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EDITORIAL

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The ever-present problem of violence and abuse in health care settings

Violence and abuse in society is both a pervasive and pertinent issue for nurses, nurse managers and citizens alike. In recent times, the world has witnessed large-scale global events that have potentiated the conduct of violence and abuse at multiple yet interacting levels of society. The World Health Organization (WHO) defines violence as 'The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation' (Krug et al., 2002, p. 6). While this definition is invaluable, I raise two relevant questions here. First, is it possible that an individual can be causing harm unintentionally by their practices and behaviours? And second, is it always possible to recognize violence and abuse? In my years of experience of life and researching this highly emotive topic, it is my contention that these two aspects, especially considering the historical and present-day challenges within our largely female workforce often go unchecked.

The presentation of people (experiencing the outcomes of violence and abuse) to health care services is perpetual, and as always, the nursing community and management remain steadfast at the forefront of responses. The call for papers to this special edition was intentionally broad and related to all types of violence and abuse (both terms are used here as they are often used interchangeably). We sought papers that reflected the multifaceted nature of violence and abuse to provide nurses and nurse managers alike with a strong evidence base from which to respond effectively. These papers do just this and usefully inform us about important aspects of this complex phenomenon. The breadth of international contributors (e.g., Korea, Australia, China, Slovenia, Saudi Arabia, Turkey, France, United Kingdom, Greece, Oman, Spain, Switzerland and Italy) highlights the clear international resonance of this problem. It contains studies of victimization, studies of nursing and midwifery responses and studies of perpetration. Some of the findings presented do not make for easy reading, but the purpose of research is to explore, describe, explain and predict, not to alter stark realities. Such as is the case in society, it seems that nurses, midwives and managers can be responders, recipients and perpetrators of violence and abuse. This unwelcome thought needs to be borne in mind when considering solutions to this complex problem.

I write this editorial with mixed emotions. On one hand, I am delighted to see the breadth of interesting and thought-provoking international research studies. On the other hand, I am deeply saddened at the sheer volume of papers pertaining to violence and abuse, in particular the large volume of papers highlighting how the nursing workforce is experiencing violence and abuse initiated by their (our?) colleagues. It made me wonder if aspects of the academic 'killer elite' toxicities described by Darbyshire and Thompson (2021) is present in all levels of care settings, not just academia. This would indeed resonate with the pervasiveness of violence and abuse throughout social contexts. Despite the inalienable right nurses (managers, students and academics) have to a healthy, violence-free environment (International Council of Nurses [ICN], 2017), the problem of violence and abuse in the workplace remains a pervasive and challenging problem.

While the WHO usefully highlights intentionality in the exercise of power to elicit harm (Krug et al., 2002) when defining violence, there are a multiplicity of ways in how that power is exercised and it is important that nurses and nurse managers remain mindful of the plethora of ways in which harm is exercised. A wide variety of violent acts are identified in the papers presented in this special edition (e.g., physical, physiological, sexual harassment, smear, mobbing, sex trafficking, sexual harassment, horizontal violence and workplace bullying), all of which illustrate the wide variation in the nature of violent and abusive acts. In this technological age, it is essential to always remain mindful of the scope of cyberbullying which augments and further deepens the effects of harmful behaviours well beyond face-to-face interactions. Although emerging from my research undertaken in relation to intimate partner violence against men, conceptualizing abuse in two waves (i.e. first wave abuse directly initiated by the abuser and second wave abuse being initiated by but not enacted by an abuser) (Corbally, 2011) provides a useful perspective to illustrate the potential for violence and abuse to be both directly and indirectly enacted. This resonates with aspects of direct and indirect abuse articulated in a study in this edition.

The challenges inherent in the measurement of this complex phenomenon are well known especially due to varying definitions. This special edition is particularly encouraging due to the methodological breadth evident in the papers submitted. Techniques such as structural equation modelling, social network analysis, surveys, dialectical phenomenology, systematic review, scoping review, focus groups, interviews and diary logging are some examples of diverse methodological approaches, data collection and evidence synthesis techniques presented here, all of which creatively contribute to the creation of what terms a 'scientific mosaic' (Becker, 2009) of understanding. Each

of the studies here as well as additional literature reviews and discussion papers constitute a piece in this larger mosaic which is particularly helpful in building a larger picture of understanding and more importantly prompt appropriate responses. The national studies presented here represent great strides in establishing prevalence. Utilization of a unified international definition of violence and abuse in future research would prove useful in enabling cross comparison of future studies of prevalence rates internationally. Methodologically, violent 'acts' are often (wrongly) equated with 'harm experienced' and it is encouraging to see studies which acknowledged this important consideration. Capturing the frequency of abuse experiences is an important (and often overlooked) factor which has the potential to make findings even more stark as everyday (often invisible) incivility and day-to-day toxicity has potential to cause significant distress.

The importance of viewing violence and abuse through an ecological framework (i.e., recognizing the interrelatedness of individual, relationship, community and societal levels) is essential in understanding the full breadth and depth of this multifaceted problem as well as being foundational to its solution (Heise, 1998; Krug et al., 2002). Key individual factors relating to violence and abuse identified in studies submitted relate to gender, age, vulnerability, clinical experience, religiosity, marital status and having children. For nurse victims, being female and young unsurprisingly proved to be key factors for increased victimization. Cultural factors, clinical experience and being married were also interesting findings. For men, fear of not being believed remains a continual challenge inhibiting this cohort from recognizing abuse and seeking help. Evidence of all classifications of abuse (physical, psychological, sexual and controlling behaviours) are evidenced. This is mirrored by an unfortunate myriad of human outcomes (e.g., physical injuries, physical symptoms, decreased resilience, psychological and psychosocial distress not to mention deterioration in quality of life).

It is well known that under reporting of violence and abuse experiences occur for many reasons and the actual 'dark figures', that is, what goes unnoticed or unreported are often much more extensive. This perpetual problem and reasons for under reporting are equally multifaceted and are discussed within the papers presented here. Accepting violence as inevitable, self blame, guilt, fear of abusers, fear of lack of action and possible retaliation are some reasons individuals choose not to report. Such reasons highlight current problems with facilitation of disclosure whilst also reinforcing the ongoing need for open, trusting and respectful environments both within and outside the workplace. The concept of individual resilience as a coping mechanism strongly features in several papers as does a call for promotion of this attribute by nursing managers. Individuals also used other forms of what I term 'understandable resistance', 'survival strategies' or coping which extreme situations (e.g., absenteeism, increased turnover and sick leave, being silent, reduced productivity, leaving early, decreased job and life satisfaction) especially considering the multilayered discrediting contexts they experience.

Where violence is concerned, sometimes priority is given to what is more 'visible' or 'dramatic' than what is not. The 'everydayness' of violence being overlooked in favour of more dramatic events is an interesting phenomenon discussed in two papers in this special edition. Quite often, lifetime prevalence statistics and dramatically violent incidents get more attention subsequently, overlooking the frequent day-to day violence where abuse and incivility are endured often daily. Sadly and more seriously, many (victims and perpetrators) do not recognize violence and abuse (intentional use of power) as harmful. This is particularly problematic within the nursing and midwifery culture (Darbyshire & Thompson 2021).

The presence of violence and abuse amongst the nursing community (and indeed any community) represents an erosion or denial of a human right to just and favourable conditions of work (Article 23) as well as security of person (Article 3) (United Nations, 1948). It is sad that almost 74 years after this declaration, workplace bullying is sadly alive and well and evidenced in the multiple international studies presented in this edition. Nurses (and their managers) work in risky spaces and practice heroically in the most challenging of environments. The ability for nurses to care even through the most difficult of circumstances is a source of international pride of this wonderful profession. However, the unfortunate phenomenon of workplace bullying makes such challenges even more difficult. It could be argued that if workplace violence and abuse was a 'disease' it is easily at pandemic levels with harm being inflicted and experienced on our profession by our profession. The reasons behind such high rates of workplace bullying amongst those charged with caring is discussed extensive organizational inertia resulting from not taking the allegations seriously perpetuates a community where victimization is wrongly experienced as an occupational hazard rather than an unacceptable practice.

Interpersonal relationships are intrinsic to our humanity and our practice. Those who recognize and bear witness to violence and abuse of others also experience vicarious harm as illustrated in several studies. Proof of the direct relationship between supportive management and increased employee satisfaction is evident and reinforces the crucial role managers play in the promotion and maintenance of healthy workplaces. Supportive relationships (i.e., collegial support and supportive management) mitigate the effects of violent experiences and highlight that the role of nurse managers in recognizing and responding and acting accordingly is more crucial than ever.

Whilst violence and abuse can be experienced by individuals of any gender, the significant prevalence and effects of violence and abuse against women and girls and its significant violation of women's rights worldwide (WHO, 2021) cannot be ignored. Gender is inextricably linked with violence and abuse, and aspects relating to ones gender are used as a means by which to exercise power. In several studies presented here, worldwide prevalence and resonance of violence against women is evident in the studies presented and rates are equally stark. For example, being a female is a strong risk factor for violence and abuse in many studies here, being young and female even stronger. Given that the nursing workforce is predominantly female and our graduates are young, this should be a cause for alarm. Women's hesitancy in reporting in the studies presented here highlights an urgent need for nurse managers to foster environments which support staff and encourage disclosure.

The ecological nature of abuse warrants education and awareness raising programmes which are sensitive to its multifaceted, ever evolving and complex nature. Creative suggestions for content and implementation of necessary and meaningful educational programmes are made by authors in this issue, all providing encouraging material from which to assist our workforce to be more cognisant and prepared. The need for multidisciplinary involvement is also acknowledged and welcomed.

To conclude, this special edition commands us to take seriously the pervasive problem of violence and abuse at personal, professional, community, organizational and societal levels. If there ever was a case for the need for good managers, this special edition and the research presented within it reinforces the crucial role they perform. The late Archbishop Tutu's sentiment 'if you are neutral in situations of injustice—you have chosen the side of the oppressor' (Yongue, 2009) is a signal to us all to develop a critical consciousness of the consequences of our actions and inactions as we practice and respond within eternally challenging contexts.

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ORIGINAL ARTICLE

WILEY

Workplace violence from the perspective of hospital ward managers in Sweden: A qualitative study

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Abstract

Aim: The aims of the study are to explore workplace violence perpetrated by patients or visitors from the perspective of hospital ward managers and to describe how ward managers perceive their leadership role and manage related incidents.

Background: Few studies focus on workplace violence from the perspective of ward managers even though they are the closest managers to the operational staff.

Method: Fifteen semistructured interviews were analysed using qualitative content analysis.

Results: Four categories emerged: the face of workplace violence, a two-fold assignment, strive towards readiness to act, and managing incidents.

Conclusion: While the most common acts of workplace violence are considered less serious and related to patients' medical conditions or dissatisfied visitors, hospital organizations focus on serious but rarely occurring incidents. Consequently, ward managers have limited opportunities to ensure a safe work environment on an everyday basis.

Implications for nursing management: To support ward managers' occupational safety and health management, workplace violence prevention and management should be acknowledged as an important responsibility for senior management in hospitals. It is important to identify incidents that most likely will occur at the wards and to create strategies related to those incidents. Strategies could include risk assessments, prevention, evaluation, education and reflection combined with, for example, scenario training.

KEYWORDS
content analysis, interviews, nurse manager, qualitative methods, workplace violence

1 | BACKGROUND

Workplace violence perpetrated by patients or visitors against health-care professionals is regarded as a global problem (ILO/ICN/WHO/PSI, 2002) and research repeatedly testifies to consequences in terms of reduced well-being, negative impact on family and social life, and on efficiency and skills at work (Ashton et al., 2018; Hassankhani et al., 2018; Nyberg et al., 2021). The management's significance in relation to workplace violence has been underlined before, and ward managers have an important role in ensuring occupational safety (Havaei et al., 2019). Still, few studies have focused on workplace violence from the perspective of ward managers.

Nursing shortages and heavy workloads can contribute to high levels of tension in both nurses and patients resulting in threats and violence (Najafi et al., 2018). Health-care professionals' experience is that preventive strategies at an organizational level are more or less absent or inadequate (Jakobsson et al., 2020) and that a typical managerial attitude is that workplace violence should be accepted as an inherent part of nursing (Ashton et al., 2018; Jakobsson et al., 2020). In contrast, ward managers have described workplace violence as part of nursing, though unacceptable, draining on resources and disrupting care delivery (Heckemann et al., 2017; Morphet et al., 2019). Ward managers' situation has been described as complicated and their leadership role as a loyalty battle between being a part of the management system and advocating for the nurses and assistant nurses at the ward (Ericsson & Augustinsson, 2015). In situations of workplace violence, the battle has been described as an ethical conflict since the responsibility of a ward manager involved the rights of both patients and staff and simultaneously the hospital's standards (Sato et al., 2016).

Even though ward managers are part of the management system, they have described themselves as excluded from important decision making and without support from higher management (Ericsson & Augustinsson, 2015; Hedsköld et al., 2021). It has also been explained that available policies and guidance are difficult to apply in various situations and contexts (Morphet et al., 2019). As an example, official policies on how to prevent and manage delirium in patients have been insufficiently implemented and unknown among physicians, resulting in incidents (Heckemann et al., 2017). Considering their own leadership role in relation to workplace violence, ward managers have identified a need to be able to increase the staffing, especially during night shifts, as well as to educate health-care professionals in managing incidents (Morphet et al., 2019). However, it may be difficult to justify initiatives to higher management if this will result in financial costs (Heckemann et al., 2017).

A high frequency of workplace violence has been reported by health-care professionals internationally (Babiarczyk et al., 2019; Spector et al., 2014) and in Sweden, a recent report made by the Swedish Association of Health Professionals show that nurses experience a higher risk to be exposed now compared with 3–4 years ago. Acknowledging workplace violence should therefore be an important issue for ward managers. The aim of this study was to explore workplace violence perpetrated by patients or visitors from the perspective of hospital ward managers and to describe how ward managers perceive their leadership role and manage related incidents.

2 | METHOD

2.1 | Participants

A purposeful recruitment was made with the intention of including ward managers in public hospitals located in different parts across Sweden. Ward managers in surgical wards were included in this specific study because it has been described that patients admitted to surgical wards can be threatening or violent when they are cognitively affected due to age, disease, trauma, surgery or opioid analgesics (Jakobsson et al., 2020).

In total, 42 ward managers from 15 hospitals were contacted by an e-mail containing written information about the study and a request for an answer by replying the e-mail in case of an interest in participating. Those who answered were contacted either by telephone or by e-mail to decide the time and locations for the interviews.

2.2 | Data collection

Data were collected between March 2020 and January 2021 using semistructured interviews based on an interview guide (see Appendix). The applicability of the interview guide was discussed after the three first interviews, but no major changes were needed. Four interviews were made face-to-face in a secluded room at the university or at the ward managers' offices and the remaining ($n = 11$) by telephone or videotelephony software programme. The mean duration of interviews was 49 min, ranging from 28 to 67 min. All interviews were audio-recorded and transcribed verbatim.

2.3 | Data analysis

Data was analysed using manifest, content analysis (Elo & Kyngäs, 2008). Accordingly, all transcripts were initially read to obtain a sense of the whole. Thereafter, transcripts were re-read, during which open coding was carried out by each author individually. After three transcripts, all authors met to discuss conformity of coding. Subsequently, coding was continued by all authors individually until nine transcripts had been completed. At this stage, a distinct pattern had emerged from the data, and therefore, the codes were transferred and grouped into preliminary categories. To verify the preliminary categorization, the first and last authors continued coding the rest of the transcripts, but no changes were made and the abstraction process continued. This process was led by the first and last authors with frequent reconciliations with all the authors jointly to maintain consensus.

2.4 | Ethical considerations

The study was approved by the Regional Ethics Review Board and followed ethical standards expressed in the Declaration of Helsinki. Participants were informed verbally and in writing about the study, voluntary participation and the right to withdraw without explanation. Written consent was collected prior to the interviews.

3 | FINDINGS

Fifteen ward managers from 11 different hospitals participated in the study (Table 1). Four categories emerged from the analysis: *the face of workplace violence*, *a two-fold assignment*, *strive towards readiness to act* and *managing incidents*.

3.1 | The face of workplace violence

Workplace violence was a rare phenomenon according to some of the ward managers while others experienced it as recurring. Incidents were regarded as commonly related to crisis reactions and to patients' medical conditions in connection with trauma, substance abuse, cognitive disorders and particularly in patients with dementia. Workplace violence typically occurred when patients were unprepared for care activities.

> After all, it is not gang members who are threatening and violent, mostly, but rather elderly persons who are confused and fight to defend themselves (7).

TABLE 1 Participants' characteristics ($n = 15$)

Age (years)	
Mean	46
Min–max	27–60
Gender (*n*)	
Male	2
Female	13
Basic profession (*n*)	
Registered nurse	14
Assistant nurse	1
Education in leadership (*n*)	
Yes	6
No	9
Experience as ward manager (years)	
Mean	7
Min–max	1 month–35 years
Type of hospital (*n*)	
University hospital	7
County hospital	7
Smaller county hospital	1

Note: n = number.

Threatening and violent situations also happened as an expression of dissatisfaction among patients or relatives regarding provided care or limited visiting hours. These situations gave rise to verbal threats directed against the health-care professionals regarding their competence, their privacy or that their professional license would be revoked.

Some ward managers argued that registered nurses and nurse assistants were more exposed to workplace violence because they performed nursing care close to the patients. Others stated that all professional categories were at risk of being exposed, but more likely those who were less confident in their professional role. It was also perceived that situations sometimes arose due to the health-care professionals' approach towards the patient or to personal chemistry. In addition, some ward managers explained that females or health-care professionals with minority ethnical backgrounds were especially exposed, but this was not acknowledged by all.

> Many of our colleagues who come from other countries are mocked and harassed because of the colour of their skin and their headscarves, there is lot of that stuff, verbal violence (12).

3.2 | A two-fold assignment

Ward managers' role and responsibility was perceived as a two-fold assignment, requiring them to ensure both high-quality care and occupational safety. On the one hand, they were responsible for the care of patients, and their leadership included ensuring that patients were cared for in the best possible way. A basic attitude was that patients are entitled to equal care regardless of their personal background or behaviour.

> … everyone is entitled to the same healthcare. We work according to that principle and you can think what you like but it must never affect the patients (3).

On the other hand, they were responsible for the safety of employees. Workplace violence was considered somewhat inevitable in a human care profession, but the goal was to avoid it as far as possible. Ward managers aimed to build structures to prevent and deal with incidents and the managerial assignment was perceived to run 24/7. Most ward managers accepted to be contacted during their free time if necessary. However, workplace violence was described as challenging the ward managers' leadership role and responsibility. A low tolerance for unacceptable behaviour among patients or patients' visitors was expressed, but despite this, there were situations when it was necessary to care for a potentially threatening or violent patient. In such cases, it could be difficult to balance the provision of high-quality care against maintaining workplace safety.

> You cannot decide not to take care of a threatening patient, the patient has to be cared for somehow, in

> these cases it can be challenging to be responsible for both patient security and the work environment… (14).

Regarding threatening or violent patients who did not have any cognitive disorder or patients' visitors, it can be hard to set a limit for what should be tolerated. The ward managers felt responsible for the ward, but with limited decision-making authority. For example, they might confront patients or patients' visitors to indicate that their behaviour was unacceptable, but it was not in their mandate to refuse provision of care or visits. In situations where it became necessary to set an ultimatum for patients or visitors, this had to be in consultation with a chief physician or the senior manager.

Registered nurses were regarded as responsible for and coordinating the immediate patient care and also to signal to the ward manager if something was perceived as problematic. However, it was sometimes a challenge to get information about minor incidents because the employees handled it themselves. In wards where workplace violence occurred regularly, ward managers reflected that registered nurses and assistant nurses might become used to it and therefore not pay so much attention to it. All this could jeopardize the ward managers' ability to maintain their two-fold assignment as the patients received good care but potentially at the expense of work environment.

> A lot might be happening that I do not even know about or have any possibility of knowing. So this is a challenge, that the employees have to tell me about it or I might intercept it up if I am there (1).

By contrast, in wards where threatening or violent incidents were rare, it was a challenge for everyone to know how to act in a situation. Here, it was described as even more important to regularly discuss workplace violence, and to educate.

Lack of resources was another problem that was described as a challenge for both quality in care and workplace safety. A high staff-turnover led to frequent staff shortages and inexperience among many of the employees, due to both youth and little work experience. Therefore, they needed more support in different situations. At times when a threatening or violent patient was cared for, ward managers tried to increase the staffing level; however, this was solved internally in the wards, which could lead to a risk that the employees became worn out.

> It's difficult to strike a balance between what is beneficial or what… in the long run. It's hard to be at work, but if I cannot rest then I am not going to feel well in the longer term. This is a difficult balance (4).

3.3 | Strive towards readiness to act

Considering that workplace violence could not be completely avoided, most ward managers strived for a general readiness to act. This involved preparing the employees with education and reflection. Many of the ward managers stated that the health-care organization provided on-line training about how threatening and violent situations should be prevented and tackled. Some ward managers expected their employees to take part in this training and repeat it yearly, others stated that they were not aware of any training addressing this topic. However, training or lectures offered by the health-care organization were rarely mentioned by the ward managers as mandatory or offered on a regular basis. Many ward managers arranged lectures themselves held by experts in, for example, geriatric or psychiatric care to learn how to prevent or handle different states of confusion.

> Training is very important, because the more knowledge you have the more you can do to prevent that they [threatening and violent situations] arise (12).

With knowledge and clinical experience, it was perceived that it was possible to identify patients with a risk of aggressive behaviour due to cognitive disorders. Patients with substance-induced delirium, for example, could receive medication at an early stage to relieve their abstinence and consequently prevent aggression. For patients with dementia, care could be adapted to approach the patients according to their conditions. Furthermore, communication was highlighted as an important factor in the prevention of workplace violence. Much irritation and misunderstanding could be avoided, and ward managers aimed to coordinate the interprofessional team and to promote good communication.

3.4 | Managing incidents

Ward managers' actions in a threatening or violent situation differed depending on the incident's severity and also on whether or not the patient was considered of sound mind. From the interviews, it could be understood that the hospital organizations had the same approach, which mainly focused on serious incidents. Many ward managers trusted their employees' competence to handle less serious incidents themselves, for instance threats and violence perpetrated by patients with cognitive disorders or crisis reactions. Still, they felt that they had to be responsive and talk with the employees if needed.

> I would assume that they talk with each other and get that support from a colleague rather than from me. In case they do not do so, and they do not feel well, then this will become visible quite quickly and then it is necessary to be attentive and notice this (1).

A few hospitals had general 'house rules' that were available to the public and such documents were regarded as helpful in situations when the ward manager had to, for example, confront bad-mannered patients or visitors. General guidelines formulated by the hospital organization were mentioned by most of the ward managers and contained information and routines about how to act in more serious

situations. In such cases, security guards could be called in for protection, to create a feeling of security and if necessary or to evict visitors. For an employee who had been exposed to a more serious incident, it was possible to put the person off duty and to offer paid sick leave. If needed, occupational health care could be contacted to provide support with processing the experience. There was also the human resources department, although some ward managers were satisfied with their support while others expressed dissatisfaction.

