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AMERICAN NURSES ASSOCIATION
NEW YORK

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Sustaining the Changing Landscape of Healthcare: A Nurse's Vantage Point

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The global coronavirus pandemic led to a myriad of public health concerns, highlighting health disparities and emerging inequities within healthcare. While this pandemic became an unprecedented disruptive force in today's society, it also served as a catalyst for innovations in health and technology. Telehealth is a modern solution to mitigate obstacles to healthcare delivery and plays a significant role in the future of American healthcare. With the expansion of telehealth and its growing popularity, opportunities for innovations and further iterations are expected (Roth, 2020).

Although rapid conversion to telehealth and other remote services was essential during a crisis, consideration is needed for how healthcare services can be managed in a post-pandemic era. Smith et al. (2020) propose an integration of telehealth for use as a standard approach to practice. This recommendation suggests fundamental changes to the current models of care, including assuming sustainable policies and programs, operational networks, and an infrastructure embedded with the necessary technologies (Smith et al., 2020). Improving access to essential health services will very likely increase utilization for disadvantaged populations.

The Centers for Disease Control (CDC, 2020a, 2020b) identified populations facing increased risks for severe disease, hospitalization, and death from COVID-19, including vulnerable populations and those faced with health disparities. While ongoing preventative care and health treatments are necessary, many individuals opted to forgo medical and preventive care, provider visits, urgent and emergency interventions during the early phases of the pandemic (Czeisler et al., 2020). The true impact of this remains unknown. Czeisler et al. (2020) report "medical care delay or avoidance might increase morbidity and mortality (risk) associated with treatable and preventable health conditions and might contribute to reported excess deaths directly or indirectly related to COVID-19" (p. 1250).

Older adults were one of the most susceptible populations when COVID-19 first emerged, with death rates and hospitalizations significantly higher for adults ages 65 and older (CDC, 2020c, 2020d). Although these rates have declined over time, those with advanced age remain at high risk for severe diseases (CDC, 2022a). Racial and ethnic minority groups were also found to be disproportionately affected (CDC, 2020a, 2022b; Czeisler et al., 2020), including African American, Hispanic, American Indian, and Alaska Native non-Hispanic populations (CDC, 2020a, 2022b).

While underlying conditions are more prevalent in certain populations, factors such as socioeconomic status, access to healthcare, and risk of occupational exposure are considered risk markers for racial and ethnic minorities (CDC, 2022c). System inequities such as discrimination; gaps in education, income, wealth; lack of housing and poor housing conditions have also been suggested as risk factors among minority populations (CDC, 2022b). Those in rural settings are particularly vulnerable to COVID-19 and other grave illnesses.

According to the CDC (2020b), nearly 46 million Americans reside in rural environments and face barriers to health care access. High rates of poverty, lower literacy levels, and many without health insurance further compound the ongoing challenge of rural access to quality and necessary care (Melvin et al., 2020). Residents in rural areas are also known to have high rates of comorbidities (Cheng et al, 2020; Melvin et al., 2020), including hypertension and obesity, which increase the likelihood of severe illness and death from COVID-19 (CDC, 2020b). The CDC (2020b) reports that rural populations are growing in both ethnic and racial diversity. Approximately 20% of the rural population identifies as a racial or ethnic minority (Cheng et al., 2020). Intersectionality of risk factors among minorities in rural locales suggests an even wider scope in health disparities and subsequent health needs.

Access to healthcare through the extension of telehealth services provides a formidable option to support utilization of non-urgent and non-emergent health services (CDC, 2021; Czeisler et al., 2020). The U.S. Department of Health and Human Services (U.S. DHHS) describe telehealth as a two-way, communicative technology capable of providing specific health services (U.S. DHHS, 2020). Though historically underutilized, these technologies have emerged as the alternative for in-person health services during the pandemic.

Implementation planning for a health system that integrates telehealth requires practical and sustainable policies. This is a multifaceted and extraordinary complex initiative, further complicated by variations of healthcare coverage and programs found within the United States. Current system structures have variabilities in quality and access to healthcare among certain groups. Additionally, current health policies and a growing national fiscal crisis have disproportionately impacted healthcare in rural areas (Hirko et al., 2020; Melvin et al., 2020).

Policy makers and leaders must examine access to, technology associated with, and health policies needed to increase utilization of telehealth services. Prior to COVID-19, the use of telehealth was rarely considered a viable mode of healthcare service. According to Struminger and Arora (2019), rural and low-income

populations were less likely to have the necessary technologies and have limited access to sufficient internet and broadband. These obstacles pose imminent risks of increasing disparities among certain populations and communities with the expansion of telehealth. Recommendations to eliminate these barriers include prioritizing supportive processes and infrastructure (Hirko et al., 2020).

The COVID-19 pandemic, while compounding certain health and social disparities, also presented meaningful insights for healthcare administrators and policy leaders to address such issues. Along with the rapid adoption of telehealth services, the increased consumption for remote applications in work and school operations also occurred. Offering these virtual flexibilities and alternate use of technologies led to widespread needs assessments in the form of local, county, and state-wide surveys. Though fragmented, data from these surveys highlighted disadvantages among some groups and populations. This information provided understanding and awareness necessary to de-marginalize telehealth and healthcare access on a national scale.

Limited participation in telehealth prior to COVID-19 has also been attributed to provider speculation and resistance, licensing issues, lack of consumer knowledge, and both regulatory and financial barriers (Roth, 2020; Smith et al., 2020). However, governmental agencies removed several barriers during the first wave of the COVID-19 pandemic. Amid nationwide lockdowns, the Office for Civil Rights expanded options for use of communication technologies in good faith, offering flexibility to some rules of the Health Insurance Portability and Accountability Act (U.S. DHHS, 2020).

Additionally, telehealth services were incentivized through temporary policy changes by the Centers for Medicaid and Medicare Services (CMS). These changes included reimbursement consistent to in-office provider visits for recipients of Medicaid, Medicare, and Child Health Insurance Programs; approval to offer telehealth services from providers' homes, outside designated rural areas, and across state lines; and, authorized provision of telehealth services for both established and new patients (U.S. DHHS, 2020). Additional flexibilities and options granted by Federal and state-run programs resulted in widespread use of telehealth for non-urgent and non-emergent healthcare needs.

Eclipsed by a nationwide mission, increased allocation of funds, and the removal of existing obstacles, the use of telehealth increased in healthcare systems in the U.S. and many other countries. The adoption of telehealth presents new opportunities for shaping health policy and changing the health care landscape. Enhancing access to healthcare via telehealth requires further examination of regulations and financial reimbursement of this type of service. Notably, the temporary policy change instituted by the CMS providing for a short-term resolution must be revisited and consider more lasting modifications. Policy changes should consider telehealth services as another option to meet population needs. Enduring policy related to telehealth use, requirements, regulations and reimbursements are essential to support ongoing and equitable utilization of telehealth. This may not come easy. However, when done well and in collaboration with all stakeholders, telehealth might just be the right approach to increasing access to healthcare for those without healthcare providers, or those with limited availability of services within their communities. This will also be another strategy to curtail the continuing increase in healthcare costs.

References

Centers for Disease Control (2020a, December 10). *Disparities in COVID-19 illness.* Coronavirus disease 2019 (COVID-19). https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/increased-risk-illness.html

Centers for Disease Control (2020b, August 3). *People at increased risk: Rural communities.* Coronavirus disease 2019 (COVID-19). https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/other-at-risk-populations/rural-communities.html

Centers for Disease Control (2020c, September 1). *About COVID-19.* Coronavirus disease 2019 (COVID-19). https://www.cdc.gov/coronavirus/2019-ncov/cdcresponse/about-COVID-19.html

Centers for Disease Control (2020d, August 18). *Cases, data & surveillance: COVID-19 hospitalization and death by age.* Coronavirus disease 2019 (COVID-19). https://covid.cdc.gov/covid-data-tracker/#maps_new-admissions-rate-county

Centers for Disease Control (2021, April 19). *What we can do to promote health equity.* Coronavirus disease 2019 (COVID-19). https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/what-we-can-do.html

Centers for Disease Control (2022a, April 22). *Risk for COVID-19 infection, hospitalization, and death by age group.* Coronavirus disease 2019 (COVID-19). https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-age.html

Centers for Disease Control (2022b, January 25). *Health equity considerations and racial and ethnic minority groups.* Coronavirus disease 2019 (COVID-19). https://www.cdc.gov/minorityhealth/index.html

Centers for Disease Control (2022c, April 29). *Risk for COVID-19 infection, hospitalization, and death by race/ethnicity.* Coronavirus disease 2019 (COVID-19). https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html

Cheng, K. J. G., Sun, Y., & Monnat, S. M. (2020). COVID-19 death rates are higher in rural counties with larger shares of Blacks and Hispanics. *Journal of Rural Health, 36*, 602–608. https://doi.org/10.1111/jrh.12511

Czeisler, M. E., Marynak, K., Clarke, K. E. N., Salah, Z., Shakya, I., Thierry, J. M., Ali, N., McMillan, H., Wiley, J. F., Weaver, M. D., Czeisler, C. A., Rajaratnam, S. M. W., & Howard, M. E. (2020). Delay or avoidance of medical care because of COVID-19–related concerns — United States, June 2020. *CDC Morbidity and Mortality Weekly Report.* https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6936a4-H.pdf

Hirko, K. A., Kerver, J. M., Ford, S., Szafranski, C., Beckett, J., Kitchen, C., & Wendling, A. L. (2020). Telehealth in response to the COVID-19 pandemic: Implications for rural health disparities. *Journal of the American Medical Informatics Association, 27*(11), 1816–1818. https://doi.org/10.1093/jamia/ocaa156

Melvin, S. C., Wiggins, C., Burse, N., Thompson, E., Monger, M. (2020, July 23). The role of public health in COVID-19 emergency response efforts from a rural health perspective [Brief Report]. *Preventing Chronic Disease*, 17, 602–608. https://doi.org/10.5888/pcd17.200256

Roth, M. (2020). 3 ways COVID-19 transformed healthcare delivery through telehealth. *Health Leaders, 23*(4), 24–30. https://www.healthleadersmedia.com/innovation/3-ways-covid-19-transformed-healthcare-delivery-through-telehealth

Smith, A. C., Thomas, E., Snoswell, C., Haydon, H., Mehrotra, A., Clemensen, J., & Caffery, L. J. (2020). Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19). *Journal of Telemedicine and Telecare, 26*(5), 309–313. https://doi.org/10.1177/1357633X20916567

Struminger, B. B. & Arora, S. S. (2019). Leveraging telehealth to improve health care access in rural America: It takes more than bandwidth. *Annals of Internal Medicine, 171*(5), 376–377. https://doi.org/10.7326/M19-1200

U.S. Department of Health & Human Services, Assistant Secretary for Public Affairs (2020, July 15). *Telehealth: Delivering care safely during COVID-19*. Coronavirus. https://www.hhs.gov/coronavirus/telehealth/index.html

ORIGINAL RESEARCH

A Conceptual Model of Nurse-Physician Collaboration in the Intensive Care Unit

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Abstract

Background: Nurse-physician collaboration in the Intensive Care Units (ICUs) is an important component of a healthy work environment and is associated with better outcomes. **Objective:** The purpose of this study was to better understand collaboration from the perspective of ICU nurses and physicians to develop a conceptual model. Donabedian's Heath Quality Model served as the framework for this study, and themes were situated within the context of structures, processes, and outcomes associated with nurse-physician collaboration. **Methodology:** This study utilized a qualitative descriptive design to better understand nurse-physician collaboration. The research team conducted semi-structured in-depth interviews with four ICU physicians and six ICU nurses from November 2018 through February 2019. **Results:** Top themes associated with structure included Accessible, Debrief, Experience, Leadership, and Team. Within the model, the Impact of Acuity on collaboration is illustrated. Process themes included Advocate, Rounding, and Professionalism. Outcomes consisted of Patient Outcomes, Nurse Outcomes, and Physician Outcomes. "Process outcomes" include Shared Decision Making, United Front, and Communication. **Conclusion and Recommendations:** Hospital administrators should focus on these themes when working to improve nurse-physician collaboration. This model can serve as a framework to coordinate investments to support collaboration.

Keywords: nurse, physician, collaboration, ICU, healthy work environment, health quality

Funding: The author received funding from the St. John Fisher University Faculty Development Grant.

Conflict of Interest: The author declared no actual or potential conflict of interest.

Statement of Institutional Review Board/Ethical Approval: This research used human subjects and the author and team members completed human subjects training. IRB approval was sought and approved by St. John Fisher and Rochester Regional Health (#3894-062118-08).

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A Conceptual Model of Nurse-Physician Collaboration in the Intensive Care Unit

Collaboration within the Intensive Care Unit (ICU) between nurses and physicians is an important concept that is related to both a healthy work environment and patient outcomes. One way to explore this relationship is within the context of Donabedian's structure, process, and outcome model. This model is utilized widely in healthcare as a framework to examine health services and evaluate outcomes (Donabedian, 2005). The relationship, communication, and ultimately collaboration between nurses and physicians is a complex dynamic that is impacted by multiple factors within the healthcare setting. Using Donabedian's framework, the complex healthcare environment can be examined in relation to structure, process, and outcome. Structure includes the physical and organizational characteristics within the healthcare setting. In the ICU, examples of structure include the physical layout of the unit, the various leadership roles, and experience of the healthcare team. Process focuses on the care delivered to patients. Examples include the practice of daily multidisciplinary rounds and the general flow of patient care from admission to discharge. The final phase of Donabedian's model is outcomes, which is the impact of healthcare on the patient population as well as outcomes in the workforce (Donabedian, 2005).

The dynamic of the nurse-physician relationship within the context of the ICU is informed by multiple factors within the healthcare system. The reason that this relationship is of utmost importance is that it can influence patient outcomes (Boev & Xia, 2015). Understanding this phenomenon, Donabedian's framework guided this research and helped categorize themes based on existing structures within the system, the processes utilized, and the resulting outcomes. Utilizing a qualitative approach guided by Donabedian's framework, this study adds important value to the current understanding of nurse-physician collaboration.

The concept of nurse-physician collaboration is at the core of patient safety, the healthy work environment, and moving the profession of nursing forward. Regulatory bodies like The Joint Commission (2021) require evidence of effective nurse-physician collaboration as part of the accreditation process. The American Nurses Credentialing Center (ANCC, 2021) Magnet Recognition Program ® identified collaborative, interdisciplinary relationships as a hallmark of a healthy work environment. A key component woven within the 2020-2030 Future of Nursing Report (National Academies of Sciences, Engineering, and Medicine, 2021) is collaboration, communication, and teamwork. While the 2010 Future of Nursing report states that "Nurses should be full partners, with physicians and other health professionals, in redesigning health care in the United States", much work needs to be done to realize this goal (Institute of Medicine, 2010, p.221).

Teamwork and communication are central to providing exceptional patient care. In the ICU, nurses and physicians must effectively collaborate as they navigate the healthcare milieu to meet the changing needs of the patients. Both nurses and physicians identify collaboration as an important aspect of the healthy work environment (Zangaro & Soeken, 2008). In fact, ICUs with effective collaboration are associated with superior patient outcomes (Boev & Xia, 2015; Ma, Park, & Shang, 2018). With optimal collaboration and mutual respect, the best outcomes are possible for the patients and all members of the healthcare team.

Definitions

Broadly, collaboration is defined as "to work jointly with others or together especially in an intellectual endeavor" (Merriam-Webster Online Dictionary, 2022). There is not a standard accepted definition for nurse-physician collaboration in healthcare. Collaboration has been defined as working relationship exchanges between staff members who synergistically work together to solve common problems, making decisions regarding clinical procedures for patient care, and coordinate the work (Boyle & Kochinda, 2004). Baggs & Schmidt (1988) defined collaboration as "nurses and physicians working together, sharing responsibilities for solving problems and making decisions to formulate and carry out plans for patient care" (p. 145). Recent shifts in the healthcare environment with an emphasis on collaborative relationships and teamwork suggest that an updated definition is needed.

Donabedian's healthcare quality model served as the framework for this study (Donabedian, 2005). This framework examines the work environment in relation to the existing structures, the processes executed by the interdisciplinary team, and the resulting outcomes for both patients and employees. This framework provided an intuitive way to categorize the findings of this study based on existing structures within the system, the processes utilized, and the resulting outcomes. Utilizing a qualitative approach guided by Donabedian's framework, the purpose of this study was to develop a conceptual model of nurse-physician collaboration in the ICU.

Methods

Qualitative descriptive design was used to examine nurses' and physicians' perceptions of collaboration in the ICU. Interviews took place from November 2018 through February 2019. Six ICU nurses and four ICU physicians participated in semi-structured interviews that lasted 30-60 minutes. The study was approved by the Rochester Regional Health and St. John Fisher University Institutional Review Boards (approval number 3894-062118-08).

Purposive sampling was used to recruit ICU nurses and physicians. Inclusion criteria consisted of ICU nurses and physicians with an active bedside practice. Maximum variation sampling was used to ensure there were nurses and physicians from various hospitals. Recruitment was done via email, social media, and word of mouth. We recruited nurses and physicians with both positive and negative perceptions of collaboration. We purposely recruited at least one registered nurse (RN) and one medical doctor (MD) from the same ICU, so there was consistency in the accounts of collaboration, and critical analysis could be made by unit. Sample size was achieved once data saturation was reached (Fusch & Ness, 2015).

All participants completed a consent form outlining the study objectives and risks and benefits to participating in the study. They also completed a brief demographic questionnaire. Interviews

were audio-recorded, transcribed, and uploaded into ATLAS-ti. All recordings were deleted after three years. An interview guide helped to maintain consistency in the data collection from one researcher to the other. Each interview concluded by asking if there was anything else the participant would like to add about their perceptions about collaboration in the ICU. As a token of appreciation, each participant received a $10 Starbucks gift card.

Application of Lincoln and Guba's (1985) trustworthiness criteria ensured validity of the study. The research team used an iterative process for data collection and analysis. After individually analyzing and coding each transcript, the research team met to analyze each interview collectively and reach a consensus on each theme. Member checking helped to confirm that the themes were consistent with what the participant was sharing. Our final results were shared with a qualitative research group at a large university for further validation of the findings. This group reviewed the data and concurred with our conclusions.

Table 1

Demographic Characteristics

Physicians	Nurses
Age	Age
53-60= 3	20-30=1
41-52= 1	31-40=1
	41-50=2
	51-60=1
Years in critical care	Years in critical care
10-25+ years	1-17 years

Table 2

Hospital Characteristics

	Hospital size	Number of ICUs	Type
Hospital A	886 beds	5	Academic medical center
Hospital B	528 beds	3	Tertiary Care
Hospital C	471 beds	1	Community
Hospital D	117 beds	1	Community

Results

Please see Table 1 for demographic information on all study participants. This was a diverse sample in terms of age and years of experience in critical care. Table 2 contains information on the type of hospital setting. Communication and barriers to communication were the most prevalent themes expressed by both nurses and physicians (Table 3). Using Donabedian's framework, the results were categorized based on structure, process, and outcome. Please see Figure 1 for an illustration of the findings.

Table 3

Key Themes by Discipline

Top Themes	Discipline
Barrier: Lack of Communication	Nurse: 19
	Physician: 14
Team	Nurse: 11
	Physician: 7
Communication	Nurse: 13
	Physician: 5
Relationship	Nurse: 5
	Physician: 11

Structure

Both nurses and physicians identified factors associated with collaboration related to the structure of the ICU. The structure encompasses not only the physical layout of the unit, but the unit culture, the accessibility of physicians (both physically and via phone), as well as experience, the notion of team, unit culture, and the leadership of the unit. Debriefing falls under both structure and process. Although technically a process, debriefing must be embedded into the fabric of the ICU to operationalize this activity.

Accessible

Nurses commented on the importance of accessibility in relation to collaboration. They commented on both physical accessibility as well as being able to speak with a physician via phone in a timely manner. Physicians also described ways in which the structure of the ICUs lends itself to greater accessibility. RN1C commented:

> "it's very important and crucial to the patient in their outcome to have the physician and the nurse collaborating several times throughout the day. I think that it's very important that a nurse is able to get ahold of a physician in a timely manner at any point throughout the day or night because it's crucial to the patients and their families and the outcomes that we see in our patient".

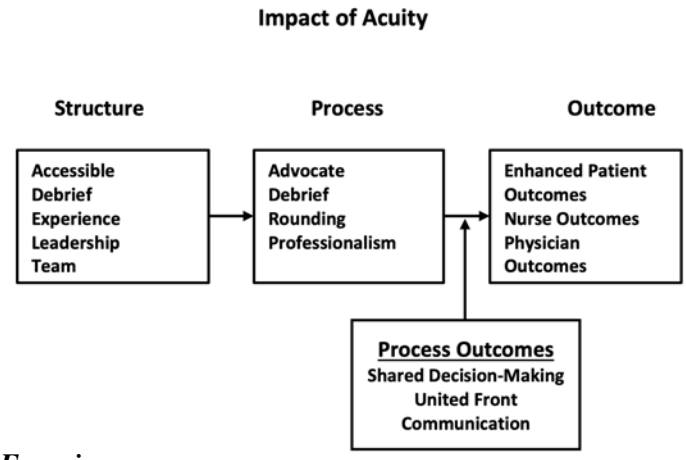
Debrief

After acute events in the ICU, (cardiac arrest, unplanned extubation, patient death, violence), it is important to have a structure in place that facilitates debriefing. Debriefing involves reviewing the events leading up to and during the event. A chaplain or social worker often facilitates this process. Debriefing allows participants to share their feelings, frustrations, sorrow, or guilt that resulted from the incident. Debriefing also allows for nurses and physicians to continue to collaborate away from the bedside, where communication is encouraged. After a particularly chaotic cardiac arrest, RN1B worked to refine and normalize debriefing in that ICU.

> "I developed a debriefing tool that we now use when there's events on the unit that we meet with all parties involved afterwards and we just talk. Just want to see how the nurses are feeling, did they feel supported, did they feel that they had a true role in the code, what we did good, what we could improve on. Again, leading back to communication. (RN1B)"

Figure 1

Nurse-Physician Collaboration in the Intensive Care Unit



Experience

Years of experience for both nurses and physicians was an important component of the structure in the ICU. The participants with greater than ten years of experience in the ICU commented on the relationship between years of experience and collaboration. According the RN1B:

> "I do think that having the experience helps because I have built the good rapport with the physicians. I have earned that trust where I do take great care of my patients, and I do know, for the most part, what I'm talking about when it comes to caring for my patients."

MD1B reiterated the importance of experience when communicating with nurses:

> "You want to know that if you go and ask the same question to the same person every day for 15 years, you know what the answer's gonna be."

Leadership

Nursing leadership, along with physician leadership, was an important structural component related to collaboration. Conflicts that cannot be resolved at the bedside need to be taken up through the chain of command where nurse and physician administrators can problem-solve and communicate. Physicians in the study noted that although collaboration was important, ultimately, the physician must make the final decision. MDB2 stated:

> "I think it's important to understand that it's not a democracy, that there are people with different types of responsibilities. But I think that listening to everybody on your team and being ... That's part of being a good leader on your team".

Team

Team was the most popular theme that fell under the structure category. Team was part of structure because working together and functioning as a cohesive unit stem from the structural expectations of the ICU. Nurses and physicians overwhelmingly described the importance of working together to achieve optimal patient outcomes. The team extends beyond the two disciplines to everyone in contact with the patient. RN1B said,

> "Everybody is a part of our team, from the cleaning person to the cardiac surgeon, it's all a part of the team for xxx. It's that focus on team dynamics. We're there to all help each other and work together". MDB1 described teamwork in the context of the hierarchy of physicians compared to other disciplines and how this inhibited teamwork. "I think times when there was this clear divide between physicians and the rest of the world is clearly passed. It's good that it's past because it was always wrong. People that realize that would have better teams and would have better patient outcomes. I think that is really important, that we work as one team."

Unit Culture

Situated within the structure of the ICU was unit culture which included the norms, expectations, and climate of the workforce. Unit culture was noted as a factor contributing to collaboration by all participants. MD1A described their ICU:

> "It is a testament to how fragile a well-oiled machine is, and I think if you have people come through here, and there's a little bit of camaraderie and sometimes even humor…everybody's treated with respect, and people feel as though they're a part of things, makes a huge difference."

RN1B described unit culture as it related to turnover.

> "I think having all the new people in the unit just really kinda shifted the culture that we had and that reputation that we had in the hospital. We were the hardcore nurses and we did have some bullies on our unit and the newer people were willing to speak out about that being a problem and we got rid of those nurses and the whole culture on the unit changed."

Structure is the first component of Donabedian's model and includes the concepts of accessible, debrief, experience, leadership, team, and unit culture. The structures within the ICU were directly related to the processes.

Process

Process reflects the way we work to deliver the desired outcome and captures the way high quality healthcare is delivered to patients. Participants shared several themes related to promoting and impeding processes that contribute to optimal collaboration and outcomes.

Advocate

In the ICU, it is important for nurses to be able to advocate on behalf of their patients. Effective advocating requires clear and direct communication, which is at the heart of successful collaboration. RN3A highlighted the importance of advocating when they stated:

> "…because ultimately the safety of the patients is what's the most important and that is your patient and you're responsible …..for the patient in the unit and make sure everyone's safe, and they go home safe, and you're safe."

MDB2 described a situation where a nurse advocated on behalf of the patient:

> "One particular patient was again a VAD patient, and nurse approached me and stated her concerns about this in a very positive way, saying, "Let's try to help him." I think that was a really good experience at that point in time."

Both nurses and physicians cited examples of advocating to improve patient outcomes and allow for respectful exchange of dialogue.

Rounding

Structured interdisciplinary rounding was cited by all participants as the most powerful process that promoted nurse-physician collaboration. Not all ICUs in this study had a formalized rounding process. In this sample, rounding was primarily driven by the physicians, with input from the nurses encouraged. RN2A stated: "The physicians set the tone for how rounds are run. Which it should be nursing driven, not physician." Similarly, RN2B explained, "As the bedside nurse, we're kind of able interject with anything that we've seen or any changes that may have come about since the providers got handoff last. And then the intensivist, overall, will make the final decision as to what we're going to be doing with the patient for each system." RN1B noted how communication has improved since the implementation of formalized daily rounding.

> "I think that's the biggest piece for us, is that communication, you know having those rounds daily. Things are just so different on the unit now that we do the rounds. Like the nurses just have a higher level of knowledge on how to be able to care for those patients now with participating in those rounds where I don't think we really had that years ago."

Professionalism

In order to effectively collaborate, a degree of professionalism from all disciplines is required. Professionalism is defined as providing top-quality care to patients, while also upholding the values of accountability, respect, and integrity (American Nurses Association, 2017). Participants described scenarios that situated professionalism within the context of collaboration. Physicians primarily spoke about professionalism in the context of the chain of command and dealing with situations where there is disagreement about the plan of care. MD1B stated:

> "I've got to be able to handle somebody that is lower in the hierarchy to me saying, you know, why are you doing this. And the person that is doing the challenge has to be willing to say, okay, well you were right, I was wrong. And that's fine. And when people get threatened by either being challenged or having their challenge denied, then it doesn't work very well."

RN1B discussed professionalism within the context of communication by emphasizing how something was said was as important as what was said. She described an interaction with an ICU physician while a patient was decompensating.

> "Cause I didn't come and make like any accusations, "This is a problem. You did this wrong." I didn't say anything like that. I was just kind of making suggestions, "You know this is what I'm seeing, what do you think?" I think a lot of how you approach people has a lot to do with how you get the response back."

Impact of Acuity

While this conceptual model was developing, it was important to acknowledge the impact of patient acuity on process and, ultimately, on collaboration. Acuity levels in the ICU are typically high, but there are often situations where patients are quickly decompensating, and typical staffing patterns must be aborted. RN1B pointed out this phenomenon when they stated:

> "The acuity on the unit can as well. If the patients are just so sick that the nurse can't leave the unit, the providers can't round and come in like everybody's just doing their own thing, that gets in the way of that collaborative relationship."

Process Outcomes

The path from process to outcomes was mediated by "Process Outcomes". These include "Shared Decision Making", "United Front", and "Communication". These themes directly impacted the nurse outcomes, physician outcomes, and patient outcomes (Figure 1). They were categorized as process outcomes because they are critical components of the healthy work environment that serve as a mediating variable between process and outcome.

Shared decision-making was an important aspect of collaboration that provided a venue to exchange ideas and enhance communication. MD2B made the following observation:

> "I think everyone's voices need to be heard, but people also need to understand that the fact that sometimes things didn't go the way you want it, it doesn't mean that your voice is not being heard. That it's just there are other voices that have maybe an opposite opinion. Then understanding where you as a provider, as a nurse, as a physician, where you stand within that team, and all these things is based on your experience, your overall position, your overall training, multiple things."

United front was an important theme that influenced outcomes. MD1B commented on the importance of maintaining a united front.

> "Everybody being gathered, interpreted, acted on. Sometimes you'll agree with it, sometimes you won't. If you can't deal with it and take care of the patient when your input isn't implemented, if you can't deal with that, then you've got to find a different job."

Communication was by far the most prominent theme and was broken down by "barriers to communication" and "communication". As a process outcome, communication was an essential component to achieving desired outcomes. Despite optimizing structures and process, if there was not effective communication, outcomes will not be realized. MD1C made the following observation: "I think everything is communication, so anything that lacks communication to the bedside nurse I think can result invariably to increase stress of the job and dissatisfaction."

RN1C commented on the importance of communication and the mechanism to optimize communication.

"I think sometimes there's a lack of response from physicians because they're overbooked with other patients or they're in the emergency room seeing patients so sometimes they aren't able to respond in a timely enough matter…I think it's hard because some doctors prefer to be called directly, some doctors prefer to be paged so I think not having a standard way of getting ahold of them is a little difficult…" Both nurses and physicians commented on how the lack on training related to interdisciplinary communication served as a barrier.

