Editorial: Addressing the nurse workforce crisis: a call for greater integration of the organizational behavior, human resource management and nursing literatures

Introduction

Nurses comprise the majority of the world's healthcare personnel and have a significant impact on the availability and quality of care received by patients (World Health Organization, 2020). However, the nursing profession faces a substantial workforce crisis due to the alarming rate of nurse turnover and an inability to recruit and train replacements in large enough numbers to make up for the losses (e.g. Kiel, 2020), a crisis that has been exacerbated by the COVID-19 pandemic (Harms, 2021).

In light of this, the present review seeks to facilitate collaboration between organizational behavior (OB), human resource (HR) management and nursing scholars seeking to address this significant issue which threatens the nursing workforce and, in turn, healthcare systems globally. As part of achieving this objective, we offer an integrated model of the nurse workforce crisis that draws on OB, HR and the nursing literature. This model is designed to aid researchers across literature seeking to identify research gaps, formulate questions and position their research within a unified structure to enhance the fields' collective understanding of the nurse workforce crisis.

A case for communication across literature

A growing number of scholars have made efforts to better align OB, HR and nursing research. As examples, Renkema et al. (2021) investigated how high-involvement HR influences nurses' innovative behavior, and Luthufi et al. (2021) examined the link between nurses' perceptions of HR and prosocial OB. However, scholarship has largely remained isolated within fields. Nursing scholars often borrow OB or HR concepts to address challenges found in nursing, while OB or HR scholars might survey nurses to test proposed relationships or theoretical models (e.g. Koopman et al., 2019); yet, there is little communication directly aimed at collaboration or intended to better integrate the literature.

Along with differing terminology and jargon, the divide between these literature studies is exacerbated by differences in research orientations. OB/HR research is often characterized by a "context-free" orientation whereby relationships are tested and generalizations are made with the goal of being applied across contexts, often without consideration for real-world implementation. In comparison, nursing research utilizes a "context-specific" orientation, where the focus is on problem-solving and examining a wide range of solutions to address specific organizational issues.

We propose that these distinct orientations provide unique insights that can be leveraged to create highly impactful "action" oriented research (e.g. Bleijenbergh et al., 2021), whereby new research can utilize the best of both orientations: utilizing and building theory to address

highly meaningful and applied contextual issues. One of the most relevant and valuable of these issues is the nurse workforce crisis.

An OB and HR perspective on the nurse workforce crisis

To this end, we propose a model that draws from OB, HR and nursing literature to outline the key components influencing the applied contextual issue of the nurse workforce crisis (Figure 1). Many of the relationships presented are well-established in the OB/HR literature. However, presenting these relationships, which are often studied in isolation within the nursing literature, introduces a more holistic understanding of what might be facilitating the nurse workforce crisis. As an example, it provides an explanation for *why* "the work environment has been identified as a significant contributory element to the nursing shortage" (Hussian *et al.*, 2012, p. 43). In this way, the model can aid researchers seeking to better position their studies within a unified framework. In presenting the model, we first identify the components and linkages, and then offer points of entry to encourage future research.

The workforce pipeline and personnel shortages. Three factors are commonly attributed to the longevity of the nurse workforce crisis: an aging RN workforce, fewer new nurses entering the profession and a growing elderly population with increased life expectancy (e.g. Zhang *et al.*, 2018). In response to these factors, the nursing profession has dramatically increased efforts to recruit new nurses (Buerhaus *et al.*, 2009). Although this tactic has been effective in the short-term, there is growing concern related to the retention of these new nurses (e.g. Cho *et al.*, 2012). Moreover, a lack of nursing faculty and educators has limited the number of individuals who can progress through nursing programs (Buerhaus *et al.*, 2009).