In the ward managers' safety work, general hospital guidelines had to be adapted to fit the specific ward, and routines concerning less serious incidents seemed to depend on the ward managers' own interest and was generally not automatically encouraged or facilitated by the hospital organizations. In the absence of organizational support, other ward managers or operational managers, to whom they could turn for advice, were a source of support that was highlighted as particularly valuable.

> We cooperate a lot and support each other a great deal. And our operational manager, if there is an issue, then he is there for us, he really is. And then there is occupational healthcare and things like that who are available to support if there is a need, or external guidance or anything. So there is support, but mostly we support each other, us managers (11).

When a more serious incident had taken place, it was regarded as important that everyone reflect on the incident. This was achieved in different ways, by a debriefing together with the interprofessional team, by writing reports to start an event analysis or by discussing it with the security department. Although workplace violence was considered somewhat inevitable, learning from experience was considered a significant part of the safety work.

> As long as we reflect on what we do and kind of deposit it in our knowledge bank for the future, then perhaps sometimes we have to accept that this is the way it is (5).

4 | DISCUSSION

This study aimed to explore workplace violence from the perspective of hospital ward managers and to describe how they perceived their leadership role and managed related incidents. According to the ward managers, serious incidents were rare. Serious incidents have been described in earlier research as physical attacks by confused or delirious patients, including breaking things in acts of aggression or confusion. It could also take the form of personally directed, verbal threats (Jakobsson et al., 2020). In the current study however, workplace violence was described as consisting mostly of less serious incidents, that is, incidents that occurred due to the patients' health status, crisis reactions or to lack of communication. It was also expressed that incidents commonly took place in connection with caring for patients with cognitive disorders. Such incidents have been described in hospital ward contexts earlier and involve patients throwing items such as shoes or medicine cups at the professionals, hitting them with a fist or cane, pushing or biting (Ferri et al., 2016; Hahn et al., 2008; Jakobsson et al., 2020).

One challenge in ward managers' leadership role was to combine the responsibility for ensuring high-quality care while caring for a threatening or violent patient. This challenge was also described in the study by Sato et al. (2016) where ward managers struggled with an internal ethical conflict between keeping staff safe, advocating for the patient and maintaining organizational functioning. Ward managers in this current study had many years of managerial experience. Even though less than half had any leadership training, they seemed confident in their leadership roles. Their leadership style can be described as both task-oriented, dealing with practical matters, and relation-oriented, communicating and reflecting with the employees as a means to prevent and manage workplace violence. Challenges were described as mostly of practical nature and concerning allocation of resources. However, it has been shown that task-focused leadership styles are not associated with any positive outcomes in relation to work environment but rather with significant lower job satisfaction among nurses (Cummings et al., 2018). Practical matters, such as the need to increase staffing, or to lead and coordinate professionals when dealing with workplace violence have been highlighted also in other studies (Heckemann et al., 2017, 2019; Morphet et al., 2019) indicating that a task-focused leadership is predominant for hospital ward managers.

Although other studies have described ward managers as excluded from important decision making and lacking support (Ericsson & Augustinsson, 2015; Hedsköld et al., 2021), ward managers in the current study appeared independent and relatively unconcerned about support provided from the hospital organization. When needed, security guards could be called in and occupational services could support victimized professionals. Less serious incidents were managed with joint efforts in the wards, and for ward managers, support was found in colleagues rather than the hospital organization. This might be yet another example of the distance between ward management and the senior hospital management as seen in previous research (Ericsson & Augustinsson, 2015; Heckemann et al., 2017, 2019; Hedsköld et al., 2021; Morphet et al., 2019). Importantly, there were occasions when the voice of the hospital organization strengthened the authority of the ward manager, for instance when printed 'house rules' were used in a confrontation with threatening or violent patients or visitors.

In the current study, it became apparent that there was an organizational discrepancy in the management of workplace violence depending on the severity of incidents. For serious incidents, the hospital organization could provide support measures. Less serious incidents were solved ad hoc by the staff involved and consequently, responsibility rested on the ward managers. Whereas occupational safety and health management concerning those commonly occurring events more or less depended on the ward managers' own interest, many ward managers trusted the nurses and assistant nurses to

handle the situation. This approach was also reported by Heckemann et al. (2019) where health-care professionals coped with situations themselves without managerial involvement. Corresponding results were described in this current study as ward managers found it challenging to be informed of minor incidents. The findings point towards an acceptance within health-care in general that threats and violence by persons who are not fully of sound mind is unintentional and therefore excused. Such mitigating circumstances have been described by nurses in studies before (Hahn et al., 2008; Hogarth et al., 2016; Luck et al., 2008; Pich et al., 2011) and might also explain the absence of guidelines addressing this sort of workplace violence—simply put, no one asks for it. However, earlier research has shown that physical violence is commonly performed by patients affected by psychiatric disease, cognitive disorder or under the influence by drugs (Ferri et al., 2016). It could therefore be argued that even if threatening or violent actions are unintentional, they can be harmful. Furthermore, it is likely that patients in hospitals with cognitive disorders will become more common due to an ageing population in several parts of the world, leading to an increased risk of incidents.

4.1 | Study limitations

This study followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) to enhance rigour (Tong et al., 2007). Although, some limitations should be considered. We approached 42 ward managers, but only 15 responded and agreed to participate. According to Malterud et al. (2016), sample size in qualitative research is guided by information power. Sufficient information power can be obtained with fewer participants if the aim of the research is narrow, including a specific target group, supported by established theory, conducted by experienced researchers and, including in-depth exploration of narratives. Hence, 15 participants could be considered as a sufficient sample size.

Due to the Covid-19 pandemic, the majority of interviews were conducted by telephone. By tradition, qualitative interviews are made face-to-face in order to capture nonverbal aspects, which are assumed to provide richer data. However, it has been argued that face-to face interviews have some disadvantages (Burnard, 1994). For example, nonverbal communication can be difficult to interpret. Further, the 'exposure' during interview can inhibit sharing of experiences regarding sensitive topics. Telephone interviews are easier to arrange, allowing researchers to collect data effectively and with more comfort for participants. Research has shown that people are comfortable using the telephone in daily life and therefore perceive telephone interviews as convenient (Ward et al., 2015). Thus, telephone interviews can be regarded as an adequate data collection method.

5 | CONCLUSION

In relation to workplace violence, occupational safety and health management by ward managers and hospital organizations seem to focus on incidents that are dramatic, out of control and require the intervention of security guards. However, such events are rare. Instead, the majority of incidents are caused by patients with impaired cognitive function or persons with crisis reactions. The findings from this study indicate signs of unreflected and misdirected efforts for occupational safety within hospital organizations. Efforts related to workplace violence need to focus on commonly occurring incidents to support ward managers in balancing the responsibilities for high-quality care and for occupational safety.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

This study provides insights that can inspire a more reflective and relational leadership among ward managers as well as hospital organizations internationally. It is important that ward managers and hospital organizations not only focus on serious incidents but on all forms of workplace violence as those most likely will increase. Hence, it is time for everyone to stop seeing workplace violence as part of the job. The occupational safety and health management at hospital wards should focus on risk assessments, prevention, evaluation, education and reflection combined with, for example, scenario training. It is necessary to identify incidents that are likely to occur and to create strategies for those incidents. This can help avoid escalation of some events that otherwise would require greater resources with the presence of guards and in worst case result in injured professionals. However, this work should not depend on ward managers' own interest but needs to be mandatory and included in a systematic, hospital-wide occupational safety and health management initiated and directed by the hospital organizations. Otherwise, there is a risk that these important issues will be forgotten and deprioritised because of the ward managers' other work.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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ETHICAL APPROVAL

The Regional Ethics Review Board in Lund, Sweden (no 2018/800).

DATA AVAILABILITY STATEMENT

Data available on request due to privacy/ethical restrictions (Appendix S1).

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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ORIGINAL ARTICLE

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Hospital nurses experiencing day-to-day workplace incivility: A diary study on the benefits of daily social support

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Abstract

Aim: The present study investigated the adverse effects of daily experienced incivility and the positive role of daily social support during the workday in predicting daily emotional exhaustion after work and vitality and positive affect at bedtime.

Background: Despite the broad knowledge of the impact of experienced incivility in different occupations, little is known about day-to-day nurse incivility, much less in the hospital context.

Method: After completing a general questionnaire, hospital nurses ($n = 96$) completed a diary questionnaire twice a day for five consecutive workdays ($n = 480$ diary observations). The diary design had two levels: 5-day repeated measures (Level 1, day level) nested in persons (Level 2, person level) using an experience-sampling methodology.

Results: Multilevel hierarchical analyses showed that incivility during the workday increased emotional exhaustion after work ($t = 3.00$, $p = <0.05$) and reduced vitality ($t = -2.48$, $p = 0.05$) and positive affect ($t = -2.23$, $p = 0.05$) at bedtime. However, daily social support during the workday was a crucial job resource that directly benefited hospital nurses' daily wellbeing ($t = 5.19$, $p = 0.01$ vitality; $t = 4.89$, $p = 0.01$ positive affect) and buffered the adverse effects of daily workplace incivility ($t = -2.33$, $p = 0.05$).

Conclusion: The within-person approach of our findings suggests that supportive practices can reduce day-to-day incivility spirals.

Implications for Nursing Management: Nurse managers can promote a civility culture within their units using in service training programmes at work.

KEYWORDS
diary study, emotional exhaustion, hospital nurses, nurse incivility, social support

1 | INTRODUCTION

Nurses experience workplace incivility and suffer from its detrimental consequences (Layne et al., 2019). Unlike bullying, workplace incivility is a subtle form of interpersonal mistreatment whose distinctive characteristic is an ambiguous intent to harm the target (Andersson & Pearson, 1999). An example of nurse incivility can be an episode in which a nurse target receives disrespectful comments or is ignored by another nurse colleague or supervisor—the actor of incivility—while other nurses observe this uncivil interaction (Guidroz et al., 2010). Workplace incivility is not always easy to identify. For this reason, nurse managers can play a key role in promoting safe and healthy workplaces, fostering intervention strategies to recognize and react to incivility within nurse groups (Kile et al., 2019). For example, efforts

are undertaken to promote an environment of social support and to report and share the incivility experience (Shen et al., 2020), as well as to provide respectful communications as part of the culture of the units (Sherrod & Lewallen, 2021).

The present diary study captures day-to-day fluctuating hospital nurses' behaviour and experiences in their natural setting. In particular, our research design takes temporal dynamics to explore the direct relationships of daily experienced incivility and daily social support during the workday, as well as the moderation of daily social support during the workday on daily emotional exhaustion after work and daily vitality and daily positive affect at bedtime (Ohly et al., 2010). In line with previous studies, this design allows us to capture within-person processes among hospital nurses using a time course of measurement and, thus, control for temporal fluctuations and different situational contingencies over time (i.e., Haluza et al., 2019). Most of the research on nurse incivility has been conducted using cross-sectional designs. However, we used an experience-sampling methodology (ESM), which implies that nurses report in situ on their current thoughts, feelings and behaviours by offering a better understanding of day-to-day incivility spirals. This methodology provides insights into how relevant variables that occur within the work environment (i.e., incivility) influence hospital nurses' wellbeing after work and at bedtime. This methodology also enhances ecological validity, examines within- and between-person hospital nurses' processes and reduces retrospective hospital nurses' recall biases (Fisher & To, 2012). Moreover, the use of multiple measures during five workdays also helps reduce the common-method variance caused by the sole use of self-report measures (Podsakoff et al., 2003).

1.1 | Daily workplace incivility in the context of nursing

Workplace incivility has caused a significant corpus of knowledge. Currently, incivility is known to affect behaviour but also elicits biological responses (Cortina et al., 2021). Workplace incivility has been mainly assessed using questionnaires, but interviews and other qualitative techniques have also been used (Vasconcelos, 2020). However, its daily effects in nursing have barely been investigated. Because of its subtle and ambiguous nature, a more nuanced examination over a period of days using a within-person approach to capture specific daily effects in natural scenarios would be important (Hershcovis et al., 2020).

To our knowledge, only two diary studies in nursing use ESM. The first study showed that nurses' daily experience of incivility was related to their daily burnout level, whereas interpersonal justice strengthened the incivility–burnout relationship (Campana & Hammoud, 2015). The second study revealed that difficulties in emotional regulation increase the effects of daily incivility on female nurses' daily fatigue and positive affect at night (Blanco-Donoso et al., 2019). To build on this knowledge, the present diary study posits that nurse incivility has direct and negative effects on their daily levels of emotional exhaustion after work and daily vitality and daily positive affect at bedtime. Thus, we propose the following hypothesis.

> **Hypothesis 1.** Daily experienced incivility during the workday will be positively related to (H1a) daily emotional exhaustion after work and negatively related to (H1b) daily vitality at bedtime and (H1c) daily positive affect at bedtime.

1.2 | Daily social support: The role of nurse managers

Another key theme is to better explore what nurse managers can do to deal with day-to-day incivility spirals within units (Taşkaya & Aksoy, 2021). Nurse managers can promote a healthy work environment to reduce nurse-to-nurse incivility from colleagues within units in hospitals by creating supportive practices of respect and appropriate behaviour, as opposed to incivility (Smith et al., 2018). Therefore, daily social support from colleagues and managers within the same units offered during the workday might be a crucial job resource that helps hospital nurses reduce the negative effects of day-to-day incivility spirals (Liu et al., 2021). However, these daily relationships remain unknown.

Although no diary studies use ESM to explore the effects of daily social support on nurses' wellbeing, this topic is awakening interest in researchers. In fact, the study conducted by Blanco-Donoso et al. (2015) revealed that day-level emotional demands at work had a direct relationship with nurses' vigour at work and their vitality at home. Therefore, nurse managers that promote social support practices within the workgroup might have direct benefits on hospital nurses' wellbeing. Based on this concept, our diary study explores the direct effects of daily social support from colleagues and managers during the workday as a predictor of the level of hospital nurses' emotional exhaustion after work and daily vitality and daily positive affect at bedtime. Thus, we propose the following hypothesis.

> **Hypothesis 2.** Daily social support during the workday will be negatively related to (H2a) daily emotional exhaustion after work and positively related to (H2b) daily vitality at bedtime and (H2c) daily positive affect at bedtime.

In addition, the literature considers daily social support during the workday as a job resource that might limit the impact of daily experienced incivility by acting as a moderator that buffers the negative effects of daily hospital nurses' experiences of incivility (Pow et al., 2017). Thus, daily social support from colleagues and managers during the workday might moderate the relationship between daily experienced incivility during the workday and daily emotional exhaustion after work and daily vitality and daily positive affect at bedtime. This moderating role might buffer the negative effect of daily experienced incivility during the workday in two ways: (1) reducing hospital nurses'

daily emotional exhaustion after work and (2) increasing hospital nurses' daily vitality and daily positive affect at bedtime. Therefore, we propose the following hypothesis.

> **Hypothesis 3.** Hospital nurses with higher levels of daily social support during the workday will show lower levels of daily emotional exhaustion after work on days when they experience more workplace incivility at work (buffering effect) as opposed to lower levels of daily social support during the workday.

> **Hypothesis 4.** Hospital nurses with higher levels of daily social support during the workday will show higher levels of (H4a) daily vitality at bedtime and (H4b) daily positive affect at bedtime on days when they experience more workplace incivility at work (buffering effects) as opposed to lower levels of daily social support during the workday.

Based on the conceptual framework by Andersson and Pearson (1999), the incivility spiral refers to a process in which incivility can cycle and potentially escalate into increasingly intense because a target reacts with negative affect and desire for reciprocity, changing from victim to instigator. Thus, the day-to-day nurse incivility spirals experienced during the workday might affect nurses' wellbeing by increasing daily emotional exhaustion after work and reducing daily vitality and daily positive affect at bedtime. In addition, these incivility spirals can break the healthy environment within units. Therefore, the daily supportive role of nurse managers interrupting incivility spirals within their units might be essential. The present diary study addresses these gaps and, using ESM, aims to test the adverse effects of daily experienced incivility and the positive role of daily social support during the workday in predicting daily emotional exhaustion after work and daily vitality and daily positive affect at bedtime among hospital nurses over five consecutive workdays, controlling gender and age—similar to previous studies (Blanco-Donoso et al., 2019) (see Figure 1).

2 | METHOD

2.1 | Participants

Based on methodological recommendations for diary designs and ESM, we estimated a sample size near hundred participants who focused on predictors at the person level and 5 days repeated measures per participant that focused on predictors at the day level (Ohly et al., 2010; Scherbaum & Ferreter, 2009). We retained data for participants who provided full daily data for all five workdays to assure that the momentary assessments are representative of participants' individual experiences and are not biased towards days with extreme experiences (Gunthert & Wenze, 2012). Furthermore, we performed a power analysis for the sample size calculation and found that 384 or more measurements are needed to have a confidence level of 95%, resulting in a final sample of 96 participants who provided 480 diary observations (96 participants at Level 2, person level × 5 diary observations at Level 1, day level, which is higher than the needed sample size). Most of the participants were females (87.5%) and had a mean age of 39.28 years ($SD = 12.87$). Participants first completed the general questionnaire to estimate the baseline (Level 2, person level) and then the diary questionnaires to estimate the daily fluctuations

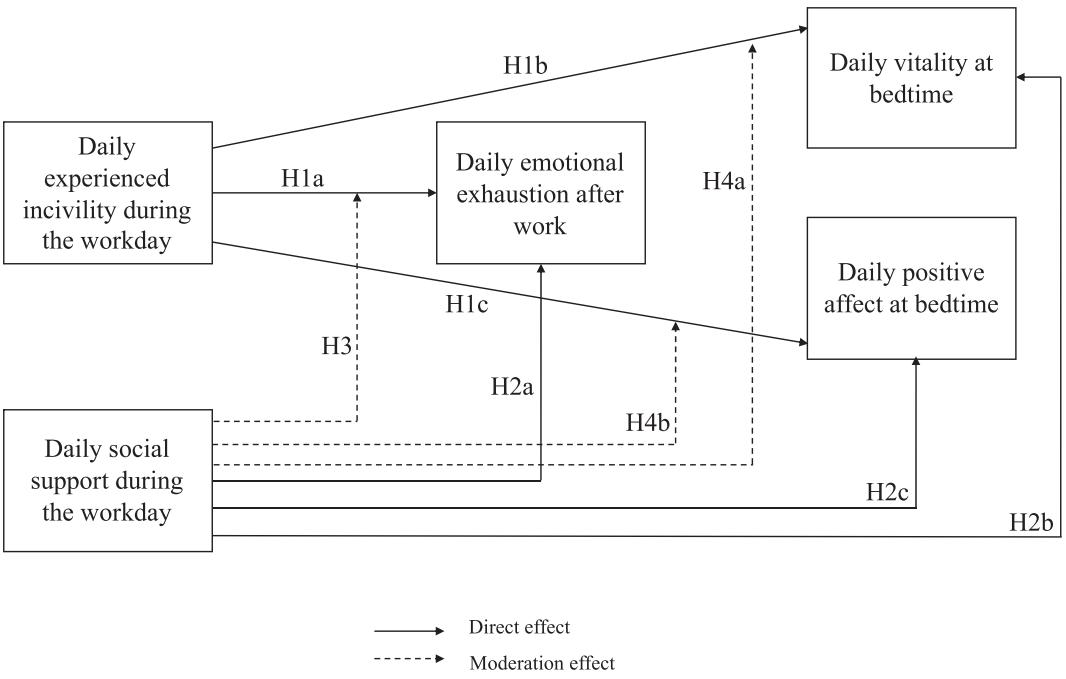

FIGURE 1 Research day-level model. *Note*: The gender and age of the hospital nurses were controlled

(Level 1, day level) over five consecutive workdays two times per day (immediately after work and at bedtime).

2.2 | Data collection procedure

Participants were recruited from hospitals in southern Spain by approaching researchers to their work units and using the snowball sampling technique of nurse-to-nurse data collection. All participants had the following inclusion criteria: (a) to be working with a schedule of five consecutive days during a working week to ensure they could fill in diary questionnaires and (b) to have more than 6 months of professional experience to guarantee that they were professionals instead of practitioners. After they expressed their willingness to voluntarily participate in the study, researchers gave them an envelope containing (a) a letter describing the objective of the study, instructions about the completion of the surveys, and a code to preserve anonymity; (b) two letters of the informed consent form (i.e., researchers' and participants' copies); and (c) general and diary paper-based questionnaires, and explained these contents. The Ethics Committee in Human Research (CEIH) of the University of Jaén approved this study (Number: NOV.17/2.PROY).

2.3 | Measures

Both general and diary questionnaires included the same measures to collect data and the same answer categories. Daily measures of predictor (i.e., daily experienced incivility and daily social support during the workday) and criterion variables (i.e., daily emotional exhaustion after work and daily vitality and daily positive affect at bedtime) were modified from the corresponding general scale to the specific diary moments (Ohly et al., 2010). At the day level (Level 1), daily experienced incivility and daily social support during the workday were assessed after work—immediately on leaving work—and referred to that specific workday. Daily emotional exhaustion was measured immediately after work on leaving work, and daily vitality and daily positive affect were reported at bedtime. At the person level (Level 2), we assessed gender, age and a person's general level of criterion variables (Blanco-Donoso et al., 2015).

2.3.1 | Daily experienced incivility during the workday

We used the Workplace Incivility Scale (Cortina et al., 2001) to measure daily fluctuations in the frequency that participants had experienced uncivil behaviours in their job. The scale consists of seven items with a five-point Likert scale, ranging from 1 (*never*) to 5 (*most of the time*). Sample items include 'Today, during my work, my supervisor or coworkers paid little attention to my statement or showed little interest in my opinion'. Cronbach's alpha ranged from .87 to .92 for the daily measure in this study.

2.3.2 | Daily social support during the workday

These were assessed with six items from the Job Content Questionnaire (Karasek et al., 1998) to measure the daily frequency of coworking with three items (i.e., 'Today, at work the people I work with collaborated to get the job done') and another three items to evaluate supervisor support at workday (i.e., 'Today, at work my supervisor got people to work as a team'). Items were rated on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Cronbach's alpha ranged from .84 to .88 for the daily measure in this study.

2.3.3 | Daily emotional exhaustion after work

This was assessed using four items from the subscale of emotional exhaustion of the Nursing Burnout Scale (NBS; Moreno-Jiménez et al., 2000). Items were rated on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Participants indicated the degree to which they felt daily exhaustion. An example item is 'At this moment, after my workday in nursing, I feel emotionally drained from my work'. Cronbach's alpha for the general measure was .87 and ranged from .87 to .89 for the daily measure in this study.