"It's a learning curve. It's something that in nursing school we don't really have to do. And then all of a sudden, we're thrown onto a unit and we're expected to talk to this attending physician, so it can be a little nerve-racking. It just comes back down to having good communication." MDB2 made a similar observation: "I was a young, junior guy and you would have nurses tell you what to do. I guess that's a way, but it doesn't work that way. Same way it doesn't work the other way around. It doesn't work in that relationship either. I think educating people about communication that has the highest chance of yielding a positive. Not everybody knows how to communicate…..I think everybody should get a certain time of how to ... Some sort of seminar of how to communicate appropriately. (RN1B)"

Outcomes

The final component of Donabedian's healthcare quality model is outcomes, which are directly impacted by structure and process. The findings of this study revealed that nurses and physicians identified three types of outcomes related to collaboration. These outcomes included patient outcomes, nurse outcomes, and physician outcomes.

Patient Outcomes

Every study participant spoke about the importance of collaboration as it related to patient outcomes. All targeted interventions and collaborative behaviors were executed with the end goal of optimizing patient outcomes. MD1A described a situation that resulted in a positive outcome due to effective collaboration:

"…..And then there was no blood pressure, and then, well, people got everything going, and you can't tell me that one person saved the day. Which one of those people saved the day? I mean, everybody did something. We had techs running for blood, we had people running to the lab with labs, we had people calling in surgeons and hematologists and everything else. So you say, wow. People walk out of here."

Nurse Outcomes

Nurse outcomes included job satisfaction and turnover. ICUs that experienced better collaboration had better job satisfaction. MD1C linked collaboration to job satisfaction when stating, "Whenever you collaborate well and communicate well, it's a much more rewarding experience". RN2A expressed their appreciation when good communication occurred. "They'll (ICU physicians) take the time to sit down and go over something with us, which is, as a bedside nurse, that's extremely appreciated." Simply taking the time to seek out the bedside nurse and ask for input in very much appreciated.

"We do have this one surgeon in particular where when he rounds in the morning, he doesn't go and find the advanced practice provider. He comes and finds the bedside nurse. He asks the bedside nurse how the night was instead of the provider, because he knows that we were at the bedside the whole night (RN1B)."

Physician Outcomes

Physicians expressed greater job satisfaction when they collaborated well with nurses. MD1A described the environment in the ICU by stating: "We have absolute openness and everybody's encouraged to participate, the nurses I believe are very empowered". MD2B described the role of the physician as a uniter and how this improved the overall work environment.

"I think it's important that we all have a voice, and we all have a voice in (a) different aspects of patient's care. At the end, someone needs to unite all this voices into a final plan."

MD2B Promoting a healthy work environment with effective nurse-physician collaboration resulted in greater job satisfaction for both nurses and physicians.

Discussion

This conceptual model has the potential to provide hospitals with a focused approach to identify areas within the work environment that can enhance nurse-physician collaboration. Collaboration is a complex construct that is influenced by many factors. Donabedian's model provides an excellent framework to organize constructs that influence collaboration.

Structure

Investments in workforce development, leadership, and team building have the potential to improve nurse-physician collaboration. The COVID-19 pandemic has only exacerbated an existing nursing shortage. The CARES (Coronavirus Aid, Relief, and Economic Security) Act, passed on March 27, 2020, provided funding to train and educate nurses in areas where there are shortages. In addition to expanding the nursing workforce, targeted evidence-based strategies to improve teamwork will improve outcomes. TeamSTEPPS (Team Strategies and Tools to Enhance Performance and Patient Safety) is an interdisciplinary program based on the airline industry and offers evidence-based strategies to improve communication and decrease errors (Agency for Healthcare Research & Quality, 2022). Many hospitals are requiring this training for all members of the healthcare team. An important aspect of TeamSTEPPS training is the concept of debriefing, which they define as "Informal information exchange session designed to improve team performance and effectiveness through lessons learned and reinforcement of positive behaviors". Having the opportunity to debrief, especially after a traumatic event, can change team behavior and positively impact patient outcomes (Tannenbaum and Cerasoli, 2013). Collaboration can

be enhanced with investments in structural components of this model. A self-assessment within the ICU is a great place to start. ICUs with either Magnet designation (or on the Magnet Journey) through the ANCC or Beacon through the American Association of Critical Care Nurses have already completed such an assessment (American Association of Critical Care Nurses, 2022). Ongoing monitoring of these structural components will be important to achieve an optimal work environment with effective collaboration.

Process

Advocating, rounding, and professionalism were the top themes within the realm of Process. In order for nurses to feel safe and empowered to advocate on behalf of themselves and their patients, there must be avenues in place and support for this dialogue. Advocacy is influenced by generational, personal, and organizational factors (Rainer, 2015) and is important because silence is the alternative, which can result in patient harm (Aghaie et al., 2021).

Interdisciplinary rounding should be a formalized process in all ICUs. Rounding was standard practice in this sample of ICU physicians and nurses and all participants expressed their satisfaction with the rounding process. ICUs with structured rounding reported improved communication amongst the team as well as better clarity on all task assignments (Cao et al., 2018). ICUs looking to improve collaboration should strongly consider implementing formalized interdisciplinary daily rounding.

Outcome

ICUs with favorable nurse collaboration were associated with better patient outcomes (Boev and Xia, 2015). In addition, ICUs with better collaboration were associated with a lower incidence of pressure injuries and patient falls (Ma, et al., 2018). High-fidelity interdisciplinary simulations are an effective way to improve collaboration (Liaw et al., 2020). In terms of nurse outcomes, ICUs with better collaboration were associated with greater nursing job satisfaction and lower turnover rates (Yılmaz et al., 2022). Overall, improvements in the structures and processes contained within this conceptual model have the potential to improve outcomes for nurses, physicians, and patients.

Conclusion

The traditional definition of collaboration merits revision and this study can serve as a launching point for an updated definition. Collaboration is a fluid, dynamic relationship that includes structure, process, and outcomes within the ICU. While considering the impact of acuity, optimization of structure and process has the potential to improve nurse, patient, and physician outcomes (Figure 1).

The development of this conceptual model supports the linear relationship between structure, process, and outcomes. Optimizing structures and processes can lead to better outcomes. For example, structured interdisciplinary rounding, which was a key process in this model, was associated with better patient outcomes (Sunkara et al., 2022). Improvements in collaboration require significant investments on the part of hospital administrations. Identifying targeted strategies to improve the structures and processes will be helpful in advocating for greater resources and investments to support nurse-physician collaboration.

References

Aghaie, B., Norouzadeh, R., Sharifipour, E., Koohpaei, A., Negarandeh, R., & Abbasinia, M. (2021). The experiences of intensive care nurses in advocacy of COVID-19 patients. *Journal of Patient Experience, 8.* https://doi.org/10.1177/23743735211056534

Agency for Healthcare Research & Quality. (2022). *TeamSTEPPS.* https://ahrq.gov/teamstepps/index.html

American Association of Critical Care Nurses. *Beacon award.* (2022). https://www.aacn.org/nursing-excellence/beacon-awards.

American Nurses Association. (2017). *Recognition of a nursing subspecialty.* https://www.nursingworld.org/~4989de/globalassets/practiceandpolicy/scope-of-practice/3sc-booklet-final-2017-08-17.pdf

American Nurses Credentialing Center. *Magnet recognition program®.* (2021). https://www.nursingworld.org/organizational-programs/magnet/.

Boev, C. & Xia, Y. (2015). Nurse-physician collaboration and hospital-acquired infections in critical care. *Critical Care Nurse, 35*(2), 66-72. https://doi.org/10.4037/ccn2015809

Baggs, J.G. & Schmitt, M.H. (1988). Collaboration between nurses and physicians. *The Journal of Nursing Scholarship, 20*(3) 145-149. https://doi.org/10.1111/j.1547-5069.1988.tb00055.x

Boyle, D.K. & Kochinda, C. (2004). Enhancing collaborative communication of nurse and physician leadership in two intensive care units. *The Journal of Nursing Administration, 34*(2),60-70. https://doi.org/10.1097/00005110-200402000-00003

Cao, V., Tan, L. D., Horn, F., Bland, D., Giri, P., Maken, K., Cho, N., Scott, L., Dinh, V. A., Hidalgo, D., & Nguyen, H. B. (2018). Patient-entered structured interdisciplinary bedside rounds in the medical ICU. *Critical Care Medicine, 46*(1), 85–92. https://doi.org/10.1097/CCM.0000000000002807

Coronavirus Aid, Relief, and Economic Security (CARES) Act. (2020, March 27). *Public Law* 116–136. https://www.govinfo.gov/content/pkg/PLAW-116publ136/pdf/PLAW-116publ136.pdf

Donabedian, A. (2005). Evaluating the quality of medical care. *The Milbank Quarterly. 83*(4), 691-729. https://doi.org/10.1111%2Fj.1468-0009.2005.00397.x

Fusch, P.I. & Ness, L.R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report, 20*(9), 1408-1416. https://doi.org/10.46743/2160-3715/2015.2281

Institute of Medicine. (2010). *The future of nursing: leading change, advancing health.* The National Academies Press. https://books.nap.edu/openbook.php?record_id=12956&page=R1

Liaw, S. Y., Ooi, S. W., Rusli, K., Lau, T. C., Tam, W., & Chua, W. L. (2020). Nurse-physician communication team training in virtual reality versus live simulations: randomized controlled trial on team communication and teamwork attitudes. *Journal of Medical Internet Research, 22*(4). https://doi.org/10.2196/17279

Lincoln, Y.S. & Guba, E.G. (1985). *Naturalistic Inquiry.* Sage.

Ma, C., Park, S. H., & Shang, J. (2018). Inter- and intra-disciplinary collaboration and patient safety outcomes in U.S. acute care hospital units: A cross-sectional study. *International Journal of Nursing Studies, 85*, 1–6. https://doi.org/10.1016/j.ijnurstu.2018.05.001

Merriam Webster Online Dictionary. (2022). *Collaboration.* In Merriam-Webster.com dictionary. https://www.merriam-webster.com/dictionary/collaboration

National Academies of Sciences, Engineering, and Medicine. (2021). *The future of nursing 2020-2030: Charting a path to achieve health equity.* Washington, DC: The National Academies Press. https://doi.org/10.17226/25982

Rainer, J. (2015). Speaking Up. Factors and issues in nursing advocating for patients when patients are in jeopardy. *Journal of Nursing Care Quality, 30*(1), 53-62 https://doi.org/10.1097/ncq.0000000000000081

Sunkara, P. R., Islam, T., Bose, A., Rosenthal, G. E., Chevli, P., Jogu, H., Tk, L. A., Huang, C. C., Chaudhary, D., Beekman, D., Dutta, A., Menon, S., & Speiser, J. L. (2020). Impact of structured interdisciplinary bedside rounding on patient outcomes at a large academic health centre. *BMJ Quality & Safety, 29*(7), 569–575. https://doi.org/10.1136/bmjqs-2019-009936

Tannenbaum, S. I., & Cerasoli, C. P. (2013). Do team and individual debriefs enhance performance? A meta-analysis. *Human Factors, 55*(1), 231–245. https://doi.org/10.1177/0018720812448394

The Joint Commission. (2021). *Comprehensive Accreditation Manual.* Joint Commission Resources.

Yılmaz, G., Kıran, S. & Bulut, H. (2022). The mediating role of nurse–physician collaboration in the effect of organizational commitment on turnover intention, *Journal of Interprofessional Care.* https://doi.org/10.1080/13561820.2021.2004099

Zangaro, G.A. & Soeken, K.L. (2007). A meta-analysis of studies of nurses' job satisfaction. *Research in Nursing and Health, 30*(4), 445-458. https://doi.org/10.1002/nur.20202

ORIGINAL RESEARCH

A Case Study of a Five-Day Virtual Clinical Simulation with Pre-Licensure Nursing Students

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Abstract

Background: The COVID-19 pandemic exacerbated existing clinical placement shortages for nursing students in the United Kingdom. Placements using virtual simulation have the potential to replace or supplement traditional clinical placements. ***Objective:*** The objective of this case study was to examine the perceptions and experience of pre-licensure mental health nursing students and facilitators who took part in a five-day virtual simulation. ***Methods:*** A virtual simulation placement focused on mental health nursing was developed. Students from three universities in London engaged in the virtual simulation placement and a student focus group. Virtual simulation facilitators participated in one-on-one semi-structured interviews. Focus group and interview data were thematically analysed using NVivo 12. ***Results:*** Pre-licensure mental health nursing students and simulation facilitators felt that virtual simulation training filled gaps in education, increased the accessibility of education, and led to the formation of a supportive community of students in a depressurized learning environment. Students reported that virtual simulation provided a safe opportunity for them to practice and learn new skills. However, facilitators reported an increased cognitive load while teaching online. ***Limitations:*** This was a small-scale case study of a placement that was converted to suit the online environment during the COVID-19 pandemic. Future work would benefit from an interventional approach with a larger and more diverse group of students. ***Conclusions:*** Virtual simulation has potential to increase placement capacity for nursing students. Students and facilitators perceived that virtual simulation was effective for student learning. Challenges with virtual simulation, such as increased cognitive load for facilitators, should be explored further in future research.

Keywords: Virtual simulation, placement capacity, remote learning, clinical simulation, nursing education

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Acknowledgment of use of Human Subjects, Training & IRB Approval: This evaluation was classified as a service evaluation and therefore did not require ethical clearance. However, the basic ethical principles of informed consent, anonymity, and data protection were followed.

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A Case Study of a Five-Day Virtual Clinical Simulation with Pre-Licensure Nursing Students

Introduction

Clinical sites have limited capacity to host undergraduate nursing students for clinical placements (Barnett et al., 2008; Williamson et al., 2020). Research supports the use of simulation to enable students to master hands-on clinical skills, critical thinking, and assessment skills (Alanazi et al., 2017; Au et al., 2016; Dickinson et al., 2016; Larue et al., 2015; Mulyadi et al., 2021). Utilizing the simulation environment to hone these abilities could reduce the burden on an already overstretched workforce who have limited capacity to host students (Hoyle, 2022). As such, simulation is commonly used as an alternative or supplement to clinical rotations for nursing students (Au et al., 2016; Larue et al., 2015). This case study will discuss the experiences of students and facilitators who took part in a five-day virtual simulation (VS) training program for pre-licensure mental health nursing students in the United Kingdom.

Currently, most high and low-fidelity simulations have been developed for delivery in-person, with only a small percentage of this teaching taking place online (Alanazi et al., 2017; Mulyadi et al., 2021). However, in March 2020, the COVID-19 pandemic acted as a catalyst for the expansion of online teaching offerings. To minimize the risk of COVID-19 infection, universities were advised to make alternative arrangements for students to continue their program of study entirely online (Health Education England, 2020). This led to the suspension of student placements, the creation of remote lectures, and the adaptation of existing simulation modules to suit the virtual environment (Bliss, 2021; Kim et al., 2021; Verkuyl et al., 2022). Given these adjustments, it is timely to consider the acceptability of such educational offerings and to establish whether VS is a suitable supplement or alternative to in-person teaching and clinical placement.

Virtual simulation has been gaining popularity in healthcare education in recent years, with mounting evidence suggesting that VS improves learning outcomes, increases learner satisfaction, boosts clinical skills, aids knowledge retention, and provides an opportunity for more accessible education for students (Foronda et al., 2020; Gu et al., 2017; Kim et al., 2021; McCutcheon et al., 2015; Oermann, 2015; Terry et al., 2018; Verkuyl et al., 2022; Xiong et al., 2017). Furthermore, in-person simulation is resource intensive and is more than three times as expensive as VS (Haerling, 2018). While early research is promising and highlights the potential for VS to replace or enhance traditional modalities, more evidence is required to establish best practices (Kardong-Edgren et al., 2019). This case study aims to contribute to this evidence base.

Case Study Aims

The primary aims of this case study were to:

1. Understand the perceptions and experiences of students and facilitators who took part in a five-day VS-based training for second-year pre-licensure mental health nursing students
2. Consider whether VS may offer an opportunity to increase student placement capacity

Methods

Simulation-Based Training Program

The training was run by three experienced nursing faculty trained in simulation at Maudsley Learning remotely over five days from the 7th-11th June 2021 over Microsoft Teams. The training took place from 10:00 AM-3:30 PM each day, including a one-hour lunch break and multiple, shorter 15-minute breaks as needed between activities to reduce screen fatigue. In total, 12 students from three different universities in London participated. Two participants were 20-24 years old; one was 25-29 years old; four were 35-45 years old; five were 46-55 years old. All students identified as Black British, Black African, or mixed Black British. The training program and content were developed by the Lead Simulation Nurse Tutor at Maudsley Learning, Anita Bignell, and were reviewed by two nurse educators at King's College London, Professor Tommy Dickinson (TD) and Dr Mary Raleigh (MR). The three facilitators of the VS were nursing faculty trained in simulation who were experienced in designing and applying different levels of simulation fidelity, including the use of immersive technologies to facilitate student learning around complex patient case studies. They were also skilled in the use of best practice simulation debrief processes that promote student reflection and critical thinking. Historically, the training had been offered in person, but the content needed to be adapted to an online format due to COVID-19 government guidelines at the time of its delivery. These adaptations were reviewed by the two educators at King's College London.

The Foronda et al. (2018, p.27) definition of virtual simulation was adopted; virtual simulation was therefore understood as: "clinical simulation offered on a computer, the Internet, or in a digital learning environment including single or multiuser platforms." This definition was selected because it broadly includes a variety of online teaching modalities and is commonly used and cited in the nursing education context. To date, there is no theoretical framework developed to underpin virtual simulation development. As such, the International Nursing Association of Clinical and Simulation Learning (INACSL^{SM}) best practice principles, such as those for pre-briefing, simulation design, facilitation, debriefing, were followed (INACSL, 2022). Additionally, all three facilitators emphasized the importance of breaks and finding different ways to interact as a group to avoid screen fatigue and to build psychological safety for the participants. Finally, as the content for the VS dealt with sensitive content like self-harm and suicidality, the facilitators informed students of the subject matter ahead of time and reminded students during the pre-brief and debrief that they were available for 1:1 support.

The training utilized multiple teaching modalities, including reading materials, videos, didactic, simulation, and group discussion. During the VS, students experienced fictional patient encounters over Microsoft Teams. The students were provided a brief synopsis and background information before the VS during a group pre-brief. A professional actor played the part of the patient and was provided a manual with the patient's mental health history, co-morbidities, social and cultural background, and a description of

behaviors to exhibit during the interaction. Each VS lasted for 10-12 minutes. Each student participated in one simulation per day (a total of two per student), but every student watched all simulations and participated in all debriefs.

The content for each training day is detailed below:

Day 1: Simulation- Managing Stressful Interactions

The first day of the training involved (a) icebreakers and introductions to develop psychological safety, (b) the introduction of a de-escalation model, (c) a detailed pre-briefing and introduction to simulation, (d) a detailed explanation of the debrief model, (e) teaching on a model to respond to domestic violence, and (f) an introduction to Human Factors, which covered situational awareness, communication, human characteristics that influence work, and how people interact within a team or system. Following these activities, the students took part in virtual simulation. There were two participants per scenario with the remaining students participating as active observers. There were four scenarios in total, plus one pre-recorded video scenario of a restrictive intervention. The cases included:

1. An agitated patient with psychosis
2. A younger patient with a history of Emotionally Unstable Personality Disorder, trauma, self-harm, and suicidality
3. A 19-year-old woman presenting to mental health services following an act of significant self-harm, who is in a domestic violence relationship and needs support
4. An angry relative refusing to leave the ward
5. A video of using restraints and debrief of that scenario to highlight the nurse's role in patient safety during these incidents, which are considered a psychiatric emergency

Immediately following the simulations, students took part in a facilitated debrief.

Day 2: Workshop- Health Conversations

Day two was a motivational skills day, which involved an interactive workshop teaching motivational interviewing skills that can be used to improve patients' mental and physical health with a particular focus on common co-morbidities.

Day 3: Workshop- Self-Directed Learning

On day three, students were given a self-guided worksheet activity that contained links to existing resources. All resources, which included both reading and video materials, were related to motivational interviewing. Students were instructed to read the materials, then watch the videos, then indicate which motivational interviewing skills had been used in the videos. After activities were completed, students participated in a facilitated session to review the learning from the day. Completion of the activities was verified by the facilitator.

Day 4: Simulation- Health Conversations and Motivational Interviewing Skills Application

On day four, students had a second simulation to practice the skills learned thus far in the training. Prior to the simulation, students were provided an introduction and psychological safety session as on day one as well as a pre-brief. As in the first simulation, two students participated in each simulation with the other students taking part as active observers. The four patient cases for the second simulation were:

1. Depression, diet, and heart disease
2. Alcohol use, denial, and enduring schizophrenia
3. Diet and lifestyle in Type 2 diabetes
4. Smoking cessation and COPD

Immediately following the simulations, students took part in a facilitated debrief.

Day Five: Reflection

During the fifth and final day of the training, students took part in a group reflective practice session with a facilitator, which provided them with the opportunity to talk with each other and ask questions about the 500-word reflective essay assessment process.

Focus Group and Semi-Structured Interviews

Students were recruited for participation in the focus group via email invitation. Students who wanted to take part in the focus group were able to do so via Microsoft Teams on the final training day. The focus group was facilitated by authors TD and MR and examined students' perceptions of the simulation. The focus group discussion was 1 hour 22 minutes in duration. A focus group guide was used to help manage the discussion, with questions such as: "If you think about the clinical placements you have been on, how does the virtual simulation training compare to these?" (Table 1). Facilitators were invited to participate in semi-structured interviews via email. All three facilitators agreed to take part. The interviews were conducted by authors TD and MR, ranged in length from 43-45 minutes, and examined facilitators' perceptions of delivering the simulation training virtually. A semi-structured interview guide was used with questions such as: *"How did you feel about this simulation being delivered virtually?"* (Table 2).

Ethics

This case study was classified as a service evaluation and therefore did not require ethical clearance. However, the basic ethical principles of informed consent, anonymity, and data protection were followed.

Data Analysis

Audio recordings from the focus group and semi-structured interviews were transcribed verbatim and were deleted immediately after transcription. Anonymized transcripts were uploaded into NVivo for storage and analysis on a password-protected computer on a secure drive. The evaluation team consisted of three nurses, each with clinical, research, and education experience (two adult nurses, NS and MR, and one mental health nurse, TD). After initial data immersion, transcripts were thematically analyzed to identify themes following the Clarke and Braun (2013) 'bottom up' inductive approach by an experienced qualitative researcher on the evaluation team (NS). Initial 'open coding' was undertaken to allow multiple codes to be applied to single segments of the transcripts.

Table 1

Student Focus Group Topic Guide

Item	Aims
Introduction to focus group: Make introductions, explain the purpose of evaluation and ground rules like confidentiality, inform participants that the session will be recorded, provide an opportunity to ask questions, and finally, collect demographic information (year group, years of experience, age, gender, and ethnicity)	Engagement, information, setting the scene
Question 1: If you think about the practice placements you have been on, how does the simulated training compare to these? Was there anything about this that you found difficult/challenging?	Explore initial impressions of virtual simulation and enable students to consider how this experience compares to other learning opportunities
Question 2: Most simulation training takes place face-to-face in a skills laboratory center, but obviously this training differed by being delivered virtually. How did you feel about it being delivered virtually? What do you think were the benefits of it being delivered virtually? What were the drawbacks/limitations of it being delivered virtually? What did you think about the schedule of the training? What did you think about the subject content of the virtual simulation training?	Further consider the benefits and limitations of virtual simulation versus in-person simulation
Question 3: As Y3 Mental Health students, what effect do you think the virtual simulation training has had on your professional preparation to progress towards registration? What skills have you think you have learned that you could use in practice? Expand on this point; is there anything else you would like to add? How do you think completing the training may improve patients' care and experience following the training?	Examine students' impressions of how virtual simulation might prepare them for professional practice
Question 4: If you think about the debrief process, how has this helped with preparation for future practice?	Enable students to consider the debriefing process, including the benefits and risks of debrief, how they might apply these skills in practice, and whether they participated the same way virtually

Table 2

Facilitator Interview Topic Guide

Item	Aims
Introduction to interview: Make introductions, explain the purpose of the evaluation and ground rules like confidentiality, inform participants that the session will be recorded, and provide an opportunity to ask questions	Engagement, information, setting the scene
Question 1: Please describe your experience in developing simulation? How was this simulation developed and how did you decide what students needed to learn?	Explore virtual simulation development and how this might differ from in-person simulation
Question 2: Most simulation training takes place face-to-face in a skills laboratory center, but obviously this training differed by being delivered virtually. How did you feel about it being delivered virtually? What do you think were the benefits of it being delivered virtually? What were the drawbacks/limitations of it being delivered virtually? In what ways do you think this simulation enhanced students' learning?	Consider the benefits and limitations of virtual simulation versus in-person simulation for the facilitator and students
Question 3: What were the most challenging aspects of the simulation and what was done to work around these challenges? Describe the least challenging aspects and why	Examine facilitators' impressions of virtual simulation training delivery, both in terms of its challenges and advantages
Question 4: Please can you describe the debrief process you used? Did you make any adaptions to the debrief process given that it was online?	Enable facilitators to consider the debriefing process, including how debriefs may be different virtually
Question 5: How was the 'psychological safety' of students taken into consideration?	Explore facilitators' strategies for promoting psychological safety in the virtual environment
Question 6: Is there something else you would like to tell me about this simulation?	Provide the opportunity for any further reflections

Relationships and overlap between codes were considered and a hierarchal coding framework was constructed based on themes in the text. The transcripts, codes, and themes were discussed with the wider evaluation team throughout the coding process and were subsequently refined, consolidated, and iterated.

Results

Four themes were established and were titled using participant terminology from the transcripts. These included: Adapting Simulation Delivery to Suit the Online Environment, Increased

Cognitive Load for Facilitators, Sense of Belonging and Community, and Creating an Authentic Experience to Bridge Gaps in Education.

Adapting Simulation Delivery to Suit the Online Environment

The simulation training was originally designed for in-person delivery and was adapted for virtual delivery due to the pandemic. During the semi-structured interviews, facilitators highlighted the techniques and online learning tools they used to engage students and encourage interactive participation online, such as virtual quizzes and whiteboards. These were particularly useful during the time spent warming up the group and reengaging students after breaks:

"We've got an [online] whiteboard space…where we got them to put what they are thinking about the simulation, what they are scared about, what they are looking forward to, things they wanted to learn…" (Facilitator 1, Semi-Structured Interview)

Facilitators took care to demonstrate genuine interest in the students, encouraging participants to share about who they are, their background, where they work, the movies they like, and other interests to develop group cohesion, familiarity, and comfort. These tools encouraged active participation, set the tone for the training, and were seen as necessary to creating and maintaining a successful, comfortable, and psychologically safe environment despite not being in the same room:

"We want participants to feel that we genuinely have an interest in what they have an interest in… it creates…rapport." (Facilitator 2, Semi-Structured Interviews)

They also devised creative ways for students to interact with their physical environments at home, despite the training taking place in the virtual space:

"…To get them…into the learning environment…we'll…say, 'We are going to have a treasure hunt and we just want you to bring us an animal.' …You'll have people with their kid's Peppa Pigs and then people will…get their cats and dogs. You'll have 10 minutes of a bit of a laugh before you set up for the afternoon, so you are back in the space, but you are not straight into that learning environment." (Facilitator 1, Semi-Structured Interview)

Facilitators noted the value of developing psychological safety and explained that if rapport was not established, students would participate less confidently in the simulation and the debrief.

Facilitators described that the teaching content, simulation scenarios, and debriefs were also adapted and condensed from the original training for this virtual delivery. Facilitators made these alterations because of the perceived intensity and distraction-free nature of the virtual environment. Although some students were interrupted by the doorbell ringing, by their family members, or by minor technological difficulties like temporary connectivity issues, these interruptions were rare and did not interrupt training delivery for the group. Facilitators felt that VS was more intense because there were no natural breaks between activities, side conversations, or distractions. Because of this, the facilitators were able to reduce the training content and duration. Students and facilitators highlighted additional benefits of delivering the simulation online, indicating advantages such as increased accessibility to the educational experience without the need to travel or find childcare.

Increased Cognitive Load for Facilitators

The facilitators adapted how they communicated with one another and with students when teaching online and reported that this involved a lot of 'moving parts.' All three facilitators had challenges collaborating with other facilitators from a distance and experienced stress monitoring multiple technological platforms. To simultaneously collaborate while teaching virtually, facilitators communicated via WhatsApp. Although they reported this worked well, they also struggled with monitoring both the Microsoft Teams and WhatsApp platforms, as they were unable to entirely focus on either:

"Behind the scenes, it's quite hard for us…There's a lot going on for you as a facilitator, probably more so than the learner… You are thinking about your facilitating. You are thinking about your group. You've got your own tech to worry about because we [are] delivering it […]. Although there is a workaround, the cognitive load on that is really, really quite intense to be honest. You are getting pinged all the time from different angles." (Facilitator 1, Semi-Structured Interviews)

Facilitators were concerned that monitoring the communication channels simultaneously would interfere with their ability to connect with students and were worried about appearing 'detached' or 'distracted.' Facilitators also found displaying non-verbal communication more challenging in the virtual setting. For example, one facilitator said that in person, she would make eye contact with a student to try to engage them in the discussion, something which was not possible online. To overcome this, the facilitator had to verbally call out a student's name, which provoked discussion, but also felt less natural than using non-verbal communication skills.

Likewise, facilitators had a harder time interpreting non-verbal cues from students. The subject matter for the simulation dealt with sensitive topics such as self-harm. When a student dropped off the call, the facilitator described being unable to discern if this was for psychological safety or technological reasons in the absence of intuitive nonverbal communication. This was considered a difference in the ability to understand the overall 'feel' of the environment. Facilitators struggled to gauge whether students understood online teaching. This had implications for the facilitators' time management and led to the repetition of course material. Ultimately, facilitators had to make sure everything was running smoothly on the back end while simultaneously interpreting and fostering communication and learning during discussions. The strategies they employed were perceived as effective but left the facilitators feeling fatigued.

