions be encouraged to include ANEs in their targeted hiring strategies to sustain the profession of nursing;[14]

RESOLVED, that nursing faculty identify prospective nurse educators amongst all levels of nursing students and begin to mentor them towards pursuing nursing education as a career;[10,20]

RESOLVED, that educational institutions create a clear pathway for post graduate certificates for nursing education to enable those novice educators, who were not required to have formal nursing education pedagogy courses to gain confidence;[21,22]

RESOLVED; that some educational institutions, who currently do not, acknowledge the value of an EdD in Nursing as qualifying criteria for a position as an ANE.[22]

Signed by the Sub-Working Committee on Educational Institutions Addressing the Nurse Faculty Shortage on this 7th day of the month of July in the year two thousand twenty-three.

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RESOLUTION

Addressing the Shortage of Nurse Educators by Collaborating with Professional Organizations

WHEREAS, there is a lack of unified and coordinated effort to address the nurse educator shortage amongst nursing professional organizations;[1, 2]

WHEREAS, there continues to be a significant wage gap between academic nurse educators and nursing clinical practice positions;[2,3]

WHEREAS, there is a lack of unified recognition of the nurse educator role as a nursing specialty, requiring broad-based and unique skills, knowledge, and competencies across clinical, community, and academic settings;[2,4]

WHEREAS, PhD and DNP programs traditionally do not provide content on the science and art of nursing education in current curricula;[2] and

WHEREAS, academic and healthcare organization educators with little to no pedagogical and theoretical teaching education and competencies are more likely to leave the nurse educator role within 5 years.[4]

Therefore, be it

RESOLVED, that nursing professional organizations establish a collaborative taskforce to identify coordinated strategies to address the nursing faculty shortage at national, regional, and local levels;[2,5,6]

RESOLVED, that nursing professional organizations lobby for increased wages for nurse educators in recognition of the importance of their role;[3]

RESOLVED, that nursing professional organizations more strongly promote the nurse educator role as a viable specialty within their organizations as stipulated in the NLN requirements for specialized pedagogical training;[10,11]

RESOLVED, that nursing professional organizations reconsider the advanced practice nursing (APRN) model to strategically include nurse educators among those currently considered APRNs, e.g., nurse practitioners, nurse anesthetist, nurse midwives, and clinical nurse specialists;

RESOLVED, that nursing professional organizations understand that nurse educator majors have the same advanced knowledge, education and training in the specialized field of nursing education that align them in the roles of other advanced practice nurses. Categorizing nurse educators as APRNs will be a big draw for those thinking of pursuing advanced degrees, and will raise them in the same classification as their current APRN peers;

RESOLVED, that nursing professional organizations recognize that the nurse educator role requires specialized training beyond traditional PhD and DNP programs;[8,10] and,

RESOLVED, that nursing professional organizations recognize and value EdD and MS Nursing Education programs in their ability to build an adequately prepared nurse educator workforce and nurse leaders.[9,10]

Signed by the Sub-Group on Professional Organizations Addressing the Nurse Faculty Shortage on this 7th day of the month of July in the year two thousand twenty-three.

Co-Leads of the Sub-Committee on Professional Organizations Addressing the Nurse Educator Shortage:
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RESOLUTION

Addressing the Workforce Shortage of Nurse Educators by Collaboration with Healthcare Organizations

WHEREAS, the nursing shortage continues to impact healthcare, retention, and recruitment across the country resulting in fewer nurse graduates to fill vacant positions in clinical, community, and academic settings;[1]

WHEREAS, schools of nursing are unable to meet enrollment demands due primarily to a lack of nursing faculty3, resulting in the rejection of over 70,000 applicants per year to nursing programs leading to initial RN licensure;[4]

Whereas, healthcare organizations have limited the number of students' clinical placement capacity even beyond acute COVID;[8]

WHEREAS, the shortage of nursing faculty in the clinical, community, and academic settings is due to the increasing mean age of faculty, retirement, retention, work-life balance, and options for higher pay when working as a staff nurse or nurse practitioner;[2,3]

WHEREAS, novice and experienced nurses are placed in healthcare organization educator roles without adequate formal pedagogical training;

WHEREAS, staff nurses do not receive sufficient support to pursue nurse educator roles in the form of pre-approved long-term scheduling requests, time off, flexible scheduling, financial assistance, and access to available nurse educator programs;

WHEREAS, healthcare organizations are investing in short term solutions such as agency, overtime, travel nurses versus long term solutions for the nurse staffing problem; and,