2.3.4 | Daily vitality at bedtime

We used four items of the vitality subscale of the Spanish adaptation of Ryff's Psychological WellBeing Scales (Ryff, 1989) by Díaz et al. (2006). This subscale assessed the degree to which participants felt physically and mentally energetic. Items were rated on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Daily vitality was modified such that the items referred to the present moment at bedtime (i.e., 'At this moment, I feel alive and vital'). Cronbach's alpha for the general measure was .89 and ranged from .91 to .94 for the daily measure in this study.

2.3.5 | Daily positive affect at bedtime

We measured positive affect with five items of the short version of the Positive and Negative Affect Schedule (PANAS; Mackinnon et al., 1999; Spanish version by Robles & Páez, 2003). This scale is based on Watson et al. (1988) and assesses the degree to which participants felt positively. Items were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). An example item is 'At this moment, I feel inspired'. Cronbach's alpha for the general measure was .86 and ranged from .92 to .97 for the daily measure in this study.

2.4 | Strategy of analyses

We conducted multilevel hierarchical analyses for each criterion variable (Nezlek, 2012). A hierarchical linear modelling approach was used

to test our four hypotheses because the collected data simultaneously included variables from two levels: days (Level 1, day level; $N = 480$ diary observations) nested within persons (Level 2, person level; $N = 96$ participants). Variables evaluated at the day level (Level 1) consisted of 5-day repeated measures using ESM to examine within-person processes. Variables evaluated at the person level (Level 2) consisted of measurement of the general level that examines between-person variations (Hox, 2010). We conducted main effects to test the direct effects of daily experienced incivility during the workday (Hypothesis 1) and daily social support during the workday (Hypothesis 2) on criterion variables and interaction effects to test the moderating role of daily social support during the workday on the relationships between daily experienced incivility during the workday and daily emotional exhaustion after work, daily vitality at bedtime and daily positive affect at bedtime (Hypotheses 3 and 4). To analyse the two-level data set, we used MLwiN Version 2.28 software.

Based on Ohly et al. (2010), we centred the predictor (daily experienced incivility and daily social support during the workday) and outcome variables (daily emotional exhaustion after work, daily vitality and daily positive affect at bedtime) at the day level (Level 1) using the person-mean centring method. The person-mean considers the mean score across days for each participant and is the only appropriate method for the interpretation of within-person effects. We centred the control variables (gender, age and a person's general level of criterion variables) at the person level of Level 2 at the grand-mean centring method, which considers the mean scores of all of the participants. This procedure allows all of the variance between subjects to be eliminated to ensure that it does not influence the interpretation of the results.

3 | RESULTS

3.1 | Descriptive and preliminary analyses

Before testing our hypotheses, we presented in Table 1 the sociodemographic and occupational characteristics of the participants. Moreover, we estimated the intraclass correlation (ICC) coefficient to examine the total variance at the day level (within-person variation). All criterion variables showed coefficients higher than 25%. The results showed that 29.2% of the variance in daily emotional exhaustion after work, 32.3% in daily vitality at bedtime, and 32.9% in daily positive affect at bedtime can be attributed to within-person variation across the 5 days, which supports the usage of multilevel analysis (Fisher & To, 2012). Table 2 displays the means, standard deviations, Cronbach's

TABLE 1 Sociodemographic and occupational characteristics of the study population ($N = 96$ hospital nurses)

		N	Percentage
Gender	Male	12	12.5
	Female	84	87.5
Age (years)	21–30	37	38.5
	31–40	17	17.7
	41–50	17	17.7
	51–60	21	21.9
	>61	4	4.2
Partner	Married or living with partner	77	80.2
	Single	15	15.6
	Divorced	3	3.1
	Widowed	1	1.0
Children (number)	None	44	45.8
	1	11	11.5
	2	34	35.4
	3	6	6.3
	4	1	1.0
Education	Degree	65	67.7
	Master	31	32.3
Professional experience in the position (years)	≤5	50	52.1
	6–10	8	8.3
	11–15	11	11.5
	16–20	10	10.4
	21–25	4	4.2
	>26	13	13.5

Note: Numbers are representative of Spanish figures.

alphas and bivariate correlations. All correlations between the general and day-level criterion variables were significant, supporting the use of a hierarchical linear modelling approach (Hox, 2010).

3.2 | Hypothesis testing

We conducted four multilevel models predicting daily emotional exhaustion after work (Table 3), daily vitality at bedtime (Table 4) and daily positive affect at bedtime (Table 5) as outcome variables. In Model 1, we entered the control variables (i.e., gender, age and the outcome general level). In Model 2, we entered the main effect of daily experienced incivility during the workday as a predictor variable to test H1a, H1b and H1c. In Model 3, we entered the main effect of daily social support during the workday as a predictor variable to test H2a, H2b and H2c. In Model 4, we entered the interaction term to test H4a and H4b. For the significant moderating effect, we calculated simple slope tests to examine the pattern of the interaction (Preacher et al., 2006).

As a measure of effect size, following the recommendations from Singer et al. (2003), we computed pseudo-R^2. This statistic is used to quantify the incremental variance in the criterion variable that is predicted by adding a new set of predictors to a given model. In our study, all predictor and control variables entered in the models predicting emotional exhaustion after work explained 72.5% of the variance at Level 1 [.181 − (.164/.181) = −.725] and 18.9% of the variance at Level 2 [.435 − (.107/.435) = .189]. All predictor and control variables entered in the models predicting daily vitality at bedtime explained 34.2% of the variance at Level 1 [.575 − (.527/.575) = −.342] and 63.4% of the variance at Level 2 [1.203 − (.684/1.203) = .634]. Finally, all predictor and control variables entered in the models predicting daily positive affect at bedtime explained 48.4% of the variance at Level 1 [.444 − (.412/.444) = −.484] and .4% of the variance at Level 2 [.907 − (.819/.907) = .004].

Regarding Hypothesis 1, hospital nurses' daily experienced incivility during the workday was significant and positively related to emotional exhaustion after work ($\beta = .20$, $SE = .07$, $t = 3.00$, $p < .05$) (H1a) and negatively related to daily vitality at bedtime ($\beta = -.29$, $SE = .12$, $t = -2.48$, $p < .05$) (H1b) and daily positive affect at bedtime ($\beta = -.23$, $SE = .10$, $t = -2.23$, $p < .05$) (H1c). As seen in Model 2 of Tables 3, 4 and 5, the results of computing the differences of their log likelihood statistic of −2 X Log showed that all models significantly improved over the previous one. Therefore, the results systematically supported the main effects of daily experienced incivility during the workday on all outcome variables. Figure 2 shows the multilevel results of the study.

Regarding Hypothesis 2, the results supported H2a, H2b and H2c. Daily social support during the workday was significant and negatively related to emotional exhaustion after work ($\beta = -.31$, $SE = .06$, $t = -5.28$, $p < .01$) (H2a) and positively related to daily vitality at bedtime ($\beta = .54$, $SE = .10$, $t = 5.19$, $p < .01$) (H2b) and daily positive affect at bedtime ($\beta = .45$, $SE = .09$, $t = 4.89$, $p < .01$) (H2c). Moreover, Model 3 showed the best model fit in predicting all criterion variables (see the difference of −2 X Log of Model 3 in Tables 3–5). As predicted, the results systematically supported the main effects of daily social support during the workday on all outcome variables.

Furthermore, the results supported Hypothesis 3. As seen in Model 4 of Table 2, there was a significant interaction between daily experienced incivility during the workday and daily social support during the workday ($\beta = -.28$, $SE = .12$, $t = -2.33$, $p < .05$) in predicting emotional exhaustion after work (see Figure 3). Simple slope tests showed that hospital nurses with higher levels of daily social support during the workday showed lower levels of emotional exhaustion after work on

TABLE 2 Means, standard deviations, Cronbach's alphas and bivariate correlations ($N = 96$ hospital nurses; $N = 480$ diary observations)

	M	DT	α	1	2	3	4	5	6	7	8
1. General emotional exhaustion[a]	2.06	.72	.87	–							
2. General vitality[a]	4.36	1.07	.89	−.32**	–						
3. General positive affect[a]	4.29	.60	.86	−.44**	.46**	–					
4. Daily experienced incivility during the workday[b]	1.27	.50	.87–.92 (.90)	.32**	−.16**	−.19**	–				
5. Daily social support during the workday[b]	3.20	.63	.84–.88 (.85)	−.33**	.35**	.31**	−.48**	–			
6. Daily emotional exhaustion after work[b]	2.11	.79	.87–.89 (.88)	.73**	−.28**	−.30**	.35**	−.38**	–		
7. Daily vitality at bedtime[b]	3.22	1.33	.91–.94 (.93)	−.25**	.54**	.26**	−.10*	.34**	−.34**	–	
8. Daily positive affect at bedtime[b]	2.74	1.16	.92–.97 (.95)	−.23**	.40**	.24**	−.1	.31**	−.32**	.74**	–

Note: Daily experienced incivility during the workday and daily social support during the workday were assessed immediately upon leaving work, referred to the present workday. Daily emotional exhaustion was measured after work immediately upon leaving work, and daily vitality and daily positive affect were reported at bedtime. α = Cronbach's alpha. For diary measures, mean between 5 days (in parentheses) and range is displayed.

[a]Level 2, person-level variables.

[b]Level 1, day-level variables.

*$p < .05$. **$p < .01$.

TABLE 3 Multilevel estimates for models predicting daily emotional exhaustion after work ($N = 96$ hospital nurses; $N = 480$ diary observations)

	Null model			Model 1			Model 2			Model 3			Model 4		
Variables	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**
Intercept	2.11	.07	3.17	2.16	.06	37.17	2.16	.06	37.17	2.16	.06	37.17	2.15	.06	37.10
Gender[a]				−.08	.08	−1.00	−.08	.08	−1.00	−.08	.08	−1.00	−.09	.08	−1.10
Age[a]				−.00	.00	.00	−.00	.00	.00	−.00	.00	.00	.00	.00	.00
General emotional exhaustion[a]				.79	.06	14.38***	.79	.06	14.38***	.79	.06	14.38***	.79	.06	14.35***
Daily experienced incivility during the workday[b]							.20	.07	3.00*	.10	.07	1.44	.04	.07	.64
Daily social support during the workday[b]										−.31	.06	−5.28**	−.27	.06	−4.43**
Daily experienced incivility during the workday × daily social support during the workday[b]													−.28	.12	−2.33*
−2 X Log(lh)	788.94			673.80			664.88			638.00			632.58		
Difference of −2 X Log				115.14			8.92			26.89			5.42		
df				3***			1**			1***			1*		
Level 1 intercept variance (SE)	.18 (.01)			.18 (.01)			.18 (.01)			.17 (.01)			.16 (.01)		
Level 2 intercept variance (SE)	.44 (.07)			.11 (.02)			.11 (.02)			.11 (.02)			.11 (.02)		

Note: Daily experienced incivility during the workday and daily social support during the workday were assessed immediately upon leaving work, referred to the present workday. Daily emotional exhaustion was measured after work immediately upon leaving work, and daily vitality and daily positive affect were reported at bedtime. Gender is coded as 1 = male nurse, 2 = female nurse.

[a]Person-level variables.

[b]Day-level variables.

*$p < .05$. **$p < .01$. ***$p < .001$.

TABLE 4 Multilevel estimates for models predicting daily vitality at bedtime ($N = 96$ hospital nurses; $N = 480$ diary observations)

	Null model			Model 1			Model 2			Model 3			Model 4		
Variables	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**
Intercept	3.22	.12	27.53	3.26	.14	23.64	3.26	.14	23.64	3.26	.14	23.64	3.27	.14	23.85
Gender[a]				−.08	.20	−.40	−.08	.20	−.40	−.08	.20	−.40	−.07	.19	−.35
Age[a]				.00	.01	.43	.00	.01	.43	.00	.01	.43	.00	.01	.43
General vitality[a]				.68	.09	7.64**	.68	.09	7.64**	.68	.09	7.64***	.69	.09	7.82***
Daily experienced incivility during the workday[b]							−.29	.12	−2.48*	−.11	.12	−.95	−.04	.12	−.35
Daily social support during the workday[b]										.54	.10	5.19**	.49	.11	4.51**
Daily experienced incivility during the workday x daily social support during the workday[b]													.38	.23	1.69
−2 X Log(lh)	133.74			1283.43			1277.30			1251.07			1248.23		
Difference of −2 X Log				47.32			6.12			26.23			2.85		
df				3***			1*			1***			1		
Level 1 intercept variance (SE)	.58 (.04)			.58 (.04)			.57 (.04)			.53 (.04)			.53 (.04)		
Level 2 intercept variance (SE)	1.20 (.19)			.69 (.12)			.69 (.18)			.70 (.12)			.68 (.11)		

Note: Daily experienced incivility during the workday and daily social support during the workday were assessed immediately upon leaving work, referred to the present workday. Daily emotional exhaustion was measured after work immediately upon leaving work, and daily vitality and daily positive affect were reported at bedtime. Gender is coded as 1 = male nurse, 2 = female nurse.

[a]Person-level variables.

[b]Day-level variables.

*$p < .05$. **$p < .01$. ***$p < .001$.

TABLE 5 Multilevel estimates for models predicting daily positive affect at bedtime ($N = 96$ hospital nurses; $N = 480$ diary observations)

	Null model			Model 1			Model 2			Model 3			Model 4		
Variables	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**	**Estimate**	**SE**	**t**	**Estimate**	**S**	**t**
Intercept	2.74	.10	26.85	2.68	.15	18.24	2.68	.15	18.24	2.68	.15	18.24	2.58	.15	17.57
Gender[a]				.11	.21	.52	.11	.21	.52	.11	.21	.52	.11	.21	.53
Age[a]				−.01	.01	−1.00	−.01	.01	−1.00	−.01	.01	−1.00	−.01	.01	−1.13
General positive affect[a]				.45	.16	2.75*	.45	.16	2.75*	.45	.16	2.75*	.45	.16	2.75*
Daily experienced incivility during the workday[b]							−.23	.10	−2.23*	−.08	.10	−.76	−.06	.110	−.58
Daily social support during the workday[b]										.45	.09	4.89**	.44	.10	4.56**
Daily experienced incivility during the workday × daily social support during the workday[b]													.09	.20	.43
−2 X Log(lh)	1204.54			1195.04			119.14			1166.74			1166.55		
Difference of −2 X Log				9.50			4.90			23.40			.18		
df				3*			1*			1***			1		
Level 1 intercept variance (SE)	.44 (.03)			.44 (.03)			.44 (.03)			.41 (.03)			.41 (.03)		
Level 2 intercept variance (SE)	.91 (.14)			.81 (.13)			.82 (.13)			.82 (.13)			.82 (.13)		

Note: Daily experienced incivility during the workday and daily social support during the workday were assessed immediately upon leaving work, referred to the present workday. Daily emotional exhaustion was measured after work immediately upon leaving work, and daily vitality and daily positive affect were reported at bedtime. Gender is coded as 1 = male nurse, 2 = female nurse.

[a]Person-level variables.

[b]Day-level variables.

*$p < .05$. **$p < .01$. ***$p < .001$.

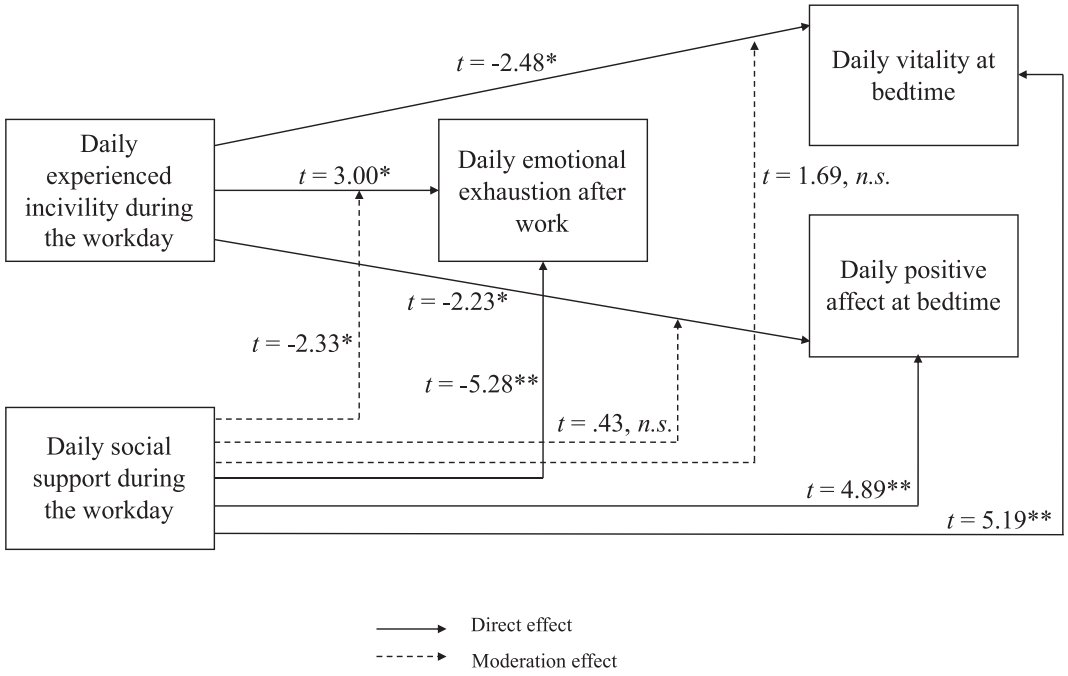

FIGURE 2 Results of the multilevel hierarchical analyses. *Note*: The gender and age of the hospital nurses were controlled. *$p < .05$. **$p < .01$. *n.s.*, not significant

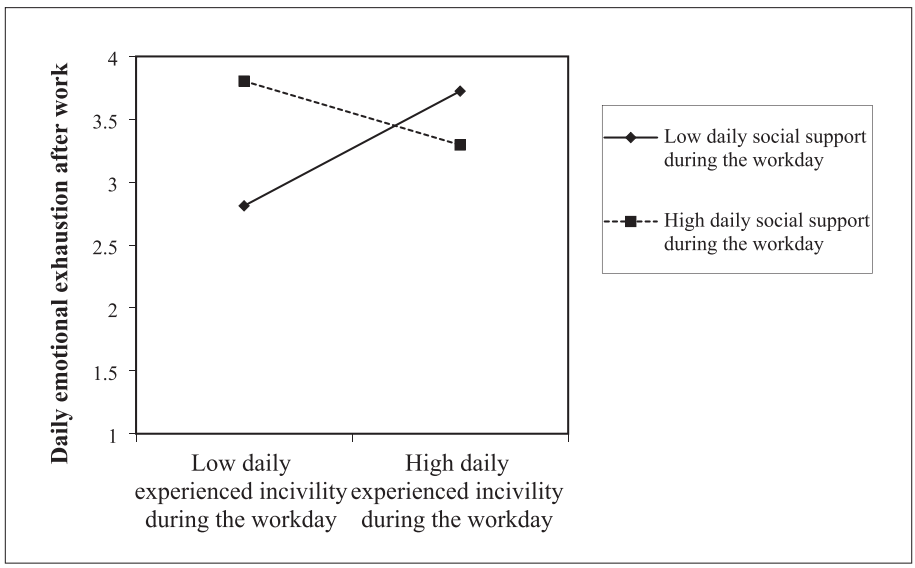

FIGURE 3 Interaction effects of daily experienced incivility during the workday and daily social support during the workday in predicting daily emotional exhaustion after work

days when they experienced more workplace incivility at work ($\gamma = -1.09$, $SE = .50$, $z = 2.18$, $p < .05$), as opposed to lower levels of daily social support during the workday ($\gamma = -.43$, $SE = .23$, $z = -1.87$, *n.s.*). Therefore, daily social support during the workday buffered the negative effect of daily experienced incivility during the workday by reducing hospital nurses' daily emotional exhaustion after work.

The results did not support Hypothesis 4. No significant interactions occurred between daily experienced incivility during the workday and daily social support during the workday in predicting daily vitality at bedtime ($\beta = .38$, $SE = .23$, $t = 1.69$, *n.s.*) and daily positive affect at bedtime ($\beta = .09$, $SE = .20$, $t = .43$, *n.s.*). Therefore, daily social support during the workday did not buffer the negative effect of daily experienced incivility during the workday by increasing hospital nurses' daily vitality at bedtime (H4a) and daily positive affect at bedtime (H4b).

4 | DISCUSSION

In this diary study, hospital nurses' daily experiences of incivility seriously impacted nurses' wellbeing, whereas daily social support from

colleagues and managers during the workday reduced the impact of this negative effect. Nurse incivility increases daily emotional exhaustion after work and reduces daily vitality and daily positive affect at bedtime. In contrast, daily social support as a supportive job resource during the workday directly promotes the opposite daily processes. The implications of these findings show that daily social support is central to reducing the day-to-day incivility spirals on hospital nurses, which is especially important for nurse managers who can install supportive daily practices within the risk groups in hospital nurse units.

Under the spiralling effect of incivility in the workplace (Andersson & Pearson, 1999), this study highlights the negative impact at the individual hospital nurse level on a day-to-day basis, fostering detrimental consequences for hospital nurses' wellbeing during the off-job time. Our results show that daily experiences of incivility are present in hospital nurses, which installs a climate of nurse-to-nurse disrespectful interactions. According to the framework of Andersson and Pearson (1999), our study revealed that this interpersonal process, which occurs day-to-day, not only impacts hospital nurses' wellbeing (i.e., increasing daily emotional exhaustion after work and reducing daily vitality and daily positive affect at bedtime) but also affects the culture of the unit, fostering a toxic dynamic of relationships within the workgroups. Considering the high prevalence of workplace incivility among nurses (Taşkaya & Aksoy, 2021), our results support previous evidence of similar diary studies and remark on the necessity to better acknowledge its theoretical interpersonal mechanisms in nursing (Blanco-Donoso et al., 2019; Campana & Hammoud, 2015; Zhou et al., 2019).

This diary study highlights the importance of negative interactions among hospital nurses. From the point of view of interpersonal relationships, our study systematically showed that daily social support emerged as a key job resource within the nursing health care context. Specifically, multilevel results showed that direct effects through daily social support during the workday were negatively related to daily emotional exhaustion after work and positively related to daily vitality and daily positive affect at bedtime. Using an ESM, our findings support evidence about the direct benefits of social support, which is a potential job resource in reducing nurses' stress and burnout and fostering nurses' positive affect (Liu et al., 2021). The present research also demonstrates that the contribution of social support during the workday is even clear at the day level, supporting its beneficial effects on nurses' functioning and wellbeing.

A major contribution of this research is the protective role that daily social support plays for hospital nurses' emotional exhaustion. The literature has well documented the protective role of social support for individuals (Lopez-Zafra et al., 2019). Our study goes much further by analysing the moderating role of daily social support during the workday among hospital nurses and found that a buffering effect through the negative effect of daily experienced incivility during the workday reduced daily emotional exhaustion after work when hospital nurses experience high levels of daily social support during the workday. From the framework of Andersson and Pearson (1999), this result suggests that daily social support from colleagues and managers can be a significant element of the tipping point of the spiral, acting as an inhibitor instead of facilitating nurse-to-nurse workplace incivility.