Sense of Belonging and Community

Both students and facilitators commented on group cohesion, intergroup support, and the community formed during the training.

The students specifically referenced the time spent getting to know their peers and becoming a team on the first day as being essential to building comfort and familiarity:

"It was…interactive. …we were all involved; it was engaging… the first day…we were just getting to meet some new people… but after that first day, even after 30 minutes, everybody had… confidence. We felt like we are now part of the team.…like we were all together." (Participant 7, Focus Group)

Students emphasized that they felt safe to learn and make mistakes. This sentiment was echoed by all students participating in the focus group. Students described how positive the group was and that they felt reassured that they would not be judged, even when they got the answer wrong. They attributed their sense of belonging and community to the respectful environment created by the facilitators:

"Anything facilitative ensures empowerment because there is guidance. There was that atmosphere of learning, where everybody was made aware of respect for each other.… The anxiety that surrounds being put on the spotlight was the barest minimum, in the sense that, 'At least, let me give it a try. Whether good or bad, I can get a constructive recommendation from the team.'" (Participant 4, Focus Group)

This feeling of community was particularly appreciated by the students because of the challenges they have faced creating that community remotely during the COVID-19 pandemic. Students even exchanged contact details so that they could stay in touch after the training:

"…I feel like a student. In about two years now, since COVID, I haven't felt the student relationship. So, these five days have brought back that memory, you know? Of belonging." (Participant 7, Focus Group)

The training provided students with the opportunity to collaborate with and support their peers, suggesting that this training fulfilled both learning outcome requirements and nuanced social needs.

Creating an Authentic Experience to Bridge Gaps in Education

Students were able to practice patient assessments, decision-making, and teamwork during the VS. Students described feeling that the actor was a real patient and forgetting that they were taking part in a simulation. They described a sense of total immersion, with the VS provoking the same emotions and thought processes that students had in in-person placements:

"…The simulation was done in such a way that it appeared so real that the emotions you get when you're meeting the patients for the first time were actually there. So, to me, it's that realness. The realness that was attached to the whole thing." (Participant 5, Focus Group)

Interestingly, one facilitator felt that the students' emotions were more muted during the VS than during an in-person simulation. In their opinion, students seemed more focused on the content during the VS and anxiety levels were perceived to be lower without the 'hallway conversations' that occur between students in person. This disparity could reflect the difficulty of reading emotions in a virtual setting.

Although the simulation generated realistic emotions, the students reported that they felt less afraid of failure in the VS. Particularly, when relating the virtual experience to clinical placements, the students explained that the simulation taking place outside of the pressurized clinical environment meant that they were able to take their time, ask questions, and debrief the scenarios without feeling like they were a burden to staff:

"The acute ward, like we all know, is very fast paced. I am not taking anything away from my assessors and supervisors, but they are…busy…the simulation has helped to bridge the gap where I have not been able to- what I was not able to get on the placement." (Participant 6, Focus Group)

Learning in a safe yet realistic environment enabled students to practice skills at their own pace, leverage peer support, and gain confidence in their abilities. Students described the simulation as 'revealing' and 'a confidence booster' because they could practice responding to unexpected or unpredictable situations without fear of failure or embarrassment. The facilitators also noticed the increase in the students' skills and confidence as the training went on:

"It just was lovely to see how enthusiastic they were, how keen they were to learn…how important it was for them to do things well…to see the skills and the knowledge that they already had and [to help them] consolidate it a bit…and just give them a bit of confidence…They went into their scenarios, and they just looked like they were trying hard. Anything that we were telling them…you could see them trying to implement the skills and do things a bit differently in their scenarios." (Facilitator 3, Semi-Structured Interviews)

Students were able to practice, increase their confidence, and build their skills without fear of failure when working with the actors in the simulation while maintaining a high degree of perceived realism.

Discussion

This paper presents a case study of a five-day VS training for pre-registration mental health nursing students to determine its use in increasing placement capacity. The evaluation revealed several successes of the training program. We discovered that students found the VS valuable, realistic, and beneficial to their education. Additional themes revealed key distinctions between virtual and in-person learning for both students and facilitators and the impacts of these differences. For students, learning outside of the pressurized clinical environment increased their confidence and skills. Students felt part of a community during the training and there was a high degree of psychological safety for the students, both of which created a desirable learning environment, especially in the wake of the COVID-19 pandemic. The student participants did not have prior experience with in-person simulation due to the pandemic, so VS and in-person simulation could not be compared. However, these results echo those previously found for in-person simulation, suggesting that VS may be a suitable alternative (Au et al., 2016; Dickinson et al., 2016; Foronda et al., 2020; Gu et

al., 2017; Larue et al., 2015; McCutcheon et al., 2015; Oermann, 2015; Terry et al., 2018; Xiong et al., 2017). For facilitators, teaching virtually meant adapting how course content was delivered. While facilitators embraced these changes, they were challenged with increased cognitive load. Namely, the facilitators struggled to manage multiple online tools and communication pathways simultaneously. Despite these challenges, facilitators were impressed with the students' enthusiasm, the cohesiveness of the group, and students' improvement throughout the training. Participants also discussed other advantages, such as increased accessibility and the distraction-free virtual environment.

This case study builds on existing work in simulation, echoing a growing body of international studies that promote the use of simulation to replace or supplement clinical placements (Au et al., 2016; Bridge et al., 2022; Dickinson et al., 2016; Foronda et al., 2020; Gu et al., 2017; Larue et al., 2015; McCutcheon et al., 2015; Oermann, 2015; Terry et al., 2018; Xiong et al., 2017). Internationally, the practice of replacing in-person clinical teaching with in-person simulation is becoming more commonplace. For instance, in the United States, in a landmark study by the National Council of State Boards of Nursing (NCSBN), researchers found that nurses who had 50% simulation and 50% clinical placement had no differences in their clinical knowledge, nursing board exam pass rates, or performance in the first six months as a registered nurse compared to groups with 10% and 25% simulation (Hayden et al., 2014). The NCSBN study therefore concludes that up to 50% simulation can be effectively substituted for traditional clinical experience (Hayden et al., 2014). Additional research is needed to confirm if these findings are also true for VS. Our case study adds to existing knowledge of VS by contributing the findings that VS was accepted and seen as valuable by students and facilitators participating in our training.

While cognitive load theorists have considered the impacts of virtual teaching on students' ability to retain learning (Costley, 2020; Skulmowski & Xu, 2021) and a few studies explore teachers' perceptions of teaching online (Kebritchi et al., 2017; Roblyer et al., 2009; van der Spoel et al., 2020), existing studies on VS in nursing primarily explore student perceptions and outcomes or facilitator perception of student outcomes (Foronda et al., 2020; Gu et al., 2017; Kim et al., 2021; McCutcheon et al., 2015; Oermann, 2015; Terry et al., 2018; Xiong et al., 2017). Indeed, only a handful of existing studies explore the benefits and challenges of online teaching in nursing from the perspective of teachers, and most centre around online lecture modules not simulation (Cravener, 1999; Elshami et al., 2021; Gazza, 2017; Howe et al., 2018; Wingo et al., 2016). However, the demands of utilizing various teaching modalities in the online space are different. For instance, delivering a lecture, sharing a PowerPoint, or playing a video requires different skills than leading a virtual discussion, managing breakout rooms, or supervising live actors and simulation participants. To our knowledge, there are no existing studies, in nursing or otherwise, that specifically explore the cognitive load of teachers who teach online, how this is impacted by the chosen teaching modality, and how this might impact content delivery.

Limitations

Due to the nature of the training and the evaluation, the sample size for the case study was small. This should be repeated with a larger, more diverse group of students to verify whether these themes persist. Secondly, as this was a course evaluation, not a research study, future work would benefit from an interventional approach with both quantitative and qualitative pre-and post-course evaluations of learning and acceptability. In-person and virtual simulation should be compared.

Conclusions

Our findings provide evidence for the acceptance of this VS training by students. However, our findings also illuminate some of the challenges faced by facilitators in delivering VS. This outcome should be explored further. Despite these challenges, facilitators and students alike resoundingly reported the benefits of taking part in simulation virtually. VS should be considered as a supplement or replacement for clinical placement, especially given clinical placement capacity issues.

References

Alanazi, A. A., Nicholson, N., & Thomas, S. (2017). The use of simulation training to improve knowledge, skills, and confidence among healthcare students: A systematic review. *Internet Journal of Allied Health Sciences and Practice, 15*(3), 2. https://doi.org/10.46743/1540-580X/2017.1666

Au, M. L., Lo, M. S., Cheong, W., Wang, S. C., & Van, I. K. (2016). Nursing students' perception of high-fidelity simulation activity instead of clinical placement: A qualitative study. *Nurse Educ Today*, 39, 16-21. https://doi.org/10.1016/j.nedt.2016.01.015

Barnett, T., Cross, M., Jacob, E., Shahwan-Akl, L., Welch, A., Caldwell, A., & Berry, R. (2008). Building capacity for the clinical placement of nursing students. *Collegian, 15*(2), 55-61. https://doi.org/10.1016/j.colegn.2008.02.002

Bliss, J. (2021). The impact of COVID-19 on practice learning in nurse education. *British Journal of Community Nursing, 26*(12), 576-580. https://doi.org/10.12968/bjcn.2021.26.12.576

Bridge, P., Adeoye, J., Edge, C. N., Garner, V. L., Humphreys, A.-L., Ketterer, S.-J., Linforth, J. G., Manning-Stanley, A. S., Newsham, D., Prescott, D., Pullan, S. J., & Sharp, J. (2022). Simulated Placements as partial replacement of clinical training time: A Delphi consensus study. *Clinical Simulation in Nursing, 68*, 42-48. https://doi.org/10.1016/j.ecns.2022.04.009

Clarke, V., & Braun, V. (2013). *Successful qualitative research: A practical guide for beginners.* Sage.

Costley, J. (2020). Using cognitive strategies overcomes cognitive load in online learning environments. *Interactive Technology and Smart Education, 17*(2), 215-228. https://doi.org/10.1108/ITSE-09-2019-0053

Cravener, P. A. (1999). Faculty experiences with providing online courses. Thorns among the roses. *Computers in Nursing, 17*(1), 42-47.

Dickinson, T., Hopton, J., & Pilling, M. (2016). An evaluation of nursing students' perceptions on the efficacy of high fidelity clinical simulation to enhance their confidence, understanding and competence in managing psychiatric emergencies. *J Clin Nurs, 25*(9-10), 1476-1478. https://doi.org/10.1111/jocn.13211

Foronda, C. L., Fernandez-Burgos, M., Nadeau, C., Kelley, C. N., & Henry, M. N. (2020). Virtual simulation in nursing education: A systematic review spanning 1996 to 2018. *Simulation in Healthcare, 15*(1), 46-54. https://doi.org/10.1097/SIH.0000000000000411

Foronda, C. L., Swoboda, S. M., Henry, M. N., Kamau, E., Sullivan, N., & Hudson, K. W. (2018). Student preferences and perceptions of learning from vSIM for Nursing™. *Nurse Education in Practice*, 33, 27-32. https://doi.org/10.1016/j.nepr.2018.08.003

Gazza, E. A. (2017). The experience of teaching online in nursing education. *Journal of Nursing Education, 56*(6), 343-349. https://doi.org/10.3928/01484834-20170518-05

Gu, Y., Zou, Z., & Chen, X. (2017). The effects of vSIM for Nursing™ as a teaching strategy on fundamentals of nursing education in undergraduates. *Clinical Simulation in Nursing, 13*(4), 194-197. https://doi.org/10.1016/j.ecns.2017.01.005

Haerling, K. A. (2018). Cost-utility analysis of virtual and mannequin-based simulation. *Simulation in Healthcare, 13*(1), 33-40. https://doi.org/10.1097/SIH.0000000000000280

Hayden, J. K., Smiley, R. A., Alexander, M., Kardong-Edgren, S., & Jeffries, P. R. (2014). The NCSBN National Simulation Study: A longitudinal, randomized, controlled study replacing clinical hours with simulation in prelicensure nursing education. *Journal of Nursing Regulation, 5*(2). https://doi.org/10.1016/S2155-8256(15)30062-4

Health Education England. (2020). Standard Operating Procedure for the Deployment of Students: North East and Yorkshire. Birmingham, UK: HEE. NHS. https://madeinheene.hee.nhs.uk/Portals/0/NEY%20SOP%20for%20student%20deployment.pdf

Howe, D. L., Chen, H. C., Heitner, K. L., & Morgan, S. A. (2018). Differences in nursing faculty satisfaction teaching online: A comparative descriptive study. *Journal of Nursing Education, 57*(9), 536-543. https://doi.org/10.3928/01484834-20180815-05

Hoyle, B. (2022). How Covid-19 has impacted upon the practice learning experience of pre-registration nursing students. In D. Turner & M. Fanner (Eds.), *Digital Connection in Health and Social Work: Perspectives from Covid-19* (pp. 37-45).

International Nursing Association for Clinical Simulation and Learning. (2022). *Healthcare Simulation Standards of Best Practice.* https://www.inacsl.org/healthcare-simulation-standards

Kardong-Edgren, S., Farra, S. L., Alinier, G., & Young, H. M. (2019). A call to unify definitions of virtual reality. *Clinical Simulation in Nursing, 31*, 28-34. https://doi.org/10.1016/j.ecns.2019.02.006

Kebritchi, M., Lipschuetz, A., & Santiague, L. (2017). Issues and challenges for teaching successful online courses in higher education. *Journal of Educational Technology Systems, 46*(1), 4-29.

Kim, M. J., Kang, H. S., & De Gagne, J. C. (2021). Nursing students' perceptions and experiences of using virtual simulation during the COVID-19 pandemic. *Clinical Simulation in Nursing,* 60, 11-17. https://doi.org/10.1016/j.ecns.2021.06.010

Larue, C., Pepin, J., & Allard, É. (2015). Simulation in preparation or substitution for clinical placement: A systematic review of the literature. *Journal of Nursing Education and Practice, 5*(9). https://doi.org/10.5430/jnep.v5n9p132

McCutcheon, K., Lohan, M., Traynor, M., & Martin, D. (2015). A systematic review evaluating the impact of online or blended learning vs. face-to-face learning of clinical skills in undergraduate nurse education. *Journal of Advanced Nursing, 71*(2), 255-270. https://doi.org/10.1111/jan.12509

Mulyadi, M., Tonapa, S. I., Rompas, S. S. J., Wang, R. H., & Lee, B. O. (2021). Effects of simulation technology-based learning on nursing students' learning outcomes: A systematic review and meta-analysis of experimental studies. *Nurse Education Today,* 107, 105127. https://doi.org/10.1016/j.nedt.2021.105127

Oermann, M. H. (2015). Technology and teaching innovations in nursing education: engaging the student. *Nurse Educator, 40*(2), 55-56. https://doi.org/10.1097/NNE.0000000000000139

Roblyer, M.D., Porter, M., Bielefeldt, T. & Donaldson, M.B. (2009). "Teaching Online Made Me a Better Teacher": Studying the Impact of Virtual Course Experiences on Teachers' Face-to-Face Practice. *Journal of Computing in Teacher Education,* 25(4), 121-126. https://www.learntechlib.org/p/105301/

Skulmowski, A., & Xu, K. M. (2021). Understanding cognitive load in digital and online learning: a new perspective on extraneous cognitive load. *Educational Psychology Review.* https://doi.org/10.1007/s10648-021-09624-7

Terry, V. R., Terry, P. C., Moloney, C., & Bowtell, L. (2018). Face-to-face instruction combined with online resources improves retention of clinical skills among undergraduate nursing students. *Nurse Education Today*, 61, 15-19. https://doi.org/10.1016/j.nedt.2017.10.014

van der Spoel, I., Noroozi, O., Schuurink, E., & van Ginkel, S. (2020). Teachers' online teaching expectations and experiences during the Covid19-pandemic in the Netherlands. *European Journal of Teacher Education, 43*(4), 623-638. https://doi.org/10.1080/02619768.2020.1821185

Verkuyl, M., St-Amant, O., Atack, L., MacEachern, D., Laird, A., Mastrilli, P., Flores, G., & Gunn, H. S. H. (2022). Virtual simulations' impact on clinical practice: a qualitative study. *Clinical Simulation in Nursing*, 68, 19-27. https://doi.org/10.1016/j.ecns.2022.04.001

Williamson, G. R., Kane, A., & Bunce, J. (2020). Student nurses, increasing placement capacity and patient safety. A retrospective cohort study. *Nurse Education in Practice*, 48, 102889. https://doi.org/10.1016/j.nepr.2020.102889

Wingo, N. P., Peters, G. B., Ivankova, N. V., & Gurley, D. K. (2016). Benefits and challenges of teaching nursing online: exploring perspectives of different stakeholders. *Journal of Nursing Education, 55*(8), 433-440. https://doi.org/10.3928/01484834-20160715-03

Xiong, P., Zhang, J., Wang, X., Wu, T. L., & Hall, B. J. (2017). Effects of a mixed media education intervention program on increasing knowledge, attitude, and compliance with standard precautions among nursing students: A randomized controlled trial. *American Journal of Infection Control, 45*(4), 389-395. https://doi.org/10.1016/j.ajic.2016.11.006

ORIGINAL RESEARCH

Roles and Skills for Effective Academic Nurse Leaders

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Abstract

Background: The extant nursing literature reveals limited information about specific aspects of the academic nurse leader role. To fully prepare academic nurse leaders for actualizing their roles, a deeper understanding of the knowledge and skills within these roles is needed. **Objectives:** This study assessed the extent to which academic nurse leaders are prepared for the challenges they face by measuring their perception of the importance of select leadership activities and their associated self-assessed level of competence with those activities. This study sought to answer the following research questions: What are the characteristics of the current New York state academic nurse leadership group? What are leaders' beliefs about the importance of specific components of the leadership role? What are leaders' beliefs about their competence in activities necessary for effective leadership and management? **Methodology:** Using a descriptive study method, academic nurse leaders in New York state (n=69) were queried using the Academic Nurse Leader Survey©. An email, using SurveyMonkey, was sent to academic nurse leaders for all NY state pre-and post-licensure nursing programs asking for their participation in the research study and asking them to forward the study to qualified individuals on their leadership team. **Results:** Fifty-two percent of the sample had worked 40 years or more in nursing; 54% worked 20 or more years in a faculty position. The majority of the respondents (58%) reported holding their current leadership position for 5 years or fewer. Activities were grouped into role dimensions. Findings demonstrate that competence was rated consistently lower than importance on all role dimensions with the largest gaps (15-24%) for the monitor, resource allocator/financial control, and strategic assessment dimensions, ($p < .0005$). **Limitations:** Sample size, sample geographic distribution, survey fatigue, format bias and response bias may be possible limitations. The format change from paper to electronic survey format may have contributed to the limited sample size since it is likely the time to complete the survey lengthened. The survey was restricted to academic nurse leaders in New York state. Response bias could have been a factor since the research team members may have been known to the respondents. **Conclusions and recommendations:** Future study of academic nurse leader role is warranted. Mixed method studies can be useful in extracting information about the lived experience of the academic nurse leader in relation to the activities and dimensions studied using the Academic Nurse Leader Survey©. It is suggested that the results may be used to further develop academic leaders both in formal and continuing education settings. Instruction in the areas of the largest gaps, monitor, resource allocator/financial control, and strategic assessment dimensions would be useful. Establishing academic nurse leader competencies across program types is also suggested, as well as strengthening accreditation standards around the development of academic nurse leaders.

Key words: leadership; schools, nursing; surveys and questionnaires; organization and administration

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Roles and Skills for Effective Academic Nurse Leaders

Background

The scope and delivery of educational and healthcare services nationwide is changing rapidly and it is anticipated that economic and political forces will have an even greater impact throughout the next 10 years. At the center of these changes will be the academic nurse leaders, who control resources that directly affect learning outcomes. These individuals need a variety of skills and abilities to plan for the effective delivery of education to students of all ages and at all levels of higher education. Nursing leadership in academia is critical to the future of nursing in the healthcare system.

Academic nurse leaders are those frontline people who set the stage for achieving excellence in nursing education through intricate juggling of a multitude of roles, initiatives, and competencies. Well-prepared leaders need knowledge of the academic environment, budgeting, and resource management skills, the ability to establish internal and external collaborative relationships, and to co-create effective work environments with faculty, as well as personnel management and political skills. Persuasive communication is an essential building block and interpersonal skills must be finely tuned; organizational assessment and analysis and strategic planning skills are essential.

It is necessary that academic nurse leaders are equipped to engage in the challenges of managing academic enterprises that produce graduates who are ready to join the changing healthcare system. The literature contains some examples of best practices and research that address the role and impact of the academic nurse leader in higher education. To fully prepare academic nurse leaders for actualizing their roles, a deeper understanding of the knowledge and skills within these roles is needed.

In 2020, a team with extensive experience in nursing education and academic administration came together to discuss the need to better understand the beliefs of academic nurse leaders about their roles. Specifically, the team wanted to examine the activities necessary for effective leadership and management, and determine the leaders' beliefs about the importance of specific components of the role and their competence in those areas.

Literature Review

Much of the literature exploring nursing leadership in academia, going back decades, points to the need for quality preparation for academic nurse leaders. In fact, in 1974 the United States Health Resources Administration, Division of Nursing, "concerned with the quality of the … preparation of nurses for leadership in nursing education" (p. iii), convened a conference for the purpose of discussing the role of the dean in baccalaureate and higher colleges of nursing. In 1976, Arminger published a paper exploring all aspects of the nursing deanship titled *The Educational Crisis in the Preparation of Deans.* Most recently, Apen et al. (2021) published a paper titled *Nursing Academic Leadership: An Urgent Workforce Shortage in Nursing Education.* In the decades between 1976 and 2021, several other papers were published reflective of this theme (Adams, 2007; Bouws, 2018; Green & Ridenour, 2004; Princeton & Gaspar, 1991; Starck et al., 1999).

But what are the competencies that an academic nurse leader must possess? The gray literature offers two comprehensive sources that articulate necessary competencies. These are the Nurse Executive Competencies promulgated by the American Organization of Nurse Executives (AONE, 2015) and the *Scope of Practice for Academic Nurse Educators* put forth by the National League for Nursing (NLN, 2012). The AONE identifies five areas of competency, with detailed activity statements providing specificity to each competency. The NLN identifies eight competencies for nurse educators, and in a similar manner, provides what they call 'task statements' to elucidate the competencies. Taken together, these two resources could provide a comprehensive structure for the preparation of an academic nurse leader. Interestingly, with one exception (Patterson & Krouse, 2015), there is no mention in the literature reviewed for this paper of these resources.

The peer-reviewed literature does offer insights into competencies. The literature includes thought pieces by academic nurse leaders in the form of personal accounts or syntheses of current thinking on leadership (Fischer, 2017; Giddens & Morton, 2018; Green & Ridenour, 2004; Mundt, 2018; Redman, 2001; Thompson & Miller, 2018), integrative reviews (Bouws, 2018), and reports of qualitative studies (Patterson & Krouse, 2015; Starck,1999; Wilkes et al., 2015). There is an additional body of work that discusses the urgent need for succession planning for leadership in nursing education (Glasgow et al., 2009; Phillips, 2019; Tucker, 2020). However, there are few reports of quantitative research related to competencies of academic nurse leaders.

Princeton and Gaspar (1991) explored competencies necessary for first-line nursing education administrators. Theirs is a mixed methods study in which they first conducted telephone interviews with 56 academic nurse leaders. They then asked the study subjects to rate the importance of 14 administrative competencies. They found that the respondents ranked character/integrity as most important and fundraising as least important. They also found that while respondents "reported [in their telephone interviews] that their second greatest responsibility was developing and managing the departmental budget in the form of allocating and monitoring financial and material resources" (p. 85), the respondents ranked this competency as next to last in a ranking of the importance of administrative competencies. The researchers did not ask the subjects to rate their estimation of their abilities (i.e., competence) with regard to the competencies.

Broome (2013) conducted a mixed methods study comprised of the administration of the Multifactor Leadership Questionnaire (MLQ) with a follow-up interview, investigating the self-reported leadership styles of 344 deans of baccalaureate and higher nursing education programs in the United States. Broome found that the deans of nursing ranked in the 80th percentile for self-reported transformative behaviors and outcomes effectiveness, as compared with the findings on the MLQ for over 3000 other leaders. Broome comments that all deans face constant, relentless changes in education and practice, and notes that "when interacting with

external constituencies, knowledge and skills related to financial acumen, resource acquisition, interdisciplinary collaboration, and development and advancement are critical" (p. 324).

With respect to barriers to assuming a leadership role, Delgado et al. (2016) surveyed 52 nurse educators from 12 of the 15 highest-ranked United States university nursing education programs (ranking done by *U.S. News & World Report* in 2013). In addition to identifying barriers, they also explored respondents' formal and informal educational preparation for leadership versus on-the-job learning, whether or not the respondent had been mentored, and respondents' opinions as to whether leadership can be learned. Furthermore, the survey asked 27 questions focusing on academic leadership qualities and required the respondents to rank the importance of the qualities. The respondents ranked a research track record as being the least important quality and integrity as being the most important quality, followed by clear communication and skills in problem resolution. They also ranked challenges facing academic nurse leaders in order of importance. Legal issues were ranked as the least important and finding faculty was ranked as the most important.

A recent study of academic nurse leaders in California identifies several critical knowledge competencies and several critical skills that an academic nurse leader must possess (Apen et al., 2021). These researchers distributed a survey to the leaders of all 145 pre-licensure programs in the state. Eighty-nine responded. The respondents ranked communication strategies and conflict resolution competencies as very important (74%), being knowledgeable about regulatory requirements and reporting as very important (69%), and fiscal management as being very important (58%).

It is noteworthy that leaders of associate degree nursing education programs have rarely been included in the research on academic nurse leaders. According to the NLN, in 2012 (the most recent year for which these statistics are available) there were 1084 associate degree nursing education programs in the United States. These represent 31% of all nursing education programs (AD, BS, BSRN, MS, and doctoral), and 61% of all licensure-qualifying nursing education programs in the United States. Thus, understanding the leadership profile of academic nurse leaders of associate degree nursing education programs is critical.

Broome (2013) and Bouws (2018) both note that there is a need for empirical data shedding light on the role and competencies of successful academic nurse leaders. None of the studies discussed above asked participants to estimate their competence with respect to the qualities, attributes, characteristics, and challenges. The research reported here helps to finely tune our understanding of where to focus leadership development, both in formal academic leadership preparatory courses and in ongoing professional development.

Academic Nurse Leader Survey Development

A study by Roemer (1996) of middle managers in acute care hospitals, sought to develop a profile of their personal characteristics, determine their work roles and skills, and measure their perception of the importance of and competence in performing specific activities. Mintzberg's (1973) work on management activities provided the basis for this research. Roemer's study questionnaire contained 75 work activities that were rated based on respondents' perceptions of the importance of their work and their perceived competence. These were divided into 11 role groups and 5 skill groups. Additionally, when the roles and skills were grouped according to their importance ratings, they seemed to divide into the following: those most closely related to the management of the individual unit, those involving the relationship between the unit and the larger organization, and those involved in the relationship of the unit and organization to the external environment.

Edwards and Roemer (1996) studied nurse managers at four teaching hospitals to test the extent to which they were prepared for the changes that challenged them. The research was also designed to confirm the results of Roemer's (1996) study on middle managers. Edwards and Roemer used the previous 75 work activities with minor wording changes in their questionnaire. Nurse managers were asked about their perception of the importance of the work activities and their perceived competence. Based on the previous study, the statements were divided into the same role and skill groups and also grouped in regard to the relationship of the unit to the organization and external environment.

Edwards (1999) studied middle managers in rehabilitation facilities utilizing a questionnaire that contained the 75 activity statements from the previous studies. As part of the study, factor analysis was used to identify those statements that went together as unified concepts. An examination of the statements yielded 12 groupings, named dimensions, each containing five statements that were used to analyze both importance and competence ratings. To provide evidence of the reliability of the measure, Cronbach's alpha was applied to the statements in the dimensions. The alpha for importance was 0.94 and for competence was 0.95. In this study, the dimensions were grouped as behaviors related to the unit, the organization, and the external environment.

A pilot study by Edwards (2011) built on the previous research to determine the beliefs of academic nurse leaders about the importance of specific components of their role and their competence in the activities necessary for effective leadership and management. The study survey contained 69 activity statements (58 adapted from the previous research and 11 new statements) rated for importance and competence. The new activities were elicited from the literature and the statements created were reviewed by a panel of academic nurse leaders. The activity statements from the previous research were grouped into the dimensions as previously noted for comparison purposes and incorporated all of the previous roles and skills. No attempt was made to incorporate the new activity statements into the dimensions. Also in the pilot study, the groupings of behaviors in relation to the unit, the organization, and the external environment were analyzed.

Study Aims

Based on the demonstrated paucity of knowledge in the role components and specific skills believed to be important for nursing educators in leadership positions in academia, this study sought to answer the following research questions:

- What are the characteristics of the current New York state nursing academic leadership group?

- What are leaders' beliefs about the importance of specific components of the leadership role?
- What are leaders' beliefs about their competence in activities necessary for effective leadership and management?

Methodology

This quantitative, survey method study used a cross-sectional approach to examine academic nurse leaders' beliefs about their role components. A convenience sample from the leaders of professional nursing education programs of all levels across New York state was used for this study. IRB approval from SUNY Empire State College was obtained prior to survey distribution.

An email address mailing list was generated from public information available on the website of the NY State Office of the Professions. An email was sent to academic nurse leaders for all NY state pre-and post-licensure nursing programs asking for their participation in the research study. It explained this was a one-time inquiry of leaders to identify demographic characteristics and examine beliefs about leadership activities and competence in specific activities necessary for effective leadership and management. The deans and directors were also asked to identify other appropriate nurses in leadership positions in their schools (associate dean, program coordinator, program director, etc.) and to share this request with them so they could also participate in the research study. Completion of the survey indicated informed consent. A copy of the survey instrument may be obtained from the corresponding author.