WHEREAS, work life balance between academic educators and healthcare organization educators is negatively affecting academic faculty capacity.[1-5]

Therefore, be it:

RESOLVED, that the leaders of healthcare organizations (HCOs) encourage the nursing educator role pathway as a career choice in their clinical ladder and promotion systems;

RESOLVED, that HCOs hire educators into nurse educator roles whose qualifications are stipulated by professional organizations, such as the National League for Nursing, and State requirements;

RESOLVED, that HCOs strongly support staff nurses financially in advancing their education;

RESOLVED, that managers and administrators of HCOs provide dedicated time for course work and class attendance to staff pursuing a graduate degree in nursing education;

RESOLVED, that hospitals and other clinical training sites resume pre-COVID clinical placement capacity for student groups;[8]

RESOLVED, that HCOs support and develop Dedicated Education Units (DEUs) where appropriate and feasible;[6]

RESOLVED, that administration of HCOs support clinical nurse educators in their role of educating clinical staff and nursing students with regards to the important role of diversity, equity, inclusion, and belonging in patient care;[7]

RESOLVED, that HCOs develop formal partnerships between schools of nursing and medical centers in order to incentivize both academic and clinical educators with a joint or dual appointment;[9]

RESOLVED, that healthcare settings provide opportunities for academic nurse educators to collaborate with healthcare organization leaders and clinical nurse educators during regulatory visits, staff training, faculty and student residency programs, and research initiatives;

RESOLVED, that HCOs reject requiring payment from academic institutions for clinical placements and preceptorships;

RESOLVED, that administrators of HCOs identify and reduce barriers for enhanced partnerships with academic institutions;[8]

RESOLVED, that HCOs develop a nurse educator residency program for staff nurses who have the interest, skill, and potential to become nurse educators in collaboration with academic institutions; collaborate with schools and departments of nursing to build and sustain a culture of wellness to address work-life balance; and,

RESOLVED, that HCOs collaborate in the use of educational resources, such as simulation centers in schools of nursing in orientation and residency programs for novice nurses and faculty.

Signed by the Sub-Group on Healthcare Organizations Addressing the Nurse Faculty Shortage on this 7th day of the month of July in the year two thousand twenty-three.

Co-Leads of the Sub-Committee on Healthcare Organizations Addressing the Nurse Educator Shortage:
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RESOLUTION

Addressing the Nurse Educator Workforce through Collaboration with Policymakers

WHEREAS, nursing is the largest of the health professions, with over 4 million nurses in this country;[1]

WHEREAS, nurses are the backbone of the American healthcare system, serving in urban, suburban, and rural areas; as first responders and acute care nurses, working in ambulatory care or in the community;

WHEREAS, nurses have been consistently ranked as the most trusted profession for over twenty years;[2]

WHEREAS, America is in the midst of a crisis threatening the supply, education, and training of registered nurses;[3]

WHEREAS, the American Nurses Association reported in 2022 that more registered nurse jobs would be available than any other profession in the U.S.;[4]

WHEREAS, the American Hospital Association projects that the nursing shortage crisis will continue in the absence of concerted action;[5]

WHEREAS, the U.S. Bureau of Labor Statistics projected more than 275,000 additional nurses will be needed between 2020 and 2030, with growth projected at a faster rate (9%) than all other occupations from 2016 through 2026;[6]

WHEREAS, an increasing number of nurses will be needed to care for an aging population with more than one morbidity (illness or health challenge) and many other terminal diseases that are now considered to be chronic in nature;[4]

WHEREAS, the nursing workforce is aging with one million RNs in the US over 50;[7]

WHEREAS, approximately 100,000 registered nurses left the workforce between 2021-2023 due to stress, burnout, and retirements; another 610,388 reported an intent to leave by 2027;[7]

WHEREAS, nurses will move to different jobs or to other states in the country to follow salary, job satisfaction, and safe staffing laws. Nurses will remain in positions where they find intrinsic satisfaction and when salaries are commensurate to the volume and risks of the workload;[8]

WHEREAS, nursing education coursework and experiential learning are needed to prepare students to promote health equity, reduce health disparities, and improve the health and well-being of various populations;[9]

WHEREAS, nursing students must learn about, and practice in, a broad range of care environments (beyond acute care in the hospital), and work collaboratively in teams with other health professionals;[9]