Personnel shortages and organizational concessions. In response to personnel shortages, organizations are often forced to increase work hours and reduce breaks (Bae, 2021). Organizations also commonly hire travel or agency nurses to address personnel shortages (Birmingham *et al.*, 2019). This can result in additional resource drain and time commitment from permanent nursing staff, as temporary nurses generally require additional advising or assistance in completing responsibilities (Castle, 2009). Many organizations have also reduced the number of non-nursing support staff and nurse manager positions, resulting in
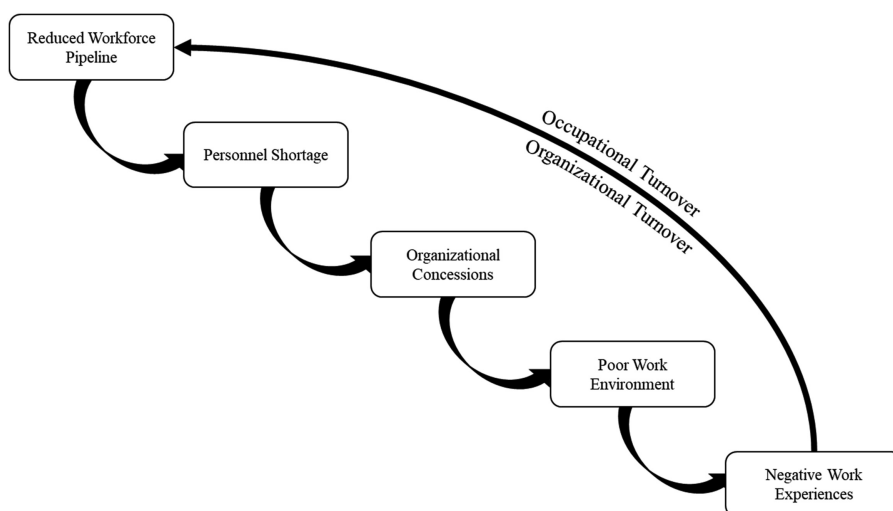

Figure 1.
An organizational
behavior and human
resource management
model of the nurse
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nurses spending more time on non-patient related activities (Hussain *et al.*, 2012). Further, opportunities for leadership and professional development are scarce when faced with a nurse shortage and limited resources; this is particularly true when promotion to managerial positions or diverting nurses to developmental training would further detract from the organization's limited workforce (e.g. Coventry *et al.*, 2015). All of these concessions can be seen to undermine the nursing pipeline and diminish patient care.

Organizational concessions and a poor work environment. Given these organizational concessions in response to personnel shortages, nurses often work in suboptimal conditions. For instance, within the care environment, nurses working overtime in response to personnel shortages can lead to increased medical errors, uncompleted care responsibilities and a general decrease in patient safety, including increased patient mortality rates (Trinkoff *et al.*, 2011). Working overtime also leads to inadequate sleep (Geiger-Brown *et al.*, 2011), which can create a potentially hazardous care environment for patients as well as other nurses. Further, the use of temporary nurses is also positively associated with increased patient falls and medication errors (Bae *et al.*, 2010).

Organizational concessions that relate to personnel shortages also weaken the broader organizational environment. Nurses who work overtime and have extended hours are less available to help others, reducing teamwork and collaboration (e.g. Kalisch and Lee, 2009; Rosenberg and Mechatie, 2018). With greater use of temporary nurses, and subsequently less stability in team or unit membership, cohesiveness and communication become increasingly difficult (e.g. Anthony and Preuss, 2002). Additionally, with limited opportunities for developmental activities, leadership is often lacking in organizations dealing with a nurse shortage. This can lead to leadership "gaps," an issue that has become all the more acute within the profession as it faces the ongoing COVID-19 pandemic (Daly *et al.*, 2020). Without leaders to guide and promote strong cultural norms (Schein, 2010), the culture within an organization can quickly deteriorate into a toxic environment. While not the only cause, this type of culture and organizational environment likely contributes to the "nurses eat their young" mentality often associated with nursing (Bartholomew, 2006).