4.1 | Limitations and future research

Despite the contributions of the present study, it has several limitations. The first limitation stems from the self-report measures. Second, nurses were recruited from several hospitals via snowball sampling; however, other sampling techniques could be used to render sociodemographic characteristics uniform in future research. Moreover, it could be interesting to explore each hospital separately or even to test differences between centres to determine whether differences exist among their nurses. Future studies could further test whether multilevel mediation of daily social support during the workday exists for predicting outcome variables. However, future studies could also examine the direct effects of daily emotional exhaustion after work on daily vitality and daily positive affect at bedtime and test the mediation and moderation of daily emotional exhaustion after work on hospital nurses' wellbeing at bedtime at home. Including these recommendations in future studies could provide a better understanding of the daily spiral of nurse incivility.

5 | CONCLUSIONS

Our study enhances both the theoretical and practical contributions to the current literature about nurse incivility. The within-person approach of our findings reveals temporal dynamics by means of hospital nurses who experience incivility during the workday reporting higher levels of emotional exhaustion after work, as well as a decrease in their levels of daily vitality and daily positive affect at bedtime. Daily social support that colleagues and managers of the units offer to hospital nurses suffering from incivility reduces its negative consequences on their levels of wellbeing. This study showed the benefits of the within-person approach through the usage of diary designs and ESM. This methodology allows researchers to capture day-to-day nurses' processes of interpersonal relationships that occur during the workday and to explore how these workplace processes impact their individual level of day-to-day wellbeing. Working in civilized and supportive environments improves their wellbeing-related daily outcomes.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Nursing always faces challenges in a socially changing context. Given the multiple demands that nurses must face in their daily practice, hospitals can only provide efficient patient quality and safety when they consider the nurses' day-to-day incivility experiences, implying needed changes from a systems perspective.

By turning a work environment into a healthy workplace, nurse managers play a crucial role in the creation and maintenance of civil behaviour and good practices of interpersonal mistreatment nurses' professionals (Smith et al., 2018). Nurse managers who play a leadership role within their units can reduce incivility that occurs day-to-day by providing social support for nurses. Our findings show that daily social support during the workday is a powerful job resource that might limit the negative impact of daily experienced incivility. Additionally, training programmes at work and in service should educate nurses in civil behaviours at work. To date, the evidence suggests the use of a combination of educational training about workplace incivility, training on effective responses to uncivil workplace behaviours and active learning activities to practice newly learned communication skills to assist nurses in improving their ability to manage incivility in the workplace (Armstrong, 2018).

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

ETHICS STATEMENT

The Ethics Committee in Human Research (CEIH) by the University of Jaén approved this study (Ethical Approval Number: NOV.17/2. PROY).

DATA AVAILABILITY STATEMENT

The data presented in this study are available on request from the corresponding author.

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ORIGINAL ARTICLE

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Nurse-to-nurse horizontal violence in Chinese hospitals and the protective role of head nurse's caring and nurses' group behaviour on it: A cross-sectional study

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Abstract

Aims: This study aimed to analyse the prevalence of nurse-to-nurse horizontal violence in Chinese hospitals and examine the effects of head nurse's caring and nurse's group behaviour on horizontal violence.

Background: Horizontal violence is a serious global problem affecting the nursing profession, but little is known of the issue in Chinese hospitals. Increasing evidence has showed that leadership and group factors are important in facilitating horizontal violence. Whether the head nurse's caring and group behaviour perceived by nurses has protective effects against horizontal violence remains unclear.

Methods: A cross-sectional online-based questionnaire study was performed in seven general hospitals in Hubei Province, China. Data related to the demographic information, horizontal violence, head nurse's caring and group behaviour were collected. Descriptive analyses, chi-squared tests and logistic regression were used for data analysis.

Results: In total, 1942 valid questionnaires were collected, with a 92.70% effective response rate (1942/2095). Of those, 59.1% (1148/1942) of respondents had experienced horizontal violence at least once in the previous 6 months. Covert negative behaviours were more frequently reported. Compared with the low level, moderate and high levels of the head nurse's caring showed a lower risk of horizontal violence (odds ratio [OR] = 0.400, $p < .001$; OR = 0.128, $p < .001$); moderate and high levels of group behaviour also showed a reduced risk (OR = 0.601, $p < .001$; OR = 0.221, $p < .001$).

Conclusion: Horizontal violence is common among Chinese nurses. The head nurse's caring and maintaining a good climate of nurses' group behaviours could serve as protective factors for preventing horizontal violence.

Implications for Nursing Management: This study helps nursing managers identify which specific negative behaviours occur frequently and require special attention. It suggests that nursing managers attach importance to improving their caring ability towards nurses and to creating an amicable climate of group behaviour to buffer against horizontal violence.

KEYWORDS
caring, group behaviour, head nurse, horizontal violence, nursing staff, hospital

1 | INTRODUCTION

Horizontal violence (HV), a kind of interpersonal conflict, is a serious global problem in the nursing profession (Blair, 2013; Doo & Kim, 2020; Rosi et al., 2020). It affects all areas of nursing: For the victims, HV can result in low self-esteem, depression, self-hatred and feelings of powerlessness and even cause physical health problems; for the health care organizations, HV leads to impaired personal relationships and lack of cooperation, toxic working environments, poor patient outcomes, increased turnover and financial damage; and for society, HV reduces the attractiveness of nursing profession and intensifies the shortage of nursing human resources, especially in the context of global aging (Embree & White, 2010; Pien et al., 2019; Woelfle & McCaffrey, 2007). Therefore, it is worth exploring any solutions to HV.

Nursing scholars, mainly in Western countries, have examined the incidence of HV among nurses based on its definition, prevalence, causes and strategies to combat it; however, there is little known internationally of HV in Chinese hospitals. Prior studies have identified variations of negative behaviours in workplace in different cultural contexts (Karatuna et al., 2020; Terzioglu et al., 2016). There are nine major cultural clusters (Confucian Asia, Southern Asia, Middle East, Anglo, Latin Europe, Eastern Europe, Nordic Europe, Latin America and Sub-Saharan Africa) in the world (Karatuna et al., 2020). Confucian culture originated in China and deeply influenced the Chinese people. Chinese working culture emphasizes collectivism, cooperation, protecting face and performance orientation and promotes the ideas of Confucian benevolence, which may lead to HV in the Chinese cultural context having different characteristics from those of other countries (Cheng et al., 2017; Karatuna et al., 2020; Leong & Crossman, 2016). Thus, conducting a well-designed survey on HV in Chinese hospitals will contribute to the worldwide understanding of this problem.

Another research issue that is not yet clear but worth exploring is the role of head nurse's caring and nurses' group behaviours on HV. It is well known that the head nurse and nursing colleagues are the long-term colleagues of every staff nurse in the workplace. Wilmot and Hocker (2017) found that intrapersonal perceptions were the foundation for conflicts such as HV. Whether the degree of caring by the head nurse and group behaviour of other nurses could serve as the protective factors against HV remains unclear. Clarification of this issue will assist in combating HV and is of great significance.

2 | BACKGROUND

HV refers to any hostile, aggressive and harmful behaviour by a nurse or a group of nurses towards a co-worker or group of nurses via displaying negative attitudes, actions, words and/or other behaviours at the same hierarchical levels in an organisation (Embree & White, 2010; Longo & Newman, 2014; Taylor, 2016). Woelfle and McCaffrey (2007, p. 126) defined HV as 'interpersonal conflict' among nurses. This term is often used interchangeably with bullying in the nursing literature, but there are subtle differences in the meaning. Bullying is described as being more deliberate and repetitive and can occur across a power gradient, whereas in HV, it has been emphasized that the violence occurs among the workers at the same status and HV is not required to be repeated over time (Longo & Newman, 2014; Vessey et al., 2009). In this study, we focus on HV.

Diverse sources have shown that the prevalence of nurse-to-nurse HV varies across different areas. In the United States, the prevalence of nurse-to-nurse HV ranged from 25.3% to as high as 87.4% (Dunn, 2003; Sellers et al., 2012). One survey in New Zealand revealed that over 50% of the staff nurses in their first practising year recognized that they were undervalued by other nurses (McKenna et al., 2003). Morrison et al. (2017), in Jamaica, found that 96% of registered nurses had been exposed to HV, and three quarters rated the exposure as moderate to severe. Ayakdaş and Arslantaş (2018), in Turkey, reported that 47% of nurses had suffered HV. Bambi et al. (2014), in Italy, found that 79.1% of nurses had experienced some form of HV at least once, whereas 22.4% experienced HV at least weekly. A survey performed in Spain showed that 74.2% of nurses had experienced HV at least once in the previous 6 months (Topa & Moriano, 2013). However, little is known about nurse-to-nurse HV in Chinese hospitals. Scholars have pointed out that the occurrence of HV in the nursing profession is related to the local

culture (Bambi et al., 2018). Chinese Confucian philosophy is a typical representative of the Eastern culture, which has a profound impact on the Chinese people. The ideas of collectivism and benevolence are highly valued by individuals and organizations in this kind of culture (Cheng et al., 2017). The question of whether nurse-to-nurse HV is less prevalent in Chinese hospital may thus be raised, together with the characteristics of HV in this context. This is a meaningful research topic worthy of exploration.

To date, there still is a global lack of systematic and effective prevention and management measures against HV. Exploring effective protective factors to prevent HV may assist in reducing its incidence. According to the Society Ecosystems Theory, human behaviour involves multiple systems (i.e., micro, mezzo and macro systems) in the social environment, in which the nurse managers and co-workers form the mezzo system (Johnson, 2011; Zastrow et al., 2017). Increasing evidence has shown that leadership and group factors play important roles in facilitating HV; that is, HV is not just a binary issue between the victim and the perpetrator (Fontes et al., 2019; Kaiser, 2017; Samsudin et al., 2020; Topa & Moriano, 2013).

In China, the head nurse is the first-line nurse manager in an individual department and directs the other nursing staff in the performance of the nursing tasks in a ward. A recent study conducted by Kaiser (2017) found that the behaviours of the nursing leader can have a significant impact on the level of negative behaviours among the nurses. Nowadays, caring has been increasingly positioned as one of the core concepts for an evolved nursing science (Watson, 2009). Some scholars have described caring as an affect, a feeling of compassion or empathy towards the recipient of care, and consider that the staff nurses' perceptions of nurse managers' caring influenced their job satisfaction and well-being (Cortis & Kendrick, 2003; Kostich et al., 2020; Turkel & Ray, 2004). To date, it is still not known whether the head nurse's caring as perceived by nurses can significantly affect the occurrence of HV.

Another important variable used in the present study was the nurse's group behaviour. Group behaviour is defined as collaboration and consensus in a group according to Stone's integrative model for organizational climate of staff working conditions (He et al., 2011; Stone et al., 2005). Nursing staff work as a group in a unit to provide the nursing care for patients. A previous study by Topa and Moriano (2013) identified that group support as a negative predictor of HV. In the same vein, researchers have underlined that work group factors create a favourable atmosphere for occurrence of HV (Blackstock et al., 2018; Crawford et al., 2019; Hutchinson et al., 2010; Topa & Moriano, 2013).

Based on this evidences, we hypothesized that the more positively nurses perceived the head nurse's caring and the nurses' group behaviour, the less HV would occur. However, as yet, there is no direct evidence to support this hypothesis. Bridging this gap will help nurse managers and policymakers recognize the importance of caring for subordinates and develop more effective approaches at the organizational level to mitigate HV. Therefore, the purpose of this study was to (a) investigate prevalence of nurse-to-nurse HV in Chinese hospitals over a 6-month period and to analyse it in terms of different demographics and (b) to examine the protective role of the head nurse's caring and nurses' group behaviour on HV from the perspective of HV victims.

3 | METHODS

3.1 | Study design

A cross-sectional online-based questionnaire study was performed from 1 January to 31 January 2021. Four tertiary general hospitals and three secondary general hospitals from Wuhan, the capital of Hubei Province, and three prefecture-level cities located in the south-east, south-west and the north of Hubei Province were selected as target hospitals using a convenience sampling method, with a total of 4500 eligible nursing staff meeting the study criteria. The study was reviewed and approved by the Ethics Committee.

3.2 | Participants

According to previous studies, the HV rate in general hospitals was 78.2% (Xie et al., 2019). The sample size was calculated using the following formula: $n = z^2_{1-\alpha/2} p(1-p)/d^2$, where n is equal to the minimum required sample size, α is equal to type I error (0.05), $z_{1-\alpha/2}$ is equal to level of confidence (1.96), p is equal to parameter for sample calculation (78.2%) and d is equal to margin of error (0.03). Based on this formula, a sample size of 728 anticipated for the study. Considering the 15% dropout rate, the final minimum sample size was 857. The inclusion criteria of the participants were as follows: registered nurses working in a hospital, who agreed to take part in the anonymous survey and who had worked in the clinical nursing unit for at least 6 months. Nurses with leadership positions (such as head nurses and nurse administrators) were excluded from the samples. An informed consent form which explained the study's purpose, risks, benefits, anonymity, voluntary participation and the right to withdraw participation was distributed to the participants before their participation.

3.3 | Data collection

The data were collected using a self-reported questionnaire via the service of Wenjuanxing (https://www.wjx.cn/). Informed consent forms and the survey link were distributed to every clinical department through WeChat and Tencent QQ group with the assistance of nursing administrators of the nursing department from the recruited hospitals. WeChat and Tencent QQ are the two most popular instant chat tools in China and are widely used in work. Each participant filled in the questionnaire through clicking the survey link or scanning the QR code. Only one questionnaire was allowed from each IP address. All questions were set as compulsory. If there was any missing item, the respondents would be reminded when he or she submitted their survey. Only when they had completed all the questions could they

submit the survey successfully. Their participation was both voluntary and anonymous.

3.4 | Measures

3.4.1 | Demographic characteristics

Data concerning gender, age, years of working experience, marital status, education, contract status, professional title, type of unit and hospital level were systematically collected.

3.4.2 | Horizontal violence

The Chinese version of the nurse-to-nurse Negative Acts Questionnaire was used. This was developed by Li (2011) based on the English version of the Negative Acts Questionnaire-Revised (Einarsen et al., 2009). The questionnaire included 19 items, containing 8 items of overt type behaviours and 11 items of covert type behaviours. It was developed to measure the exposure of nurses to HV within the previous 6 months, with the various response alternatives: '1 = *never*', '2 = *very rarely*', '3 = *almost once a month*', '4 = *almost once a week*' and '5 = *almost every day*'. The respondents were instructed to consider the behaviours of only fellow nurse co-workers and exclude the behaviour of their supervisor or nonnursing individuals (such as physicians and patients). The Chinese version of the nurse-to-nurse Negative Acts Questionnaire has been substantiated for validity and reliability, and the internal reliability of Cronbach's alpha coefficient was found to be .95 in the previous study (Li, 2011; Wang et al., 2018). Cronbach's alpha coefficient was .98 in this study.

3.4.3 | Head nurse's caring

The head nurse's caring was measured using a 36-item Chinese version of the Caring Assessment Tool-administration, which was originally developed on the basis of the American nursing population by Duffy and adapted and validated by Peng et al. (2020) for use with Chinese nurses (Watson, 2009). There were two items that were deleted from the original English version in the process of cross-cultural adaptation. The scale had three different dimensions: decision making, human respect and noncaring behaviours, which were designed to capture staff nurses' perceptions of their managers, using a 5-point Likert-type response scale (1 = *never*; 2 = *rarely*; 3 = *occasionally*; 4 = *frequently*; and 5 = *always*). The respondents were asked about the degree of caring they had perceived from the head nurses in the workplace. Ten items were intentionally worded negatively to minimize the chance of errors. The available options were reverse coded during analysis to prevent misinterpretation. The higher the score, the more the caring was perceived by nurses from head nurses. Cronbach's alpha coefficient was found to be .97 in this study. The extreme group analysis method was used to classify the level of head nurses' caring: The scores equal to and below quartile 1 were classified as 'low' levels, the scores in the range between quartile 1 and quartile 3 were classified as 'moderate' level, and scores equal to and above quartile 3 were classified as 'high' levels.

3.4.4 | Nurses' group behaviour

An eight-item subscale derived from the Nurse's Organizational Climate Scale was used to measure nurses' group behaviour. The total scale was developed by He et al. (2011) based on the theoretical framework of Stone's integrative model of health care working conditions on organizational climate and safety. The respondents indicated their agreement using a 4-point Likert-type response scale: 1 = *strongly disagree* to 4 = *strongly agree*. Higher scores indicated a better group behaviour in the organisation. Cronbach's alpha coefficient of this subscale was .95 for the present study. The level of group behaviour was categorized as 'low', 'moderate' and 'high' levels using the same way as the classification of the degree of caring of the head nurse.

3.5 | Data analysis

The data were analysed using IBM SPSS Statistics software Version 21.0 (IBM Corp., Armonk, NY, USA). According to the previous study (Xie et al., 2019), we treated the dependent variable, HV, as a binary variable (yes and no). If the respondents chose 'never' on all 19 items, that is, the score equalled 19, they were judged to be 'no, they haven't suffered HV'. If the total score was greater than 19, they were judged to be 'yes, they have suffered HV'. The demographic variables, head nurse's caring and group behaviour perceived by the nurses were treated as independent variables.

Descriptive statistics were used to analyse the demographic characteristics of the respondents, as well as the frequency and percentage of HV. A chi-squared test was conducted to test the potential association between nurses with and without HV in the terms of various demographic characteristics. Significant factors of demographic characteristics and the target variables (head nurse's caring and nurses' group behaviour) were modelled into the logistic regression analysis to estimate the effect of selected potential factors on HV. Univariate and multivariate logistic regression analyses were conducted to calculate unadjusted odds ratio (OR) and adjusted OR, respectively, by using enter method. All tests were two sided with a significance level of .05.

4 | RESULTS

4.1 | Sample demographic characteristics

Among the 4500 eligible staff nurses, a total of 2095 consented to participate in the study, resulting in an overall response rate of 46.6% (2095/4500). After double-checking the data, 153 questionnaires

were deleted because the respondents did not meet the inclusion criteria or the response was illogical. Finally, a total of 1942 respondents were included in the analyses, with a valid response rate of 92.70% (1942/2095). The respondents were aged 20–58 years (M = 30.32, SD = 6.30), and their working experience in the nursing profession ranged from 1 to 39 years (M = 8.65, SD = 6.71). Other demographic details are shown in Table 1. The result of the chi-squared test showed that there was no statistically significant difference in the demographic variables between the group that experienced HV and the group that did not experience HV, except for the different unit types ($\chi^2 = 17.070$, $p = .017$).

4.2 | Prevalence of nurse-to-nurse HV over the previous 6 months

A total of 1148 (59.1%) of respondents had experienced some form of nurse-to-nurse HV at least once during the previous 6 months, and 156 (8.0%) nurses reported being subjected to it at least weekly. The total score of respondents in this study ranged from 19 to 95 (M = 25.17, SD = 11.04). Of the 19 items, withholding information, ignoring opinions and spreading of gossip/rumours were the most frequent negative behaviours, and they were all covert behaviour. Repeated reminders of one's errors or mistakes were the most frequent overt type of negative behaviours. The specific scores for each item and the frequency ranking of each negative behaviour have been shown in Table 2.

4.3 | Predictive effect of head nurse's caring and nurses' group behaviour on HV

In this study, the total scores of the head nurse's caring ranged from 55 to 180 (M = 147.25, SD = 25.81), and nurses' group behaviour ranged from 8 to 32 (M = 27.67, SD = 4.91). Multivariate logistic regression analysis indicated a reduced risk of HV for nurses with higher levels of head nurse's caring and group behaviour (Table 3). Compared with the low level of head nurse's caring, the moderate and high levels showed a low ORs (OR = 0.400 and OR = 0.128, respectively). Compared with the low level of group behaviour, the moderate and high levels also showed lower ORs (OR = 0.601 and OR = 0.221, respectively). The findings indicate that head nurse's caring and group behaviour had moderate to strong negative association with HV and indeed played a protective role against HV. A significant chi-squared test ($\chi^2 = 533.885$, $p < .001$) and a non-significant Hosmer and Lemeshow test ($\chi^2 = 6.247$, $p = .620$) supported the model as well. Following the Nagelkerke R^2, the model explained 32.4% of the variance in exposure to HV behaviour.

5 | DISCUSSION

The current study measured the prevalence of HV over a 6-month period among staff nurses at the seven general hospitals in Hubei Province of China, involving a large sampling survey of 1942 respondents, and thus makes a significant contribution to the ever-increasing global information on HV in nursing profession. The study also examined the predictive effects of head nurse's caring and nurse's group behaviour on HV from the perspective of HV victims.

In this study, 59.1% of ($n = 1148$) nurses reported HV experience at least once, which is lower than the 74.2% who reported being subjected to HV in Spain, the 79.1% in Italy and the 87.4% in New Jersey, but higher than the 47% in Turkey and the 34% in New Zealand (Ayakdaş & Arslantaş, 2018; Bambi et al., 2014; Dunn, 2003; McKenna et al., 2003; Topa & Moriano, 2013). Meanwhile, the percentage of nurses in this study who experienced HV at least once a week was significantly lower than the finding of 22.4% among Italian nurses (Bambi et al., 2014). A possible explanation for this might be that different countries and organizations have different cultures in terms of power distance, collectivism, and performance orientation (Karatuna et al., 2020). Confucian culture attaches much importance on performance orientation, which may increase the work-related stress, thus increasing the risk of exposure to HV (Karatuna et al., 2020; Topa & Moriano, 2013). However, it also values harmony with others, and organizations in this culture have a lower power distance, which may reduce the occurrence of HV. The interplay of these impacting factors results in a moderate level of HV experienced by Chinese nurses compared with other countries. Another possible reason for this variation may be attributed to the presence of different psychological tools and threshold standards to measure HV (Bambi et al., 2018). To date, there is no uniform definition of the term HV, which leads to some differences in measurement. Further research is needed to standardize a clear operational definition and develop a unified measuring tool for HV assessment.

What is surprising is that no significant differences were found in terms of gender, age, seniority, marital status, education, contract status, professional title or hospital level between the group with HV and the group without HV in our sample. Obstetrics/gynaecology and emergency room/outpatient units had higher risks of HV compared with the medicine unit in this study. This finding is partially consistent with the review of Bambi et al. (2018) who showed that gender, age, seniority and nursing education are not related to nurse-to-nurse HV, but differs from that of Xie et al. (2019) who found that gender, marital status, professional title and seniority were associated with HV among Chinese nurses. The result further confirms that nurse-to-nurse HV has different characteristics in different organizations and regions.