The reliability of the original survey items (Edwards,1999; Edwards & Roemer, 1996; Roemer, 1996) was demonstrated in the previous research conducted with healthcare managers. The final survey instrument titled "Academic Nurse Leader Survey" included 42 activity statements generated from the nurse manager research, 23 activity statements modified for the academic nurse leaders, and 12 new activity statements specific to the academic nurse leader role, for a total of 77 activity statements. Examples of these new statements are, "Implementing processes to achieve established program outcomes" and "Leading programmatic accreditation activities". Respondents were asked to first rate the importance of the activity and then rate their competence related to the same activity using a 5-point Likert scale for both ratings. The activity statements were followed by 10 demographic questions. The survey was distributed via SurveyMonkey®.

Descriptive and inferential statistics, including McNemar's test, were used to analyze the results. McNemar's test is a nonparametric method appropriate for comparing dichotomous outcomes for matched pairs (Rosner, 2015). The data were analyzed with JMP and SPSS statistical software. Consistent with the approach of previous studies (Roemer, 1996; Edwards & Roemer, 1996; Edwards, 1999), the survey results were analyzed first by combining the responses for all of the activity statements within each dimension and then further aggregated into three groupings based on organizational proximity to the academic nurse leader.

Table 1

Sociodemographic Characteristics of Participants

Characteristic	*n*	% of total
Years as a nurse		
1 - 19 years	3	6
20 - 29 years	9	18
30 - 39 years	12	24
40 years and above	26	52
Years in faculty position		
1 - 9 years	7	14
10 - 19 years	16	32
20 - 29 years	18	36
30 years and above	9	18
Years in current leadership position		
1 - 5 years	29	58
6 - 10 years	9	18
11 -15 years	8	16
16 years and above	4	8
Current position		
Associate Dean	1	2
Dean	17	34
Department Chair	18	36
Program Coordinator/Director	11	22
Other	3	6
Dual teaching & administrative responsibilities[a]	35	70
Education (all graduate degrees obtained)		
Master's degree in nursing	30	60
Master's degree in another field	7	14
Doctorate in nursing	24	48
Doctorate in another field	15	30
Programs for which respondent provided leadership		
Associate's degree	20	40
RN to bachelor's degree	25	50
Bachelor's degree	26	52
RN to master's degree	2	4
Master's degree	21	42
Doctoral degree	9	18
Age		
20 - 49 years	4	8
50 - 59 years	14	28
60 - 69 years	25	50
70 years and above	7	14
Gender		
Female	49	98
Male	1	2
Race/Ethnicity		
Asian or Asian American	2	4
Black or African American	2	4
White or Caucasian	42	84
Hispanic or Latino	1	2
Prefer not to answer	3	4

[a]Reflects the number and percentage of participants answering "yes" to this question.

Results

A total of 69 responses were received of which 19 (27.5%) did not provide demographic information. Table 1 shows the characteristics of the survey respondents. Note that for the title of current position, dean, associate dean, department chair, and program coordinator/director, represent 94% of the sample. These titles are comparable and reflect individuals in the role of chief nurse administrator.

For the activity statements, the 5-point Likert response scale was dichotomized for analysis, with ratings of 4 and 5 categorized as important or competent, respectively. Similarly, ratings from 1 to 3 were categorized as not important or not competent. The activity statements were analyzed by dimension, as in the previous study. Table 2 shows the responses for each dimension where the activity statement was rated as important and the percentage where the respondents rated themselves as competent. Also shown for each dimension are the number of activity statements in the dimension, the number of responses in the dimension, the difference in the percentage between important and competent (calculated as important minus competent), and the p-value associated with a McNemar's test.

Table 2

Summary of Percentage Importance and Competence Ratings by Dimension

Dimension	No. of activity statements	No. of responses	Important %	Competent %	Difference	*p*
Communication	8	418	98.3	94.0	-4.3	.001
Disturbance Handler/ Negotiator	5	251	93.1	82.8	-10.3	<.0005
Entrepreneur	4	212	95.8	91.5	-4.2	.049
Leader	10	519	95.4	90.0	-5.4	<.0005
Interpersonal Relations	7	359	93.6	85.2	-8.4	<.0005
Liaison/ Disseminator	4	213	81.7	79.3	-2.3	.499
Operations	6	319	95.0	88.4	-6.6	.001
Resource Allocator Financial Control	8	415	82.9	58.3	-24.6	<.0005
Figurehead/ Spokesperson	5	266	84.2	81.2	-3.0	.35

All dimensions have relatively high importance, ranging from 84.2% to 98.3%. Competence ratings are lower, ranging from 58.3% to 94%. For all dimensions, the competence percentage is lower than the corresponding importance percent. The smallest gap (2.3%) is observed in the liaison/disseminator dimension; the largest gap (24.6%) is found in the resource allocator/financial control dimension. The differences between importance and competence are significant for all dimensions except for liaison/ disseminator and figurehead/spokesperson.

Table 3

Importance and Competence Ratings by Groupings

Grouping	No. of activity statements	No. of Responses	Important %	Competent %	Difference	*p*
Relationship to unit	27	1410	95.9	90.1	-5.8	<.0005
Relationship to organization	25	1306	88.6	76.5	-12.1	<.0005
Relationship to external environment	25	1308	89.1	77.1	-12.0	<.0005

The 12 dimensions were aggregated into three groupings based on organizational proximity to the academic nurse leader. The results are shown in Table 3. Relationship to unit has the highest importance and competence, and the smallest difference.

Relationship to organization and relationship to external environment are similar, showing lower levels of importance and competence and a relatively larger difference. These findings are consistent with findings in the Edwards and Roemer (1996) study with nurse managers, as are the results of the importance and competence percentages by the three groupings of dimensions.

When considering the activity statements, nine were unanimously rated as important with four of them from the communication dimension (Table 4). The same four activity statements were also highly rated in terms of competence (Table 5).

Table 4

Highest Percentage Activity Statements Rated by Importance

Activity statement	Dimension	Important percent
Keeping administration and students informed about the program	Communication	100
Keeping faculty and staff informed	Communication	100
Communicating effectively orally	Communication	100
Communicating effectively in writing	Communication	100
Handling formal grievances	Disturbance handler/ Negotiator	100
Managing or supporting students with complaints and concerns	Disturbance handler/ Negotiator	100
Modeling professional behavior	Leader	100
Demonstrating behaviors that value cultural, ethnic, gender, and other individual differences	Leader	100
Identifying and solving complex problems	Technical expert	100

Table 5

Highest Percentage Activity Statements Rated by Competence

Activity statement	Dimension	Important percent
Keeping administration and students informed about the program	Communication	100
Keeping faculty and staff informed	Communication	100
Modeling professional behavior	Leader	100
Communicating effectively orally	Communication	96
Coaching, mentoring, and challenging the faculty and staff	Interpersonal relations	96
Communicating effectively in writing	Communication	96

The largest gap between importance and competence, 24.6%, was found for the resource allocator/financial control dimension. Table 6 shows the comparison of importance and competence for the eight individual activity statements in this dimension. The activity statement "Understanding financial aid processes" shows the lowest levels of importance and competence for this dimension but has the largest gap of 62%.

Table 6

Importance and Competence Percentage for Activity Statements in Resource Allocator/Financial Control Dimension

Activity Statement	No. of responses	Important %	Competent %	Difference	*p*
Allocating resources (personnel, money, materials)	55	98.2	80.0	-18.2	.006
Projecting how anticipated revenues will impact the program or institution	55	90.9	58.2	-32.7	<.0005
Preparing financial reports	53	73.6	54.7	-18.9	.021
Formulating budgets	52	80.8	57.7	-23.1	.004
Managing effective cost reduction strategies	50	86.0	70.0	-16.0	.021
Analyzing and using financial reports	50	82.0	68.0	-14.0	.001
Understanding financial aid processes	50	68.0	36.0	-62.0	<.0005
Understanding enrollment management processes	50	82.0	56.0	-26.0	.001

Discussion

Research Question 1: What are the characteristics of the current New York state nursing academic leadership group?

The demographics reported in this study revealed a homogenous group of nurse educators who reflect the characteristics of the nurse educator population as a whole, in particular, related to age, gender, and ethnicity. The NLN 2017 Faculty Census Survey shows that 46 percent of the leadership of nursing education programs were between the ages of 46 and 60 years old and that almost half (45 percent) of the administrators were 61 years of age or older. According to the American Association of Colleges of Nursing (AACN) 2021 *Annual State of the School Report*, the median age of nursing faculty is 54 years old, 92.8% are female and only 7.2% are male, 81.2% are white while only 18.8% are from racially diverse groups. The nursing faculty workforce is rapidly aging, and it is expected that a third of this workforce will retire by 2025. This trend is confirmed by the current study with 92% of the respondents reporting an age of 50 years or above, and 94% reporting to have been in the nursing profession for twenty-plus years.

Fifty-two percent of the sample had worked 40 years or more in nursing; 54% worked 20 or more years in a faculty position. The majority of the respondents (58%) reported holding their current leadership position for 5 years or fewer. Of note, 70% indicated they work in a dual teaching and administrative position. Sixty-four percent of respondents were aged 60 or above. Not surprisingly, 84% indicated they are white or Caucasian. The demographic findings from this study reveal the extensive experience in nursing and the years in academic roles in this group, consistent with the literature, these findings are reflective of the larger population of academic nurse leaders.

The sample for the pilot study (Edwards, 2011) was composed of academic nurse leaders from across the U.S. (n=93). Demographic characteristics for the two studies are shown in Table 7 and are within 10%, with the exception of Age, Title – Department Chair, and Education – doctorate nursing.

Over two-thirds of the pilot study respondents indicated they had formal education in the last five years in leadership (81%) and around one-half in organizational theory and planning (48%), strategic assessment (46%), and quality management (44%). This question was not included in the current study but could be used to obtain useful information in the future. Of note in the current study, 70% indicated they work in a dual teaching and administrative position. Since academic nurse leaders are already burdened by extensive responsibilities, such as faculty workload assignments, student advisement, leading accreditation activities, budgeting, and representing the nursing program to multiple stakeholders, the addition of a teaching assignment may create undue demands and lead to greater burnout. This phenomenon was exacerbated due to the pandemic when academic nurse leaders had to take on didactic and clinical teaching roles to cover for faculty and staff illness or family losses.

Green and Ridenour (2004) note that while all academic leaders have three customers: the college administration, the faculty, and the students, academic nurse leaders have a fourth customer – the public for whom nurses provide care. Glasgow et al. (2009) suggest that academic nurse leaders have additional responsibilities related to "clinical placement legalities, patient care issues, clinical and laboratory budget issues, state board and accreditation requirements, and a critical nursing faculty shortage" (p. 205).

Table 7

Demographic Characteristics of Pilot and Current Studies

Demographics	Pilot study (n = 93)		Current study (n = 69)	
	n	%	*n*	%
Years in nursing – 30 years or greater	75	81	52	76
Years in a faculty position – 20 years or greater	55	59	37	54
Years in current leadership position – five years or less	49	53	40	58
Title - Dean	39	42	23	34
Title – Department Chair	16	17	25	36
Title – Program Coordinator/ Director	16	17	15	22
Education – doctorate nursing	33	36	33	48
Education – doctorate in another field*	36	39	21	30
Gender - female	86	92	68	98
Age – greater than 55/60 years**	66	71	44	64

*Doctorate in another field included EdD in higher education/leadership and PhD in higher education.
**Pilot study reported age as 55 and above; current research study reported age as 60 and above.

Research Questions 2 & 3: What are leaders' beliefs about the importance of specific components of the leadership role? What are leaders' beliefs about their competence in activities necessary for effective leadership and management?

The academic nurse leaders rated their competence significantly lower than importance for the majority of the dimensions. Both importance and competence ratings were highest for the groupings related to the management of the individual unit. The activity statements with the highest importance (4 of 7) and competence (4 of 6) ratings were primarily in the communication dimension. The activity statements with the lowest importance ratings were scattered across the following dimensions: resource allocator/ financial control (2), liaison/disseminator (2), disturbance handler/ negotiator (1), and figurehead/spokesperson (1). The lowest competence ratings were primarily in the resource allocator/ financial control dimension (5 of 8).

Seven of the dimensions were rated on the importance scale receiving a score of 90% or higher. These included communication, disturbance handler/negotiator, entrepreneur, leader, interpersonal relations, operations, and technical expert. Five of the dimensions were rated less than 90% on the importance scale and these included liaison/disseminator, resource allocator/financial control, figurehead/spokesperson, monitor, and strategic assessment. The range of rating for importance was 81.7% to 98.3% which suggests that the respondents believe all of the dimensions with their related activities are important to the academic nurse leader role.

All dimensions were rated as being important aspects of an academic nurse leader's role by 80% or more of the respondents. But there was much more variation in the percentage of respondents who rated themselves as competent (58% to 94%). This variation may be due, in part, to the formal educational preparation of the academic nurse leader which typically has less content/emphasis on dimensions such as budgeting and financial oversight, and strategic planning.

The 12 dimensions were aggregated into three groupings based on organizational proximity to the academic nurse leader. Another finding which is consistent with the previous study of nurse managers (Edwards, 1999) is the results of the importance and competence percentages by the three groupings of dimensions (Table 3). Relationship to unit has the highest importance and competence and the smallest difference. Relationship to organization and relationship to external environment are similar showing lower levels of importance and competence and a relatively larger difference. This is likely due to the greater comfort level of the academic nurse leader operating within his or her unit. There are numerous recommendations in the literature that the academic nurse leader must develop a keen understanding of the relationship of the nursing education program to the college or university as a whole, as well as to the larger societal environment (Broome et al., 2013; Giddens & Morton, 2018; Glasgow et al., 2009; Green & Ridenour, 2004; Huston, 2008; Patterson & Krouse, 2015; Starck, 1999; Thompson & Miller, 2018).

The results presented in Table 2 confirm that communication is most important to academic nurse leaders. A gap, -10.3% ($p < .0005$), between the rating of competence and importance, exists in the disturbance handler/negotiator role, one implication of this is that conflict management may be avoided by many nurse educators who feel less confident to manage conflict, predisposing faculty to avoid assuming the academic leadership role. This is consistent with the findings of Adams (2007) who found that apprehension about conflict, with both faculty and administration, was a major barrier for nurse educators in considering taking on a leadership role. There is potential utility in faculty development in conflict resolution and management of work based on work styles.

The largest gap between importance and competence is in the area of resource allocation and financial control, -24.6% ($p < .0005$). This finding is also consistent with other reports or recommendations in the literature commenting on the necessity of financial acumen and budgetary skills (Adams, 2007; Apen et al., 2021; Broome, 2013; Giddens & Morton, 2017; Glasgow et al., 2009; Worthy et al., 2020). Identification of the important activities in which academic nurse leaders do not feel competent facilitates the planning for interventions and activities to ameliorate this and provides the necessary information to improve formal educational curricula. The graduate and continuing education that academic nurse leaders receive should be examined relative to the needs of the institution and the changes that are taking place in the educational environment. Ongoing educational efforts to increase competence are crucial in areas such as finance and strategy with an emphasis on decision-making and problem-solving skills.

Finally, it is noteworthy that 40% of the respondents in this study were leaders of associate degree nursing education programs. This is important because our literature review suggests that leaders at this level have been largely omitted in previous research on leadership in nursing education.

Limitations

We recognize this study has several limitations. The following factors should be considered when developing future studies or interpreting the results reported herein. The large number of survey questions and survey length (77 items each for importance and competence rating) as well as the survey format used may have contributed to the lower than desired response. A formatting issue arose when using the SurveyMonkey platform for the delivery of the instrument; it created an inadvertent limitation in that it separated the ratings of importance and competence items that were delivered side by side via paper format in previous studies. This likely contributed to extending the survey completion time. Although it was anticipated that it would take 10-15 minutes to complete the survey, the length of the survey could have been prohibitive for some, resulting in incomplete surveys. Of the 69 valid responses, 19 (27.5%) respondents did not rate all 77 of the activity statements. It is unknown to what extent survey fatigue contributed to a decreased item response rate and lower survey completion rate. Fass-Holmes (2022) suggests survey fatigue can contribute to measurement error.

The researchers believe that the final sample size was acceptable for a study launched in the midst of the COVID-19 pandemic. However, participation may have been impacted because of the pandemic. In response to the pandemic, academic nurse leaders have coped with many issues: interruptions in clinical schedules, rescheduling of clinical placements, managing didactic learning experiences from a distance, and reconfiguring psychomotor skill-building using altered methods and schedules. The rapid adoption of innovations including new distance learning software, with all its implications, added to the host of adaptions needed (Ard et al., 2021). Nonetheless, a larger sample size would contribute to the external validity of future study findings.

Since the sample was drawn from New York state, the academic nurse leaders in this study may not be representative of the academic nurse leader population as a whole. However, it should be considered that New York state is large and populous. In 2011, the most recent date for which these data are available, New York state had the most professional nursing education programs of any state in the country (206), followed closely by California, which had 205 (NLN, 2012). While there has been a proliferation of nursing education programs, it is unlikely that the geographic

distribution of such programs has changed significantly in the past decade. Therefore, while this limitation must be considered, the findings of this study may be applicable in other locales.

There are several potential sources of bias that may have influenced the survey results. Self-selection bias should be considered as a limitation of this study as respondents were obtained through a convenience sample and participation was voluntary. Format bias may exist due to the formatting limitations associated with the third-party survey platform (Choi & Pak, 2005). Social desirability bias occurs when survey participants' responses are chosen to align more closely with accepted social norms (Larson, 2019) and may be present in this study. Participants in this study may have been acquainted with the leaders of this research project, which could have introduced response bias.

Recommendations for Future Study

Since the survey instrument contained new items, repetition of the study with a larger sample size would facilitate conducting a factor analysis. Factor analysis of the activities would determine if the new activity statements fell into the existing dimensions, thus adding to the construct validity of the instrument. A subsequent revision, based on factor analysis of the instrument, could result in a reduction in the number of activity statements (Polit, 2009). A shorter survey may increase the number of surveys returned and increase the likelihood that all activity statements are rated. The generalizability of study findings would be enhanced with the use of a larger sample size.

Since only nurse leaders' self-ratings of importance and competence were used in this study, the study did not address the relationship between self-beliefs about competence, and competence as evaluated by others. To address this issue, it is suggested leadership competence be studied using mixed methods to corroborate findings. A mixed methods study might mitigate the effect of social-desirability bias.

In one study, California academic nurse leaders reported 14 various titles for the same role (Mintz-Binder & Fitzpatrick, 2009). With multiple roles and titles, future studies can examine the role responsibilities for the variety of academic leader/manager roles and compare them to the activities and dimensions within the Academic Nurse Leader Survey©.

In the pilot study conducted by Edwards (2011), respondents were asked if they had formal education on a variety of management and leadership topics; however, this question was not included in the current study. This information would be useful to uncover issues surrounding the sufficiency of the preparation of future academic nurse leaders who seek professional growth in graduate nursing education programs. Tucker (2020), in a discussion of succession planning for leadership in academic nursing, suggests future investigations focus on novice academic nurse leaders' perceptions of which learning activities are valuable for development in the leadership role, once in the role. Evidence about continuing professional development needs of academic leaders could inform the development of not only graduate education but also continuing education programs.

The activities within the dimensions in the Academic Nurse Leader Survey© do not contain aspects of the academic leader role reflecting the cognitive and affective domains, e.g., valuing the change agent role or understanding the impact of changes within the educational system. Future instrument development might consider the cognitive and affective role of the manager/leader, and how to best measure these constructs for ratings of importance and competence.

Since the lived experience of academic nurse leaders might impact the rating of importance and competence of activities within their role, consideration should be given to uncovering the structure and processes within which academic nurse leaders operate and the potential impact on how academic nurse leaders rate activities. The perspective of the academic nurse leader at an associate degree program at a community college may be very different than that of, as Broome (2013) suggests, a leader at "schools of nursing housed in health science centers within universities with strong clinical research missions [who] have additional demands for expertise and knowledge about obtaining and sustaining considerable resources for support of research-intensive faculty" (p. 324).

The current study framed this work based on previous studies by Roemer (1996), Edwards and Roemer (1996), and Edwards (1999) who cited Mintzberg (1973) as the conceptual model framing their work. In future work, consideration of aspects of the manager role vs. leader role within other conceptual models would be useful. In addition, a comparison of the activities in the Academic Nurse Leader Survey©, in relation to the AONE Nurse Executive Competencies (2015) and the NLN *Scope of Practice for Academic Nurse Educators* (2012) could potentially uncover role activities that can be considered for addition into the Academic Nurse Leader Survey©. Investigation into a common set of competencies is necessary within a conversation containing representation from all program types, in light of the lack of clearly defined, commonly accepted academic nurse leader competencies. There is interest expressed in the literature in the further development of academic nurse leader competencies (Morse & Warshawsky, 2021). This creates an opportunity to also consider core academic nurse leader competencies in relation to existing and future nurse leader competencies.

Recognizing the needs of nurse academic leaders, the NLN, the AACN, and the Organization for Associate Degree Nursing have implemented leadership development programs for academic nurse leaders. A recommendation from study findings is to review these programs to address program gaps with a focus on competence related to managing finances for example. It is also suggested that nursing education program accrediting bodies consider strengthening the standards and criteria surrounding the expectations for the orientation and development of the chief nurse administrator.

In addition, specialized accreditation bodies such as Accreditation Commission for Education in Nursing and Commission on Collegiate Nursing Education have also developed standards related to the qualifications of the chief nurse administrator for nursing programs and related supports such as a formal orientation program and mentoring. This is further recognition of the critical role played by academic nurse leaders in higher education.

Conclusions

This study provides convincing evidence from many academic nurse leaders in New York state, who rated work activity competence below the importance of those activities for many aspects of their work. Academic nurse leaders rated activities within their unit as most important, indicating that relationships and interactions with faculty are major components of the work. Relationships with the organization and the external environment were rated as secondary in importance to the operation of the unit. Implications indicate that as faculty advance into academic leadership roles, they must focus attention on increasing their knowledge and skills in the areas of resource allocation, financial control, strategic assessment, and monitoring of the internal and external environment.

In a rapidly changing educational landscape in which the external environment can be a significant factor, educational leaders must be able to assess these challenges and implement strategies that enable success. They must be skilled in scanning the external educational and healthcare environments, monitoring trends and forecasting their direction, and assessing how to respond to the opportunities and challenges presented. This has implications for graduate nursing education and the development of future academic nurse leaders. It may also be beneficial for current leaders to examine their existing roles and skills as they relate to their own professional development needs, in light of changing responsibilities and emerging developments in higher education.

References

Adams, L. (2007). Nursing academic administration: Who will take on the challenge? *Journal of Professional Nursing, 23*(5), 309-315. https://doi.org/10.1016/j.profnurs.2007.01.012

American Association of Colleges of Nursing. (n.d.). *Leadership development programs.* https://www.aacnnursing.org/Resources-for-Deans/Leadership-Development

American Organization of Nurse Executives. (2015). *Nurse executive competencies.* https://www.aonl.org/sites/default/files/aone/nec.pdf

Apen, L.V., Rosenblum, R., Solvason, N., & Chan, G.K. (2021). Nursing academic leadership: An urgent workforce shortage in nursing education. *Nursing Education Perspectives, 42*(5), 305-309. https://doi.org/10.1097/01.NEP.0000000000000851

Ard, N., Beasley, S., Nunn-Ellison, K., & Farmer, S. (2021). Responding to the pandemic: Nursing education and the ACEN. *Teaching and Learning in Nursing, 16*, 292-295. https://doi.org/10.1016/j.teln.2021.06.009

Arminger, B. (1976). The educational crisis in the preparation of deans. *Nursing Outlook, 24*(3), 164-168.

Bouws, M. (2017). The nursing dean role: An integrative review. *Nursing Education Perspectives, 32*(9), 80-84. https://doi.org/10.1097/01.NEP.0000000000000277

Broome, M.E. (2013). Self-reported leadership styles of deans of baccalaureate and higher degree nursing programs in the United States. *Journal of Professional Nursing, 29*(6), 323-329. http://dx.doi.org/10.1016/j.profnurs.2013.09.001

Choi, B. C. K., & Pak, A. W. P. (2005). A catalog of biases in questionnaires. *Preventing Chronic Disease, 2*(1), A13. https://pubmed.ncbi.nlm.nih.gov/15670466/

Delgado, C., & Mitchell, M.M. (2016). A survey of valued academic leadership qualities in nursing. *Nursing Education Perspectives, 37*(1), 10-15. https://doi.org/10.5480/14-1496

Edwards, P. (1999). Work activities of middle managers in rehabilitation facilities. *Journal of Rehabilitation Administration, 22*(3), 179-189.

Edwards, P. (2011). *What are the roles and skills for effective nursing education leadership?* Leadership survey report presentation to members of the Tau Kappa chapter STTI at Excelsior College, Albany NY, *January 2011.*

Edwards, P. & Roemer, L. (1996). Are nurse managers ready for the current challenges of health care? *Journal of Nursing Administration, 26*(4), 11-17. https://doi.org/10.1097/00005110-199609000-00005

Fass-Holmes, B. (2022). Survey fatigue— What is its role in undergraduates' survey participation and response rates? *Journal of Interdisciplinary Studies in Education, 11*(1), 56-73. https://ojed.org/jise

Fischer, S.A. (2017). Transformational leadership in nursing education: Making the case. *Nursing Science Quarterly, 30*(2), 124-128. https://doi.org/10.1177/0894318417693309

Giddens, J., & Morton, P. (2018). Pearls of wisdom for chief academic nursing leaders. *Journal of Professional Nursing, 34*, 75-81. https://doi.org/10.1016/j.profnurs.2017.10.002

Glasgow, M.E.S., Weinstock, B., Lachman, V., Suplee, P.D., & Dreher, H.M. (2009). The benefits of a leadership program and executive coaching for new nursing academic administrators: One college's experience. *Journal of Professional Nursing, 25*(4), 204-210. https://doi.org/10.1016/j.profnurs.2009.01.004

Green, A., & Ridenour, N. (2004). Shaping a career trajectory in academic administration: Leadership development for the deanship. *Journal of Nursing Education, 43*(11), 489-495. https://doi.org/10.3928/01484834-20041101-04

Huston, C. (2008). Preparing nurse leaders for 2020. *Journal of Nursing Management, 16*, 901-911. https://doi.org/10.1111/j.1365-2834.2008.00942.x

Larson, R.B. (2019). Controlling social desirability bias. *International Journal of Market Research, 61*(5) 534–547. https://doi.org/10.1177%2F1470785318805305

Mintzberg, H. (1973). *The nature of managerial work.* Harper & Row.

Mintz-Binder, R. D., & Fitzpatrick, J. J. (2009). Exploring social support and job satisfaction among associate degree program directors in California. *Nursing Education Perspectives, 30*(5), 299-304. https://pubmed.ncbi.nlm.nih.gov/19824240/

Morse, V., & Warshawsky, N.E. (2021). Nurse leader competencies: Today and tomorrow, *Nursing Administration Quarterly, 45*(1), 65-70. https://doi.org/10.1097/naq.0000000000000453

Mundt, M.H. (2018). Reflections on a dean's career: Lessons learned. *Journal of Professional Nursing, 34*, 142-146. http://doi.org/10.1016/j.profnurs.2017.07.012

National League for Nursing. (2012). *Number of nursing programs in the United States by state, region and program type, 2012.* https://www.nln.org/news/research-statistics/newsroomnursing-education-statistics/geography-5636b25c-7836-6c70-9642-ff00005f0421

National League for Nursing. (2012). *The scope of practice for academic nurse educators.* Wolters Kluwer.

National League for Nursing. (2017). *Age of full-time nurse educators by rank, 2017.* https://www.nln.org/docs/default-source/uploadedfiles/default-document-library/age-of-full-time-nurse-educators-by-rank-2017.pdf?sfvrsn=5156ab0d_0

Organization for Associate Degree Nursing. (n.d.). *Leadership development institute.* https://oadn.org/news/oadn-leadership-institute/

Patterson, B. J., & Krouse, A.M. (2015). Competencies for leaders in nursing education. *Nursing Education Perspectives, 36*(2), 76-82. https://doi.org/10.5480/13-1300

Phillips, L.K. (2019). Succession planning in nursing academia: A scoping review. *International Journal of Nursing Education Scholarship*, 1-9. https://doi.org/10.1515/ijnes-2019-0070

Polit, D.F. (2009). *Statistics and data analysis for nursing* (2nd ed.). Pearson.

Princeton, J.C., & Gaspar, T.M. (1991). First-line nurse administrators in academe: How are they prepared, what do they do, and will they stay in their jobs? *Journal of Professional Nursing, 7*(2), 79-87. https://doi.org/10.1016/8755-7223(91)90091-X

Redman, B. K. (2001). The dean of nursing as arbiter, antagonist, and advocate. *Nursing Administration Quarterly, 25*(4), 57-63. https://journals.lww.com/naqjournal/Abstract/2001/07000/The_Dean_of_Nursing_as_Arbiter,_Antagonist,_and.9.aspx

Roemer, L. (1996). Hospital middle managers' perceptions of their work and competence. *Hospital and Health Services Administration, 41*(2), 210-235. https://pubmed.ncbi.nlm.nih.gov/10157964/

Rosner, B. (2015). *Fundamentals of biostatistics (8th ed.).* Cengage Learning.

Starck, P.L., Warner, A., & Kotarba, J. (1999). 21st-century leadership in nursing education: The need for trifocals. *Journal of Professional Nursing, 15*(5), 265-269. https://doi.org/10.1016/S8755-7223(99)80050-7

Thompson, S. A., & Miller, K. L. (2018). Disruptive trends in higher education: Leadership skills for successful leaders. *Journal of Professional Nursing, 34*(2), 92–96. https://doi.org/10.1016/j.profnurs.2017.11.008

Tucker, C.A. (2020). Succession planning for academic nursing. *Journal of Professional Nursing, 36*(5), 334-342. https://doi.org/10.1016/j.profnurs.2020.02.002

United States Health Resources Administration, Bureau of Health Resources Development, Division of Nursing. (1975). *The decanal role in baccalaureate and higher degree colleges of nursing.* (DHEW publication no. (HRA) 75-11). U.S. Government Printing Office.