Poor work environment and negative work experiences. While the connections between the prior components of the model are generally overlooked in the nursing literature, the link between a poor work environment and negative work experiences is well-established. As examples, a poor work or social environment is related to increased job dissatisfaction, burnout, fatigue and intentions to leave an organization (e.g. Garret and McDaniel, 2001; Liu *et al.*, 2012; Barker and Nussbaum, 2011). Further, poor work environment and organizational cultures contribute to nurses' experience of workplace incivility and violence (Crawford *et al.*, 2019).

Poor work environments are related to negative patient outcomes as well, which includes increased missed care (Smith *et al.*, 2018), hospital readmissions (Lasater and McHugh, 2016) and patient risk of death (Aiken *et al.*, 2008), the latter of which can dramatically heighten nurses' emotional and psychological distress (e.g. Zheng *et al.*, 2018). Therefore, nurses who work in poor environments have greater exposure to negative work experiences either directly (e.g. increased burnout) or indirectly (e.g. poor patient outcomes).

The reinforcement loop. The outcome of negative work experiences is often turnover, as job dissatisfaction, burnout, fatigue, exposure to poor patient outcomes and workplace incivility are all significantly related to turnover and turnover intentions (e.g. Hayes *et al.*, 2012). Notably, this turnover includes nurses leaving an organization as well as leaving the profession entirely. Increased turnover also leads to increased costs, which further reduces the ability of the organization to replenish its workforce pipeline and address personnel shortages.

In summary, organizations experience a reduced workforce pipeline, either by the shortage of nurses in the broader labor market or due to internal factors (e.g. nurses leaving to

be travel nurses), which triggers a personnel shortage and leads organizations to make concessions. These concessions lead to a poor work environment, and the result is increased turnover that reinforces the reduced workforce pipeline.

In this way, the key issue facing the nursing profession is not only the recruitment of new nurses, but in breaking the downward feedback cycle by developing and designing organizational practices and policies that encourage nurses to stay at organizations and remain in the profession (e.g. Goodare, 2017). To aid in this pursuit, the proposed model is intended to offer scholars an opportunity to identify entry points by which to address the challenges associated with the nurse workforce crisis.

Points of entry for future theory-driven research

The model of the nurse workforce crisis offers a first step in developing a stronger integration of OB/HR and nursing literature by reviewing and modeling the context-specific problem faced by the nursing profession. It can also provide highly relevant and contextually meaningful entry points for more "context-free" OB/HR researchers as well as an overarching framework in which nursing scholars can position their work.

Nursing as a career. While far from absent in the nursing literature (e.g. Jirwe and Rudman, 2012; Price, 2009), there is a need for greater understanding of nursing as a career from an OB/HR perspective. For instance, researchers could build on empirical work by Reilly and Orsak (1991) and Super's (1957) model of career development to identify potential factors that might mitigate early career turnover in response to negative work experiences. Further, scholars could utilize the boundaryless career literature and its associated theories (e.g. Sullivan and Baruch, 2009) or research on career profiles (e.g. Briscoe and Hall, 2006) to investigate nurse turnover.

Along with current nurses, additional research is needed to better understand the career choices of prospective nurses. For instance, how do prospective nurses perceive the profession pre-entry, and what factors most strongly influence those perceptions? Research by Kohler and Edwards (1990) sought to examine this question for high school students and found that concerns related to working conditions, salary and social status negatively influenced students' interest in a nursing career. However, examining the nuances of where these perceptions originate, why they persist and what organizations can do to address these concerns remains a fruitful avenue of research.

Leadership. Given the opportunity to influence multiple relationships in the workforce crisis model, additional research on leadership in nursing from an OB/HR perspective is particularly warranted. One notably overlooked area is examining how leadership relates to organizational concessions driven by personnel shortages. Questions related to how leadership might buffer against the negative effects of hospitals being understaffed or how leaders might introduce innovative solutions to maximize scarce resources is still relatively unexplored. In this way, additional research is needed on how nurse leaders respond to and make decisions related to (human or material) resource allocation and its impact on nurses' work environment.