This study reveals that covert type of HV behaviours was more common than overt types among Chinese nurses, which is consistent with the data reported in other similar studies (Bambi et al., 2014; McKenna et al., 2003; Xie et al., 2019). This may be related to the female-dominated nature of the nursing profession. Females are generally thought to be good at using indirectly aggressive strategies because successful indirect aggression can be very effective and it is difficult to identify the perpetrator, which could help the perpetrator to effectively avoid counter-attacks (Strandmark & Hallberg, 2007). Another possible explanation is that nurses are reluctant to have face-

TABLE 1 Demographic characteristics and variations of two groups among different characteristics ($N = 1942$)

Characteristics	*n* (%)	Group with HV ($n = 1148$)	Group without HV ($n = 794$)	χ^2	*p*
Gender					
Male	70 (3.6)	44	26	0.421	.516
Female	1872 (96.4)	1104	768		
Age (years)					
20–25	447 (23.0)	242	205	7.251	.123
26–30	760 (39.1)	454	306		
31–35	399 (20.5)	247	152		
36–40	203 (10.5)	120	83		
≥41	133 (6.9)	85	48		
Years of experience					
≤3	419 (21.6)	232	187	3.212	.201
4–10	1006 (51.8)	602	404		
≥11	517 (26.6)	314	203		
Marital status					
Unmarried	687 (35.4)	401	286	0.248	.883
Married	1215 (62.6)	723	492		
Widowed and divorced	40 (2.0)	24	16		
Education					
Secondary or advanced diploma	404 (20.8)	229	175	1.247	.280
Bachelor's degree or above	1538 (79.2)	919	619		
Contract status					
Permanent	761 (39.2)	463	298	1.544	.219
Temporary	1181 (60.8)	685	496		
Professional title					
Nurse	496 (25.5)	273	223	5.442	.066
Nurse practitioner	1031 (53.1)	616	415		
Nurse-in-charge and above	415 (21.4)	259	156		
Type of unit					
Medicine unit	546 (28.1)	310	236	17.070	.017*
Surgical unit	408 (21.0)	238	170		
Obstetrics/gynaecology	128 (6.6)	87	41		
Paediatrics	96 (4.9)	50	46		
Emergency room/outpatient unit	197 (10.2)	132	65		
Intensive care unit	174 (9.0)	108	66		
OR/PACU	146 (7.5)	91	55		
Other	247 (12.7)	132	115		
Hospital level					
Tertiary hospital	1373 (70.7)	821	552	0.901	.361
Secondary hospital	569 (29.3)	327	242		

Abbreviations: HV, horizontal violence; OR, operation room; PACU, postanaesthesia care unit.
*$p < .05$.

to-face interpersonal conflicts with their colleagues because Chinese people concerned about face-saving under the influence of Confucian culture.

Moreover, the findings indicated that head nurse's caring and a good climate of nurse's group behaviour were indeed two negative predictors of HV, which supported the hypotheses tested. These relationships may partly be explained by the cultural value that Chinese people believe in reciprocity. That is, when nurses perceive that their efforts and gains are balanced in interpersonal relationships, benign interpersonal interactions will continue, thereby reducing the

TABLE 2 The specific scores for each item and the frequency ranking of each negative behaviour ($N = 1942$)

Rank[a]	No.	Type	Item	Mean ± SD	1 *n* (%)	2 *n* (%)	3 *n* (%)	4 *n* (%)	5 *n* (%)
1	1	Covert	Other nurse withholding information that affects your performance	1.53 ± 0.78	1166 (60.0)	618 (31.8)	88 (4.5)	53 (2.7)	17 (0.9)
2	13	Covert	Having your opinions ignored	1.45 ± 0.71	1257 (64.7)	566 (29.1)	69 (3.6)	38 (2.0)	12 (0.6)
3	5	Covert	Spreading of gossip and rumours about you	1.44 ± 0.75	1299 (66.9)	517 (266)	66 (3.4)	41 (2.1)	19 (1.0)
4	11	Overt	Repeated reminders of your errors or mistakes	1.39 ± 0.71	1370 (70.5)	458 (23.6)	60 (3.1)	41 (2.1)	13 (0.7)
5	4	Covert	Having key areas of responsibility removed or replaced with more trivial or unpleasant tasks	1.39 ± 0.73	1383 (71.2)	437 (22.5)	61 (3.1)	45 (2.3)	16 (0.8)
6	3	Covert	Being ordered to do work below your level of competence	1.39 ± 0.77	1411 (72.7)	400 (20.6)	59 (3.0)	49 (2.5)	23 (1.2)
7	2	Overt	Being humiliated or ridiculed in connection with your work	1.28 ± 0.67	1442 (74.3)	380 (19.6)	62 (3.2)	38 (2.0)	2.0 (1.0)
8	6	Covert	Being ignored or excluded by other nurse	1.34 ± 0.68	1452 (74.8)	390 (20.1)	53 (2.7)	33 (1.7)	14 (0.7)
9	18	Covert	Given too much responsibility without appropriate supervision	1.32 ± 0.66	1479 (76.2)	361 (18.6)	61 (3.1)	30 (1.5)	11 (0.6)
10	14	Covert	Practical jokes carried out by other nurse you do not get along with	1.33 ± 0.70	1481 (76.5)	346 (17.8)	56 (2.9)	42 (2.2)	13 (0.7)
11	16	Covert	Pressure not to claim something to which by right you are entitled (e.g., sick leave, holiday entitlement and travel expenses)	1.33 ± 0.71	1501 (77.3)	313 (16.1)	74 (3.8)	39 (2.0)	15 (0.8)
12	8	Overt	Being shouted at or being the target of spontaneous anger	1.30 ± 0.67	1510 (77.8)	330 (17.0)	58 (3.0)	30 (1.5)	14 (0.7)
13	12	Overt	Persistent criticism of your errors or mistakes	1.28 ± 0.66	1552 (79.9)	292 (15.0)	51 (2.6)	37 (1.9)	10 (0.5)
14	7	Overt	Having insulting or offensive remarks made about your person, attitudes or your private life	1.28 ± 0.67	1563 (80.5)	280 (14.4)	49 (2.5)	36 (1.9)	14 (0.7)
15	15	Covert	Excessive monitoring of your work	1.27 ± 0.67	1570 (80.8)	271 (14.0)	54 (2.8)	33 (1.7)	14 (0.7)
16	17	Overt	Being the subject of excessive teasing and sarcasm	1.27 ± 0.65	1572 (80.9)	279 (14.4)	46 (2.4)	34 (1.8)	11 (0.6)
17	10	Covert	Hints or signals from other nurses that you should quit your job	1.20 ± 0.59	1683 (86.7)	178 (9.2)	45 (2.3)	26 (1.3)	10 (0.5)
18	19	Overt	Threats of violence or physical abuse or actual abuse such as pushing or spitting on you	1.16 ± 0.55	1747 (90.0)	123 (6.3)	38 (2.0)	25 (1.3)	9 (0.5)
19	9	Overt	Being intimidated by other nurses	1.16 ± 0.56	1749 (90.1)	120 (6.2)	34 (1.8)	31 (1.6)	8 (0.4)

Note: 1 = *never*; 2 = *very rarely*; 3 = *almost once a month*; 4 = *almost once a week*; and 5 = *almost every day*.
Abbreviation: SD, standard deviation.
[a]The rank was calculated on the basis of the sum of the frequency of Options 2–5. The higher the sum of the frequency, the higher the negative behaviour item was ranked.

likelihood of HV. Although nursing managers may not be directly involved in the HV incidents, they set the tone and expectations in the work environment, which was found to be associated with HV (Lewis & Malecha, 2011). If head nurses show a caring attitude towards their subordinates, they will set a good example for the staff nurses to care for each other, which may create a healthy environment and act as a buffer to HV (Kostich et al., 2020). The findings of this study are promising because they highlight the importance of nurse managers' caring ability for subordinates, which is in accordance with the core concept of nursing profession and provide new insights to solve the problem of HV among nurses. Further work is encouraged to confirm the results in other cultural contexts.

5.1 | Study limitations

Several limitations are associated with this study. First, because this study used a self-reported survey method based on respondents' own

TABLE 3 Logistic regression analysis with the potential factors ($N = 1942$)

	Univariate logistic regression			Multivariate logistic regression		
Potential factors	**Unadjusted odds ratio**	**95% CI**	***p***	**Adjusted odds ratio**	**95% CI**	***p***
Type of unit (reference: medicine unit)						
Surgical unit	1.066	[0.822, 1.382]	.630	1.209	[0.894, 1.637]	.218
Obstetrics/gynaecology	1.615	[1.074, 2.429]	.021*	1.249	[0.777, 2.007]	.359
Paediatrics	0.827	[0.536, 1.278]	.393	0.856	[0.522, 1.404]	.539
Emergency room/outpatient unit	1.546	[1.098, 2.176]	.012*	1.065	[0.729, 1.569]	.751
Intensive care unit	1.246	[0.878, 1.768]	.218	1.124	[0.749, 1.686]	.573
OR/PACU	1.260	[0.866, 1.833]	.228	1.137	[0.738, 1.752]	.560
Other	0.874	[0.646, 1.182]	.381	1.001	[0.704, 1.424]	.995
Head nurse's caring (reference: low level ≤129)						
129 < moderate level < 172	0.240	[0.179, 0.321]	.000***	0.400	[0.290, 0.553]	.000***
High level ≥172	0.050	[0.036, 0.069]	.000***	0.128	[0.087, 0.187]	.000***
Group behaviour (reference: low level ≤24)						
24 < moderate level < 32	0.368	[0.280, 0.484]	.000***	0.601	[0.444, 0.814]	.001**
High level ≥32	0.087	[0.066, 0.114]	.000***	0.221	[0.160, 0.306]	.000***

Abbreviations: CI, confidence interval; OR, operation room; PACU, postanaesthesia care unit.
*$p < .05$. **$p < .01$. ***$p < .001$.

subjective perceptions on HV, the prevalence of nurse-to-nurse HV may not be completely accurate due to possible misunderstanding of the questions included in the survey. Further research could increase the amount of data from various collection sources, including participant observation or in-depth personal interviews. Second, although the current study was a multicentre cross-sectional study from the different regions in Hubei, it only included samples of staff nurses from seven hospitals. So, the results may not be generalized to nurses in other areas, indicating the need to replicate the study with nurses in other areas and hospitals. Third, the HV questionnaire directed the respondents to recall the negative behaviours they had suffered in the previous 6 months, which may have led to recall bias. Finally, causal inferences could not be made due to the cross-sectional data, and further research is needed to explore the exact relationship among nursing managers' caring, group behaviour and exposure to HV.

6 | CONCLUSION

The findings from this study make several contributions to the current literature. First, compared with other countries, the prevalence of HV over a 6-month period among nurses in Chinese hospitals was found to be moderate, with general demographic variables such as gender, age and working experience not found to affect HV in the present cultural contexts, which indicate that future research among Chinese nurses needs to pay attention to additional variables. Second, a high level of caring from head nurses and group behaviour from co-workers were found to be protective factors to against nurse-to-nurse HV. These two factors may serve as effective methods for nursing managers and policymakers to prevent HV in the future.

7 | IMPLICATIONS FOR NURSING MANAGEMENT

This study may help nursing managers worldwide to learn about the status quo of nurse-to-nurse HV in Chinese hospitals and have a better understanding of the cultural differences related to HV. Another implication of the present study is that it helps the nursing managers identify which specific negative behaviours have a high prevalence and require special attention. Moreover, this study recommends that nursing managers might mitigate the occurrence of HV through significantly improving their caring ability towards nurses and creating an amicable climate of group behaviour. Last but not least, it suggests that hospital managers and policymakers should recognize the importance of the head nurses' caring ability for subordinates and include it as an indicator in their performance appraisals.

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CONFLICT OF INTERESTS

All the authors declare no conflicts of interest in this study.

ETHICS STATEMENT

The study was reviewed and approved by the Ethics Committee of Tongji Medical College, Huazhong University of Science and Technology (No. S323).

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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ORIGINAL ARTICLE

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Aggressive incidents in home care services and organizational support: A cross-sectional survey in Switzerland

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Abstract

Aims: To explore the available organizational structures addressing aggressive incidents towards home care services staff.

Background: Organizational structures how professional caregivers deal with care recipients' aggressive incidents.

Methods: An explorative cross-sectional survey using the Violence Experienced by Staff (German version revised) and the Impact of Patient Aggression on Carers Scale was conducted. Data from 852 health care professionals in the German-speaking part of Switzerland were collected between July and October 2019. Multiple logistic regression models were used to investigate associations. The STROBE-Checklist was used as the reporting guideline.

Results: Organizational support and management support in home care services were generally rated high and found to cause a significant decrease in negative feelings. Some self-rated skills regarding aggression management were linked to a decrease in perceived burden after aggressive incidents, whereas others increased the perceived burden.

Conclusion: Organizational structures including official procedures for affected professional caregivers should be established in home care services. This should contain efficient reporting systems and aggression management training for the specific setting.

Implications for Nursing Management: The study highlights the importance of organizational support regarding aggressive incidents in the home care setting as well as of aggression management training.

KEYWORDS
home care, survey methodology, community health, gerontology, violence

1 | BACKGROUND

Care recipients behaving aggressively with professional caregivers is a common phenomenon in the health care setting (Paschali et al., 2018; Yu et al., 2019). Investigations in the home care settings show that aggressive behaviour against professional caregivers occur often in the home care setting as well (Hanson et al., 2015; Schablon et al., 2018). Schnelli, Ott, et al. (2021) found that 14.8% of clients availing home care services display verbally or physically aggressive behaviour towards caregivers and that such behaviours were linked to cognitive impairment. Home care services have gained importance due to demographic changes worldwide (Genet et al., 2012). However, home care services face specific challenges such as increasing demand for care for people with dementia (Genet et al., 2012). Care for persons with dementia is often rewarded by aggressive behaviour against professional caregivers (Paschali et al., 2018; Schnelli, Mayer, et al., 2021; Yu et al., 2019). However, there is a lack of research regarding this phenomenon in the professional home care setting. Therefore, this study's research interest was directed towards aggressive behaviours in the home care setting.

The consequences of aggressive behaviour against professional caregivers include stress and burden, often resignation from the job, and post-traumatic stress (Paschali et al., 2018; Schnelli, Mayer, et al., 2021). Consequences of aggressive behaviour on behalf of the clients cause disturbances in the professional relationship and provoke increased fixations or assault from professional caregivers (Heckemann et al., 2017). Research could show ways to reduce such consequences after aggressive incidents. An important aspect that influences the perceived burden in the context of aggressive behaviour is team culture and support from the management (Heckemann et al., 2020). A positive team culture means the opportunity to discuss aggressive incidents in the team during informal conversations (Heckemann et al., 2020). Health professionals often seek support from their team members after surviving aggressive incidents (Edward et al., 2014; Heckemann et al., 2020).

Although support from colleagues is helpful, receiving support from the management was identified as being crucial as well (Schnelli et al., 2019). Support from the management includes an active role of the team leader. This means encouraging the team members to complete reporting forms, talking to affected professionals, and offering further measures such as case reviews or psychological support according to the affected person's needs. Additionally, management support includes promoting the employer's attitude to protect the staff and not take aggressive incidents as a "normal part of the job" (Heckemann et al., 2020; Schnelli et al., 2019). Poor support from management results in non-reporting of aggressive behaviour, even if a reporting system is available (Edward et al., 2014). Further reasons for non-reporting include the fear of being seen as oversensitive or existing horizontal violence such as harassment from team colleagues (Edward et al., 2014). Reporting systems allow analysing aggressive incidents systematically and, thus, implementing changes on an organizational level to prevent them in the future. Hence, it is necessary to address the reservations and barriers to reporting. Aggression management training leads to increased confidence, improved attitude and skills, and knowledge of risk factors of aggressive behaviour (Heckemann et al., 2015).

In Switzerland, aggression management training is part of nursing education. Further standardized aggression management trainings for health care organizations are available for inpatient settings (OdASanté, 2017). These trainings include following contents: defence techniques, verbal de-escalation techniques and information about the development of aggressive behaviour (Netzwerk für Aggressionsmanagement im Gesundheits- und Sozialwesen [NAGS], 2015).

Research from inpatient settings such as hospitals, long-term care institutions or psychiatry departments show that organizational support positively affects the consequences of aggressive incidents as well as their prevention (Edward et al., 2014; Heckemann et al., 2015). Organizational support includes the general attitude in the organization towards prevention and defusion of aggressive incidents, which has a supportive effect. This is reflected in, for example, the available reporting systems, and whether the staff is obligated to report incidents, and the official responses to reported incidents. Responses include established case reviews and free availability/offer of psychological support after aggressive incidents to professional caregivers (Schnelli et al., 2019). Regarding reporting systems, it is important that professional caregivers are able to report the incident anonymously if they wish and do not have to fear negative consequences of their report (Schnelli et al., 2019). Further, availability of concepts around prevention and dealing with aggressive behaviour, frequent aggression management trainings and refresher trainings and the opportunity to call safety staff or police for instrumental support in challenging situations are aspects of organizational support that help professional caregivers to deal with aggressive incidents (Heckemann et al., 2020; Schnelli et al., 2019).

Organizational support, team support, management support and aggression management training are crucial factors that prevent negative feelings after aggressive incidents in inpatient settings. There is insufficient corresponding research for home care services despite their unique organizational structure and the fact that aggressive incidents occur in the professional home care as well and are set to increase in the future with an increasing number of persons with dementia seeking home care, a clear gap that motivated this study. Based on insights from research in inpatient settings, the study aimed to gain knowledge of the existing organizational structures around aggression management in home care services. The following research questions guided the study:

- What organizational and management support structures are in place in home care services to support professional caregivers in dealing with their client's aggressive behaviour?
- How do these structures perceive the negative feelings experienced by professional caregivers after aggressive incidents?
- What are the training conditions for the professional caregivers in home care services and how far do they affect the negative feelings in the caregiver after aggressive incidents?

2 | METHODS

Due to the lack of existing research on organizational structures in home care services regarding aggression management and training, an explorative cross-sectional design was chosen. The Strengthening the Reporting of Observational Studies in Epidemiology Checklist (STROBE) for cross-sectional studies was chosen as the reporting guideline (von Elm et al., 2007).

2.1 | Sample/participants

The participants were adult (older than 18 years) professional caregivers working in home care services in the German-speaking part of Switzerland. Professional caregivers working in home care services of all educational levels were included: registered nurses, health specialists (a 3-year apprenticeship with a focus on basic care that ends with a diploma, but a health specialist does not have the competencies of a nurse), nursing assistants (a marginal education of 17 days' theoretical content and a 2-week practice session that ends with a certificate) and house aides (same education as nursing assistants, but with a focus on working to support households). Persons with different education (e.g. social workers) or similar education (those who work as nursing assistants) were also included, and so were persons working in direct contact with clients during nursing assignments. A total of 24 home care organizations participated in the study.

In line with the exploratory approach of the project, a convenience sampling strategy was applied. The home care service associations of non-profit organizations as well as those of the for-profit organizations in the German-speaking part of Switzerland were asked to spread the news of the study through their network. Further, the study proposal was presented in meetings of the operational managers and spread through the professional network of the research team. Interested organizations contacted the main author for further information. The contact person, either an operational manager or a nursing expert, received instructions to provide an envelope containing a prepaid and addressed answer envelope, the hard copy of the survey and an information sheet to the employees of the home care service and to inform them in a team meeting regarding the participation of the organization in the study. They were instructed not to put pressure on employees regarding participation. The following inclusion criteria were used: age over 18 years, working in direct contact with clients and working in a participating home care service.

2.2 | Data collection

Data were obtained using the Survey of Violence Experienced by Staff (German version revised) (SOVES-G-R) (Hahn et al., 2011; McKenna, 2004), which contains the Impact of Patient Aggression on Carers Scale (IMPACS) (Needham et al., 2005). Data were collected between July and October 2019. A total of 1923 hard-copy questionnaires were provided to the contact persons of the organizations. This number was the total of adult employees working in direct contact with the clients in the participating home care service organizations, that is, the number of potential participants. The contact persons delivered the questionnaires to the participants, who were assured of anonymity and voluntary participation by the project team information sheet. This sheet, as well as the hard copy of the questionnaire, mentioned that by completing and returning the questionnaire, the participants provided their consent. The participants were instructed not to provide any identifying personal information in the questionnaire. The questionnaires were marked with a specific code for each organization.

The information sheet also stated that the participants had 2 months to answer the survey. After a month, the research team sent a reminder to the contact persons of the organizations, along with the number of the returned questionnaires. The contact persons reminded the potential participants to complete the questionnaire using the usual information sources of the specific organization (mail, meeting or information sheet). The data from the questionnaire hard copies were transferred into an SPSS file using a codebook. To ensure the correctness of the data, a double-entry check was made on 10% of the data set: The error rate was 0.2%.

2.3 | Instruments

We used the SOVES-G-R (Hahn et al., 2011; McKenna, 2004), which includes socio-demographic data as well as the IMPACS (Needham et al., 2005). It is the appropriate instrument for this investigation because it contains questions regarding organizational support, team support, management support, aggression management training and burden after aggressive incidents.

SOVES contains 65 questions across eight sections. Originally developed by McKenna (2004) and tested for content validity by the European Violence in Psychiatry Group (McKenna, 2004), SOVES was translated into German and validated by Hahn et al. (2011). This survey was also used in a long-term care facility in Switzerland (Zeller et al., 2012). To meet specific issues of the home care setting, we adapted SOVES-G-R regarding wording, influencing and triggering factors (Section D) and specific measures (Section E). Face validity was tested with a nurse, a health specialist and a nursing assistant working in home care services. Marginal changes were made based on the feedback received. In this manuscript, a total of 34 questions from Sections A and F–H were included.

General information on the participants were assessed with SOVES-G-R Section A, such as socio-demographic data, with one yes/no question and eight objective-type questions. The consequences of aggressive incidents were assessed with Section F of SOVES-G-R, which also includes IMPACS, an instrument to measure negative feelings after experiencing aggressive behaviour. Section F explores the consequences of aggressive incidents and consists of two yes/no questions (regarding fear and sick leave), one

subjective-type question to describe what factors lead to fear, one objective-type question with four choice options regarding the form of sick leave after an aggressive incident, three questions with an exit option (e.g. no threat experienced) and a 5-point Likert scale with each to assess the experience of burden (1 = *not upsetting* to 5 = upsetting) and a multiple-choice question to assess the support needed. Needham et al. (2005) had conducted IMPACS psychometric testing with satisfying results (Cronbach's alpha = 06.–0.78). It consists of 10 items on 5-point Likert scales (1 = *never* to 5 = *always*) with higher scores representing more negative feelings (Needham et al., 2005).

Organizational support, team support and management support were explored with the SOVES-G-R Section G, which assesses organizational support as well as documentation and reporting of aggression events with five statements regarding staff and management support on a 5-point Likert scale (1 = *completely agree* to 5 = *completely disagree*), two yes/no questions and two objective-type questions on documentation, official procedures and reporting systems.

Aggression management training was explored with Section H that assesses training in aggression management and consists of 10 statements regarding skills measured on a 4-point Likert scale (1 = *very good* to 4 = *not good*), one yes/no question and one objective-type question.