Wilkes, L., Cross, W., Jackson, D., & Daly, J. (2015). A repertoire of leadership attributes: An international study of deans of nursing. *Journal of Nursing Management, 23*(3), 279-286. https://doi.org/10.1111/jonm.12144

Worthy, K., Dawson, R.M., & Tavakoli, A.S. (2020). Relationships among nursing deans' leadership styles and faculty job satisfaction levels. *Journal of Nursing Education, 59*(2), 68-75. https://doi.org/10.3928/01484834-20200122-03

CASE SERIES

Implications for Nursing and Multidisciplinary Collaboration in the Management of Gastroparesis Patients Receiving Chiropractic Care: A Case Series

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Abstract

Background: Gastroparesis, partial paralysis of the stomach, is a chronic and sometimes disabling neuromuscular disorder diagnosed by delayed emptying of solid food in the absence of a mechanical obstruction. The management of gastroparesis is less than optimal because the pathogenesis has not been clearly defined. **Significance:** With gastroparesis becoming an increasing concern, nurses need to communicate, collaborate and educate providers and patients regarding complementary therapies that can alleviate patient symptoms and suffering, improve outcomes and quality of life, and decrease inappropriate healthcare system use. **Methodology:** Through a case series presentation, two case reports describe the successful outcome of chiropractic treatment and implications for nursing care as part of a multidisciplinary team model, for the symptom management of gastroparesis. **Results:** Both cases were treated for musculoskeletal complaints of cervical, thoracic, and lumbar segmental dysfunction with myofascial involvement and expressed improvements in their musculoskeletal complaints and gastroparesis symptoms following treatments. The improvement of gastroparesis is thought to be a side effect of the treatment. **Conclusion and Recommendations:** This case series provides evidence that incorporating nurses and chiropractors as part of a multidisciplinary team model offers a unique approach to patient care, symptom management, and improved patient outcomes.

Key words: gastroparesis, collaboration, chiropractic, multidisciplinary

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Implications for Nursing and Multidisciplinary Collaboration in the Management of Gastroparesis Patients Receiving Chiropractic Care: A Case Series

Gastroparesis, partial paralysis of the stomach, is a chronic neuromuscular disorder diagnosed by delayed emptying of solid food in the absence of a mechanical obstruction (Navas et al., 2017; Navas et al., 2019). In the United States, it is estimated that 267.7 per 100,000 persons are diagnosed with gastroparesis (Ye et al., 2022). However, an exact prevalence is hard to capture because diagnosis is dependent on tests with significant limitations that are not applied universally. The management of gastroparesis is less than optimal because the pathogenesis has not been clearly defined. With an increase in prevalence, diversity in presentation and response to management, gastroparesis is becoming an increasing concern. It is important for providers and patients to seek complementary therapies that can alleviate symptoms and suffering, improve outcomes, and decrease the inappropriate use of the healthcare system. Nurses play a significant role in closing the gap in the unmet needs of patients with gastroparesis by way of a multidisciplinary model in caring for these patients. A multidisciplinary approach can reduce the burden of gastroparesis on individuals and society.

Background

The two main etiologies of gastroparesis are idiopathic and diabetic. Other causes include post-operative, neurological diseases, and viral or bacterial infections, but the scope should not be limited as gastroparesis is comorbid with other etiologies (Brown et al., 2022). Symptoms are unpredictable and, at times, can be debilitating. The most common are abdominal pain, fatigue, nausea, reflux, early satiety, lack of appetite, and vomiting, but these can vary depending on the level of disease severity (Brown et al., 2019). The gold standard to test for delayed motility is through gastric emptying scintigraphy. The test starts after the patient consumes a radiolabeled meal and is followed by imaging every hour to track the meal as it moves, or does not move, through the digestive tract. Treatment primarily consists of dietary adjustments and symptom management with pharmacological agents, prokinetics, antiemetics, and pain medications. For those who do not respond to first-line therapies, additional treatments are available, such as an implantable gastric electrical stimulator (GES) device inserted under the skin, botulinum toxin injections, and other surgical procedures. Current treatments have shown little, if any, substantial improvements, leading medical providers to resort to over-the-counter and other prescription medications (Navas et al., 2019). Invasive procedures and medications can cause unintended side effects and are associated with an additional level of risk, adding or worsening symptoms. Individuals living with gastroparesis experience the occurrence or recurrence of indeterminacy in symptoms, treatment, prognosis, psychological adjustments, and overall quality of life (Han et al., 2021). This uncertainty leads to overuse and misuse of the healthcare system, poor patient outcomes, and increased costs. From 1997 to 2013, the number of inpatient admissions from gastroparesis increased by 300%, and the associated costs contributed significantly to the national healthcare bill; the mean hospital charges in 1997 were $13,350 and in 2013, $34,585 (Wadhwa et al., 2017).

To meet the unique needs of this population, healthcare providers should be encouraged to step away from the silo culture and old idea of global treatment being provided by one physician (Taberna et al., 2020). Multidisciplinary collaboration brings together specialized professionals to treat patients, aiming to improve treatment efficacy, patient outcomes, and patient care. A multidisciplinary collaborative team can consist of Physicians, Nurse Practitioners, Physicians Assistants, Registered Nurses, Chiropractors, Physical Therapists, Social Workers, Respiratory Therapists, Dietitians, Psychologists, and many other licensed professionals. Utilizing a multidisciplinary model allows each member to focus on their specialty. Nurses are essential members of a multidisciplinary care model and are in a position to educate, advocate, and close the communication gap to integrate care for patients. Nurses are frequently involved in monitoring the efficacy of patient treatments (Egboh & Abere, 2022) and are consistent members of the patient care team. Continuity of care improves communication. Effective communication between healthcare providers within a multidisciplinary team is essential for clarity within the team.

Multidisciplinary collaborative care has evolved since the twentieth century, transforming toward a comprehensive, conservative, patient-centered model, and chiropractors are being added as a complementary treatment approach. Chiropractors can provide diagnoses for musculoskeletal complaints related to the spine and have the capacity to offer an additive approach to patient care within a multidisciplinary care model. Chiropractors typically practice independently; however, evidence shows that a growing number of chiropractors are integrated into multidisciplinary care environments (Corcoran et al., 2022). Given the lack of scientific literature supporting this phenomenon, we present chiropractic treatment for the symptom management of two patients with gastroparesis.

Method

Through a case series presentation, two case reports describe the successful outcome of chiropractic treatment, and the role of nurses as part of a multidisciplinary model, for the symptom management of gastroparesis. The same provider treated both cases in private practice.

Results

Case Report #1

History

A 40-year-old Caucasian, employed, female had an office visit with complaints of thoracolumbar and lumbar spine pain with mild referral symptoms on her left lateral thigh. She was diagnosed with idiopathic gastroparesis and occasional mild headaches due to work postures in her history. She is an active, healthy adult running more than 20 miles per week. She has had a

long-standing history of gastroparesis that intermittently inhibits her daily activity, comfort, and sleep.

Examination

Intrathecal disc pressure signs were negative, upper and lower extremity neural tension tests were also negative bilaterally. Orthopedic tests showed lumbar and left leg symptoms with standing Kemp's extension and rotation test on the left. Prone joint line palpation revealed left paraspinal tenderness at the thoracolumbar junction and left mid-lower lumbar levels. Deep palpation over the T11, T12, L1, L5, and S1 facets produced local pain. The lower lumbar segments produced paraspinal hypertonicity at these levels, along with the left quadratus lumborum, bilateral psoas, iliacus, and left internal oblique. Trigger points were found in the psoas, quadratus lumborum, and bilaterally in the cervical spine's sternocleidomastoid, suboccipitals, and the digastric muscle. Cervical, lower thoracic, and lumbar spine segments were motion palpated to show loss of intersegmental joint motion and abnormal biomechanics.

Management

Management consisted of spinal manipulation of the restricted segments assessed per visit. Myofascial release of the hypertonic muscles and nerve entrapment protocols of the lumbar plexus in the pelvis. Myofascial release was used in the cervical spine on sternocleidomastoid, scalenes, digastric, and suboccipitals. Lumbar myofascial release techniques were performed on the psoas, iliacus, iliolumbar ligament, quadratus lumborum, and internal oblique.

Outcome

Outcomes for the lumbar spine pain with referred pain to the lateral thigh and stomach discomfort symptoms showed improvement. Lumbar spine pain resolved with Spinal Manipulation using high velocity-low amplitude (HVLA) with myofascial release protocols and active home care flexion and stability exercises. She reported improvement in her gastroparesis symptoms, including feeling less nauseous after meals, increased bowel movements, and improved motivation for meal consumption after several treatments of lumbopelvic myofascial release. The symptoms remained in remission for 2 – 3 week periods. After treatment, gastrointestinal symptoms did return slowly, the most notable being nausea after eating.

Case Report #2

History

A 45-year-old, married, Caucasian female with complaints of chronic gastroparesis and pain in each of the quadrants of the abdomen. She suffered from intermittent bouts of thoracic and lumbar spine pain. Pain level at worst was 6/10, and at best was 2/10. She has diabetes and attributes her gastroparesis to this diagnosis.

Examination

Intrathecal disc pressure signs were negative. Neural tension signs in the upper and lower extremities were negative except for the femoral nerve bilaterally, and the right was worse than the left. Cranial nerves were normal and symmetrical. Motor, sensory, and reflex testing were normal and symmetrical bilaterally in the upper and lower extremities. Motion palpation exam revealed multiple cervical, thoracic, and lumbar spine segment restrictions with paraspinal hypertonicity and tenderness along the interspinous ligament. Muscular trigger points were found in the external oblique, internal oblique, and rectus abdominis, as well as the psoas and iliacus.

Management

Management consisted of several sessions of spinal manipulation at the levels of restrictions in the cervical, thoracic, and lumbar areas. Myofascial release movements were performed on the muscles assessed each visit, most notably the psoas, iliacus, and internal oblique in her abdominal region. She also received myofascial release on the posterior cervical spine and anterior neck structures of the sternocleidomastoid and scalenes.

Outcome

Overall, she improved with pain reduction in all three regions of her spinal complaints. Improvement in abdominal comfort was mild to moderate. Improvement in bowel motility was reported as "mildly improved." Her bowel movements went from 1-2 per week to 3. She reported that she "felt better after meals."

Nursing Implications

As the largest group of professionals in healthcare, nurses play a crucial role in building patients' knowledge, understanding, and preparedness for self-management, disease prevention, and health promotion. Given the slow return of symptoms, nurses can encourage the patient to schedule follow-up appointments every 2-3 weeks, depending on symptoms. Nursing education should empower patients to participate in their care.

Nurses interact with patients and families more than any other health professionals in clinical, community, and policy settings in which they are employed (National Institute of Nursing Research [NINR], n.d). There is no cure for gastroparesis, and by limiting the scope of treatment and care, opportunities could be lost to enhance the well-being of patients. As part of a multidisciplinary collaboration that facilitates good communication, informed team members, and patient interests, nurses create an environment for a patient-centered approach that formulates additive solutions to optimize patient care. With an increased understanding of the benefits of chiropractic treatments for symptom management of gastroparesis, nurses can educate and inform patients and providers of alternative therapies that could improve their quality of life.

Discussion

The central nervous system plays an essential role in gastric motility (Uesaka et al., 2016). Many gut functions are controlled by the enteric nervous system and the extrinsic, sympathetic, parasympathetic (via the vagus nerve), and sensory neurons (in vagal and spinal pathways) (Uesaka et al., 2016). Normal gastric function requires the coordination of neuronal and hormonal

signals along with the corresponding function of the stomach (Rao, 2013). Three essential functions are required for ingested food to be processed and transported to the duodenum: receptive relaxation (relaxing of the fundus to allow food to enter), peristaltic contractions (breakdown of food and the creation of chyme), and the emptying of chyme into the duodenum (Jarrett et al., 2020). The vagus nerve, the gastric emptying mediator, assists with regulating these three essential gastric functions. Literature suggests that an impaired vagus nerve is likely a significant contributor to the cause of gastroparesis (Parkman et al., 2004; Shakil et al., 2008; Valerie et al., 2015). Chiropractic treatment can influence the vagus nerve by manipulating surrounding structures that might affect its ability to function optimally, positively impacting digestion. Chiropractors are licensed and doctoral-prepared to adjust or manipulate misaligned vertebrae and other parts of the body. Using their hands, they are able to impact the misalignment to restore the correct functioning of the central nervous system. Gastric function and its modes of regulation present the opportunity for applying principles of chiropractic treatments through the changes of enteric neural feedback, autonomic function, and direct mechanical effects on abdominal viscera.

Both cases were treated for musculoskeletal complaints of cervical, thoracic, and lumbar segmental dysfunction with myofascial involvement. Both cases expressed improvements in their musculoskeletal complaints and gastroparesis symptoms following treatments. The improvement of gastroparesis is thought to be a side effect of the treatment. This demonstrates that patients with gastroparesis might benefit from chiropractic management in terms of decreased severity and frequency of symptoms. Improved symptom management might reduce dependence on surgical and pharmacological interventions and show cost savings to the insurance company and its constituents. Chiropractors who are part of multidisciplinary care models have shown cost savings to hospital systems (Paskowski et al., 2011).

Conclusion and Recommendations

Although gastroparesis has been identified as a neuromuscular dysfunction of the stomach, it remains an unexplained disease that is troublesome for patients, nurses, and healthcare providers (Camilleri et al., 2018). This case series is an example where a chiropractor provided complementary care not previously considered by the primary healthcare team resulting in symptom improvements. This provides further evidence that incorporating chiropractors as part of a multidisciplinary team model offers a unique approach to patient care, symptom management, and improved patient outcomes. Emphasizing the important role of nurses in educating these patients aligns with the NINR's strategic health promotion plan to include efforts to facilitate healthy behaviors to reduce risk, improve health, manage disease, and enhance well-being (NINR, n.d). Nurses are vital in optimizing care by closing the communication gap between team members and educating patients with gastroparesis within the community and hospital setting.

Although psychological and placebo factors cannot be eliminated, and the methodology did not allow causality, no adverse effects were reported on follow-up. Further research should focus on understanding the relative effectiveness, developing policies and procedures, and cost implications of chiropractic protocols as a management option for patients with gastroparesis.

References

Brown, A. S., Beener, C., & Lowrie, M. (2022). Comorbidities and gastroparesis: A retrospective study. *Journal for Nurse Practitioners, 18*, 324–327. https://doi.org/10.1016/j.nurpra.2021.12.012

Brown, A., Beener, C., & Smith, S. H. (2019). Delayed gastric emptying and symptom variation. *Journal for Nurse Practitioners, 15*(9), e177-e180. https://doi.org/10.1016/j.nurpra.2019.04.017

Camilleri, M., Chedid, V., Ford, A. C., Haruma, K., Horowitz, M., Jones, K. L., Low, P. A., Park, S. Y., Parkman, H. P., & Stanghellini, V. (2018). Gastroparesis. Nature reviews. *Disease Primers, 4*(1), 41. https://doi.org/10.1038/s41572-018-0038-z

Corcoran, K. L., Peterson, J.,Douglas R., Zhao, X., Moran, E. A., & Lisi, A. J. (2022). Characteristics and productivity of the chiropractic workforce of the veterans' health administration. *Chiropractic & Manual Therapies, 30*(1), 18. https://doi.org/10.1186/s12998-022-00429-1

Duarte, A., Walker, J., Walker, S., Richardson, G., Holm Hansen, C., Martin, P., Murry, G., Sculpher, M., & Sharpe, M. (2015). Cost-effectiveness of integrated collaborative care for comorbid major depression in patients with cancer. *Journal of Psychosomatic Research, 79*(6), 465–470. https://doi.org/10.1016/j.jpsychores.2015.10.012.

Egboh, S. C., & Abere, S. (2022). Gastroparesis: A Multidisciplinary Approach to Management. *Cureus, 14*(1), e21295. https://doi.org/10.7759/cureus.21295

Han, Z., Zhang, H., Wang, Y., Zhu, S., & Wang, D. (2021). Uncertainty in illness and coping styles: Moderating and mediating effects of resilience in stroke patients. *World Journal of Clinical Cases, 9*(30), 8999-9010. https://doi.org/10.12998/wjcc.v9.i30.8999

International Foundation for Gastrointestinal Disorders. (2022). Research survey reveals unmet needs of people with gastroparesis. https://iffgd.org/news/press-release/2017-0802-research-survey-reveals-unmet-needs-of-people-with-gastroparesis/

Jarrett, K.E., Glasgow, R.E. (2020). Normal gastric motility. In: Ibele, A., Gould, J. (eds) *Gastroparesis* (pp. 3-20). Springer, Cham. https://doi.org/10.1007/978-3-030-28929-4_1

Navas, C. M., Crowell, M. D., & Lacy, B. E. (2019). The willingness of patients with gastroparesis to take risks with medications. *Alimentary Pharmacology & Therapeutics, 49*(4), 429-436. https://doi.org/10.1111/apt.15112

Navas, C. M., Patel, N. K., & Lacy, B. E. (2017). Gastroparesis: Medical and therapeutic advances. *Digestive Diseases and Sciences, 62*(9), 2231–2240. https://doi.org/https://doi.org/10.1007/s10620-017-4679-7

National Institute of Nursing Research. (n.d.). *The National Institute of Nursing Research 2022–2026 Strategic Plan*. https://www.ninr.nih.gov/aboutninr/ninr-mission-and-strategic-plan

Parkman, H. P., Hasler, W. L., Fisher, R. S., & American Gastroenterological Association (2004). American Gastroenterological Association medical position statement: Diagnosis and treatment of gastroparesis. *Gastroenterology, 127*(5), 1589–1591. https://doi.org/10.1053/j.gastro.2004.09.054

Paskowski, I., Schneider, M., Stevans, J., Ventura, J. M., & Justice, B. D. (2011). A hospital-based standardized spine care pathway: Report of a multidisciplinary, evidence-based process. *Journal of Manipulative and Physiological Therapeutics, 34*(2), 98-106. https://doi.org/https://doi.org/10.1016/j.jmpt.2010.12.004

Rao, J. N. (2013). Estrogen and gastroparesis: A clinical relevance. *Digestive Disease and Sciences, 58*, 1449-1451. https://doi.org/10.1007/s10620-013-2683-0

Shakil, A., Church, R. J., & Rao, S. S. (2008). Gastrointestinal complications of diabetes. *American Family Physician, 77*(12), 1697–1702. https://pubmed.ncbi.nlm.nih.gov/18619079/

Taberna, M., Moncayo, F. G., Jané-Salas, E., Antonio, M., Arribas, L., Vilajosana, E., Peralvez Torres, E., & Mesía, R. (2020). The Multidisciplinary Team (MDT) Approach and quality of care. *Frontiers in Oncology, 10*, 85. https://doi.org/10.3389/fonc.2020.00085

Uesaka, T., Young, H. M., Pachnis, V., & Enomoto, H. (2016). Development of the intrinsic and extrinsic innervation of the gut. *Developmental Biology, 417*(2), 158-167. https://doi.org/10.1016/j.ydbio.2016.04.016

Van Ravenswaay, V.J., Hain, S.J., Grasso, S., Shubrook, J.H. (2015). Effects of osteopathic manipulative treatment on diabetic gastroparesis. *Journal of Osteopathic Medicine 115*, 452–458. https://doi.org/10.7556/jaoa.2015.091

Wadhwa, V., Mehta, D., Jobanputra, Y., Lopez, R., Thota, P. N., & Sanaka, M. R. (2017). Healthcare utilization and costs associated with gastroparesis. *World Journal of Gastroenterology, 23*(24), 4428-4436. https://doi.org/10.3748/wjg.v23.i24.4428

Ye, Y., Yin, Y., Huh, S. Y., Almansa, C., Bennett, D., & Camilleri, M. (2022). Epidemiology, etiology, and treatment of gastroparesis: Real-world evidence from a large US national claims database. *Gastroenterology, 162*(1), 109-121.e5. https://doi.org/10.1053/j.gastro.2021.09.064

ORIGINAL RESEARCH

Fellowship, Finance, and Fervor: Nurses Caring for Nurses During the Covid-19 Pandemic

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Abstract

Background: From March 25-July 8, 2020, the COVID-19 Emergency Grant Program awarded $2,734,500 to 2484 nurses across the United States who experienced economic distress. **Significance:** The study describes the effect of emergency grant funding on grantees and determines the commonalities of these nurses' experiences through their written expressions of appreciation in thank you notes. **Methodology:** This descriptive study used Burnard's 14 Stages in Qualitative Content Analysis to determine the categories and sub-categories from thank you notes received from grantees. **Results:** The 99 thank you notes analyzed led to identification of five categories: 1) thanks to Nurses House, Inc., 2) expressions of appreciation, 3) experiencing COVID-19, 4) economic uncertainty, and 5) caring within the professional context. **Conclusions:** While the thank you notes revealed economic uncertainty amongst these nurses, the thrust of this study revealed the gratitude of nurses who experienced nurses caring for them during pandemic conditions. Nurses caring for each other is a new phenomenon. While the thank you notes revealed the importance of financial support to the grantees during this crisis, this study redefined the impact of nurses caring for nurses.

Keywords: caring, gratitude, COVID-19, content analysis, financial distress, Nurses House, Inc

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Fellowship, Finance, and Fervor: Nurses Caring for Nurses During the Covid-19 Pandemic

As hands-on and direct caregivers, nurses' physical, psychosocial, and economic well-being continues to be impacted by the COVID-19 pandemic (American Nurses Foundation (ANF), 2021). On March 25, 2020, during the first surge of the COVID-19 pandemic, Nurses House, Inc., a national organization created by nurses to help nurses in need, partnered with the American Nurses Foundation (ANF) to launch a COVID-19 Emergency Grant Program. Nurses House, Inc. accepted applications through July 8, 2020, and awarded over $2,734,500 to 2,484 nurses across the United States who reported experiencing economic distress (ANF, 2020; Millenbach et al., 2021). The COVID-19 Emergency Grant Program was a unique offering in response to nurses economically impacted by the COVID-19 pandemic. Grants ranged from $1,000 to $1,500. Nurses House Inc. received many handwritten and electronic (i.e., email) thank you notes from grantees. These notes revealed the importance of nurses caring for nurses and of financial support for nurses in times of crisis.

Background

General Impact on Nursing

In response to the resulting financial crisis related to COVID-19, in March 2020 the Families First Coronavirus Response Act (FFCRA) and in July 2020 the Coronavirus Aid, Relief, and Economic Security Act (CARES) were passed by Congress. These acts were designed to provide emergency short-term paid sick time and extended paid family leave to those affected by COVID-19. Significantly, the FFCRA created an exception for large private healthcare employers, thus leaving 17.7 million healthcare workers at risk for not having access to this paid leave (Long & Rae, 2020). Women comprise approximately three-quarters of all healthcare workers, including more than 90% of nurses (Day & Christnacht, 2019; Smiley et al., 2019), making them particularly vulnerable during the pandemic. These nurses are caregivers at home and at work, and as all other workers, need paid leave to protect them and their families during times of crisis (Ranji et al., 2020).

Impact on Nurses and Nursing Practice

While a large percentage of the country experienced health and financial hardships due to the pandemic, nurses appeared to carry additional burdens related to their professional expectations. These expectations served as an additional stressor not suffered by most Americans affected by the pandemic. In addition, a moral sense of duty to patients and colleagues has resulted in nurses being four times more likely than other professionals to work while ill (Aronsson et al., 2000). Factors contributing to the proclivity to work while ill include the stress created in the working environments and nursing professional identity (Hensel, 2011; Laranjeira, 2013, Rainbow & Steege, 2017).

Positive impacts of COVID-19 on nurses and their workplace have been reported. Sun et al., (2020). stated that nurses have reported opportunities to experience love, affection, honor, respect for the profession, appreciation and gratitude towards others, and active cooperation during the care of patients with COVID-19. Core to the profession of nursing is the caring and support for others which is described within the Watson's Caritas Processes as "developing and sustaining loving, trusting caring relationships" (Watson, 2008, p. 172). Nurses provide care for others and find a sense of comfort in knowing that support can come from team members (Maben & Bridges, 2020). Perhaps the current collegial support is a step toward nurses supporting nurses that needs to be expanded. Walker (2018) currently has an online pledge for nurses to support other nurses. Practices like those identified in this study demonstrate that nurses' care and support for each other strengthen the profession.

It is notable that since the onset of the COVID-19 pandemic, nurses have been more team-driven, supporting each other, especially helping new members to " ... feel safe, valued, and welcome" (Maben & Bridges, 2020, p. 2746). This contrasts with nursing's past professional identity which included behaviors indicative of bullying or incivility in the work environment, representing how nurses worked against each other instead of working together. It is a colloquialism used to describe seasoned nurses' behaviors towards neophyte nurses, or those who are not part of their practice culture – "nurses eating their young" (Aebersold & Schoville, 2020; Meissner, 1986).

Galehdar et al. (2021) determined that, during the COVID-19 pandemic, the status of the nursing profession has improved in the view of nurses themselves, officials, patients, and communities. They noted that nurses "reported that although patients with COVID-19 feel helpless and frustrated, their love and interest towards nurses taking care of them have increased, making them proud of being a nurse" (Galehdar et al., p. 175). The authors suggested that the COVID-19 crisis was an opportunity for nurses to become more aware of the depth of their field and profession and to comprehend the true value of nursing in practice (Galehdar et al., 2021).

In a related descriptive study, the authors examined the grant application data used by Nurses House, Inc. and concluded that there was a lack of a comprehensive financial safety net for nurses during the pandemic (Millenbach et al., 2021). The authors reported that during the COVID-19 pandemic, nurses' lack of financial safeguards significantly resulted in financial vulnerability. The study suggested that the financial burden on nurses has serious implications for State and Federal stakeholders and policymakers. This present follow-up research examined the thank you notes received from grantees. We determined that the rich qualitative data in these notes would be helpful in further describing the impact of COVID-19 on these nurses. The goal was to highlight the remarkable work of Nurses House, Inc. and ANF, which, at the first surge of the COVID-19 pandemic, recognized and acted upon the financial need of frontline nurses. The gratitude and experience conveyed in these thank you notes in response to a one-time grant of $1,000 - $1,500 are reflective of nurses caring for nurses.

Table 1

10 Carative Factors and Caritas Processes

Original 10 Carative Factors, Juxtaposed Against The Emerging Caritas Processes/ Carative Factors	Caritas Processes
1. Humanist – Altruistic Values	1. Practicing Loving-kindness & equanimity for self and other
2. Instilling/enabling Faith & Hope	2. Being authentically present to/ enabling/sustaining/honoring deep brief system and subjective world of self/other
3. Cultivation of Sensitivity to one's self and other	3. Cultivating one's own spiritual practice; deepening self-awareness, going beyond "ego self"
4. Development of helping-trusting, human caring relationship	4. Developing and sustaining a help-trusting, authentic caring relationships
5. Promotion and acceptance of expression of positive and negative feelings	5. Being present to, and supportive of, the expression of positive and negative feelings as a connection with deeper spirit of self and the one-being-cared-for
6. Systemic use of scientific (creative) problem-solving caring process.	6. Creatively using presence of self and all ways of knowing/multiple ways of Being/doing as part of the caring process: engaging in artistry of caring-healing practices
7. Promotion of transpersonal teaching-learning	7. Engaging in genuine teaching-learning experiences that attend to the whole person, their meaning, attempting to stay within other's frame of reference
8. Provision for a supportive, protective, and/or corrective mental, social, spiritual environment	8. Creating a healing environment at all levels (physical, non-physical, subtle environment of energy and consciousness whereby wholeness, beauty, comfort, dignity, and peace are potentiated
9. Assistance with gratification of human needs	9. Assisting with basic needs, with an intentional, caring consciousness of touching and working with embodied spirit of individual, honoring unity of Being; allowing for spiritual emergence
10. Allowance for existential-phenomenological spiritual dimensions	10. Opening and attending to spiritual-mysterious, unknown existential dimensions of life-death, attending to soul care for self and one-being-cared-for

Notes: Watson, J. (2008). *Nursing: The philosophy and science of caring* (Revised Edition). University Press of Colorado.

Caring as Theoretical Underpinning

Watson's model of caring guided this study. Caring is the core of nursing (Nightingale, 1859; Skretkowicz & Nightingale, 1992). Adams (2016) stated that "the construct of caring remains critical to the nursing profession perhaps even more now than in the past…" (p. 1). It is the role of nurses to safeguard that caring in nursing transcends turbulent times and remains at the forefront of patient care (Adams, 2016). Watson's (1979, 1985) Theory of Human Caring or Theory of Transpersonal Caring is foundational to nursing. Watson and Smith (2002) maintained that caring brings meaning to the nursing profession as a distinct healthcare profession. It is the central feature within the metaparadigm of nursing knowledge and practices (Watson & Smith, 2002). This resulted in Watson developing the 10 Carative Factors and associated Caritas Processes (Table 1).

Thus, caring science connects nurses, patients, families, and all healthcare professionals in authentic human caring relationships (Ackerman, 2019). In addition, the Code of Ethics for Nurses requires nurses to care for other nurses (American Nurses Association, 2015).

We deemed three of Watson's Carative Factors and their related Caritas Processes particularly relevant to the experience of nurses who applied for COVID-19 emergency grants (Millenbach, et al, 2021).. The first is Factor #1: "Human-Altruistic Values" which is explained as practicing loving-kindness and equanimity for self and others. Second, was Factor #4: "developing a helping-trusting human caring relationship" which results in an authentic caring relationship. Finally, we identified Factor #9: "assisting with the gratification of human needs that are basic in nature" which demonstrates intentional, caring consciousness of touching and working with the embodied spirit of an individual, honoring unity of Being. These demonstrated intentional, caring consciousness of touching and working with the embodied spirit of an individual, honoring unity of Being (Gallagher-Lepak & Kubsch, 2009, Millenbach, et al., 2021). These three factors served to describe the nature of the interaction of the nurses included in this study as they cared for others, recognized their need for care, and were cared for by Nurses House, Inc. (Millenbach, et.al., 2021). In addition, the caring processes have been exemplified by the response of Nurses House, Inc. and ANF to helping nurses in financial distress from COVID-19 and provided an exemplar to articulate human caring in action (Millenbach, et al., 2021).