WHEREAS, nursing schools must expand efforts to recruit and assist students and faculty with regards to the populations they serve; These can be achieved through holistic efforts to support, mentor, and sponsor students and faculty from a wide range of backgrounds;[9]

WHEREAS, to achieve health equity, the U.S. must increase nursing capacity and expertise;[9]

WHEREAS, the shortage of nursing faculty has been identified by nursing schools as a top reason for not accepting all qualified applicants into their programs;[9,10]

WHEREAS, U.S. nursing schools turned away 91,938 qualified applications from baccalaureate and graduate nursing programs in 2021 due to an insufficient number of faculty, clinical sites, classroom space, clinical preceptors, and budget constraints;[10]

WHEREAS, student enrollment is limited by state guidelines that mandate faculty to student ratio. For example, "pre-licensure registered nursing education programs shall have a maximum faculty to student ratio of one faculty member to ten students in clinical settings involving direct patient care, and one faculty member to fifteen students at one time in practice settings that are observational, involve student precepted experiences, or are skills practice labs;[11]

WHEREAS, the nursing profession continues to face shortages due to lack of potential educators, inequitable workforce distribution and high turnover;[4]

WHEREAS, a total of 2,166 full-time faculty vacancies were identified in a survey of 909 nursing schools with baccalaureate and graduate programs across the country;[11]

WHEREAS, schools cited the need to create an additional 128 faculty positions to accommodate student demand;[11]

WHEREAS, there is a national nurse faculty vacancy rate of 8.8%, with most of the vacancies (84.9%) for faculty positions requiring or preferring a doctoral degree;[11]

WHEREAS, the nursing faculty shortage includes academic (tenure-track) faculty, clinical (non-tenure track) faculty, clinical field and site instructors, and preceptors, making it impossible to resolve with a unilateral strategy;[12]

WHEREAS, the nursing faculty shortage is intensifying due to the aging of the faculty and expected retirements within this decade;[3,11]

WHEREAS, nursing education program administrators are now reporting a deterioration of the nursing education workplace climate due to work overload and burnout;[13]

WHEREAS, policymakers are needed to enact laws which address the infrastructure needed to promote and develop new nurse educators, while also supporting existing nurse educators;

WHEREAS, effectively addressing the nursing faculty shortage requires the collective efforts of all stakeholders, including schools of nursing, practice leaders, legislators, corporate entities, and the public;[14]

WHEREAS, there is a critical need for the creation of a national center focused on nursing education and the development of nurse faculty and clinical preceptors;[3]

WHEREAS, the American Hospital Association urged Congress and the U.S. Administration to invest in nursing schools and nurse faculty salaries; increase funding for the National Health Service Corps and the National Nurse Corps;[5]

WHEREAS, nursing education programs struggle to find clinical placements and preceptors to facilitate student clinical experiences;[10] and,

WHEREAS, the Department of Labor awarded over $78 million to 25 academic-practice partnerships in 17 states as a model incubator for grantees (academic and practice partners) under the Nursing Expansion Grant Program.[15]

Therefore, be it

RESOLVED, that Congress and the U.S. government invest in nursing schools and departments of nursing, nurse faculty salaries, and hospital training time; increase funding for the National Health Service Corps and the National Nurse Corps, providing support for nurse faculty positions;[3,5]

RESOLVED, that the Department of Health and Human Services and the Department of Education identify other funding sources to programs that promote an increase in the number of nursing faculty;[3]

RESOLVED, that the Department of Health and Human Services and the Department of Education allocate specific funding to programs that support nurse faculty development. This means incorporating academic coursework in nursing education within all graduate nursing curricula to prepare nurses to assume nurse faculty positions upon completion;[3]

RESOLVED, that Congress and the U.S. government provide funding for the Health Resources and Services Administration to develop a nurse faculty residency program that emphasizes strategies to improve faculty recruitment, preparation, development, retention and financial reimbursement for service as a faculty member;[3]

RESOLVED, that the U.S. government incentivize academic institution and healthcare organization partnerships related to mutual and joint appointments for academic nurse educators. This can come in terms of role expansion, improved collaboration between schools and healthcare settings, and offer a form of financial reward to enhance existing or the lack of academic-healthcare industry partnerships;

RESOLVED, that Congress and the U.S. government allocate specific funding for the creation of a national center devoted to nursing education and the development of nurse faculty;[3]