The SOVES-G-R sections not included in this study are described briefly: Section B assesses the form of aggression experienced during work time; Section C assesses the frequency, perpetrator and form of aggression experienced within the last 12 months; Section D assesses the aggressive incidents experienced within the last 7 working days; and Section E assesses which measures were taken quickly and from a long-term perspective after an aggressive incident. At the end of the survey is a free text field named 'personal remarks and amendments' for additional comments.

2.4 | Ethical considerations

The study was reviewed and approved by the responsible ethics committee (Project ID: 2019-00502 EKOS: 19/041).

2.5 | Data analysis

Variables were analysed using descriptive statistics (frequencies). After an explorative analysis of the data set, multiple regression models were calculated for assessing relationships between organizational support (self-rated skills) and perceived burden or negative feelings after an aggressive incident. Associations between self-rated skills and received aggression management training were investigated using logistic regression. Assumptions were checked, and outliers (cases with standardized absolute residuals greater than three) were eliminated. We conducted the statistical analysis using IBM SPSS Statistics (Version 25). A level of significance of 0.05 was assumed.

3 | RESULTS

From the 1923 questionnaires sent out, 874 were returned, or a response rate of 45.4%. We excluded 22 (2.5%) questionnaires from analysis either because the cover pages were missing ($n = 1$), less than 50% of the questionnaire was answered ($n = 13$) or socio-demographic data were not provided ($n = 8$). The final sample of 852 questionnaires (44.3%) was used for data analysis.

3.1 | Description of the organizations and participants

A total of 24 home care service organizations with employees ranging from 23 to 319 participated in our study. Table 1 illustrates the socio-demographic data of the participants. The mean response rate was 55.6%, ranging from 4.0% to 92.0%. The two organizations that did not allow filling the questionnaire during working hours had a response rate of under 30.0%. Whereas a majority of the participating organizations had under 50 employees ($n = 12$), eight organizations had 51–150 employees, and the rest ($n = 4$) had more than 150 employees. Four of the participating organizations were located in rural, five in urban and 15 in suburban areas. Two organizations were for-profit organizations, and the rest, non-profit.

3.2 | Organizational structures

A third (33.3%, $n = 284$; missing: $n = 18$; 2.1%) of professional caregivers reported that an official procedure for employees affected by aggressive behaviour was in place at the home care service they worked for. Meanwhile, 17.1% ($n = 146$) reported no official procedure, and 47.4% ($n = 404$) reported that they were not aware of any available official procedure. The documentation of aggressive behaviour was mostly done in the written nursing report (88.3%, $n = 708$, missing: $n = 5$; 0.6%,). About 5% ($n = 43$) of the participants reported a protocol being followed in their organization to document aggressive behaviour, and 22.1% ($n = 188$) reported the availability of an official reporting system. Of the latter, 179 persons answered the question on reporting aggressive incidents: 46.9% ($n = 84$) reported all or nearly all of the incidents, whereas 53.1% ($n = 95$) reported half or less of the aggressive incidents.

A total of 61.5% ($n = 524$) of the professional caregivers stated that support was available at the workplace in general, whereas 61.4% ($n = 523$) reported that specific management team support was available. Nearly half of the participants (49.9%, $n = 425$) said that support from team colleagues was available, 27% ($n = 230$) said employees were reluctant to discuss aggressive behaviour at the workplace, and 12.8% ($n = 109$) said it was difficult to receive support at the workplace in general. Table 2 illustrates the correlation of the items regarding organizational support and the IMPACS items (negative feelings after aggressive incidents). Significant associations

TABLE 1 Socio-demographic characteristics of the participants

Socio-demographic characteristics		Total ($n = 852$)		
		n	(%)	Missing
Sex	Female	818	96.0	$n = 2$; 0.2%
Age (years)	18–29	121	14.2	
	30–45	250	29.3	
	>45	479	56.2	$n = 2$; 0.2%
Education	Nurse	397	46.6	
	Psychiatric nurse	20	2.3	
	Health specialist	210	24.6	
	Nursing assistant	131	15.4	
	House aid and others	80	9.4	$n = 14$; 1.6%
Working experience (years)	0–4	83	9.7	
	5–9	145	17.0	
	10–15	175	20.5	
	>15	442	51.9	$n = 7$; 0.8%
Level of employment	<50%	300	35.2	
	50%–79%	225	26.6	
	80%–100%	320	37.6	$n = 7$; 0.8%
Time of direct contact with care recipient (in relation to total work time)	<30%	91	10.7	
	30%–60%	288	33.8	
	>60%	461	54.1	$n = 12$; 1.4%

Source: Schnelli, Mayer, et al. (2021).

between the items 'support of the management is available', 'support of team colleagues is available', 'difficulty of receiving support at the workplace', 'employees are reluctant to discuss aggressive behaviour at the workplace' and 'support is available at the workplace' with IMPACS items were found. The IMPACS item 'I have a guilty conscience regarding the patient' resulted in no significant correlation with the items regarding organizational support. None of the five aspects of organizational support after aggressive incidents remained in the ANOVA model with 'I have a guilty conscience regarding the patient', and therefore, this item is not illustrated in Table 2.

3.3 | Aggression management training

Our survey found that 48.7% ($n = 415$; missing: 1.3%, $n = 11$) participants received aggression management training during their professional education or their work time as a professional caregiver. None of the house aides or the nursing assistants had received aggression management training. Therefore, the results regarding aggression management training do not involve these persons. Aggression management training was rated as unimportant, slightly important or moderately important by 26.2% ($n = 220$, missing: 1.6%, $n = 14$) and as important or very important by 72.5% ($n = 618$) of the participants. The self-rated skills regarding aggression management strategies are illustrated in Table 3. The skills 'knowledge on physical defence techniques', 'ability to confront patients with their aggressive behaviour' and 'ability to address the needs of persons who show aggressive behaviour' were rated the lowest.

A logistic regression model to find out if self-rated skills are associated with received aggression management training was built. The results of the logistic regression are illustrated in Table 4. Those with better knowledge of physical defence techniques ($p = .000$) as well as the ability to perceive their behaviour in dealing with aggressive patients ($p = .013$) were significantly more likely to have had training and were the only remaining items in the model. There was no significant association between the rating of the skills and aggression management training received in most items.

The analysis found that some skills influence the perception of the burden, especially after verbally aggressive events (Table 5). However, some of the higher rated self-perceived skills engraved the perceived burden after verbally aggressive incidents. Only the self-perceived skills 'ability to seek conversation with the patient with aggressive behaviour' ($B = -.287$, $p = .047$, F_{model}: 3.191 corr. $R^2 = 0.013$, df: (2; 344), $p_{model} = .042$, $n = 347$) and 'ability to set boundaries' ($B = .301$, $p = 0.32$, F_{model}: 3.191 corr. $R^2 = 0.013$, df: (2; 344), $p_{model} = .042$, $n = 347$) had a significant influence on such burden after physically aggressive incidents; there were none for experiencing threats.

TABLE 2 ANOVA: Organizational support and IMPACS

		Support available at the workplace	Support from the management is available	Support from team colleagues is available	Employees are reluctant to discuss aggressive behaviour in the workplace	It is difficult to receive support at the workplace	p_{model}	df	Adj. R^2	*F*	*n*
I have feelings of anger towards the institution I work in	B[a]		−.169	.109		.106		1			
	p		.001	.009		.001	.000	426	.171	23.220	432
I experience a disturbance in the relationship with the patient	B[a]	−.281				-.094		1			
	p	.000				.058	.000	436	.037	9.334	439
I avoid contact with the aggressive patient	B[a]	−.299						1			
	p	.000					.000	431	.071	33.888	433
I feel sorry for the patient	B[a]				−.131			2			
	p				.001		.000	433	.034	8.600	436
I feel insecure at work	B[a]	−.213						1			
	p	.000					.000	427	.041	19.455	430
I feel that I have to deal with society's problems	B[a]		−.234		.101			2			
	p		.000		.023		.000	434	.048	12.029	437
I feel insecure in working with the patient	B[a]				−.115	.134		1			
	p				.003	.001	.000	435	.030	7.758	439
I have feelings of being a failure	B[a]	−.116						1			
	p	.019					.012	429	.012	6.352	432
I feel ashamed of my work	B[a]	−.046						1			
	p	.013					.013	418	.012	6.292	421

[a]Regression coefficient (IMPACS: 1 = *never*, 5 = always; organizational support: 1 = *totally disagree*, 5 = *totally agree*).

TABLE 3 Self-rating of skills in aggression management

Organizational support (*total n = 852*)	Good or very good		Not good or bad		Missing
	n	%	*n*	%	
Ability to seek conversation with the patient with aggressive behaviour	653	76.6	167	19.6	*n* = 32, 3.8%
Ability to protect oneself against physical assaults	643	75.5	177	20.8	*n* = 32, 3.8%
Ability to set boundaries	632	74.2	187	21.9	*n* = 33, 3.9%
Ability to demonstrate that aggressive behaviour will not be tolerated	618	72.5	200	23.5	*n* = 34, 4.0%
Ability to address the needs of aggressive patients	595	69.8	223	26.2	*n* = 34, 4.0%
Ability to show appreciation towards the aggressive person	625	73.4	183	21.5	*n* = 44, 5.2%
Ability to confront aggressive patients about their behaviour	464	54.5	350	41.1	*n* = 38, 4.5%
Knowledge on physical defence techniques	350	41.1	476	55.9	*n* = 26, 3.1%
Ability to perceive one's behaviour in dealing with aggressive patients	708	83.1	109	13.3	*n* = 35, 4.1%
Ability to show understanding of the situation of the aggressive patient	675	79.2	135	15.8	*n* = 42, 4.9%

TABLE 4 Association of aggression management training and self-rated skills

	B[a]	Wald	*p*	Exp(B)	Confidence interval (95%)
Associated self-rated skills to received training					
Knowledge of physical defence techniques	−0.655	25.545	.000	.519	0.419–0.644
Ability to perceive one's behaviour in dealing with aggressive patients	−0.387	7.742	.013	.679	0.500–0.921

Note: Backward stepwise according to likelihood ($n = 707$; Hosmer–Lemeshow test: $p = 0.164$, Nagelkerkes $R^{2:}$ 0.101, classification of prediction: 61.4%; $X^2(2) = 55.584$, $p = .000$, 1 = *very good*, 2 = *good*, 3 = *not good*, 4 = *bad*).
[a]Regression coefficient.

4 | DISCUSSION

To our knowledge, this is the first investigation that surveyed organizational, management and team support and aggression management training conditions and their effect on the negative consequences of aggressive incidents in home care services. It found that availability of organizational support and aggression management conditions reduced negative feelings or burden after aggressive incidents.

Regarding organizational support, there was a lack of availability of reporting systems or internal concepts to prevent or deal with aggressive incidents, in line with the insights received from inpatient settings (Heckemann et al., 2020). A third of the participants reported an established official procedure to deal with aggressive incidents, and 22.1% said there was an official reporting system available, yet the reporting rate in the latter case was poor at under 50%. This conforms to the current literature, confirming that reporting of aggressive incidents is low (Edward et al., 2014). Reasons for non-reporting in inpatient settings are high administrative burden and a lack of time, the fear of stigma after reporting an incident or of no reaction on reporting (Edward et al., 2014; Schnelli et al., 2019). Based on our data, it remains unclear why the reporting rate in the home care setting is poor, and further research on that topic is suggested. As our survey found a poor reporting rate of aggressive incidents, one can suggest that reporting systems are not well established. The importance of measures to aid the implementation of reporting systems has been emphasized by studies in the acute hospital setting (Hahn et al., 2012; Schnelli et al., 2019). In home care settings, the implementation of a reporting system is possibly more challenging because professional caregivers are not physically present in the organization, and therefore, the personal information on the reporting systems is difficult (Genet et al., 2012).

Another aspect regarding organizational support found in the survey was that the general attitude of an organization that makes the employees feel they receive support if they need it leads to reduced negative feelings after aggressive incidents: Availability of support in the workplace is strongly linked to fewer feelings of 'disturbance of the relationship', 'avoidance of contact with the aggressive patient', 'insecurity at work', 'being a failure' and 'shame', whereas difficulties in receiving support at the workplace provoke feelings of 'anger' or 'insecurity' when working with the patient.

In line with research from inpatient settings, the survey identified the support of the management as crucial in the prevention of

TABLE 5 ANOVA abilities and perceived burden after verbally aggressive incidents

Self-rated skills		Burden after verbally aggressive incidents
Ability to seek conversation with the patient with aggressive behaviour	B[a]	*Not in the model*
	p	
Ability to protect oneself against physical assaults	B[a]	.160[b]
	p	.091
Ability to set boundaries	B[a]	*Not in the model*
	p	
Ability to demonstrate that aggressive behaviour will not be tolerated	B[a]	.234[b]
	p	.015
Ability to address the needs of aggressive patients	B[a]	.271[b]
	p	.009
Ability to behave appreciatively towards the aggressive person	B[a]	.211[b]
	p	.042
Ability to confront aggressive patients about their behaviour	B[a]	−.265[b]
	p	.004
Knowledge of physical defence techniques	B[a]	−.194[b]
	p	.010
Ability to perceive own behaviour in dealing with aggressive patients	B[a]	
	p	
Ability to show understanding for the situation of the aggressive patient	B[a]	.165
	p	.077

Note: (adj. $R^2 = 0.108$, F_{model}: 7.471, $df_{model} = (7; 369)$, $p_{model} = .000$, n = 377).

[a]Regression coefficient (self-rated skills: 1 = *very good*, 2 = *good*, 3 = *not so good*, 4 = bad).

[b]Due to the direction of the scales, the signs are to be interpreted as follows: Negative implies higher burden; positive implies lower burden.

negative feelings after aggressive incidents (Heckemann et al., 2020). Availability of support from the management significantly reduces 'anger' and the feeling 'to deal with society's problems' after aggressive incidents. Feelings such as 'anger', 'disturbance of the relationship', 'insecurity' or 'shame' as a perceived consequence of aggressive behaviour might influence the interaction between the professional caregiver and the care recipient, worsening the aggressive behaviour (Richter, 2012). These insights substantiate that organizational and management support is crucial in the primary as well as secondary prevention of aggressive behaviour against professional caregivers. This is also in line with theoretical approaches on person-centred care. McCormack and McCance's (2016) person-centred care model establishes that the care environment, such as the workplace, is a crucial aspect of successful caregiving. They state that shared decision-making, effective staff relationships and supportive organizational systems are necessary to provide person-centred care. An organization aiming at person-centred care delivery, therefore, should establish a positive safety culture and provide organizational support. Another aspect of the care environment in a person-centred care model is the presence of effective staff relationships (McCormack & McCance, 2016), which might be influenced on the interpersonal exchange after aggressive incidents and therefore requires the availability of team support. In this study, we investigated the 'reluctance to discuss aggressive incidents', which yielded ambivalent results. On the one hand, this reluctance seemed to reduce feelings of compassion and insecurity in working with the patient, whereas on the other hand increasing the feeling of having to deal with society's problems. Interestingly, 'receiving support from team colleagues' is strongly associated with an increased feeling of 'anger' after aggressive incidents. This result hints that unguided discussions between team colleagues might increase negative feelings against the care recipient. In the light the results of Schnelli, Ott et al. (2021), which disclose that staff with lower education is mostly used in the case of clients with aggressive behaviour, these insights highlight the need for guided reflexive processes. Guided reflexive processes such as case reviews might help reframe the aggressive incidents experienced. Based on these results, an extension of conducting case reviews is indicated in home care services. A lack of professional guided interpersonal discussion of aggressive incidents might decrease the chances of questioning one's actions when working with the patient, decreasing the quality of care.

Questioning one's actions can also be part of aggression management training. Aggression management training was also part of the survey and the results of this study are in line with results from inpatient settings (Heckemann et al., 2015): Less than half of the participants (48.7%) had received aggression management training during their education or work time. However, self-rated skills regarding aggression management were high, but the skills need to be reviewed closely because it is important to include any potential discrepancy between self-rated skills and potentially lower actual skills. The review of self-rated skills and actual skills is an important aspect in intervention development to address aggression management in home care. Increased self-rated skills of 'perceive their behaviour in dealing with aggressive incidents' and 'knowledge of physical defence techniques' were significantly associated with the group that received aggression management training. These results are partly in line with Heckemann et al. (2015), highlighting the positive effect of aggression management training on confidence, attitude, skills and knowledge. However, as Heckemann et al. (2015) state, aggressive management training might not lead to decreased aggressive incidents, but to reduced perceived burden after experiencing aggressive incidents and to increased team resources to deal with the incidents. Our study found that the most sought skills were not positively associated with the group who received aggression management training. This indicates that aggression management training is not sustainable. However, most of the survey participants (72.5%) marked training as important or very important, highlighting its benefits. Aggression management training must be refreshed at regular intervals to ensure sustainability, a practice not being followed by home care services.

It was also found that increased self-rated skills in aggression management might reduce the perceived burden after aggressive incidents, whereas other increased self-rated skills enhance the

perceived burden significantly. The skills 'addressing the needs of the patient', 'acting appreciatively', 'demonstrating that aggressive behaviour is not tolerated' and 'to set boundaries' are associated with decreased perception of burden after aggressive incidents. The finding underlines the importance of knowing one's boundaries and communicating them. The skills 'acting appreciatively' and 'addressing the needs of the patient' during aggressive behaviour indicate a person-centred nursing attitude that might improve well-being during and after aggressive incidents. A constructive way to deal with the situation by 'acting appreciatively' or 'addressing the needs of the patient' might lead to a positive end to the situation, reducing the burden. Aggression management training and nursing education must specifically address these skills in the future. The skills 'confronting aggressive patients with their behaviour' and 'knowledge of physical defence techniques' increased the perceived burden and seem to be of a more confrontative nature. These skills do not address specific situations and, when used, lead to more burden after aggressive incidents. The safety of a physically present team in the background is not assured in the home care setting, indicating that these strategies increase burden instead of decreasing it. Such aspects in the development of future aggression management training must be addressed, with a focus on specific conditions in home care settings. The conditions in home care services should be improved to provide person-centred and need-oriented care while supporting the employees.

4.1 | Limitations

We conducted an explorative cross-sectional survey using a convenience sample that is not representative. Our sample is comparable to the entirety of professional home caregivers in Switzerland, although registered nurses were over-represented (Bundesamt für Statistik, 2020). This indicates that better-educated nurses are more likely to consider the topic relevant because they have more resources gained from their nursing practice. The survey studies which structures for organizational support in the organizations are available; however, the results focus on the German-speaking part of Switzerland, making the transferability of the results possible with caution. Our results are partly in line with research in the field of aggression management and its lack around home care settings. This study with an exploratory approach gains basic insights on the topic; however, further research is necessary to strengthen these insights.

5 | CONCLUSION

Home care services in the German-speaking part of Switzerland have established organizational support structures. However, reporting systems or official procedures are present in very few organizations, and the reporting rate is only under 50%. Therefore, home care organizations should implement such structures urgently and carefully. Organizational and management support can lead to reduced negative feelings after aggressive incidents, underlining the importance of a positive safety culture and promoting guided interpersonal exchange between professional caregivers. Aggression management training should be further established in nursing education, with refreshers tailored to specific situations in home care settings. Aggression management training should especially focus on constructively learning from aggressive behaviour. Further research on organizational structures in home care services with a focus on aggression management and the implementation of aggression management concepts is necessary to improve the situation for professional caregivers and the care recipient regarding the occurrence and consequences of aggressive behaviour.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Leadership in home care services must have a positive safety culture, and regular and specific aggression management training on the agenda. Additionally, the implementation of further measures like reporting systems or regular case reviews is necessary. To implement such measures, specific strategies that address the nature of home care services should be developed. The specific nature of home care services means that staff is not regularly in the spatial structures of the organization and staff exchange is reduced. This makes it challenging to ensure the flow of information regarding client situations or even implementation of innovations.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

ETHICS STATEMENT

The study was reviewed and approved by the Ethics Committee Eastern Switzerland, Project ID: 2019-00502 EKOS: 19/041.

AUTHOR CONTRIBUTIONS

Study design: AS, AZ, HM and SO; data collection: AS; data analysis: AS and SO; manuscript preparation: AS, AZ, SO and HM.

DATA AVAILABILITY STATEMENT

Data available only on request due to privacy restrictions.

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ORIGINAL ARTICLE

WILEY

Preventing intimate partner violence among foreign-born Latinx mothers through relationship education during nurse home visiting

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Abstract

Aims: This study aimed to examine the effectiveness of an augmented home visiting programme in preventing intimate partner violence among Latinx mothers by nativity.

Background: Intimate partner violence diminishes home visit programmes' effectiveness. Immigrant Latinx mothers are especially vulnerable and need culturally tailored prevention.

Methods: We performed secondary analyses of 33 US-born and 86 foreign-born Latinx mothers at baseline and 1- and 2-year follow-up in a longitudinal randomized controlled trial of the Nurse-Family Partnership programme augmented with nurse-delivered *Within My Reach* relationship education curriculum and violence screening and referrals in Oregon. We estimated proportional odds models via generalized estimating equations on total physical and sexual victimization and/or perpetration forms (an ordinal variable), adjusting for intervention, wave, age and education.

Results: The intervention–nativity interaction was not significant ($p = .953$). Foreign-born status was associated with lower reported violence at baseline (adjusted odds

ratio: 0.29, 95% confidence interval: 0.13–0.67, $p = .004$). This association was marginally significant at 1-year follow-up (0.43, 0.17–1.08, $p = .072$) and not significant at 2-year follow-up (0.75, 0.33–1.67, $p = .475$).

Conclusions: This augmented programme was not effective for Latinx mothers by nativity. Their nativity gap diminished over time.

Implications for Nursing Management: Nursing leaders should support culturally tailored home visiting programmes to detect and prevent intimate partner violence affecting Latinx immigrants.

Clinical Trial Registration: This study is registered at www.clinicaltrials.gov NCT01811719. The full trial protocol can be accessed at https://clinicaltrials.gov/ct2/show/NCT01811719.

KEYWORDS

immigrant Latinx health, intimate partner violence, maternal and child health nursing, nurse-delivered home visitation, randomized controlled trial, relationship education programmes

1 | INTRODUCTION

Early home visiting is a service delivery model and a vital health promotion strategy for vulnerable families (Condon, 2019). Despite these goals and the overall effectiveness of home visits on maternal and child outcomes, for example, a 48% reduction in child maltreatment (Kitzman et al., 1997; Olds et al., 1997), intimate partner violence (IPV) has been common and particularly challenging to detect and address with home visiting (Sharps et al., 2008). Across all 19 home visiting models in the Maternal, Infant, and Early Childhood Home Visiting Program in the United States (Condon, 2019; Maternal and Child Health Bureau, 2020), IPV has been widely screened (Lachance et al., 2020), is quite common (26%) (Duggan et al., 2018) and likely dampens the effectiveness of service delivery (Eckenrode et al., 2000).