The effects of the COVID-19 pandemic on the profession have amplified many of the challenges faced by nurse leaders. Nurse scholars have devoted significant effort into understanding leadership in the context of COVID-19 (e.g. Raso *et al.*, 2021). However, many of these leadership studies lack strong theoretical underpinnings, which can impede the development of a cohesive understanding of how crises influence nurse leadership. We encourage researchers to draw on the vast literature examining leadership and crisis management (e.g. Pearson and Clair, 1998; Bundy *et al.*, 2017) to integrate these theories and frameworks to offer theoretically driven context-specific insight into the nurse workforce crisis.

Emergence of leaders within nurse units during crises could also offer novel insight into how nurses might fill the leadership void that is faced by many healthcare organizations. This stream of research could be informed by theories of leader emergence that focus on specific traits or draw on social network theories that seek to examine how interactions between individuals foster leader emergence (e.g. Kwok *et al.*, 2018). Lastly, researcher could draw on implicit leadership theories (e.g. Lord *et al.*, 2001) to examine how crises shift nurses' perceptions of leadership and how perceptions of effective leadership might change given resource constraints or unique environmental challenges.

Culture and climate. Organizational culture has been established as a strong predictor of employee retention (e.g. Sheridan, 1992; Brown *et al.*, 2013) and is directly tied to the work environment component of the nurse workforce crisis model. One avenue for research could be examining how organizational concessions influence the development or resiliency of organizational cultures. Similar to leadership, understanding how crises affect organizational cultures and the subsequent effect on nurses' work experiences could offer insight into how the COVID-19 pandemic might strengthen or weaken the workforce pipeline over the coming years.

Integrating recent work on employee normative and distinctive preferences (Wood *et al.*, 2019) into the nursing context also offers a novel avenue for contributions. Specifically, examining what individual differences might lead to distinctive preferences could be used for targeted recruitment. Alternatively, for healthcare organizations with limited resources, future research could examine if seeking to satisfy normative preferences might offer a more cost-effective means of retaining current nurses than seeking to satisfy distinctive preferences.

Another relevant area of research related to climate is emotional contagion (e.g. Barsade, 2000). As an example, Bakker *et al.* (2005) found that for intensive care nurses, "perceived burnout complaints among colleagues was the most important predictor of burnout at the individual and unit levels" (p. 276). Along with burnout, loneliness is another growing and significant issue faced by nurses (e.g. Amarat *et al.*, 2019), and could be studied from the lens of emotional contagion. Building on studies such as these might offer insight into how to address the reinforcement loop in the workforce crisis model from a climate perspective, as well as offer theoretical framing for studies focusing on the link between poor work environments and nurses' negative work experiences.

Teams. Closely related to issues surrounding climate, scholars should seek to better integrate OB/HR concepts into our understanding of nurse team and unit relationships and dynamics. This is particularly true for organizations that have made organizational concessions resulting in nurse teams navigating poor or unstable work environments. For example, exploring what factors influence the speed at which trust is developed in teams that are comprised of both full-time and travel nurses could offer insight into how organizations can encourage cohesion and team effectiveness while also addressing their labor shortage with travel nurses.

Organizations trapped in the negative reinforcement loop of the workforce crisis are often faced with not only resource drain (e.g. increased costs associated with recruiting new nurses), but also knowledge drain as experienced nurses leave the organization. This can be particularly damaging for nurse teams when nurses leave who hold valuable differentiated knowledge. To address this challenge, OB/HR scholars could examine what factors facilitate the development of transactive memory systems (Lewis and Herndon, 2011) as a means of combatting knowledge drain in the nursing context. Insight from this stream of research could reveal what factors encourage knowledge encoding, storage and retrieval processes between new nurses joining existing teams or how knowledge processes can be reestablished after a nurse leaves a team.