RESOLVED, that policymakers strategically include nurse educators among those currently considered advanced practice nurses (APRNs), e.g., nurse practitioners, nurse anesthetist, nurse midwives, and clinical nurse specialists. Nurse educator majors have the same advanced knowledge, education and training in the specialized field of nursing education that aligns them in the roles of other advanced practice nurses. Categorizing nurse educators as APRNs will be a big draw for those thinking of pursuing advanced degrees, and will raise them in the same classification as their current APRN peers;

RESOLVED, that Congress and the U.S. government allocate specific funding for preceptors/clinical evaluators to support students in obtaining clinical hours while working as unlicensed assistive personnel (UAP)10; and,

RESOLVED, that the Health Resources and Services Administration lead the implementation of the national center devoted to nursing education as a federal-private partnership, in coordination with professional nursing and non-federal philanthropic organizations.[3]

Signed by the Sub-Group on Policy Addressing the Nurse Faculty Shortage on this 14th day of the month of July in the year two thousand twenty-three.

Co-Leads of the Sub-Committee on Policy Addressing the Nurse Educator Shortage:
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RESOLUTION

Improving the Workforce Shortage of Nurse Educators through Collaboration with the Public and Business Sector

WHEREAS, there is concern about the alarming and pressing nursing care crisis in the United States and the critical shortage of nurses that stems from the deficient number of ANEs;[5]

WHEREAS, there is distress about the scarcity of academic and clinical nurse faculty, resulting in a significant number of qualified nursing students being denied acceptance into nursing

programs, further exacerbating the nursing shortage;[1,5]

WHEREAS, consumers of healthcare, including the public and business owners, need to know what the standards of nursing care are and how safe and quality care is being threatened due to the nursing shortage;[13]

WHEREAS, there is evidence in the literature that the nursing shortage results in patient dissatisfaction and missed nursing care which directly affects patient outcomes [2,3] and increased readmission for the same symptoms and complications of chronic illnesses;[1,2,8]

WHEREAS more ANEs improve the health of the consumers of care, as a result of the increased number of nurses educated to deliver safe and competent care;[5]

WHEREAS, there is an increasing need for public awareness of the intersection of taxes and healthcare. This includes those who own businesses who are mandated to pay government taxes and offer healthcare insurance to their employees if they have more than 20 workers; taxes are used by local, state, and Federal governments to fund programs deemed essential or dire, such as enhancing academic nurse education and faculty appointments;

WHEREAS; the need for access to care is crucial to all healthcare consumers, including both public and business sectors;[6]

WHEREAS, some businesses include healthcare insurance as part of the compensation for their employees;

WHEREAS, when employees become sick and potentially become hospitalized, they experience the negative consequences of nurse staffing shortage, such as poor patient care outcomes;

WHEREAS, prolonged illnesses and medical complications for employees consequently increase overhead for businesses;

WHEREAS, the public and business sectors require culturally-competent, equitable, and inclusive care as the nation becomes more diverse;[11]

WHEREAS, the human experience in healthcare is a critical healthcare outcome, often influenced by the quality of nursing care and reflected in patient satisfaction and treatment adherence, among other outcomes.[15]

THEREFORE, be it:

RESOLVED, that the public and business sectors be informed of the standards of care already set by the nursing profession and should demand quality care accordingly;[13]

RESOLVED, that the public and business owners are encouraged to attend public forums to support legislation to fund more academic nurse educator positions, thereby increasing the number of nurses to decrease the shortage;

RESOLVED, that the public and business owners will be provided with letter and email templates to petition healthcare insurance companies and private and public foundations to provide media coverage in support of the need for ANEs and nurses;[5,11]

RESOLVED, that the public and business owners will be provided with letter and email templates so they may contact local, state, and federal government representatives about the critical shortage of ANEs;[5]

RESOLVED, that that the public sector support advocacy groups to seek the increase in the number of ANEs resulting in more nursing graduates to improve patient-nurse ratios;[7,10]

RESOLVED, that the public will appeal to nursing associations, foundations, and health-related businesses to create service announcements to increase awareness of the lack of ANEs across the nation and to encourage nursing as a profession;[7,10]

RESOLVED, that the public and business sectors will collaborate with the efforts of healthcare organizations, advocacy groups, and nursing associations to achieve culturally competent healthcare;[10,11]

RESOLVED, that the public and business sectors will surface the human stories at the heart of healthcare, which largely reflect satisfaction/dissatisfaction with nursing care and subsequent positive or negative outcomes of care.[16]

Signed by the Sub-Group on the Public Sector Addressing the Nurse Faculty Shortage on this 7th day of the month of July in the year two thousand twenty-three.

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