Latinx mothers are particularly vulnerable to IPV. Although the prevalence and even some impacts of IPV may be similar for Latina and non-Latina women, particularly after risk factors are controlled for (Bonomi et al., 2009; Klevens, 2007), several studies do suggest Latina women suffer IPV more frequently due in large part to said risk factors (Klevens, 2007). Besides structural and sociocultural factors leading to more hierarchical gender relations affecting Latin American and, to some extent, US-born Latinx women (Cianelli et al., 2008; Mancera et al., 2017), foreign-born women in particular are more vulnerable to abuse because they are more likely to experience barriers to accessing formal support systems and less likely to leave an abused relationship due to fear of deportation, limited language proficiency and a lack of strong support networks (Marrs Fuchsel & Brummett, 2020). This social, legal and physical isolation can create mistrust of formal systems, resulting in barriers to health and social services (Jean-Baptiste et al., 2017).

Due to the trauma and barriers to broader service delivery IPV produces, it is particularly important to address IPV. The hope is that early visiting programmes can help disrupt IPV and some research has been devoted to this issue. Two randomized controlled trials in the United States evaluated the effectiveness of the Nurse-Family Partnership (NFP) programme augmented with IPV components. However, neither trial showed a reduction in IPV or improvement in maternal quality of life (Feder et al., 2018; Jack et al., 2019). As a sensitive issue, women may often not disclose IPV experiences and providers can face discomfort and fear about IPV management, especially when victims are minority patients and perpetrators are around (Evans & Feder, 2016).

Despite its limited impacts, research still needs to address how heterogeneous are the impacts of these home visiting programmes on various vulnerable populations, including Latinx immigrant women. Federal home visiting programmes include a large share of Latinx mothers (e.g., 37%) (Duggan et al., 2018). A review of 10 articles on IPV programmes among immigrant Latinx populations did not identify studies on home visiting but report positive impacts of culturally specific, theoretically grounded and group-based programmes on depression, self-esteem and knowledge of wellness (Marrs Fuchsel & Brummett, 2020). Culturally tailored programmes included the use of Spanish language, cultural considerations and culturally relevant topics (e.g., gender roles, social isolation, immigration, religiosity, family and community unity, and access to legal protection) (Marrs Fuchsel & Brummett, 2020). Only one study protocol to date—on SafeCare+®, an evidence-based parenting curriculum augmented with a healthy relationship curriculum—was designed to reduce IPV and child maltreatment for Latinx families (Fettes et al., 2020). However, the programme is still in the implementation phase and providers are not nurses (Fettes et al., 2020).

In this context, secondary analyses of prior trials focusing on Latinx women can be informative. Both the Feder and Jack trials included a high proportion of Latinx participants (50% and 46%, respectively). The Feder trial also integrates a primary prevention against IPV, namely, a relationship education curriculum called *Within My Reach* (Pearson et al., 2005).

Given these features, in this study, we used data from the Feder trial (Feder et al., 2018) to evaluate the effectiveness of the augmented NFP programme in preventing IPV among Latinx mothers, paying particular attention to differences by nativity. This trial assessed programme effects at 1- and 2-year follow-up. This longitudinal design allows us to track when the prevention programme started to show an effect and to understand how the effect changed over time.

1.1 | Theoretical framework

The theoretical framework guiding our analysis on Latinx nativity status and IPV integrates an intersectionality framework and an ecological model and is adapted from the work on IPV in Latin American women in Toronto (Godoy-Ruiz et al., 2015) and our prior work (Li et al., 2021), illustrated in Figure 1. Understanding foreign-born effects requires consideration of how it intersects with and mutually reinforces other forms of disadvantage (e.g., discrimination and response to IPV interventions) on the life course (Landale et al., 2017), for which both the intersectionality framework and an ecological model are helpful. The intersectionality framework posits that overlapping forms of oppression related to gender, race, ethnicity, nativity, immigration status and other social locations shape the experiences of individuals (Bowleg, 2012), including not only the IPV experiences of Latinx mothers but also their reports of IPV and responses to interventions against IPV. Relatedly, an ecological framework emphasizes contextual influences on individual behaviour and health (Guruge & Khanlou, 2004; Heise, 1998).

Therefore, we hypothesized that the life trajectories of US-born and foreign-born Latinx mothers could affect their responses to the home visiting programmes augmented with IPV prevention differently. Potential mechanisms are to shape their understanding of relationship commitment and their process to gain skills for future-oriented decisions (Figure 1). We assessed if the augmented programme reduced IPV among Latinx mothers by nativity. We also reviewed programme documents to learn how culturally tailored the augmented programme was compared with the standard programme.

2 | METHODS

2.1 | Design, sample, setting and randomization

We performed secondary data analyses of Latinx mothers at three waves (baseline and 1- and 2-year follow-up) of a longitudinal randomized controlled trial (Feder et al., 2018; Niolon et al., 2009). Our study protocol (#Temp-2399) was not human subject research as determined by the Institutional Review Board of San Diego State University.

In the Feder trial (Feder et al., 2018), first-time, low-income mothers in Multnomah County, Oregon, were recruited from 2007 to 2009 and assigned at random to either the augmented or standard programme. All women contacted the NFP referral line, met the NFP programme criteria and spoke either English or Spanish. Of 238 women who completed the baseline survey, retention was 88% and 81% after 1- and 2-year follow-up. Among 119 mothers who identified themselves as Hispanic, 75 were in the augmented programme, 44 in the standard programme, 33 were US-born (13 in the standard programme and 20 in the augmented programme) and 86 were foreign-born (31 and 55, respectively). Non-Hispanic White mothers ($n = 70$) were not included as a comparison.

2.2 | Intervention

As described in more detail by Feder et al. (2018), the IPV intervention included three components. First, a 15-unit primary prevention curriculum, *Within My Reach* (Pearson et al., 2005), focused on building and maintaining healthy and committed relationships (e.g., vision exercise, and sliding versus deciding) (Rhoades & Stanley, 2011) and skills-based activities on communication, decision making and conflict management to reduce the risk of IPV (Pearson et al., 2005). Second, structured verbal screening of IPV was conducted at regular intervals (Feder et al., 2018). Third, those reporting IPV were provided brochure-driven intervention and referral (McFarlane et al., 1992).

By the end of the trial, the IPV prevention programme was delivered by four English-speaking and two Spanish-speaking trained

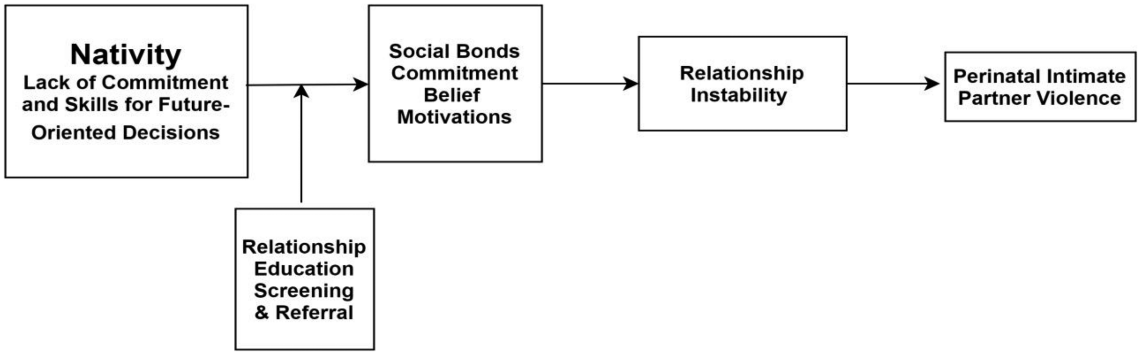

FIGURE 1 Maternal nativity in intersectionality framework with an ecological model in the mechanisms of change on how relationship education prevents intimate partner violence, adapted from a manuscript (Li et al., 2021)

nurses in the augmented programme, and eight and four respectively in the standard programme. Given an unanticipated increase in the number of Spanish-speaking clients consenting into the NFP programme, one additional Spanish-speaking nurse was added into two programmes. The Spanish-speaking nurses were matched with Latinx mothers with needs for Spanish. However, counts of Latinx nurses were unknown. Among measures in the survey, only the revised Campbell's Danger Assessment was translated and back-translated into Spanish with content validation by Spanish-speaking experts on IPV (Campbell et al., 2009).

2.3 | Measures

Mothers were interviewed at three waves (baseline and 1- and 2-year follow-up) by research assistants in-person or using Audio Computer-Assisted Self-Interview software on the laptop (65%) in an English or Spanish version (Feder et al., 2018).

The primary outcome was IPV, operationalized as the perpetration and victimization of physical and sexual violence in the past year, using the Revised Conflict Tactics Scale. This measure has high internal consistency within scales and good validity (Straus et al., 1996). This scale included subscales for physical assault (12 items) and sexual coercion (7 items). We summed physical and sexual victimization and/or perpetration to construct the total forms of reported IPV. Therefore, IPV was an ordinal outcome that ranged from 0 for no violence to 4 for all forms of violence. The absence of any form indicated a violence free status and was a binary variable.

Maternal nativity was based on the question: 'Were you born in the US?'

Maternal low education for age was operationalized on the basis of the highest level of education. Latinx mothers who are (1) at least 18 years old and do not have a general educational development test or high school diploma or (2) between 15 and 17 years old without high school education were therefore coded as having low education for age.

Relationship with the child's father was based on maternal choice: 'living separately, casually dating each other', 'living separately, dating each other exclusively', 'living together, dating each other, but also other people', 'living together, dating each other exclusively', 'engaged' or 'married'.

Relationship stability. When a woman confirmed a current romantic relationship with her child's father, she was asked for his first name. Relationship stability was a dummy variable operationalized as whether the same father was identified from pregnancy to 1-year follow-up or over three waves (i.e., yes or no).

Commitment. A committed relationship was operationalized as being married or engaged, which would be markers of psychological commitment between partners, such as dedication to the joint benefit of each partner and the future (Li et al., 2010; Rhoades et al., 2010), which has been shown in turn to be associated with lower tendency for aggression to a partner (Rhoades et al., 2010).

2.4 | Data analysis

All analyses were performed using SAS 9.4 (SAS Institute, Cary, NC). Descriptive statistics were calculated. Chi-squared tests and *t* tests for differences of proportions and means were used to examine the significance of univariate analyses between maternal characteristics and nativity status and of bivariate associations between maternal nativity status and IPV. Because IPV was coded as an ordinal variable across the three waves, we performed the proportional odds model of generalized estimating equations (Stokes et al., 2012) for IPV forms, which allows for the adjustment of standard errors to the clustering of observations within individuals. Generalized estimating equations were performed for a binary outcome of IPV free status. With these two approaches, we investigated the association between maternal nativity status and IPV, adjusting for the intervention status, wave, age and education. Due to our research questions and the longitudinal nature after the IPV prevention programme, three interaction terms (i.e., the moderation effect between intervention and nativity, the different intervention effects on waves and the different nativity effects on waves) were included in the models. We selected $\alpha = .05$ as the level of significance.

3 | RESULTS

As shown in Table 1, at baseline, compared with US-born counterparts, foreign-born Latinx mothers were less likely to report IPV (24% vs. 65% and 42% vs. 69% in augmented and standard programmes, respectively, $p < .05$) and report fewer forms of IPV (0.4 vs. 1.3 and 1.1 vs. 1.5 in augmented and standard programmes, respectively, $p < .05$). More importantly, compared with their reports at baseline, US-born Latinx mothers in both standard and augmented programme as well as foreign-born mothers in the standard programme reported similar levels of IPV across waves, suggesting that neither standard nor augmented programmes were effective for these mothers. In contrast and unexpectedly, foreign-born Latinx mothers in the augmented programme increasingly reported *higher* rates of experiencing IPV (24%, 45% and 55%, comparisons $p > .100$) and more forms of IPV across waves (0.4, 0.7 and 0.8, Wave 3 vs. Wave 1 $p = .012$, other comparisons $p > .100$). The ratio of the augmented/standard programme percentage of violence by nativity and wave shows more clearly that the programme was not effective for US-born women (0.94, 0.96 and 0.94). This indicator shows even worse outcomes by wave for foreign-born women (0.57, 1.15 and 1.15). Thus, the augmented programme either made violence worse for foreign-born women or, perhaps more likely, helped uncover more violence that already existed.

Our multivariable models, which control for important sociodemographic characteristics that differ somewhat by nativity and programme assigned, confirm these patterns. As shown in Table 2, after first fitting a model that allowed for the effect of the intervention to vary by wave and nativity, none of these were significant for either of two outcomes ($p > .050$; for example $p = 0.414$ and 0.953

TABLE 1 Social demographics, relationship quality and intimate partner violence by nativity status among 119 Latinx mothers in a trial, Oregon, 2005 to 2011

Measures	US-born ($n = 33$)			Foreign-born ($n = 86$)			US- vs. foreign-born
	Standard $n = 13$	Augmented $n = 20$		Standard $n = 31$	Augmented $n = 55$		p value
Any violence			A/S			A/S	
Baseline	69%	65%	0.94	42%	**24%**	0.57	.003*
1-year follow-up	62%	60%	0.96	39%	**45%**	1.15	.086**
2-year follow-up	69%	65%	0.94	48%	**55%**	1.15	.015*
Violence forms (0 to 4)							
Baseline	1.5 (1.3)	**1.3 (1.2)**		1.1 (1.4)	**0.4 (0.7)**		.008*
1-year follow-up	1.8 (1.9)	**1.1 (1.2)**		0.9 (1.4)	**0.7 (1.0)**		.235
2-year follow-up	1.3 (1.1)	**0.9 (1.1)**		1.0 (1.3)	**0.8 (1.0)**		.651
Age at the baseline	18.6 (3.8) 15–27	18.3 (4.5) 15–36		22.2 (5.3) 15–34	20.7 (3.8) 15–29		.002*
Education at the baseline							.002*
Elementary	0%	0%		10%	13%		
6–8th grade	0%	0%		19%	31%		
9–12th grade	62%	55%		32%	33%		
General educational development test	0%	15%		3%	0%		
High school graduate	38%	30%		32%	22%		
Low education for age	15%	20%		55%	60%		<.001*
Annual family income baseline							
<$21,000	31%	45%		68%	62%		.023*
Missing	31%	40%		23%	25%		
Employed at the baseline	77%	70%		87%	90%		.037*
Relationship with child's father							
Baseline							.170
Missing	4 (31%)	2 (10%)		7 (23%)	12 (22%)		
Living separately, dating casually	0	0		0	1 (2%)		
Living separately, dating exclusively	4 (31%)	6 (30%)		3 (10%)	6 (11%)		
Living together, dating casually	0	0		0	0		
Living together, dating exclusively	2 (15%)	5 (25%)		7 (23%)	15 (27%)		
Engaged	1 (8%)	4 (20%)		3 (10%)	10 (18%)		
Married	2 (15%)	3 (15%)		11 (35%)	11 (20%)		
1-year follow-up							.029*
Missing	6 (46%)	6 (30%)		9 (29%)	16 (29%)		
Living separately, dating casually	2 (15%)	1 (5%)		0			
Living separately, dating exclusively	0	4 (20%)		1 (3%)	3 (5%)		
Living together, dating casually	0	0		0	2 (4%)		
Living together, dating exclusively	3 (23%)	4 (20%)		4 (13%)	14 (25%)		
Engaged	0	2 (10%)		4 (13%)	8 (15%)		
Married	2 (15%)	3 (15%)		13 (42%)	12 (22%)		
2-year follow-up							.396
Missing	6 (46%)	9 (45%)		11 (35%)	23 (22%)		
Living separately, dating casually	1 (8%)	0		0	1 (2%)		
Living separately, dating exclusively	0	3 (15%)		0	2 (4%)		

(Continues)

TABLE 1 (Continued)

Measures	US-born ($n = 33$)		Foreign-born ($n = 86$)		US- vs. foreign-born
	Standard $n = 13$	Augmented $n = 20$	Standard $n = 31$	Augmented $n = 55$	p value
Living together, dating casually	0	1 (5%)	0	1 (2%)	
Living together, dating exclusively	1 (8%)	2 (10%)	3 (10%)	8 (15%)	
Engaged	3 (23%)	2 (10%)	5 (16%)	6 (11%)	
Married	2 (15%)	3 (15%)	12 (39%)	14 (25%)	
Relationship stability					
Time 1 to Time 2	54%	60%	65%	60%	.876
Across 3 time points	38%	45%	52%	42%	.954

Note: At 1-year follow-up, 8 (7 in the augmented programme and 1 in the standard programme) foreign-born mothers and 4 (3 and 1) US-born mothers dropped out. At 2-year follow-up, 13 (11 and 2) foreign-born mothers and 5 (4 and 1) US-born mothers did. The major differences are bolded.
Abbreviation: A/S, the ratio of the augmented/standard percentage of violence by nativity and wave.
*$p < .05$. **$p < .10$.

TABLE 2 Multivariable analysis of maternal nativity status and intimate partner violence among 119 Latinx mothers in a trial, Oregon, 2005 to 2011

Outcome types	Intimate partner violence					
	Model 1[a]			Model 2[b]		
	Violence forms			Any violence		
	AOR	95% CI	p value	AOR	95% CI	p value
Intervention–wave interaction			.414			.506
Intervention–nativity interaction[c]			.953			.982
Nativity–wave interaction						
Nativity effect at pregnancy	0.29	0.13–0.67	.004*	0.23	0.09–0.59	.002*
Nativity effect at 1-year follow-up	0.43	0.17–1.08	.072**	0.55	0.23–1.34	.189
Nativity effect at 2-year follow-up	0.75	0.33–1.67	.475	0.61	0.25–1.48	.273
Augmented vs. standard programme before intervention	0.38	0.18–0.82	.013*	0.47	0.20–1.09	.080**
Age	0.95	0.90–1.01	.095**	0.96	0.91–1.01	.112
Low education for age	1.19	0.67–2.13	.553	1.19	0.65–2.19	.574

Abbreviations: AOR, adjusted odds ratio, adjusting for intervention, wave, age and education; CI, confidence interval.
[a]Proportional odds model of generalized estimating equations.
[b]Generalized estimating equations.
[c]p values for the intervention–nativity interaction before being deleted from the models.
*$p < .05$. **$p < 0$.

for violence forms, respectively). This suggests that the lack of effectiveness of the augmented programme described before was similar for US-born and foreign-born mothers.

Note that augmented programme participants did report lower IPV before intervention. The adjusted odds ratio (AOR) of IPV forms of the augmented group was 0.38 compared with the standard group (0.38, 95% confidence interval: 0.18–0.82, $p = .013$). However, given that the intervention–wave interaction was not significant ($p = .414$), this coefficient reflects differences between groups that already existed at baseline, that is, *prior to* and thus not attributable to exposure to the augmented programme (Table 2).

Finally, we do find significant and potentially relevant nativity differences in IPV by wave (i.e., the nativity–wave interaction) (Table 2). Foreign-born status was associated with significantly fewer IPV forms at baseline (0.29, 0.13–0.67, $p = .004$). Such association was attenuated at 1-year follow-up (0.43, 0.17–1.08, $p = .072$) and reduced further and was not significant at 2-year follow-up (0.75, 0.33–1.67, $p = .475$). For a binary outcome of IPV free, generalized estimating equations did not detect the marginally significant nativity difference at 1-year follow-up or age effect (Table 2).

4 | DISCUSSION

Our secondary analyses of 119 Latinx mothers participating in the Feder trial (Feder et al., 2018) showed that neither the standard nor

augmented programme seemed to be effective in reducing the occurrence of IPV or IPV forms in its Latinx mothers' subsample with different outcomes by nativity. US-born Latinx mothers reported IPV at similar levels during the 2 years of the NFP. Despite the participation of Spanish-speaking trained nurses and the translation of programme materials to Spanish, the augmented programme could have missed some important cultural nuance that reduced its effectiveness among Latinx mothers. In contrast to the situation of US-born Latinx participants, Latinx immigrant mothers participating in the augmented programme reported *higher* levels of IPV after 2 years in the NFP. Given that, at baseline, foreign-born mothers (in both standard and augmented programme) reported lower levels of IPV, this unexpected result reduced the nativity gap in IPV in our multivariable models.

At least three reasons could explain the attenuated and lost advantage of foreign-born Latinx mothers on reported IPV and the diminished nativity gap. First, the augmented programme may be less effective among foreign-born mothers for various reasons (e.g., due to the programme not being sufficiently culturally tailored). As previously discussed, because we find no evidence that the programme was effective on reducing IPV on either group of women, we discard this possibility. Second, the augmented programme could have 'produced' more IPV if the strategies recommended to deescalate violence were not well received by partners (or well executed by mothers). Preventing this possibility requires the careful implementation of the augmented programme. Finally, third, and *perhaps* most likely, the programme could have been effective in uncovering already-existing IPV that had otherwise gone under-reported. That is, the survey instrument may have been less effective in capturing IPV among immigrant women at baseline due to a larger reporting bias among them (Waltermaurer et al., 2003). This reporting bias could have decreased (nonmonotonically) over time (see Table 1) due to the impacts of both nurse home visits and *especially* the augmented programme. In a sense, this would have been a benefit of the programme not only because it helped better detect an important problem but also because it could have helped empower participants to recognize the problem.

Insights from an intersectionality framework and an ecological model suggest that many foreign-born mothers experiencing IPV might not report it at baseline due to their vulnerability related to several factors, from gendered social control norms in the sending country and/or immigrant community to difficulties in navigating social and legal systems in the United States due to legal status, language and unfamiliarity (Raj & Silverman, 2002). The augmented programme could have thus helped these women become more willing or able to recognize the presence of IPV in their lives at 1- and 2-year follow-up. These two reasons could not be differentiated in this quantitative study. Future qualitative studies can better understand the reasoning and inform prevention. Future research also needs to understand the mechanisms, quantify inequalities that led to nativity differentiation in programme effects to IPV in Latinx mothers and identify strategies to eliminate them.

Culturally tailored programmes were not planned before this study. However, intervention materials were delivered in English or Spanish based on maternal preference. Nurses reported using cultural adaptations in their administration of the interventions informally, for example, using the examples of Spanish *telenovelas* (soap operas) that women were watching to explain commitment concepts (P Niolon, personal communication, 17 May 2021). Future studies need to design culturally tailored curricula, which can sensitively address needs of both foreign-born and US-born Latinx mothers, detect and prevent IPV, and optimize resources for health equity.

4.1 | Study strengths and limitations

This study has clear strengths, such as its experimental longitudinal design with a pre-intervention baseline measure and immediate intervention as well as two well-spaced assessments post-intervention. However, there are also some limitations. First, Latinx mothers were not an a priori subgroup of this randomized controlled trial. After randomization, Latinx mothers were unbalanced with 75 in the augmented programme and 44 in the standard programme. As such, some results could be underpowered and/or could not be generalizable to Latinx mothers in Multnomah County or other places. Second, annual family income and the first name of the child's father—used to ascertain IPV—had relatively high proportions missing, potentially biasing our results. Third, reporting bias could exist due to self-reports of sensitive IPV outcomes. Fourth, we could not control for whether mothers and nurse visitors were matched by race/ethnicity or language, which could have affected programme effectiveness.