Research Objective

We conducted this descriptive qualitative study of thank you notes sent to Nurses House, Inc. by nurses who received emergency COVID-19 grant funding to gain insight into nurses' experience by describing the contents of their notes and summarizing the commonalities.

Methodology

Design

This descriptive qualitative study used content analysis to examine 134 grantee notes sent to Nurses House, Inc. The notes included emails, greeting cards with handwritten notes, and

greeting cards with only a grantee's signature. It was particularly meaningful that these nurses, who were mostly sick or caring for ill family members and experiencing economic distress, took the time and made the effort to express their gratitude for this financial support.

Qualitative documentary analysis involves using pre-existing text as a data source (Morgan, 2022). These data are considered to be stable, meaning these were collected without researcher influence and interaction, i.e., as those possible with interviews and observation (Merriam & Tisdell, 2016). Documents provide social and historical context (Miller & Alvarado, 2005) in addition to establishing a contemporaneous account of the experience. Contemporaneous accounts are rarely found in nursing research but are potentially more accurate testimonials of experiences (Bollen et al., 2021); compared to retrospective accounts that have an affinity to "gloss over difficulties" (Smith, 1994) with recall reporting bias (Teitler et al. 2006).

Of the 134 notes, 52 were emails and 82 were greeting cards. We excluded greeting cards without personal comments, resulting in 52 emails and 47 handwritten notes. The total sample used in the analysis was 99 notes. This sample represents 73% of all thank you notes received from grantees and 3% of the total number of grantees.

Data Collection and Analysis

Grantees sent notes to the two administrators of Nurses House, Inc., whose names were listed on the grant award cover letter included with the checks. One administrator de-identified the notes and sent them to the 10 nurse researchers who independently reviewed the documents in their entirety for analysis. The 14 Stages of Analysis, described by Burnard (1991), guided qualitative analysis of the notes. Burnard used data from interviews while our data were derived from documents.

Our analysis included qualitative and quantitative content analysis. The quantitative content analysis involved counting word frequencies. High frequency words were evaluated to determine their fit within emerging categories and subcategories. Burnard's content analysis method was described using data obtained from interviews, while our data were derived from documents. We summarize Burnard's Stages (1991) used for this study in Table 2.

The notes were sent to the 10 nurse reviewers in their entirety, thereby providing the whole documents for analysis. No predetermined or anticipated categories or subcategories were provided to the nurse researchers. The analysis process began with all the notes being reviewed by the 10 researchers. This involved the researchers reading the original documents, performing independent analysis, and developing the categories and subcategories with supporting documentation from the notes. Next, a subgroup of five researchers completed an additional independent analysis to finalize their categories, sub-categories and supporting documentation. These categories, sub-categories, and supporting documentation were finalized through numerous discussions between the five subgroup members that created consensus.

The model provided a framework that guided the stages in analyzing the notes from nurses who received Nurses House, Inc. COVID-19 emergency funding. We determined that the data obtained in the 99 documents had reached saturation.

Table 2

Burnard's Stages Employed in Qualitative Content Analysis

Stages	Description
1	Notes meeting inclusion criteria are sent to the entire study group.
2	Notes are read through and general categories with supporting comments from the notes are created by the individual members of the group -allowing for immersion in the data.
3	General categories and notes are collapsed into one document for a subgroup of researchers: documents are reread, and headings are written down to describe all aspects of the content.
4	The subgroup of researchers lists the individual categories and subcategories with supporting documentation. These are grouped into headings with a reduction of the categories and subcategories.
5	A list of headings is reviewed to reduce repetition, producing a final list.
6	Reviewers generate category systems with supporting documentation independently, then discuss their lists to validate categories and subcategories.
7	Documents are re-read alongside the final agreed category list to be sure all aspects are covered.
8	Each document is reviewed and coded according to the list of categories.
9	Each coded document is checked for the relevant content and collected it to provide context for the category.
10	Coded sections of notes are organized into categories and subcategories
11	Subgroup of researchers are asked to validate that the selected content appropriately represents their intention (validity).
12	Once filed together, the writing-up process begins.
13	Writing is reviewed for accuracy.
14	Researchers decide to link examples to literature, and which quotes to use as exemplars.

Note: Burnard, P. (1991). A method of analyzing interview transcripts in qualitative research *Nurse Education Today, 11*(6) 461-466. https://doi.org/10.1016/0260-6917(91)90009-Y

Trustworthiness

To establish the trustworthiness of the study results, four elements needed to be addressed: credibility, dependability, confirmability, and transferability (Polit & Beck, 2021). Credibility was established as the data source was unsolicited grantees' notes addressed to the Nurses House, Inc. administrators. Confirmability occurred through the intensive analysis process, defined by Burnard (1991), leading to a comprehensive description of the data. Transferability was promoted through a rich discussion of the context of the data. Comparison of the results with the literature also enhanced the transferability and dependability of the

findings. During the entire analysis process, reflexivity occurred with ongoing discussion between the subgroup of researchers.

Approvals and Ethical Considerations

This study received institutional review board (IRB) approval from Niagara University (IORG # IORG0006266). As a retrospective content analysis of the documents with no identified personal information, the research was considered exempt. The anonymity of the grant recipients was maintained.

Findings

From the 99 notes (52 emails and 47 cards with notes) that met the inclusion criteria, we determined five categories and 15 sub-categories. (Table 3).

Categories included: 1) thanks to Nurses House, Inc. (99 documents, three sub-categories), 2) expressions of appreciation (70 documents, three sub-categories), 3) experiencing COVID-19 (70 documents, four sub-categories), 4) economic uncertainty (61 documents, three sub-categories), and 5) caring within the professional context (17 documents, two sub-categories). In the following discussion of the categories, we include an exemplary grantee quote for each sub-category with additional supporting quotes for each sub-category in Table 4.

Category 1 -Thanks to Nurses House, Inc.

Messages of "Thanks to Nurses House, Inc." resounded in notes from the grantees (99/99). Grantees voiced thanks to Nurses House, Inc. for their "generosity" (64/99), "support" (89/99), and what was described by many as appreciation that went "beyond words" (47/99).

Thanks to Nurses House, Inc. for their Generosity

An expression of thankfulness by a grantee for the "generosity" of Nurses House, Inc. was "My family and I are touched by your generosity and thank you from the bottom of our hearts while wishing Nurses House, Inc. the strength to continue helping the many other families in need of help."

Thanks to Nurses House, Inc. for the Support

During this stressful time, another theme that resonated was that of "support" resulting from the monetary support from Nurses House, Inc. One grantee who was a novice nurse wrote,

"I am a first-year nurse and the support I received from this organization was a perfect reminder of why I choose this selfless profession."

In the notes, grantees described "support" by associating it with words such as caring, love, heart, and heartfelt. "It is heartwarming that someone actually cares, helps and supports nurses in this difficult and challenging time. Your help came unexpectedly so to our surprise, we felt really loved and supported when we got the check in the mail."

Table 3

Frequencies of categories and sub-categories from the population of 99 documents

Category		Sub-category	
Title	Number of documents	Title	Number of documents
Thanks to Nurses House, Inc.	102	Generosity	65
		Support	89
		Beyond words	48
Expression of Appreciation	71	Pay it forward	19
		Feeling Blessed	48
		Thanks to God	28
Experiencing COVID	74	Being a patient	24
		Affect family	43
		Out of work	48
		COVID survivor	13
Economic Uncertainty	61	Being without income	30
		Bills piling up	17
		Not qualified-used all benefits	28
Caring within a Professional Context	18	Caring for our patients	16
		Caring support for each other	6

Thanks to Nurses House, Inc. – Beyond Words

Some grantees thanking Nurses House, Inc. wrote about feeling support that was described as "beyond words." "Words are not enough to thank you for what you have done for us. We want to let you know that you saved three souls by coming to our assistance at the very time we need it."

Category 2 - Expressions of Appreciation

The grantees' notes provided "expressions of appreciation" (70/99). These were expressed through statements about "pay it forward" (19/99), "feeling blessed" (47/99), and "thanks to God" (28/99).

Pay It Forward

Generosity is linked with physical, emotional, and psychological well-being (Allen, 2018). In fact, helping others and receiving help result in similar positive benefits. Here is a quote illustrating this sub-category. "It will definitely help me and my family during these difficult times. I will pay it forward and will be donating to the cause."

Table 4

Categories with Subcategories Grantees' Quotes

Thanks to Nurses House, Inc	Expression of Appreciation	Experiencing COVID-19	Economic Uncertainty	Caring within a Professional Context
Generosity *"I am so grateful for your generosity in this time of need. In the midst of this pandemic, kindness and love prevails."* *"We truly appreciate the generosity and this organization."* *"Your generosity has helped me pull through during these tough times."*	***Pay It Forward*** *"This gift will enable us to keep helping others in a "pay it forward" way. It also reminds us there are people looking out for us to offer support in a time when support has been limited."* *"I know there are several nurses who are affected with this virus. I will pay it forward, so others can benefit from it as well."* *"My goal is to assist other nurses someday and give back to society the way your award has helped me during this difficult time."*	**Being a patient** *"Suffering from COVID-19 for 3 weeks and seeing 15 of my patients die from COVID-19 put me in a dark place."* *"Experiencing COVID-19 and being a patient, myself was one of the toughest trying times in my life."* *"Having COVID was the hardest challenge that I have faced in my life."*	**Being without an Income** *"I was desperate not able to work for 19 days and my husband on furlough with no pay for 2 months."* *"Both my husband and I had to be out of work for two weeks due to contracting COVID and unfortunately, his was unpaid."* *"I was without income for a whole month due to being sick from COVID."*	**Caring for Our Patients** *"As a healthcare professional Registered Nurse my passion and goal in life has always been to help others and give quality care to all humanity."* *"I am back doing what I love to do and that's caring for patients."* *"During this time I worked tirelessly to provide the best care possible; putting my health and my family's health and life on the line."*
Support *"During this time of crisis, it is comforting to know I am not alone."* *Thank you from the bottom of my heart for the continued support of nurses during this difficult time. I appreciate the outreach that your organization has been able to provide. Thank you so much again!"*	***Blessing*** *"This helps my family so much and is truly appreciated and a blessing during this difficulty time."* *"Thanks so much for the COVID-19 grant. This was very much appreciated. I am very blessed."* *"The gift of love, hope & kindness I received was such a blessing."*	***Effect on family*** *"My husband was out of work for a month, I was out of work because I caught the COVID and then when I went to the hospital due to COVID, my husband got it-while at home taking care of our two girls. It's been a real rough few months for us."* *I myself was sick with COVID, it was a long and tumultuous battle and I found myself behind in my mortgage. On top of that, my father became very sick and unfortunately passed away during the COVID crisis."*	***Paying bills*** *"This grant will help me with bills and other expenses that were put off."* *"Covid 19 sent me to the hospital and I almost died. I am so grateful for your help as bills piled up and I was not sure how I would pay them. I will continue to be out of work post Covid as my lymph nodes are swollen… your generosity has helped pull me through during these tough times"*	***Caring for/Supporting Each Other*** *"Looking very much forward to getting back to work so I might be in a position to give back to this brilliant community of love and support."* *"Words cannot express my deepest gratitude and THANKS. It is comforting to that 'Nurses Taking Care of Nurses' exist." "My fellow nurses are amazingly supportive… Without a doubt they are so compassionate, knowledgeable, and professional in caring for our patients."*

Beyond words *"This organization saved my household during this time of crises. I am crying as I write this because you can't image how much you have touched our lives."* *"Thank you, thank you is not even enough gratitude to express my 'tears of thankfulness', so this was a great surprise I just got today in the mail."*	***Thanks to GOD*** *"I thanked God for everything. He is always at my side helping me. Praying the rosary and believing that Jesus will always provide when need arise."* *"God has been so good to me and I thank God every day for another day. Being a survivor from this Covid-19 has open up more opportunities and has increased my Faith with our Father."* *"Give thanks to the Lord for he is good; his love endures forever." I Chronicles 16:32*	***Out of Work*** *My husband and I came down with COVID-19 in mid-March and were both incredibly sick for over two weeks."* *"During this time, neither of us could work causing us to lose out on almost a month of income."*	***Did Not Qualify/Used All Benefits*** *"I was without pay, as my position does not earn vacation or sick leave."* *"It came when I really needed as I did not qualify for benefits from my employer." "I couldn't even get short term disability from time away from work."* *"My husband and [I] came down with COVID-19 in mid-March and were both incredibly sick for over two weeks. During this time, neither of us could work causing us to lose out on almost a month of income. On top of that, I had to use ALL of my sick leave, so I am now only left with one hour."*
		COVID-19 Survivor *"In total I spent 3 weeks in the hospital and now I'm at home with oxygen and new medicine regimen to try to get me back to my normal self." "Thank you all for the help you extend to me and to my family who are COVID survivors"* *"I'm back to work as a pediatric RN in a hospital in northwest Arkansas, a new hot spot in the nation, although I still experience symptoms such as joint pain and fatigue."*	

Feeling Blessed

The sub-category of "feeling blessed" reflects a spiritual dimension to the experience of the grantees. This sub-category conveys the feeling of nurses who described financial support as a blessing. This description is noteworthy, considering the ultimate reason grantees received the grant was that they experienced an economic crisis due to the pandemic. A grant recipient wrote: "This was very much appreciated! I am very blessed. Your organization is lovely and has helped thousands of nurses who were exposed to COVID."

Thanks to God

A grantee quote for the final sub-category in Category 2, "Thanks to God," while spiritual in nature, illustrates a strong belief system and speaks to an underlying faith in God's presence for Nurses House, Inc. and financial support. A grantee wrote: "My husband walked into the kitchen from the mailbox with the biggest smile and gratitude of praise to God for the check he did not know the source of. He said, honey, look, someone sent you a check! God is really working for us, and he handed me the check."

Category 3 – Experiencing COVID-19

The third category identified in 74 of the 99 notes was "Experiencing COVID-19." We identified four distinct sub-categories in this category. These included experiencing COVID-19 from the perspective of "being a patient" (24/99), the "effect on family" (43/99), the impact of being "out of work" due to COVID-19 (48/99), and being a "COVID-19 survivor" (13/99).

Being a Patient

This sub-category includes descriptions by grantees of being personally ill with COVID-19, experiencing emotional responses to their own and their patients' COVID-19 illness, and the effect that being ill with COVID-19 had on their professional role. One recipient said: "I contracted COVID taking care of patients without proper PPE; but unfortunately, it affected my health and ability to continue working. Health issues forced me to retire. It is bittersweet. It has been my passion for 44 years."

Effect on Family

Many of the grantees wrote of the effects of the COVID-19 pandemic on their families. A common result of "being a patient" for many grantees with COVID-19 was extended periods of being out of work which negatively impacted their ability to provide emotional and financial support to their families. This distress contributed to a sense of isolation. One nurse wrote: "I contracted COVID and was out of work for 2.5 – 3 weeks. I was completely isolated from everyone during this time, including my 18-month-old daughter. It was an emotionally challenging time for me."

The grantees described concerns for others in their families who were financially dependent on them. Receiving financial support from Nurses House, Inc. seemed to relieve some monetary pressures on the family unit associated with the head of the household becoming ill. An example of this was evident in the note: "I have COVID-19 and have had to go out on short-term disability. I'm the head of the household, [as] a divorced mom, so any assistance really comes [in] handy. I have three children and my elderly mom [sic] live with me."

Out of Work

Grantees who were stricken with COVID-19 frequently described how the illness resulted in being out of work for them and, often, other family members. All too often, this left them experiencing financial vulnerability considering limited or altogether lacking paid leave. One said: "Being out of work without a solid financial solution in sight made the situation seemingly impossible to bear."

COVID-19 Survivor

Grantees wrote about their survival from COVID-19. Many described enduring and surviving physical, mental, and emotional challenges. A recipient wrote: "Experiencing COVID 19 and being a patient was one of the toughest trying times in my life. Mentally & physically challenging, yet I was able to endure it & become a COVID survivor."

In addition, grantees used varied statements to describe the impact of survivorship on their ability and desire to return to employment and an unknown work future because of COVID-19 symptoms. One grantee stated: "I will continue to be out of work post-COVID as my lymph nodes are swollen in the left hilar area and other areas of the lung."

Category 4 – Economic Uncertainty

Grantees described "Economic Uncertainty" in 61 of 99 notes. These nurses described "being without an income" (30/99), "having (sic) bills piling up" (17/99), and "not qualified for benefits" or having "used up all of their benefits" (28/99).

Being without an Income

Grantees described being without an income by using words and phrases including "desperate," "seemingly impossible," "scary and uncertain," "daunting," and "for a whole month." Though time away from work was limited, it was evident that many were living paycheck to paycheck and disruption of pay created financial hardship. One wrote: "It was a scary and uncertain time for me and my family. Having a positive COVID result made times daunting for us. Being out from work without a solid financial solution in sight made the situation seemingly impossible to bear."

Bills Piled Up

In many cases, grantees wrote of being at risk of losing a significant share of their income since they could no longer go to work. This was evident in this note:

> "I myself was sick with COVID, it was a long and tumultuous battle and I found myself behind in my mortgage. On top of that my father became sick and unfortunately passed away during the COVID crisis. His funeral expense was a lot to bear, then my mortgage and other bills piled up."

Did Not Qualify or Used All Benefits

The grantees described using all their sick time and vacation time while ill with COVID-19, and some reported a lack of benefits that would allow them to stay home and care for a sick family member. A grant recipient wrote:

> "As an emergency dept. nurse educator contracting COVID and being out of work for a month was very frustrating and scary. In addition, I did not qualify for FMLA and ran through all of vacation and sick time [sic]. It was to the point of me paying my employer for health insurance."

Category 5 - Caring within the Professional Context

The fifth and final category that emerged was "Caring within the Professional Context" (17/99). The grantees' notes describe nurses' experience in "caring for patients" (16/99) and instances of "caring support for each other" (6/99).

Caring for Our Patients

In the notes, grantees expressed the essence of nursing: caring for others. Despite the seemingly insurmountable challenges they faced, they continued to love the profession of nursing. A nurse stated:

> "We sacrifice so much on a normal day without even thinking. This COVID crisis has taken the lives of so many healthcare workers, yet we still push through and care for our patients. We push through it all and still show up with a smile."

Caring for and Supporting Each Other

The nursing profession is based on caring behaviors and, as such, has the concept of caring as a core intrinsic value (Watson, 2008). Therefore, the notes reflect feelings of being cared for and supported by colleagues and providing support for colleagues. One wrote: "… they say nurses eat their young… but that's not always true… we take care of each other too."

A visual graphic summary of the categories and sub-categories is shown in Figure 1.

Discussion

This study is unique because it deals with nurses supporting nurse colleagues financially; the culmination of this work discovered that this professional support extended to the care of each other. Even with the adversities described above, these nurses took the time to express gratitude to Nurses House, Inc. for providing financial support.

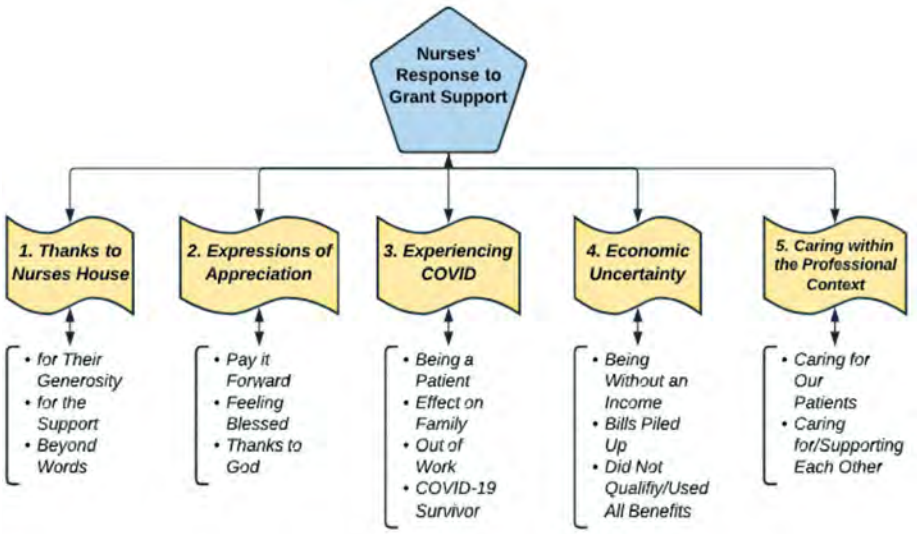
This study describes the content and commonalities of thank you notes sent to Nurses House, Inc. by nurses who received emergency COVID-19 grant funding. Content analysis revealed five major categories: thanks to nurses' house, expressions of appreciation, experiencing COVID, economic uncertainty, and caring within the professional context. Our analysis found evidence that much of what we believe to be hallmark characteristics of nurses and the nursing profession – caring, love, sense of duty to the profession, and selflessness – were evident in the notes written by nurses. However, we also found an alarming degree of financial vulnerability and evidence of its subsequent negative effect on nurses and their families. Financial vulnerability is often not associated with the profession. In addition, the description provided by nurses of personal loss and pain that accompanies caring for others, and their alternating feelings of both support and lack of support is not frequently expressed. These written accounts require our collective attention if we are to continue to advance the profession of nursing, while maintaining those aspects that most hold most dear to our professional identity – caring, support, and professionalism. In this study, nurses caring for nurses has been redefined.

Conclusions and Recommendations

The nurses in this research expressed gratitude to Nurses House, Inc. for the financial safety net that the COVID-19 emergency fund provided. While an increased understanding of this issue does not promise prevention or intervention, awareness of nurses at financial risk is important. Going forward, national

Figure 1

Graphic of Categories and Sub-Categories



policy initiatives addressing this issue for frontline healthcare workers must be developed. As previously suggested, an emergency funder like Federal Emergency Management Agency (FEMA) needs to be created to concretely support our healthcare workers who risk their own health and safety by providing care to others (Millenbach, et al., 2021).

This study reveals the financial losses suffered by nurses due to economic disruption from the COVID-19 pandemic. It is our hope that by focusing on these losses, we have further highlighted the necessity of bringing about an effective economic safety net to address child-care issues, provide equitable worker's compensation, and foster gender equity in salary, thus providing social justice for nurses (Millenbach, et al., 2021).

The work of Nurses House, Inc. and ANF described in this study exemplifies nurses caring for nurses, a new phenomenon. Further research is needed to determine how this exemplary work can be expanded.

References

Ackerman, L. (2019). Caring science education: Measuring nurses' caring behaviors. *International Journal of Caring Science, 12*(1), 572-583. http://www.internationaljournalofcaringsciences.org/docs/64_ackerman_12_1.pdf

Adams, L. Y. (2016). The conundrum of caring in nursing. *International Journal of Caring Science, 9*(1), 1-8. http://internationaljournalofcaringsciences.org/docs/1_1-Adams_special_9_1.pdf

Aebersold, M., & Schoville, R. (2020). How to prevent the next generation of nurses from "eating their young." *Clinical Simulation in Nursing*, *38*, 27-34. https://doi.org/10.1016/j.ecns.2019.10.002

Allen, S. (2018). *The science of generosity.* John Templeton Foundation. https://www.issuelab.org/resources/29718/29718.pdf

American Nurses Association. (2015). *Code of ethics with interpretative statements.* https://www.nursingworld.org/practice-policy/nursing-excellence/ethics/code-of-ethics-for-nurses/

American Nurses Foundation. (2020). *Pulse on the nation's nurses COVID-19 survey series: Financial.* ANA Enterprise. https://www.nursingworld.org/practice-policy/work-environment/health-safety/disaster-preparedness/coronavirus/what-you-need-to-know/financial-impact-survey/

American Nurses Foundation. (2021). *Pulse of the nation's nurses survey series: Mental health and wellness: Taking the pulse on emotional health, post-traumatic stress, resiliency, and activities for strengthening well-being.* ANA Enterprise. https://www.nursingworld.org/~4aa484/globalassets/docs/ancc/magnet/mh3-written-report-final.pdf

Aronsson, G., Gustafsson, K., & Dallner, M. (2000). Sick but yet at work. An empirical study of sickness presenteeism. Journal of Epidemiology and *Community Health, 54*(7), 502-509. https://dx.doi.org/10.1136%2Fjech.54.7.502

Bollen, K.A., Gutin, I., Halpern, C.T., & Harris, K.M. (2021). Subjective health in adolescence: Comparing the reliability of contemporaneous, retrospective, and proxy reports of overall health. *Social Science Research*, *96* https://doi.org/10.1016/j.ssresearch.2021.102538

Burnard, P. (1991). A method of analyzing interview transcripts in qualitative research *Nurse Education Today, 11*(6) 461-466. https://doi.org/10.1016/0260-6917(91)90009-Y

Burton, L.R. (2019). *The health and wellness benefits of gratitude. ealthy Nurse Healthy Foundation.* https://engage.healthynursehealthynation.org/blogs/8/3378

Day, J & Christnacht, C. (2019). *Your health care is in women's hands.* United States Census Bureau. https://www.census.gov/library/stories/2019/08/your-health-care-in-womens-hands.html

Galehdar, N., Toulabi, T., Kamran, A., Heydari. H. (2021). Exploring nurses' perception of taking care of patients with coronavirus disease (COVID-19): A qualitative study. *Nursing Open, 8*(1), 171–179. https://doi.org/10.1002/nop2.616

Gallagher-Lepak, S., & Kubsch, S. (2009). Transpersonal caring: A nursing practice guideline. *Holistic Nursing Practice, 23*(3), 171-182. https://doi.org/10.1097/hnp.0b013e3181a056d9

Hensel, D. (2011). Relationships among nurses' professional self-concept, health, and lifestyles. *Western Journal of Nursing Research, 33(1), 45-62.* https://doi.org/10.1177/0193945910373754

Laranjeira, C.A. (2013). Validation of the Portuguese version of the Stanford Presenteeism Scale in nursing. *International Journal of Nursing Practice, 19*(6), 644-650. https://psycnet.apa.org/doi/10.1111/ijn.12117.

Long, M., & Rae, M. (2020, June 17). *Gaps in the emergency paid sick leave law for health care workers.* Kaiser Family Foundation. https://www.kff.org/coronavirus-covid-19/issue-brief/gaps-in-emergency-paid-sick-leave-law-for-health-care-workers/

Maben, J. & Bridges, J. (2020). COVID-19: Supporting 'nurses' psychological and mental health. *Journal of Clinical Nursing, 29*(15-16). 2742-2750. https://doi.org/10.1111/jocn.15307

Meissner, J.E. (1986). Nurses: Are we eating our young? Nursing, 16(3), 51–53. PMID: 3633461.

Merriam, S.B., & Tisell, E.J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey Bass.

Millenbach, L., Crosby, F., Niyirora, J., Sellers, K., Maneval R., Pettis, J., Brennan, N., Gallagher, M., Michela, N., & Elliot, D. (2021) Impact of COVID-19 pandemic on nurses-where is the financial safety net? *Online Journal of Issues in Nursing, 26*(2). https://doi.org/10.3912/OJIN.Vol26No02Man01

Miller, F.A., & Alvarado, K. (2005). Incorporating documents into qualitative nursing research. *Journal of Nursing Scholarship, 37(4), 348-353.* https://www.academia.edu/22196044/Incorporating_Documents_Into_Qualitative_Nursing_Research

Morgan, H. (2022). *Conducting a qualitative document analysis. the qualitative report, 27(1), 64-77.* https://doi.org/10.46743/2160-3715/2022.5044

Nightingale, F. (1859). *Notes on nursing: What it is and what it is not.* Harrison. https://archive.org/details/notesonnursingnigh00nigh

Polit, D. & Beck, C. (2021). *Nursing research: Generating and assessing evidence for nursing research* (11th ed.). Wolter Kluwer.

Rainbow, J. G., & Steege, L. M. (2017). Presenteeism in nursing: An evolutionary concept analysis. *Nursing Outlook, 65*(5), 615-623. https://doi.org/10.1016/j.outlook.2017.03.005

Ranji, U., Long, L., & Salganicoff, A. (2020). *Coronavirus puts a spotlight on paid leave policies.* Kaiser Family Foundation. https://www.kff.org/coronavirus-covid-19/issue-brief/coronavirus-puts-a-spotlight-on-paid-leave-policies/

Skretkowicz, V., & Nightingale, F. (1992). *Florence Nightingale's notes on nursing.* Scutari Press.

Smiley, R. A., Lauer, P., Bienemy, C., Berg, J. G., Shireman, E., Reneau, K. A., & Alexander, M. (2019). The 2017 national nursing workforce survey. *Journal of Nursing Regulation, 9*(3), S1-S88. https://www.journalofnursingregulation.com/article/S2155-8256(18)30131-5/pdf

Smith, J.A. (1994). Reconstructing selves: An analysis of discrepancies between women's contemporaneous and retrospective accounts of the transition to motherhood. *British Journal of Psychology, 85*(3), 371-392. https://doi.org/10.1111/j.2044-8295.1994.tb02530.x

Sun, N., Wei, L., Shi, S., Jiao, D., Song, R., Ma, L., & Wang, H. (2020). A qualitative study on the psychological experience of caregivers of COVID-19 patients. *American Journal of Infection Control, 8, 592–598.* https://doi.org/10.1016/j.ajic.2020.03.018

Teitler, J.O., Reichman, N.E., & Koball, H. (2006). Contemporaneous versus retrospective reports of cohabitation in the fragile families' survey. *Journal of Marriage and Family, 68*(2), 469-477. https://onlinelibrary.wiley.com/doi/10.1111/j.1741-3737.2006.00265.x

Walker A. (2018). *Sign the pledge: Nurses support their young.* Nursing.org. https://nurse.org/articles/stop-nurse-workplace-bullying

Watson J. (1979). *Nursing: The philosophy and science of caring.* Little Brown & Co.