Nurse recruitment and retention. Although a number of studies have already examined how factors such as poor work environments might influence nurse recruitment and retention

(e.g. Spence Laschinger *et al.*, 2009), many opportunities exist for OB/HR researchers to engage in further theory testing and theory development in this area. For example, the dynamics between full-time and temporary or travel nurses and its relation to recruitment and retention has emerged as a dominant theme in the nursing literature. In particular, compensation disparities between travel nurses and full-time nurses may induce fulltime full-time nurses to leave their employer to become a travel nurse at another hospital within the same city for a substantial pay increase. This can create a ripple effect, where hospitals within the same area essentially swap full-time nurses that are reclassified as travel nurses, drastically increasing the hospitals' expenses. OB/HR researchers interested in this topic could explore questions related to how nurses evaluate the opportunity cost of remaining a full-time nurse when travel nurse options are available, how informal conversations about pay drive fairness perceptions and turnover intentions, or how organizations might restructure compensation plans to accommodate full-time and travel nurses more equitably.

Job design. Job design offers another viable avenue for OB/HR researchers seeking to employ their expertise within the context of the nurse workforce crisis (e.g. Harms, 2021). When organizations are forced to make concessions, increasing the number and prolonging the length of nurses' shifts is one of the first actions taken. This can damage the work environment and lead to increased medical errors (e.g. Melnyk *et al.*, 2018). By integrating job design concepts (e.g. Oldham and Hackman, 2010), researchers could seek to better understand how staff positions that support nurses could be redesigned to allow for adaptability and quick transitions into new roles. For example, during periods of nursing personnel shortages, these positions could be repurposed and pivoted into taking on less critical nursing responsibilities. Supplementing nurses with support staff that are trained to transition quickly into new roles could help alleviate some of the strain often experienced by nurses when working in organizations with a nurse shortage.

Well-being. We reiterate prior calls for researchers to explore various intervention techniques for promoting resilience and psychological flexibility as a way of fostering greater well-being (Jarden *et al.*, 2021). While past studies have identified the link between job resources and job demands to nurses' resilience (Yu *et al.*, 2019), additional work is needed to develop our understanding of how organizations can build nurse resilience and psychological flexibility when resources are scarce and demands are high, such as during the COVID-19 pandemic or when organizations are faced with a sudden exodus of personnel. Examining the degree to which interventions retain their effectiveness over time could provide valuable insight into this area, and could inform how organizations prepare for crises when nurses' well-being is most threatened due to restricted resources and increased demands.

Nursing in rural areas. Research is desperately needed for better understanding the nursing shortage in rural areas. The COVID-19 pandemic has heightened the already challenging situation faced by many rural hospitals, which are often forced to navigate consistent personnel shortages and implementation of organization concessions due to resource scarcity. Once trapped within the downward cycle of the workforce crisis, units and hospitals can be forced into closing (Hung *et al.*, 2016; Vaughan and Edwards, 2020).

Nursing in rural areas likely represents the most critical area for workforce pipeline concerns and should be a focus of future research. Undertaking such a significant issue will likely require substantial collaboration between OB/HR and nursing scholars. Initial work might consider career initiatives, similar to those used to encourage physicians to work in rural areas (Rabinowitz *et al.*, 1999) or examining the impact of travel nurse agencies on the ability of rural healthcare providers to offer competitive wages. However, ultimately, each component of the nurse workforce crisis model will likely need to be investigated to inform practice and advance our understanding of contributing factors that drive the nursing shortage in rural areas.

Conclusion

To facilitate the integration of the OB/HR and nursing literature, we propose a nurse workforce crisis model that offers a contextually specific framework to aid future scholarship as well as several points of entry for future research. For nurse researchers, we encourage positioning studies within the model to help develop cohesion and a broader framework for the various studies being undertaken. By positioning studies within the model, it allows nursing researchers to identify where their study fits in the broader context of the nurse workforce crisis. For OB/HR researchers, we have outlined a contextually relevant and critical problem faced by the nursing profession. In this way, the model offers OB/HR scholars clear guidance on where they can direct their theorizing and theory testing to ensure it has practical and applied value.

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