Watson J. (1985). *Nursing: Human science and human care.* Appleton-Century-Croft

Watson, J. (2008). *Nursing: The philosophy and science of caring* (Revised Edition). University Press of Colorado.

Watson, J. & Smith, M. (2002). Caring science and the science of unitary human beings: a transtheoretical discourse for nursing knowledge development. *Journal of Advanced Nursing, 37*(5), 452-461. https://onlinelibrary.wiley.com/doi/abs/10.1046/j.1365-2648.2002.02112.x

CONCEPT ANALYSIS

Caring: A Concept Analysis with Watson's Theoretical Perspective

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Abstract

Background: The concept of caring has been around for centuries. Although there are various uses of the concept, the definition has remained ambiguous. By examining, analyzing, and synthesizing the various literature on caring, a clearer and better understanding of the concept can emerge. **Objective:** The purpose of this paper was to identify and explore the concept of caring, determine similarities in the literature, distinguish the uses of the concept throughout disciplines, and provide clarification for the development of nursing science. **Methodology:** In this paper, the author used the Walker and Avant method of concept analysis to explore the concept of caring across various disciplines to create a definition suitable for nursing science using Watson's theoretical perspective. **Results:** After careful review of the literature, attributes of caring identified were mindful, altruism, and reverence. The antecedents of caring were understanding and compassion. The consequences of caring were trust and the individual being cared for feeling valued and protected. **Conclusion and Recommendations:** Caring is universal and central to nursing. Proper investigation and development of the concept is vital to the nursing discipline and nursing science. By exploring the concept in light of Watson's theoretical perspective, nursing science is further expanded.

Keywords: caring science, mindful, altruism, reverence, caring, Watson

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Caring: A Concept Analysis with Watson's Theoretical Perspective

For centuries, the concept of caring has been used in society (Smith, 1999). The word caring stems from the word "care". It is also associated with sorrow, anxiety, grief, burdens of the mind and to feel concern or interest (Merriam-Webster, n.d.). These are all terms that trigger a negative sense when referring to caring. Over time the negative connotation transformed into the positive connotation that is familiar today. The term caring has been constantly used vaguely to describe relationships and actions. It can be stated that caring takes place between families, friends, animals and the like. Although the word caring has remained ambiguous throughout the years (Smith, 1999), when reflecting on the activities and relationships of individuals over time, the presence of the term is evident. Since the word caring is used in various contexts, this author sought to identify the use of the term in relation to nursing.

Methodology

The Walker and Avant (2019) method of concept analysis was utilized. These eight steps include: (1) select a concept; (2) determine the aims/purpose of the analysis; (3) identify uses of the concept; (4) determine the defining attributes; (5) identify a model case; (6) identify borderline, related, contrary, invented, and illegitimate cases; (7) identify antecedents and consequences; and (8) define empirical referents. CINAHL and PubMed were the databases used for the search and keywords included "concept analysis" and "caring". The search did not include "nursing" in order to allow for the uses of caring on a spectrum of disciplines. Abstracts were read and articles that defined caring were used. Reference lists were also scanned to find other possible relevant articles.

The purpose of this paper was to identify and explore the concept of caring, determine similarities in the literature, distinguish the uses of the concept throughout disciplines, and provide clarification for the development of nursing science. The outcome of this paper was a definition consistent with the philosophical ideology and theoretical frameworks of nurse theorist Jean Watson (1979; 2008; 2012; 2018; 2021), building on the nursing science literature.

Background

Historically, caring has been demonstrated as an act; originally delineated to women (Cree, 2000; Halstead et al., 2002; Smith, 1999; Watson, 2018). In the 1990s men began to be included in the discussion of caring although it was still considered a feminine act (Cree, 2000; Halstead et al., 2002). Noddings (2013) also noted that the concept of caring is "characteristically and essentially feminine" (p. 8). Watson (2018) described nurses as ontological archetypes with ancient energy fields that are equivalent to yin, i.e., "feminine healing, serving as artist through caring-healing acts" (p.103). Caring has also been very closely tied to the discipline of nursing so the importance of creating a definition with attributes, antecedents, and consequences is imperative (Smith, 1999). Having a clear understanding of the concept will further validate its use, advance nursing science and Watson's (2018) Unitary Caring Science.

Purpose of the Caring Analysis

The purpose of studying caring was to gain knowledge and understanding about human attributes in relation to nursing, healing, and illness. This knowledge and understanding provide the nursing profession with details related to the facets of caring that will allow for improved nursing care. This, in turn, enhances nursing science.

In the evolution of her theory from the *Caring Science* (1979) to the *Unitary Caring Science* (2018), Watson identified caring as a major concept in the theory as well as in nursing. Her description evolved from caring acts to identifying the importance and need for transpersonal caring moments and the caring occasion (Watson 2012; 2021). She explained that the transpersonal caring moment or caring occasion is a unique moment in time shared by two individuals that brings healing and understanding (Watson, 2020). The theorist explored caring acts and situations but she did not provide an explicit definition. Over the years the concept of caring has been studied in various disciplines including nursing. One of the oldest analysis of caring was completed by Smith (1999) in which she used the Paley (1996) method to develop five constitutive meanings of caring using the Science of Unitary Human Beings (SUHB). The most recent analysis of the concept was completed by Townsend (2020) using the Walker and Avant (2019) method without describing attributes. There were also other analyses using the Rodgers and Knafl (2000) method which did not lead to a definition because of the methodology used (Brilowski & Wendler, 2005; Sourial, 1997).

According to Watson (2012), "caring calls for a philosophy of moral commitment toward protecting human dignity and preserving humanity" (p. 41). Thus, caring is mindful altruism with reverence. It is an inherent act that leads to a relationship between individuals in any circumstance and situation. In nursing, caring is a human attribute that transcends into the core of the discipline. To provide a better understanding of the concept, it is essential to explore caring in light of this philosophical approach and theoretical perspective.

Results

Uses of Caring

The concept of caring is used throughout many disciplines, e.g., sociology, education, nursing, medicine, and veterinary medicine. In these disciplines, caring is categorized as an act, encounter, or a location. It is noted as a multidisciplinary culture of care that is linked to ethical codes and guidelines (Donald, 2018).

Noddings (2012) explored caring as it relates to education and stated that caring is an encounter or sequence of encounters that include one person as carer and the other as cared for. Further, Noddings (2012) described that the carer is attentive and understanding of the experience and needs of the cared for. She explained that in order for the caring encounter to be complete, there must be a response by the cared for. According to the medical literature, caring is a relational phenomenon that is central to medical practice. Gillespie et al. (2018) conducted a narrative descriptive study that evaluated the experiences and feelings of ten patients with their physicians. The study concluded

by noting that patients feel seen when physicians are genuine. This was supported by Mayeoff (1971) in that caring for someone helps them grow.

Cree (2000) examined caring and emphasized the need to distinguish between "care: the institutional site of where caring takes place; and, caring: an act carried out by one person for another…" (p. 142). This is an important point because with the various uses of the concept, this significant difference was not always noted (Brilowski & Wendler, 2005; Sourial, 1997; Townsend, 2020). According to Noddings (2013), caring involved some action; thus, providing a distinction between the act and the institution was instrumental to the definition.

Watson (2012; 2018) did not make this distinction but the difference of caring as an institutional site and an act is clear throughout her work. She stated that caring is "a stance, an attitude, a consciousness that becomes an intentional commitment" (Watson, 2012, p. 41). She further explained that is it a "philosophical orientation toward honoring the whole person and all of humanity" (p. 42) and being "responsive to a person as a unique individual, perceiving the other's feelings, and sets one apart from another and from the ordinary" (Watson, 2012, p. 44). Sadat-Hoseini and Khosropanah (2017) applied care to God's commandments by emphasizing the acknowledgement and appreciation of the physical needs as well as the needs of the soul. They explained that God is at the helm and cares for humans. In turn, humans must care for others and the universe.

In one of her latest works, Watson (2018) discussed the caring occasion or caring moment. This takes place when two individuals share an energy field and experience in which nothing else matters besides the energy being shared and the encounter in that very instant.

The uses of caring in the literature can easily be linked to the Unitary Caring Science created by Watson (1979; 2008; 2012; 2018). Being able to help with growth, build relationships, and provide an atmosphere of humility and attentiveness is all detailed in the Unitary Caring Science. Watson (2018, p. 39-40) explained caring as follows:

- manifesting intention… caring is being aware of holding intentions for well-being
- appreciating pattern... caring is entering into a relationship with the curiosity to come to know the uniqueness of the other
- attuning to dynamic flow…caring is the ability to move in concert with the evolving patterning of healing and well-becoming
- experiencing the Infinite…caring is surrendering to the enfolding and unfolding mystery of spiritual connectedness
- inviting creative emergence…caring is nurturing that growth through exploring and supporting the person's chosen journey

By using her theory to learn about caring, nurses are able to add to nursing knowledge by enhancing the understanding of the ways in which caring and the Unitary Caring Science can be applied to human characteristics and behavior. In order to better comprehend the concept of caring, it is imperative that unique attributes are designated.

Defining Attributes

Caring is a "feeling or showing concern for or kindness to others…" (Merriam-Webster, n.d.). Caring has been said to have various meanings depending on the circumstances, society, and culture being reviewed (Halstead et al., 2002; Leira, 1994; Notle & Downing, 2019). The term caring is used in various circumstances, societies, cultures, and contexts (Brilowski & Wendler, 2005; Sourial, 1997; Townsend, 2020). The Oxford English Dictionary (2023) defined caring as "displaying kindness and concern for others". It has been associated with "being nice", being female, providing a service to a loved one and having or developing a deep connection with the individual (Cree, 2000; Halstead et al., 2002; Leira, 1994). Heidegger (1962) defined caring as a universal phenomenon that impacts an individual's thoughts, feelings, and behavior. Mayeroff (1971) defined caring as assisting in the development of another by providing significance and direction to their life.

Although there are still varying ideas and conceptualizations of caring, mindfulness is one of its attributes. It takes a conscious effort to be caring, whether that is in the context of where caring takes place or in providing care to a loved one. Mindful is defined as being "conscious or aware of something; focusing one's awareness on the present moment, especially as part of a therapeutic or meditative technique" (Merriam-Webster, n.d.). Watson (2018) also discussed the importance of mindfulness in relation to caring consciousness and cultivating a therapeutic presence. It was also embedded in the Unitary Caring Science via Watson's emphasis on the ideology of Nhat Hanh's Mindful Practices (Watson, 2018). Kabat-Zinn & Hanh (2013) said that mindfulness was not endless, but was something that we have to think about and consider; it developed from paying attention, being present, and remaining nonjudgmental. The authors also considered mindfulness not to be automatic, but of being aware of oneself and those around. DeMauro (2019) stated that mindfulness is especially useful for caring and it mitigates burnout among those in the caring professions. Mindfulness is therefore essential in the definition of caring.

Based on the aforementioned descriptions of caring and the circumstances, it is evident that some amount of altruism exist. According to Watson (2018) "caring is underpinned and motivated by our humanistic-altruistic value system" (p. 49). Tuppal et al. (2018) explained that caring is a meeting of body, mind, and soul that involves altruism and love. Altruism is "the belief in or practice of disinterested and selfless concern for the well-being of others" (Merriam-Webster, n.d.). It is also described as acting "to promote someone else's welfare, even at a risk or cost to ourselves" (Greater Good, 2022, para. 1). Altruism is being selfless and putting others first. When considering the true essence of caring it is important to understand that altruism does not concern itself with circumstances or details; it is genuine concern for another, no matter what. Cree (2000) discussed potential constraints to caring, such as social class, race, ethnicity, gender, age, mental health, age, disability. However, caring for an individual based on altruism presents no impediments.

Watson (2018) stated that caring is "the highest ethical ideal we can offer society and humanity" (p. 7); thus, reverence is an attribute of caring. Reverence is defined as "deep respect for

someone or something; honor or respect felt or shown; a gesture of respect" (Merriam-Webster, n.d.). As an attribute to caring, reverence is to have respect for another human being regardless of actions or any person in particular. The emphasis on reverence is even noted in Watson's Caritas Process Ten, i.e., "reverentially assisting with basic needs as sacred acts, touching mind-body-spirit of another; sustaining human dignity" (2012, p. 47). This caritas process is a flawless explanation of what acts and behaviors demonstrate caring in the nursing profession.

In her work, Cree (2000) also outlined potential gains and reasons as to why people care. These include personal consideration, time, opportunity, money, accidental, affect, reciprocity, duty and obligation. It can be argued that if caring is associated with any of these reasons, it cannot be considered true caring as defined by the author. Ideally there is no gain or bias in caring. It is imperative to understand that true caring (Watson, 2018) sets aside any bias, ideology, concern, or circumstance. It does not exclude individuals based on race, experience, age, gender, sexuality, disability, mental health, or social class. Watson (2018) described "true transpersonal caring within a Caritas Healing praxis presence as sacred" (p. 94). Based on these findings, the attributes of caring are mindfulness, altruism, and reverence. Caring can therefore be defined as mindful altruism with reverence.

Caring: Mindful Altruism with Reverence

Model Case

A model case describes caring in the purest form. Based on this idea, a photograph by Partha Pratim Saha (2017) was found and will be described in this section as the model case. The photograph depicts *mindful altruism with reverence* (Figure 1). Saha (2017), a photographer who specializes in portrait photography, captured a moment between two brothers. The brothers are in the midst of an opencast coal mining site. The eldest brother is holding his younger brother who is crying and in clear distress. In the photograph, both boys are covered in coal dust and seem to be struggling with finding a safe place to be. The younger brother is displaying more evident signs of distress and fear as he is crying. The older brother is holding his younger brother and trying to console him. The photograph displays a model case of caring because even without the description, it is evident that the older boy is caring for the younger boy. He is exhibiting mindful altruism with reverence. This particular photograph was chosen to represent caring because the aim is not to define or depict caring for nursing or healthcare alone, but to represent caring across disciplines. This photo can be used to represent caring universally. In continuing to review the concept of caring, details of a borderline, related, and contrary cases are also described.

Borderline

A borderline case is an example of a situation that can be similar to a model case but lacks some of the vital attributes of the concept. An example of this would be philanthropic donations. It can be argued that a philanthropic donation is mindful and may be altruistic, but it may or may not involve reverence. A donation may be a requirement for an organization to maintain its status and therefore not all attributes of caring are met. It is also vital to note that if funds for the donation are not available it would not take place. In true caring there are no boundaries or circumstances that would impede caring from taking place.

Figure 1

Picture Representation of a Model Case of Caring

Note: The children living near opencast coal mining sites are affected by acute and chronic respiratory health. The older brother is caring his ailing younger brother in an opencast coalmining site. From Envision Kindness (2017). https://www.envisionkindness.org/2017-photocontest/. Copyright 2017 by Partha Pratim Saha. Reprinted with permission.

Related Case

A related case is identified as a case that is associated to the concept but does not display all of the attributes. An example is when an individual, who is entering or exiting a building, holds the door open for the person immediately following behind. The act of holding the door open can be considered mindful and demonstrating reverence, but it is not altruistic. The gesture of holding the door open does not involve being selfless or genuinely concerned for the wellbeing of another. It is usually done as a courtesy. Therefore, holding a door open does not display all attributes of caring and cannot be considered caring using the aforementioned definition.

Contrary Case

A contrary case related to caring is noted on a daily basis in instances of abuse, whether this is elder, child, or sexual abuse, human trafficking, or animal cruelty. In these instances, there is no caring from the individual. Hence, there is no mindfulness, altruism, or reverence. Another example that is contrary to caring can be noted in any type of crimes, whether white collar crimes, murder, and other severe forms of atrocities. In these cases, there is absolutely the absence of concern or any attributes of caring. To better understand the concept of caring and the cases described above, it is essential to discuss the antecedents and consequences of caring.

Antecedents and Consequences

Antecedents are instances or occasions that must take place or be in place before the concept can occur. The antecedents of caring are understanding and compassion. According to Noddings (2012), understanding the feelings of the cared for is critical for caring to take place. Compassion is also necessary for caring to take place as explained by DeMauro (2019). In the study, it was outlined that mindfulness contributes to being compassionate and helps in the interconnectedness of everything. An individual who demonstrates compassion exhibits concern for the suffering of others. Drahošová and Jarošová (2016) explained that caring is an emotional and physical act that provides protection and puts the patient's best interest at the forefront. It is, therefore, inherent in caring that understanding and compassion be in their most transparent forms.

In her work, Watson (2012) explained that in order for caring to take place, caring processes need to happen. The caring processes include treating the individual as a person, showing concern and empathy, personalized characteristics of the nurse, communication, and extra effort. These caring processes are clear examples of acts that demonstrate understanding and compassion, and are therefore identified as antecedents of caring (Watson, 2012, p. 44).

Consequences are instances or occasions that take place as a result of the act of caring or its outcome. Caring consequences are trust and feeling valued and protected by those cared for. Trust is confident reliance with certainty (Gonzalez, 2017). In this case, trust is built despite the circumstances. Caring is experienced and demonstrated, which leads to feeling valued and protected. Calong-Calong and Soriano (2018) described caring as an interactive and intersubjective human process with shared vulnerability. As a result, the cared for feels valued and protected. Noddings (2012) explained that "a climate of care and trust is one in which most people will want to do the right thing, will want to be good" (p. 777). The ability to do good no matter the circumstances were fundamental in Watson's (2018) Unitary Caring Science.

Empirical Referents

Empirical referents that demonstrate caring vary across situations. Sitzman and Watson (2019) developed a text that compiles various tools that can be used to measure caring in nursing. Among the tools reviewed are the Caring Behaviors Inventory, Caring Ability Inventory, CARE-Q, Caring Efficacy Scale, Holistic Caring Inventory, and the Caring Factor Survey (Sitzman & Watson, 2019). Each tool can be used in different settings and circumstances in order to provide the most accurate assessment.

Caring is seen on a daily basis in various situations. It is seen between persons in a relationship as well as between a person and an animal. For example, pet owners demonstrate caring to their animals by feeding, grooming, and walking them. This is also seen in individuals who care for their plants by watering them and providing them with sufficient sunlight. Faculty members display caring behaviors when they provide students the opportunity to meet with them on various occasions besides the classroom. Caring is also visible in the relationship between parents and their children. Parents work in order to provide meals and a safe, warm place to live on a daily basis. It can be argued that parents, pet owners, and even faculty complete the above out of obligation but these roles specifically can be carried out without caring whatsoever. For example, there are pet owners as well as parents who neglect some or all their responsibilities. There are also faculty who do the bare minimum to maintain employment.

Lastly, caring is noted in nurses who go above and beyond to provide services to clients no matter the circumstances that brought them into the healthcare setting. This has been especially evident in relation to the COVID-19 pandemic. Healthcare providers across the world demonstrated the essence of caring as defined in this analysis. Healthcare professionals were committed to work long hours on a daily basis during a time when there was so much uncertainty and unrest. They set aside their concerns, fears and questions with regards to taking care of the sick. They even kept safe distances from their loved ones in order to assure that their families were safe. Empirical referents of caring are noted throughout daily activities and interactions. When analyzing empirical referents, it is important to remember that the attributes of caring must be present – mindful, altruism, and reverence.

Conclusion

The purpose of this paper was to identify and explore the concept of caring, determine similarities in the literature, distinguish the uses of the concept throughout disciplines, and provide clarification for the development of nursing science. This was accomplished by identifying caring as the concept and defining it as mindful altruism with reverence. The uses of the concept were explored in the disciplines of sociology, education, nursing, medicine and veterinary medicine. It is important to understand and note that caring is universal and central to nursing (Matsuda et al., 2017; Boykin, 1994). Therefore, further investigation of the concept is essential to build nursing science by providing nursing knowledge about the role of caring in human behavior and attributes.

References

Boykin, A. (1994). *Living a caring-based program.* National League for Nursing.

Brilowski, G. A., & Wendler, C. M. (2005). An evolutionary concept analysis of caring. *Journal of Advanced Nursing, 50*(6), 641–650. https://doi.org/10.1111/j.1365-2648.2005.03449.x

Calong-Calong, K. A., & Soriano, G. P. (2018). Caring behaviors and patient satisfaction: Merging for satisfaction. *International Journal of Caring Sciences, 11*(2), 697-703. http://www.internationaljournalofcaringsciences.org/docs/9_soriano_original_10_2.pdf

Cree, V. E. (2000). Caring. In *Sociology for Social Workers and Probation Officers* (pp. 142-166). Routledge.

DeMauro, A. A., Jennings, P. A., Cunningham, T., Fontaine, D., Park, H., & Sheras, P. L. (2019). Mindfulness and caring in professional practice: An interdisciplinary review of qualitative research. *Mindfulness, 10*(3), 1969-1984. https://doi.org/ 10.1007/s12671-019-01186-8

Donald, M. M. (2018). When care is defined by science: Exploring veterinary medicine through a more-than-human geography of empathy. *Area, 51*(3), 470–478. https://doi.org/10.1111/area.12485

Drahošová, L. & Jarošová, D. (2016). Concept caring in nursing. *Central European Journal of Nursing and Midwifery, 7*(2), 453-460. https://doi.org/10.15452/CEJNM.2016.07.0014

Gillespie, H., Kelly, M., Gormley, G., King, N., Gilliland, D., & Dornan, T. (2018). How can tomorrow's doctors be more caring? A phenomenological investigation. *Medical Education, 52*(10), 1052–1063. https://doi.org/10.1111/medu.13684

Gonzalez, K. M. R. (2017). Trust: A concept analysis with Watson's theoretical perspective. *Nursing Science Quarterly, 30*(4), 356-360. https://doi.org/10.1177/0894318417724446

Greater Good. (2022). What is altruism? https://greatergood.berkeley.edu/topic/altruism/definition

Halstead, R. W., Wagner, L. D., Vivero, M., & Ferkol, W. (2002). Counselors' conceptualizations of caring in the counseling relationship. *Counseling and Values, 47*(1), 34–47. https://doi.org/10.1002/j.2161-007x.2002.tb00222.x

Heidegger, M. (1962). Being and time. (J. Macquarrie & E. Robinson, Trans.). Routledge & Kegan Paul.

Kabat-Zinn, J., & Hanh, T. N. (2013). *Full catastrophe living; using the wisdom of your body and mind to face stress, pain, and illness.* Bantam.

Leira, A. (1994). Concepts of caring: loving, thinking, and doing. *Social Service Review, 68*(2), 185–201. https://doi.org/10.1086/604046

Matsuda, Y., Martinez, M., & Beeber, L. S. (2017). Caring as a facilitator of sensitive research studies with immigrant latino families. *International Journal for Human Caring, 21*(1), 26–31. PMID: 30464376; PMCID: PMC6242296.

Mayeoff, M. (1971). *On caring.* Harper & Row.

Merriam-Webster. (n.d.). *Dictionary*. https://www.merriam-webster.com/dictionary

Noddings, N. (2012). The caring relation in teaching. *Oxford Review of Education, 38*(6), 771–781. https://doi.org/10.1080/03054985.2012.745047

Nolte, A., & Downing, C. (2019). Ubuntu—The essence of caring and being. *Holistic Nursing Practice, 33*(1), 9–16. https://doi.org/10.1097/hnp.0000000000000302

Oxford English Dictionary. (2023). *OED. The historical English dictionary.* https://www.oed.com.

Paley, J. (1996). How not to clarify concepts in nursing. *Journal of Advanced Nursing, 24*(3), 572. https://doi.org/10.1046/j.1365-2648.1996.22618.x

Rodgers, B. & Knafl, K. (2000). *Concept development in nursing: Foundations, techniques, and applications.* (2nd ed.). Saunders.

Sadat-Hoseini, A.-S., & Khosropanah, A.-H. (2017). Comparing the concept of caring in Islamic perspective with Watson and Parse's nursing theories. *Iranian Journal of Nursing and Midwifery Research, 22*(2), 83. PMID: 28584543 PMCID: PMC5443001

Saha, P. P. Photographer (2017). *Brothers* [Online photograph]. Envision Kindness. https://www.envisionkindness.org/2017-photocontest/

Sitzman, K., & Watson, J. (2019). *Assessing and measuring caring in nursing and health sciences: Watson's caring science guide* (3rd ed.). Springer.

Smith, M. C. (1999). Caring and the science of unitary human beings. *Advances in Nursing Science, 21*(4), 14–28. https://doi.org/10.1097/00012272-199906000-00006

Sourial, S. (1997). An analysis of caring. *Journal of Advanced Nursing, 26*, 1189-1192. PMID: 9429970.

Townsend, C. A. (2020). Concept analysis of caring: Jean Watson philosophy and science of caring. *Nebraska Nurse,* 14-15. https://media.healthecareers.com/wp-content/uploads/2022/07/27164115/Nebraska_Nurse_5_20.pdf

Tuppal, C. P., Baua, E., Vega, P., Magnolia, M., & Rajhi, W. A. (2018). Does interprofessional caring exist in the health professions? Transcending profession, transforming practice, and languaguging caring. *International Journal of Caring Sciences, 11*(1), 614-622. http://internationaljournalofcaringsciences.org/docs/71.tuppal_special_11_1_2.pdf

Walker, L. O., & Avant, K. C. (2019). *Strategies for theory construction in nursing* (6th ed.). Pearson Education Inc.

Watson, J. (1979). *Nursing: The philosophy and science of caring.* Little Brown and Company.

Watson, J. (2008). *Nursing: The philosophy and science of caring.* (Revised Ed). University Press of Colorado.

Watson, J. (2012). *Human caring science: A theory of nursing* (2nd ed.). Jones & Bartlett Learning.

Watson, J. (2018). *Unitary caring science: The philosophy and praxis of nursing.* University Press of Colorado.

Watson, J. (2021). *Caring science as sacred science.* Lotus Library.

ORIGINAL RESEARCH

The Academic Nurse Educator Shortage: A Qualitative Study and a Call for Collaboration with Professional Nursing Organizations

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Abstract

Background: The academic nurse educator shortage has limited schools of nursing in accepting a steady pool of students interested in becoming nurses. **Purpose:** The purpose of this research is to identify strategies that professional nursing organizations can implement in order to address the nurse educator shortage. Professional organizations include specialty groups, nurse educators, accrediting bodies, and regulatory agencies, etc. **Methods:** A qualitative, modified nominal group technique was utilized. Nurse educators acting as participatory action researchers took part in the study. Stakeholders were identified and subgroups were formed to develop stakeholder specific courses of action. **Findings:** The professional nursing organizations subgroup identified four overarching themes. Through intentional collaboration, professional organizations can support increased compensation, recognition of nursing education as a specialty, and the need for specialized training. **Conclusion:** The synergistic effect of different professional organizations collaborating to promote the direction of nursing, including academic nurse education, is imperative. Professional nursing organizations are well-positioned as subject matter experts to address barriers that impede the educational preparation, recruitment, and retention of nurse faculty. The recommendations of this research serve as a foundation for future nurse educators to collectively advocate for the enhancement of the academic nurse educator role.

Keywords: Nurse Educator, Shortage, Professional Nursing Organizations

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The Academic Nurse Educator Shortage: A Qualitative Study and a Call for Collaboration with Professional Nursing Organizations

Introduction

Schools of nursing are turning prospective students away in record numbers and this is largely due to the lack of qualified nurse educators (Bakewell-Sachs et al., 2022). This is a concern that is only going to get worse, as it is anticipated that one-third of nurse educators employed in 2017 will retire by 2025 (Fang & Kesten, 2017). The American Association of Colleges of Nursing [AACN] (2023) stated a decline in the nurse educator pipeline. Addressing the nurse educator shortage is an essential component of a multi-tiered approach to preparing adequate numbers of practicing nurses (Noguchi, 2021).

Efforts to resolve the nursing faculty shortage will require the engagement of all stakeholders of the nursing profession and healthcare system. It is necessary for these entities to recognize how the nurse educator shortage is perpetuating the nurse practice shortage and to prioritize finding collaborative solutions to increase interest in and the retention of academic nurse educators (ANEs). Professional nursing organizations are one entity that have a unique opportunity to lead nursing forward during this crisis. These organizations include the following but are not limited to specialty groups, nurse educators, accrediting bodies, and regulatory agencies, etc. Professional nursing organizations can provide guidance for increasing compensation, enhancing diversity, and clarifying role expectations, including fair calculation of workload and providing adequate support to educators, all in an effort to recruit and retain qualified nurses in these roles (Bittner & Bechtel, 2017).

The purpose of this study was to bring together a diverse group of nurse educators to explore and recommend solutions for the nurse educator shortage. These solutions aim to leverage five relevant stakeholders, including educational institutions, healthcare organizations, professional nursing organizations, policymakers, and the public and business sectors. This paper specifically proposes strategies for professional nursing organizations to address the issue that is plaguing nursing academia and the nursing profession.

Background

A persistent shortage of qualified ANEs has limited the capacity of schools of nursing to admit nursing students and prepare the nursing workforce (Gazza, 2019; National Advisory Council on Nursing Education and Practice [NACNEP], 2021). Though there are many factors that contribute to the current ANE shortage, four were identified as essential and require targeted action to address the issue. These four factors include varying qualification standards, inadequate preparation for teaching, lack of recognition as a specialized area of nursing, and significant wage gaps.

Varying Qualification Standards

The first attempt at formalizing educational requirements for the nurse educator was an evidence-based approach to delineate the role of the nurse educator with the development of nurse education competencies (Halstead, 2018). In 2008, the National Council of State Boards of Nursing (NCSBN) determined that the minimum standard for ANEs for a registered nurse (RN) program should be a master's or doctoral degree, preparation in a clinical specialty area of nursing practice, and graduate coursework in the science of teaching and learning. In practical nursing (PN) programs, a nurse with a BSN may participate and assist on a teaching team. The AACN uses similar language as the NCSBN, adding that "pedagogy, curriculum development, and student assessment" are recommended to "provide evidence-based teaching [to] better convey their clinical mastery to students" (Bakewell-Sachs, 2022, pp. 12-13). Compounding the differences in requirements are the individual state boards, which have created additional state requirements for nurse educators (NACNEP, 2021). The National League for Nursing (NLN) and the World Health Organization (WHO) established nurse educator competencies and the NLN also developed board certification programs to facilitate training and career development for nurse educators (NLN, 2022; WHO, 2016). However, in a review of 529 schools with MSN in nursing education or post-master's certificate in nursing education, the full set of nurse educator competencies were not present in the course descriptions and there was great variability in the credits and practice hours to achieve the graduate coursework in teaching and learning (Fitzgerald et al., 2020). Although the schools in this study were accredited by nursing accreditation bodies, these programs inconsistently used the nurse educator competencies for teaching nursing educators. The lack of agreed upon standards for the science of teaching and learning contributes to the inadequate number of qualified nurse educators and recognition as a valued nursing specialty.

Inadequate Preparation

In 2007, Bartels described the need for ANEs to have a graduate level understanding of the nursing role as well as the formal preparation to create learner-centered environments and employ a solid understanding of the science of teaching. Thus, the ANE must have expertise as a nurse as well as teaching preparation. The shortage of nursing educators has compelled many schools to hire experienced clinicians who lack formal training or experience with the skills and techniques required for teaching nursing students (King et al., 2020). King et al. (2020) further argue that nurses who desire a career in nursing education do not have an appropriate selection of graduate degree programs that offer both the nursing focus and sufficient preparation for nursing education. Without a defined educational pathway and clear standards for the nurse educator role, it can be reasoned that nurses are less likely to seek out an advanced degree that leads to a teaching role.

Inadequately prepared nurse educators have a direct impact on nurse educator retention and possibly the quality of future generations of nurses. Nurse educators without sufficient support or formal education in teaching have been found to become frustrated and are more likely to leave academia within five years (Summers, 2017). Additionally, a national Delphi study identified

consistent and competent ANEs as a quality indicator for pre-licensure nursing programs (Spector, 2020). Underperforming nursing programs in Texas, observed that ongoing nurse educator development that focused on teaching strategies and item writing were found effective at contributing to improved student performance (Hooper & Ayars, 2017). The lack of a standardized core nurse educator curriculum to prepare nurses for teaching results in a wide variation in preparation.

Presently, many schools of nursing hire DNP (Doctor of Nursing Practice), PhD, and MSN prepared nurses with less than 7.1 % of nursing educators having an EdD (King et al., 2020). While the EdD in nursing education has a strong emphasis on administration, leadership, research, and pedagogy, those with the degree may not be hired because of a lack of graduate nursing focus (King et al., 2020). Overlooking the EdD prepared nurse may further result in a nurse educator base that lacks the competencies needed to provide quality, learner-centered education. The lack of pedagogical knowledge, teaching experience, and support in many schools of nursing can make teaching a disappointing and frustrating experience, leading to nurse educators leaving the educational field. Students may encounter educators who are unfamiliar with academic responsibilities and teaching modalities creating a poor student learning experience. This may also send the message to nurses just entering their career that academia is not a viable career option in the future.

Lack of Role Recognition

The role descriptions, positions, and titles used for nurse educators can vary widely according to their function, purpose and setting, leading to potential confusion among employers, nurses, and the public. Hospital based clinical educators may primarily serve to support nursing practice of staff nurses at the bedside, serve in a preceptor role to facilitate transition of new nurses, or may serve as nursing staff professional development educators (Jean & White, 2019). Nurse educators serving in academic roles within nursing education institutions prepare prelicensure, advanced practice, and research nurses for professional roles in healthcare. Although these roles may appear different, there are commonalities in the special knowledge and skills required to assess learning needs, design, and deliver evidence-informed curriculum, and evaluate program and learner outcomes.

The unique knowledge and skill set required to be an effective nurse educator is often overlooked, as the role lacks recognition as an advanced practice specialty and lacks consistent educational requirements. Additionally, nurses experience perceived barriers to entering an academic nurse educator role and often lack clarity of role expectations. Bagley et al. (2018) explored the perceptions of nursing clinicians considering becoming nurse educators and found that nurses were interested in sharing their experience, shaping new nurses, and watching the professional growth inherent in a teaching role. However, nursing clinicians perceived barriers related to the extended time needed to obtain the necessary degree, financial costs of further education, and uncertainty over making a career change. Furthermore, the widespread agreement among nursing education stakeholders that there is a need for increasing diversity of the nursing workforce needs to be taken into consideration (Rosseter, 2023). Increasing diversity of nurse educators across a broad base of experiences, culture, education, and worldview can create stronger nursing programs and facilitate diversity and cultural humility in nursing students. The Bagley et al. (2018) study and the importance of diversifying the nurse educator workforce further supports the need for collaborative engagement among professional nursing organizations to address the barriers to equitable, inclusive, and accessible nurse educator preparation.

Wage Gap

Another factor leading to the shortage of nurse educators relates to wages earned. Nurses with advanced practice certification who work in the clinical setting are paid higher salaries than most nurse educators. AACN reports the average salary across the country for a master-prepared professor in schools of nursing at $87,325, while the average salary for advanced practice registered nurse roles is $120,000 (Rosseter, 2022). Existing ANEs are assigned greater workloads to mitigate the loss of educators through retirement, including those returning to the clinical practice environment. This encourages nurse educators to turn away from teaching and remain or return to clinical practice where there is higher compensation. Some states have addressed this by implementing innovative ideas, such as providing tax deductions as an incentive for clinical nurse educators (Chicca & Shellenbarger, 2021). Professional nursing organizations need to advocate to reduce the financial burden of entering the role as a nurse educator.

Professional organizations that set standards and support nursing education recognize the impact of nurse educator shortages and have worked in different ways to address the recruitment and funding of nurses interested in nursing education; however, more action is needed. Bakewell-Sachs et al. (2022) describe the importance of academic practice partnerships, and the need for a revised paradigm in exploring avenues for relieving the nurse educator shortage. Professional nursing organizations are well positioned to combine resources and leverage their strengths to develop consistent standards for the nurse educator role, advocate for funding of programs, and study ways to bring legitimacy to the nurse educator role as a valued nursing specialty. Strategic collaboration is necessary for designing a multi-modal solution that will combine efforts to bring clarity to the role of the nurse educator, delineate nurse educator qualifications, and reduce the barriers to recruitment and retention of nurses interested in a career as a nurse educator.

Purpose

The purpose of this qualitative study was to identify ways that nursing organizations can address this issue by answering the following research questions (RQ):

RQ1: How can professional nursing organizations support the specialty of nursing education?

RQ2: What strategies can professional nursing organizations implement to address the ANE shortage?

Methods

Design

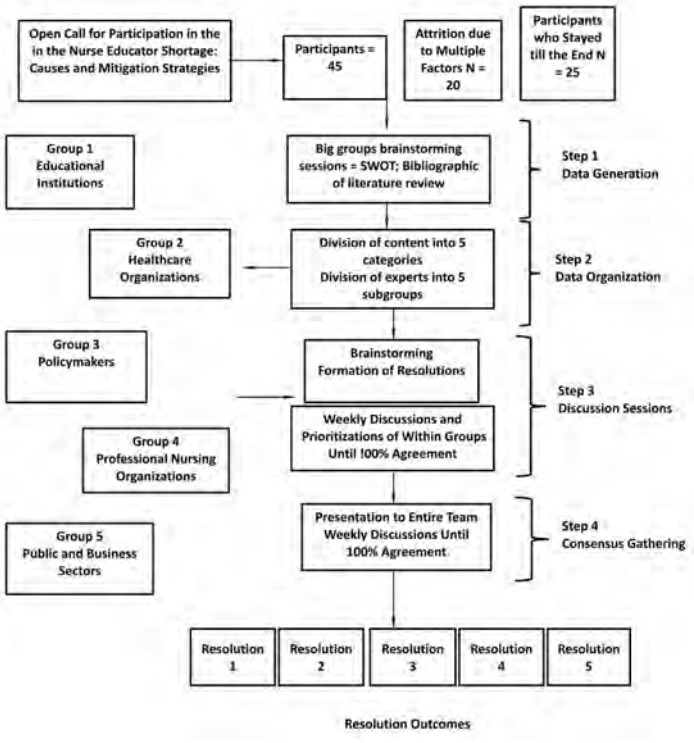
This research used a qualitative design to gather evidence to answer the two stated RQs. A modified nominal group technique (NGT) was used to guide data generation, organization, and consensus. The NGT is a formal approach often used when conducting research among health and consumer groups to gather ideas and arrive at a consensus (Allen at al., 2013; Manera et al. 2019; Mullen et al., 2021; Olsen, 2019). There are many variations in the steps used in the NGT; however, for this research, data generation, data organization, discussion and prioritization, and consensus were the four steps implemented. (Atkins et al., 2023; Mullen et al., 2021; Manera et al., 2019; Olsen, 2019; Allen et al., 2013). IRB approval was obtained from Adelphi University under exempt status.

Sample

A professional online community platform for nurse educators was used to recruit participants from across the United States. Participants were all nurse educators, many of whom either hold current or previous administrative roles in healthcare or educational organizations, and many of whom continue to work clinically while holding positions as ANEs. Implied consent was based on attendance in all of the meetings and completion of the research. Twenty-five participants met all inclusion criteria.

Figure 1

Schematic Representation of the Nominal Group Technique Method Used



Procedures

The four steps of the modified NGT were completed over the course of multiple meetings held via Zoom. The data generation phase consisted of a thorough review of the literature using scholarly databases. A SWOT (strengths, weaknesses, opportunities, and threats) analysis and an annotated bibliography were created to organize the research data generated during step one. The relevance of five stakeholder groups mentioned in the introduction of this current research became evident.

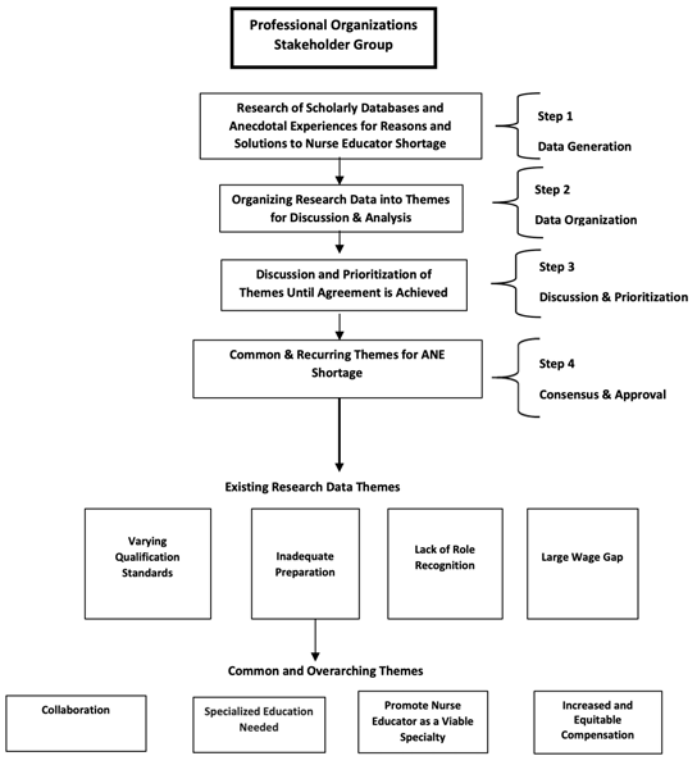
The subgroup on professional nursing organizations discussed and analyzed research data pertinent to this stakeholder group. Once this was completed, the group discussed and analyzed the data again until each member of the entire group was in 100% agreement about the themes that emerged. The members of this subcommittee met each week virtually and worked collaboratively using Google Docs throughout the month of June 2023.

Results

To answer the two proposed research questions, the professional organization subgroup applied the modified NGT to generate four overarching themes. These themes include collaboration with healthcare agencies, public entities, and federal and state agencies, recognition that ANEs require specialized training, promotion of the nurse educator as a viable specialty within the nursing profession and lobbying for increased compensation. Professional nursing organizations can work collaboratively to alleviate the nurse educator shortage in multifaceted ways to address the lack of academic nurse educators.

Figure 2

Process of Generating Common Themes Used by the Professional Organizations Stakeholder Group



Discussion

Research outcomes demonstrate that professional nursing organizations should establish a collaborative taskforce to identify coordinated strategies at the national, state, and local levels (NACNEP, 2021; National Forum of State Nursing Workforce Centers, 2022). Richter et al. (2020) and Satoh et al. (2020) strongly promote the ANE role as a nursing specialty. Bakewell-Sachs et al. (2022) recognize the specialized education needed for an ANE. Byrne et al. (2022) prioritized lobbying for increased financial compensation for academic nurse educators.

Collaboration

A collaborative task force working together at the national, state, and local levels to address the academic nurse educator shortage is a key component to alleviating the shortage of nurse educators. Nursing schools nationwide are experiencing a shortage of full-time and part-time nurse educators, with a reported 8.8% national nurse faculty vacancy rate (AACN, 2022). *Action Now!* is a notable coalition in Washington state that has been dedicated to addressing the shortage of nurse educators at community and technical colleges (Aragon et al., 2020). This advocacy group consists of members from influential organizations in the nursing field, such as the Washington Center for Nursing, the Washington Board of Nursing, and the Council on Nursing Education in Washington State (Aragon et al., 2020). Through collaboration, these organizations were able to attain a 26.5% increase in nurse educator salaries through designated state funding.

NACNEP has made multiple recommendations to address the nurse educator shortage with the most updated report being in 2017. To tackle the challenges experienced by the nurse education system, these recommendations include creation of a national center to develop and advocate for best practices in nurse educator academic preparation, data collection initiatives to assess current nurse educators, partnerships between academia and practice settings to enhance collaboration and create opportunities, advocate for uniform requirements in becoming a nurse educator, improving the image of the ANE role, and developing distance learning programs to enhance accessibility and flexibility for nurse educators seeking additional training and opportunities (NACNEP, 2021).

Specialized Education Needed

Overall, nurse educators play a vital role in shaping the future of nursing by preparing competent and skilled nurses who can provide safe and quality care to patients. Their dedication to facilitating learning, embracing leadership roles, and engaging in scholarly activities is essential for the continuous improvement of nursing education (Byrne et al., 2022). Regardless of the educational setting, individuals pursuing full or part-time educator roles in nursing education should have additional preparation in the art and science of teaching and learning. This is even more important in the current changing landscape in nursing education which requires the academic nurse educator to adopt a new paradigm for nursing education (Kavanaugh, 2021). The move to competency-based education with the recently approved AACN Essentials (Giddens et al., 2022) and the next generation NCLEX with an emphasis on clinical judgment (Sherrill, 2020) are recent changes that require advanced preparation for the nurse educator. This includes acquiring knowledge in pedagogy, curriculum development and its implementation, as well as student assessment (Jackson et al., 2008). According to Jackson et al. (2008), "the science of learning drives teaching-learning methodologies in nursing education" (p. 3). This additional preparation in teaching and learning can be integrated into formal coursework as part of a clinical focused graduate program, or it can be completed separately from a graduate degree (Summers, 2017).

There are multiple routes ANEs may take to pursue their chosen career. They can choose MSN, MSN-ED, EdD, PhD, or DNP; and each route brings value to the practice and science of nursing education (Oermann & Kardong-Edgren, 2018). Not all educational paths, however, provide the pedagogical knowledge required for the role. Dickerson and Durkin (2022) have noted that both the PhD and the DNP do not adequately prepare their graduates for the role of academic nurse educators. Similarly, Byrne et al. (2022) considered the EdD as the path to nursing education. Whatever educational pathway an ANE takes should consistently include pedagogy, research, and practical coursework. Clarity among professional organizations in the corresponding requirements and qualifications will support nursing educational programs to design nursing education curriculum both as a nursing specialty and as a component within graduate program curriculum.

There are specialized competencies that are required of academic nurse educators prior to teaching nursing students. These skills enable the ANE to design curriculum, apply theories of learning, use evidence-informed learning strategies, as well as implement multiple levels and types of learning assessment. In addition to these skills, an advanced understanding of ways to leverage pedagogies prepares nurse graduates to deliver safe, effective, and quality care. With advanced and specialized education, nurse educators can effectively convey theoretical knowledge and clinical expertise to students. This will lead to a learner-centered experience resulting in clinically competent and safer practicing nurses.

Promote Nurse Educator as Viable Specialty

The NLN recognizes the unique expertise of nurse educators through its nurse educator competencies and its three nurse educator certifications (Certified Nurse Educator, Certified Academic Clinical Nurse Educator, and Certified Novice Nurse Educator), which allow the ANE to demonstrate practice excellence (Halstead, 2018). As a professional nursing organization, the NLN acknowledges the ANE role as a nursing specialty that requires specialized knowledge and skills in order to cultivate clinically competent professional nurses. The nurse educator role, however, is often not promoted as a specialty within the nursing profession. To become an ANE, one must earn at least a graduate degree, which is comparable to expectations for advanced practice registered nurses (APRNs); yet certification as an educator is not required to practice as an ANE at most educational institutions (Kilpatrick et al., 2021; Wall, 2006). This fact contributes to the lack of recognition of the role of the ANE as

an advanced specialty practice and often leads to nurses entering the educator role with extensive clinical knowledge but little preparation in pedagogy (Keating et al., 2021; Summers, 2017). The lack of pedagogical knowledge and teaching preparation can lead to challenges with ANE retention and diminished quality in nursing programs (Summers, 2017). The advanced education and specialized skills required to practice in the nurse educator role support the acknowledgement that the nurse educator embodies the concept of advanced practice and should be acknowledged as such. This highlights the importance of nursing professional organizations collaboratively recognizing the ANE role as an advanced practice specialty within nursing and furthermore, promoting the specialty early on in a nurse's career.

The role of the nurse educator is often not visible or understood by the public (Keating et al., 2021). Promoting the role of the nurse educator can be achieved through various venues, including continuing education offerings, educational scholarships, nursing education research grants, and public relations campaigns. Facilitating nursing student attendance at nursing education conferences can expose students to the specialty earlier in their careers. Furthermore, the National Student Nurses' Association (NSNA) has an opportunity to promote the nurse educator role as a specialty. It is also important to provide ANEs with the skills needed to identify and mentor nursing students who show interest in the educator role. Nurse educators are essential to preparing a competent future nursing workforce, and a collaborative approach to promoting the role of the ANE as a respected nursing specialty will help to address the nurse educator shortage.

Increased and Equitable Compensation

One challenge faced by academic nurse educators is significantly lower pay when compared to the pay of nurses in practice settings that led to difficulty recruiting and retaining nurse educators (NACNEP, 2021). In the state of Washington, approximately 40% of ANEs are dissatisfied with their pay (Aragon et al., 2020), and "…nurse educator salaries continue to be less than 75% of practice salaries…" (NACNEP, 2021, p. 11). By collaborating and working together, the coalition called *Action Now!* successfully secured additional state funding for nurse educators through legislative efforts aimed at increasing salaries. This achievement has had a positive impact on the remuneration of nurse educators within that state, making the academic career path more attractive and sustainable.

In addition to the immediate gains in salary improvement, the coalition's efforts have resulted in the development of a comprehensive blueprint for future endeavors. *Action Now!* can serve as a guide for policymakers and stakeholders interested in further advancing the nursing education system nationally (Aragon et al., 2020). Current and prospective faculty have stated their discontent about salaries that a win in the state of Washington may be an impetus for increasing the number of academic nurse educators.

Implications for Nursing

The current recommendations, which expand on previous recommendations made by NACNEP, provide a course of action for professional nursing organizations to address the nurse educator shortage. Schools of nursing, healthcare agencies, individuals, and other stakeholders must collaborate to establish multi-faceted and coordinated strategies to address the nurse educator shortage. It is essential that professional nursing organizations address the nurse faculty shortage in order to attract nurses with consistent and adequate preparation to the specialty. Doing so will enhance the quality of nursing education and will contribute to the alleviation of the nursing practice workforce shortage.

Conclusion

The shortage of ANEs is significantly reducing the capacity of nursing programs to admit more nursing applicants. Unresolved, this shortage will continue to worsen the ongoing demand for nurses. The current study recognizes professional nursing organizations as one stakeholder that can provide solutions for the ANE shortage through a collaborative and unified effort. The research sought to answer the questions of how professional nursing organizations can support the specialty of nursing education and identify strategies to address the shortage. Nurse educators are essential in preparing the next generation of nurses. Results of this current research serve as a foundation for nurse educators and leaders to advocate collectively for the enhancement of the academic nurse educator role on the local, state, and national levels.

References

American Association of Colleges of Nursing. (2023). *New data show enrollment declines in schools of nursing, raising concerns about the nation's nursing workforce.* https://www.aacnnursing.org/news-data/all-news/article/new-data-show-enrollment-declines-in-schools-of-nursing-raising-concerns-about-the-nations-nursing-workforce#:~:text=In%202022%2C%20a%20total%20of,201%20from%20PhD%20nursing%20programs

American Association of Colleges of Nursing. (2022). *Special survey on vacant faculty positions for academic year 2022-2023.* https://www.aacnnursing.org/Portals/42/News/Surveys-Data/2022-Faculty-Vacancy-Report.pdf

Allen, J., Dyas, D. & Jones, M. (2013). Building consensus in health care: A guide to using the nominal group technique. *British Journal of Community Nursing, 9*(3), 110-114. https://doi.org/10.12968/bjcn.2004.9.3.12432

Aragon, S.A., Babbo, G.M., Bear, S.J., & Schaffner, M.L. (2020). Nurses at the table: Action Now! for nursing education. *OJIN: The Online Journal of Issues in Nursing, 25*(1), Manuscript 4. https://doi.org/10.3912/OJIN.Vol25No01Man04

Atkins, B., Briffa, T., Connell, C., Buttery, A. K., & Jennings, G. L. R. (2023). Improving prioritization processes for clinical practice guidelines: New methods and an evaluation from the National Heart Foundation of Australia. *Health Research Policy & Systems, 21*(1), 1–10. https://doi.org/10.1186/s12961-022-00953-9

Bartels, J. E. (2007). Preparing nursing faculty for baccalaureate-level and graduate-level nursing programs: Role preparation for the academy. *Journal of Nursing Education, 46*(4), 154-158. https://doi.org/10.3928/01484834-20070401-03

Bagley, K., Hoppe, L., Hanson Brenner, G., Crawford, M., & Weir, M. (2018). Transition to nursing faculty: Exploring the barriers. *Teaching and Learning in Nursing, 13*(4), 263-267. https://doi.org/10.1016/j.teln.2018.03.009

Bakewell-Sachs S, Trautman D, & Rosseter R. (August 3, 2022). Addressing the nurse faculty shortage. *American Nurse.* https://www.myamericannurse.com/addressing-the-nurse-faculty-shortage-2/

Bittner, N., & Bechtel, C. (2017) Identifying and describing nurse faculty workload issues: A looming faculty shortage. *Nursing Education Perspectives, 38*(4),171-176, https://doi.org/10.1097/01.NEP.0000000000000178

Byrne, C., Keyt, J. & Fang, D. (2022). *Special survey on vacant faculty positions for academic year 2022-2023.* American Association of Colleges of Nursing. https://www.aacnnursing.org/Portals/0/PDFs/Data/Vacancy22.pdf

Chicca, J., & Shellanbarger, T. (2021). Preparing, maintaining, and evaluating remote partnerships: Considerations for nurse educators. *Teaching and Learning in Nursing, 16*(4), 396-400. https://doi.org/10.1016/j.teln.2021.04.006

Christensen, L. & Simmons, L. E. (2019). The academic clinical nurse educator. *Nursing Education Perspectives 40*(3), 196. https://doi.org/10.1097/01.NEP.0000000000000509

Dickerson, P. S. & Durkin, G. J. (2022). Nursing professional development standards of practice: Standards 1-6. *Journal for Nurses in Professional Development, 38*(4), 248–250. https://doi.org/10.1097/NND.0000000000000900

Fang, D. & Kesten, K. (2017). Retirements and succession of nursing faculty in 2016–2025. *Nursing Outlook, 65*(5), 633-642. https://doi.org/10.1016/j.outlook.2017.03.003

Fitzgerald, A., McNelis, A. M. & Billings, D. M. (2020). NLN core competencies for nurse educators: Are they present in the course descriptions of academic nurse educator programs?. *Nursing Education Perspectives, 41*(1), 4-9. https://doi.org/10.1097/01.nep.0000000000000530

Gazza, E. (2022). The experience of being a full-time academic nurse educator during the COVID-19 pandemic. *Nursing Education Perspectives,43*(2), 74-79. https://doi.org/10.1097/01.NEP.0000000000000933

Giddens, J., Douglas, J. P., & Conroy, S. (2022). The revised AACN essentials: Implications for nursing regulation. *Journal of Nursing Regulation, 12*(4), 16-22. https://doi.org/10.1016/S2155-8256(22)00009-6

Halstead, J. (2018). *NLN core competencies for nurse educators: A decade of influence.* Lippincott Williams & Wilkins.

Jackson, B., Napier, D., Newman, B. ,Odom, S.,Ressler, J., Ridgeway, S., Shanta, L. & Spector, N. (2008). Nursing faculty qualifications & roles. *National Council of State Boards of Nursing (NCSBN).* https://www.ncsbn.org/public-files/Final_08_Faculty_Qual_Report.pdf

Jean, S. C., & Briana, L. W. (2019). The clinical nurse educator role: A snapshot in time. *The Journal of Continuing Education in Nursing, 50*(5), 228-232. https://doi.org/10.3928/00220124-20190416-09

Kavanagh, J.M., Sharpnack, P.A. (2021). Crisis in competency: A defining moment in nursing education. *OJIN: The Online Journal of Issues in Nursing,26,*(1), Manuscript 2. https://doi.org/10.3912/OJIN.Vol26No01Man02

King, T. S., Melnyk, B. M., O'Brien, T., Bowles, W., Schubert, C., Fletcher, L. & Anderson, C. (2020). Doctoral degree preferences for nurse educators: Findings from a national study. *Nurse Educator 45*(3), 144-149. https://doi.org/10.1097/NNE.0000000000000730

Manera, K., Hanson, C.S., Gutman, T. & Tong, A. (2019). Consensus methods: Nominal group technique. In P. Liamputtong (Ed.). *Handbook of research methods in health social sciences.* Springer. https://doi.org/10.1007/978-981-10-5251-4_100

Monagle, J., Lasater, K., Nielsen, A., Gonzalez, L., Jessee, M.A., & Dickison, P. (2022). A call to action: Nursing education research at a crossroads. *Nursing Education Perspectives 43*(4), 209-210. https://doi.org/10.1097/01.NEP.0000000000000993

Mullen, R., Kydd, A., Fleming, A., & McMillan, L. (2021). A practical guide to the systematic application of nominal group technique. *Nurse Researcher, 29*(1), 14–20. https://doi.org/10.7748/nr.2021.e1777members.

National Advisory Council on Nursing Education and Practice (NACNEP). (2021). *Preparing nurse faculty, and addressing the shortage of nurse faculty and clinical preceptors-17th Report to the Secretary of Health and Human Services and the U.S. Congress.* https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/nursing/reports/nacnep-17report-2021.pdf

National Forum of State Nursing Workforce Centers. (2022). *National Nursing Workforce Center Act fact sheet.* https://nursingworkforcecenters.org/wp-content/uploads/2023/05/Forum-Bill-Fact-Sheet-.pdf

National League for Nursing. (2022). *NLN core competencies for academic nurse educators.* https://www.nln.org/education/nursing-education-competencies/core-competencies-for-academic-nurse-educators

Noguchi, Y. (2021). *The U.S. needs more nurses, but nursing schools don't have enough slots.* NPR. https://www.npr.org/sections/health-shots/2021/10/25/1047290034/the-u-s-needs-more-nurses-but-nursing-schools-have-too-few-slots

Oermann, M. H., & Kardong-Edgren, S. (2018). Changing the conversation about doctoral education in nursing: Research in nursing education. *Nursing Outlook, 66*(6), 523-525. https://doi.org/10.1016/j.outlook.2018.10.001

Olsen, J. (2019). The nominal group technique (NGT) as a tool for facilitating pan-disability focus groups and as a new method for quantifying changes in qualitative data. *International Journal of Qualitative Methods, 18.* https://doi.org/10.1177/1609406919866049

Richter, S., Yarbrough, A., & Welch, S. (2020). The value of the doctorate of education in nursing education. *Nurse Educator, 46*(3), 131-133. https://doi.org/10.1097/NNE.0000000000000885

Rosseter, R. (2023) *Fact sheet: Enhancing diversity in the nursing workforce.* American Association of Colleges of Nursing. https://www.aacnnursing.org/news-data/fact-sheets/enhancing-diversity-in-the-nursing-workforce

Rosseter, R. (2022). *Fact sheet: Nursing faculty shortage.* American Association of Colleges of Nursing. https://www.aacnnursing.org/news-data/fact-sheets/nursing-faculty-shortage

Satoh, M., Fujimura, A., & Sato, N. (2020). Competency of academic nurse educators. *Sage Open Nursing, 6*, 1-11. https://doi.org/10.1177/2377960820969389

Sherrill, K. J. (2020). Clinical judgment and next generation NCLEX®–A positive direction for nursing education!. *Teaching and Learning in Nursing, 15*(1), 82-85. https://doi.org/10.1016/j.teln.2019.08.009

Spector, N., Silvestre, J., Alexander, M., Martin, B., Hooper, J. I., Squires, A., & Ojmeni, M. (2020). NCSBN regulatory guidelines and evidence-based quality indicators for nursing education programs. Journal of Nursing Regulation. 11(2S), S1-S64. https://doi.org/10.1016/S2155-8256(20)30075-2

Summers, J. A. (2017). Developing competencies in the novice nurse educator: An integrative review. *Teaching and Learning in Nursing, 12*(4), 263–276. https://doi.org/10.1016/j.teln.2017.05.001

Wall, S. (2006). Living with the grey: Role understandings between clinical nurse educators and advanced practice nurses. *Nursing Leadership, 19*(4),57-71. https://doi.org/10.12927/cjnl.2006.18602

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