5 | CONCLUSIONS

Our secondary analyses of a randomized controlled trial in Oregon showed that an early home visiting programme augmented with a curriculum aimed at reducing the occurrence of IPV was not effective in reducing such violence among Latinx women. These results were thus similar to those obtained for the full sample for this trial (Feder et al., 2018), which also included non-Latinx women. Despite these similarities, we find an important difference for foreign-born Latinx women, for whom the programme might have been effective but only in better detecting, not preventing or reducing IPV.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Detecting and addressing IPV remains a very important challenge for nursing leaders and managers. Interventions even via relatively intensive home visiting programmes have very limited effectiveness on IPV, including for Latinx women. Because IPV may also be particularly under-reported in Latinx immigrant populations, there is an added challenge to find better ways to detect IPV in addition to address it. Larger transdisciplinary studies including nursing leaders and managers are needed to better culturally tailor both IPV screening and relationship education curricula among Latinx populations. Nursing leaders and managers can promote even tighter service coordination,

a warm hand-off, and the linkage and follow-up in promoting evidence-based IPV interventions (West et al., 2021).

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ETHICS STATEMENT

Our study protocol (#Temp-2399) was not human subject research as determined by the Institutional Review Board of San Diego State University.

CONFLICT OF INTERESTS

None of the authors have conflicts of interest. No financial disclosures were reported.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the owner of the data, Lynette Feder. Restrictions apply to the availability of these data, which were used under licence for this study. Data are available from the authors Qing Li and Lynette Feder with the permission of the owner of the data, Lynette Feder.

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REVIEW ARTICLE

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Violence against nurses by patients and visitors in the emergency department: A concept analysis

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Abstract

Aim: This analysis investigates the concept of violence against nurses by patients and visitors in the emergency department. It aims to differentiate, clarify, and clearly identify this specific concept, which will facilitate more apt measurement and reporting, ultimately to contribute violence reduction measures.

Background: Due to contextual factors, occupational risk and patient characteristics, violence against nurses by patients and visitors in the emergency department varies from other types of violence against other health care staff.

Methods: This study employed Walker and Avant's concept analysis technique.

Results: The analysis found that violence against nurses by patients and visitors in the emergency department is primarily an occurrence of interpersonal violence based on the working relationship, whereby the patient and/or visitor becomes an assailant, and a nurse becomes a target in the absence of capable guardianship. There is also an intentional use of physical force or power, which results in or has a high chance of causing harm.

Conclusion: A clearer understanding of the antecedents, attributes, and consequences of violence against nurses by patients and visitors arising from this concept analysis provides a framework that will assist in the understanding, measurement, reporting, and prevention of violence and inform future research.

Implications for Nursing Management: Nursing managers are encouraged to adopt strategies that act on the factors related to attributes and antecedents that will serve to reduce the occurrence of intentional violent acts.

KEYWORDS
concept analysis, emergency department, nurse, violence

[Correction added on 20 July 2022, after first online publication: job title and affiliation of author Melissa Corbally has been updated to 'Associate Professor in General Nursing' and 'School of Nursing and Midwifery, Trinity College Dublin', respectively in this version.]

1 | INTRODUCTION

Violence against nurses by patients and visitors in the emergency department (ED) is on the increase globally (Angland et al., 2014; Copeland & Henry, 2017). Krug et al. (2002) define violence as a complex, multifaceted issue with individual, interpersonal, community and societal aspects, all of which pose a serious threat to health care delivery. Concern about violence has been raised by many professional nursing associations, prompting actions such as nurse surveys, position statements or government lobbying. These associations are increasingly becoming active internationally in terms of encouraging approaches to reduce violence, lowering tolerance and increasing support and prevention (ACEM, 2011). In the United States for example, the Emergency Nurses Association (ENA) carried out a Violence Surveillance Study in 2012 and found that more than half of the ED nurses surveyed reported having been exposed to either verbal or physical abuse within the preceding week (2011 ENA Emergency Nursing Resources Development Committee et al., 2012). They also prepared a position paper on this (Emergency Nurses Association, 2006).

More recently, Australian ED nurses took to protesting about rising levels of ED violence (Anonymous, 2017). In the United Kingdom, the Royal College of Nursing (RCN) (2017) also voiced concern at a reported 28% occurrence of physical violence among 6000 nurses surveyed. They welcomed the Assaults on Emergency Workers (Offenses) Bill 2017-19, a Private Member's Bill, that introduced a new offense of assaulting an emergency worker and new sentencing guidelines. The RCN outlined their support for the Bill and suggested more far-reaching measures to protect health care staff from violence and aggression (RCN 2017). Similarly, the Royal College of Emergency Medicine (RCEM) (2019) voiced concern about the rising violence against health care workers and especially those working in the ED.

However, the prevention of violence in the ED is complex, and while legislation and greater action towards perpetrators is welcome, a greater understanding is needed of the phenomenon so that prevention tactics can be meaningfully utilized. Most studies in the field of contributing factors of violence against nurses in the ED by patients and visitors have focused on the behaviors and characteristics of assailant, identifying those at risk and targeting these (Carver & Beard, 2021; Kleissl-Muir et al., 2019; Ramacciati et al., 2017; Terry Ferns & Rew, 2005; Zafar et al., 2013). However, deliberate planned attacks of violence on ED staff are rare, and rather the most common occurrences are due to environmental aspects of ED, and its day-to-day management (Spelten et al., 2020; Timmins & Timmins, 2021). Indeed, recent study findings resulted in a new conceptualization of ED violence, which gave an equal weighting to the actions of the assailant and environmental/organizational factors. This approach considers the potential contribution of the ED setting to the occurrence of violence (Ramacciati et al., 2017), something which is interesting, but also controversial. However, other studies support this finding (Morphet et al., 2014; Ogundipe et al., 2013). For example, Boyle and Hassett-Walker (2008) highlighted the need to understand the assailant in the context of the circumstances and the ED setting to more fully understand the violent episode. Unlike many other health care settings, ED settings are often a public facing, open access entry point for health care services at hospitals, operating over a 24-h period. Specific environmental issues, which are unique to the EDs, and feature globally, which include 24-h accessibility, overcrowding, long waiting times, "frustration of patients," and sometimes inadequate security systems (Al-Qadi, 2020; Ogundipe et al., 2013), are all linked to ED violence. ED violence is also often associated with patients who are intoxicated, or who present with mental health crises (Timmins & Timmins, 2021). Long waiting times, notoriously associated with EDs, both evoke and exacerbate this situation (Timmins & Timmins, 2021). Therefore, consideration of environmental factors can help to understand the phenomenon of violence in the ED.

Many associations call for zero-tolerance policies on violence in the health care setting (ACEM, 2011; Hassankhani & Soheili, 2017; NSW Health, 2003). The American Nurses Association (2015) for example stated that "the nursing profession will not tolerate violence of any kind from any source." This is a useful turning point as historically, nurses were taught to ignore and sacrifice their own feelings of fear or anger, for the "greater good" of patient welfare (Lanza, 1984). Thus, the increasing recognition of the intolerability of violence towards nurses is welcome but also needs comprehensive and holistic initiatives to tackle it. The goal of zero tolerance on its own is not enough, and indeed is overly ambitious given the high-risk nature of ED nursing work where there is a high probability of violence occurring (Copeland & Henry, 2017), and the inextricable link between ED violence and the presenting conditions (such as drug and alcohol intoxication, head injuries, and other issues that affect cognition). As such, a multifaceted approach to the prevention of ED violence requires acknowledgement of this high occupational risk of ED nurses so that appropriate measures may be taken to reduce the incidence of violence. The scope of practice and code of conduct of ED nurses also needs careful consideration, as they are required to provide respectful care to all patients. A dilemma and challenge may exist therefore in how best to deal with episodes of violence. Patients in need of care cannot be turned away, for example, even if their behavior is out of control (Aljohani et al., 2021). It would also be unethical for ED nurses stand in the way of treatment those requiring medical attention, by for example prioritizing the reporting and possible arrest of a violent patient.

Tackling this issue also requires clear documentation to support investigation and action in specific events but also to understand the scope of the problem. However, there is a lack of documentation of violent events in health care generally, due to underreporting (Aljohani et al., 2021; Christensen & Wilson, 2022; Huang et al., 2022; Stene et al., 2015). Barriers to reporting might arise from existent discrepancies between what health care organizations encourage nurses to report and what nurses actually report, perhaps due to nurses' conflicting obligations and ethical concerns about doing no harm to the patient (Buterakos et al., 2020). The reporting behavior of ED nurses is also informed by how they define and understand violence in this context. ED nurses assign different meanings of violence based on the intention of the assailant and harm it brought to the victim (Ashton et al., 2018). Take an example a patient who has delirium and is attempting to hit an ED nurse. This will likely be interpreted very differently than a visitor

who is attempting to do the same thing. The former are classified as problem behaviors by nurses rather than acts of violence (Erickson & Williams-Evans, 2000; Richardson et al., 2018). This is consistent with the definition used by the World Health Organization (WHO), which associates intentionality with the committing of the act itself, irrespective of the outcome it produces (Krug et al., 2002). Besides, there are also divergent views on the perception of harm. If no nurse is harmed during the patient-related violence, an event might not meet an individual's threshold for workplace violence, which requires reporting (Christensen & Wilson, 2022; Huang et al., 2022). However, some might argue that the potential for harm exists, regardless of whether actual harm occurred, which should therefore necessitate reporting (Copeland & Henry, 2017). Similarly, the WHO highlights that defining consequences solely in terms of harm or death thus limits the understanding of the full impact of violence on individuals, communities and society at large (Krug et al., 2002). Therefore, clarifying these nuances is necessary for understanding the concept of ED violence.

While there are specific references in the literature aimed at specifically defining violence as a concept in nursing contexts (Ghosh et al., 2019; Murray et al., 2020), there is little specific understanding in relation to ED in particular. This is important, given the particular highly charged ED context within which such behaviors take place. Moreover, violence is also understood more generally as an umbrella term by researchers encompassing verbal abuse, physical assault, or the witnessing of either of these acts (Abou-ElWafa et al., 2015; Ferns, 2005; Gill et al., 2002; Lancman et al., 2013; Ramacciati et al., 2019), which leads to difficulty understanding the key issues at stake or taking action as a result of the findings. Other literature sources define violence such that it also includes all and every incident of violence, including instances of aggression, bullying, intimidation, harassment, and workplace incivility by staff members (DeWall et al., 2011). As such, a more specific explanation that focuses on patients/visitors only and clearly identifies the consequences of violence in the ED would be helpful. Therefore, an operational definition of violence against nurses in the ED by patients and visitors is needed to address specific issues of understanding given the breadth of definitions and scope within the existing literature (Aljohani et al., 2021), and the specific nature and context of ED violence, and limited attention to this area. The goals of this conceptual analysis were twofold:

1. To explore the defining attributes, antecedents, consequences, and empirical referents of violence against nurses by patients and visitors in ED settings.
2. To formulate an operational definition of the violence against nurses by patients and visitors in ED settings.

2 | METHODS

2.1 | Concept analysis approach

Analyzing violence as a concept as it relates to ED nursing practice is important as there are specific nuances within the ED nursing context that affect its manifestation, consequences, and ultimately management. The context of the ED is highly emotionally charged and is much more public facing and exposed than most health care environments; thus, analysis within this context is important. It is the site of most reported health care violence, and as such, a nuanced understanding would be immensely beneficial to our understanding and prevention. Without this, there is risk of using broad sweeping definitions that do not fully apply to this area.

Walker and Avant's (2011) method continues to be by far the most popular method of concept analysis among nursing scholars due to its applicability to nursing contexts (Janice Penrod, 2005; Paley et al., 2007). Although the context bound nature of concepts have been identified as potentially limiting (Paley et al., 2007), we argue that in this instance, violence and the context of ED are inextricably linked and having a context free definition of such a context bound phenomenon would be counterproductive and too abstract for practical application for ED nurses and their managers. Furthermore, there are multiple applications and uses of conceptual analysis in the literature that explore commonly understood concepts within particular contexts. The purpose of this concept analysis was to explore the defining attributes of ED violence to nurses by patients and visitors in the ED. We defined the aim of our analysis, as defined all uses of this concept, and identified its defining attributes in a model case, borderline case, contrary case, summarized its antecedents and consequences, and defined its empirical referents. Thus, the first two stages of the concept analysis process (i.e., one—selecting a concept; two—determining the purposes of analysis) are thus understood. The findings from the remaining stages are presented below.

2.2 | Data sources

Determining all uses of the concept constitutes the third stage of the concept analysis process. In addition to exploring common definitions using dictionary sources, we searched the empirical literature to better explore the concept of violence against nurses by patients and visitors in ED settings. Pubmed, Embase, Web of science, CINAHL, and PsycINFO databases were systematically searched without any limits on the year of publication. Article titles, abstracts, and full-text reports were searched with medical subject headings (MeSh) and other search terms (Figure 1). In addition, the references of relevant studies and journals were manually searched to identify any other articles appropriate for inclusion in this comprehensive analysis (Magarey, 2001).

In addition to the use of dictionary and gray literature sources to support understanding of definitions, empirical articles were eligible for inclusion if they were original research articles, systematic reviews, case studies, or secondary analyses published in peer-reviewed journals that contained the term "violence" or related terms including "workplace violence" and "patient-related violence" used in an ED context. Eligible research included qualitative, quantitative, mixed-methods, and review articles published in English. Articles not meeting these criteria were identified by screening the titles and abstracts of potentially relevant studies, followed by a full-text review to evaluate

FIGURE 1 Strategy for database searches

Strategy for database searches

Database	Search terms
Pubmed	((("Nurses"[Mesh]) OR (Ti/Ab Nurs*)) AND (("Violence"[Mesh]) OR Ti/Ab (Atrocities OR "Assaultive Behavior" OR Violence OR Force OR Aggression OR "Violent Behaviors" OR Harassment OR Assault OR Abuse OR Bullying OR "Negative Workplace Violence" OR "Occupational Violence")) AND (("Emergency Service, Hospital"[Mesh]) OR Ti/Ab ("Accident and Emergency*" OR "Emergency Department*" OR "Emergency Section" OR "Emergency Room*" OR "ER" OR "ED" OR "Acute Setting" OR "Emergency Unit*" OR "Hospital Emergency Service*" OR "Emergency Hospital Service" OR "Hospital Service Emergenc*" OR "Emergency Ward*" OR "Emergency Outpatient Unit*")))
CINAHL	(((MH "Nurses+" OR TI Nurs* OR AB Nurs*) AND (MH "Violence+" OR TI (Atrocities OR "Assaultive Behavior" OR Violence OR Force OR Aggression OR "Violent Behaviors" OR Harassment OR Assault OR Abuse OR Bullying OR "Negative Workplace Violence" OR "Occupational Violence") OR AB (Atrocities OR "Assaultive Behavior" OR Violence OR Force OR Aggression OR "Violent Behaviors" OR Harassment OR Assault OR Abuse OR Bullying OR "Negative Workplace Violence" OR "Occupational Violence")) AND (MH "Emergency Service+" OR TI ("Accident and Emergency*" OR "Emergency Department*" OR "Emergency Section" OR "Emergency Room*" OR "ER" OR "ED" OR "Acute Setting" OR "Emergency Unit*" OR "Hospital Emergency Service*" OR "Emergency Hospital Service" OR "Hospital Service Emergenc*" OR "Emergency Ward*" OR "Emergency Outpatient Unit*") OR AB ("Accident and Emergency*" OR "Emergency Department*" OR "Emergency Section" OR "Emergency Room*" OR "ER" OR "ED" OR "Acute Setting" OR "Emergency Unit*" OR "Hospital Emergency Service*" OR "Emergency Hospital Service" OR "Hospital Service Emergenc*" OR "Emergency Ward*" OR "Emergency Outpatient Unit*")))
Embase	(('nurse'/exp OR nurs*:ab,ti) AND ('violence'/exp OR atrocities:ab,ti OR 'assaultive behavior':ab,ti OR violence:ab,ti OR force:ab,ti OR aggression:ab,ti OR 'violent behaviors':ab,ti OR harassment:ab,ti OR assault:ab,ti OR abuse:ab,ti OR bullying:ab,ti OR 'negative workplace violence':ab,ti OR 'occupational violence':ab,ti) AND ('emergency ward'/exp OR 'accident and emergency*':ab,ti OR 'emergency department*':ab,ti OR 'emergency section':ab,ti OR 'emergency room*':ab,ti OR er:ab,ti OR ed:ab,ti OR 'acute setting':ab,ti OR 'emergency unit*':ab,ti OR 'hospital emergency service*':ab,ti OR 'emergency hospital service':ab,ti OR 'hospital service emergenc*':ab,ti OR 'emergency ward*':ab,ti OR 'emergency outpatient unit*':ab,ti))
Web of science	TS=(Nurs*) AND TS=(Atrocities OR "Assaultive Behavior" OR Violence OR Force OR Aggression OR "Violent Behaviors" OR Harassment OR Assault OR Abuse OR Bullying OR "Negative Workplace Violence" OR "Occupational Violence") AND TS=("Accident and Emergency*" OR "Emergency Department*" OR "Emergency Section" OR "Emergency Room*" OR "ER" OR "ED" OR "Acute Setting" OR "Emergency Unit*" OR "Hospital Emergency Service*" OR "Emergency Hospital Service" OR "Hospital Service Emergenc*" OR "Emergency Ward*" OR "Emergency Outpatient Unit*")
PsycInfo	((DE "Nurses" OR TI Nurs* OR AB Nurs*) AND (DE "Violence" OR TI (Atrocities OR "Assaultive Behavior" OR Violence OR Force OR Aggression OR "Violent Behaviors" OR Harassment OR Assault OR Abuse OR Bullying OR "Negative Workplace Violence" OR "Occupational Violence") OR AB (Atrocities OR "Assaultive Behavior" OR Violence OR Force OR Aggression OR "Violent Behaviors" OR Harassment OR Assault OR Abuse OR Bullying OR "Negative Workplace Violence" OR "Occupational Violence")) AND (DE "Emergency Services" OR TI ("Accident and Emergency*" OR "Emergency Department*" OR "Emergency Section" OR "Emergency Room*" OR "ER" OR "ED" OR "Acute Setting" OR "Emergency Unit*" OR "Hospital Emergency Service*" OR "Emergency Hospital Service" OR "Hospital Service Emergenc*" OR "Emergency Ward*" OR "Emergency Outpatient Unit*") OR AB ("Accident and Emergency*" OR "Emergency Department*" OR "Emergency Section" OR "Emergency Room*" OR "ER" OR "ED" OR "Acute Setting" OR "Emergency Unit*" OR "Hospital Emergency Service*" OR "Emergency Hospital Service" OR "Hospital Service Emergenc*" OR "Emergency Ward*" OR "Emergency Outpatient Unit*")))

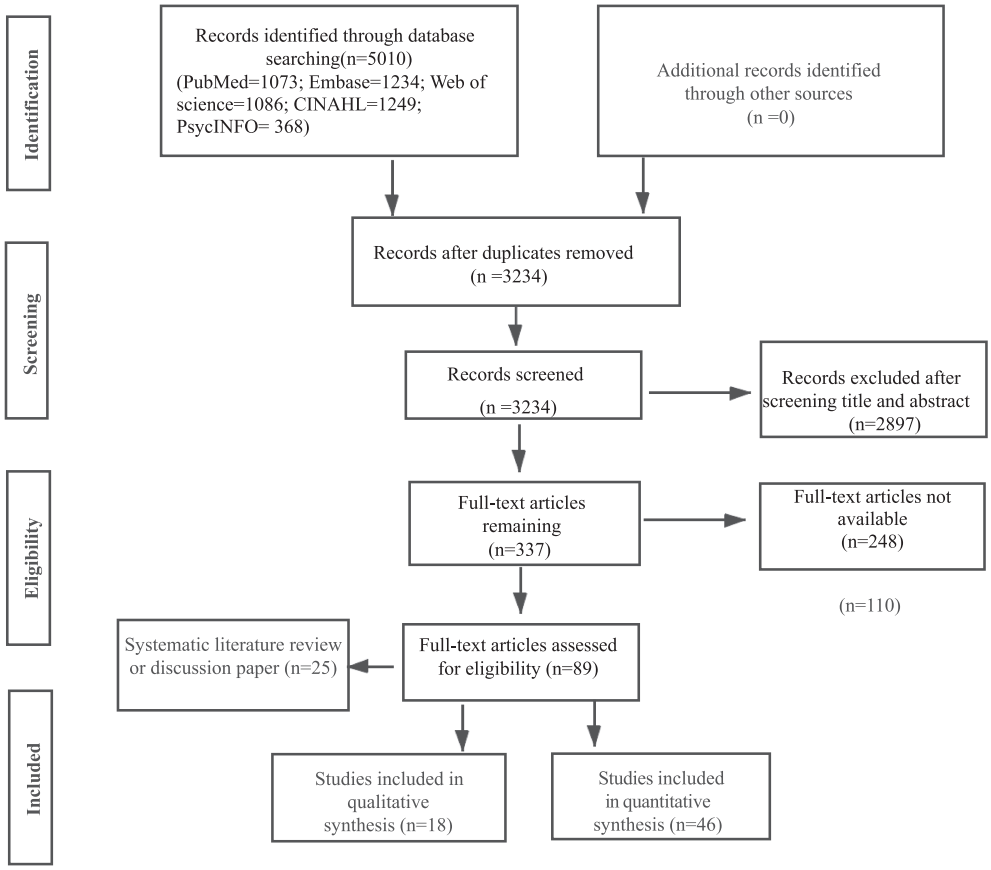

FIGURE 2 PRISMA flow diagram of the literature search

contextual details consistent with this concept. A total of 89 articles were reviewed, and informed the concept analysis, and the results are presented below (Figure 2).

3 | RESULTS

3.1 | Definitions of violence

The Oxford English Dictionary and Webster's Dictionary define violence as the exercise of physical force with the intent to injure or damage persons or property, categorizing violence as the use of physical force with intent to do harm. This singular understanding is difficult to apply in the ED context, as intentionality is not always present (Gates et al., 2006), and violence is not necessarily only associated with physical force. Indeed, a variety of acts can be constituted as violent (Khan et al., 2021) such as any verbal or physical action directed against ED nurses (Gates et al., 2006). However, although Gates et al. (2006) describes acts as violent whether they are intentional or not, intentionality is an important aspect of how violence is conceptualized within international nursing policies (e.g., the Canadian Nurse Association, 1996; and the WHO, 2002). Generally, within health care, it is the patient's intention that renders whether an act is perceived as violent by staff. Indeed, the WHO (2002) defined violence as "the *intentional* use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation" (emphasis not original). This notion of intent may then serve to discount the violence experienced by ED nurses from patients who have cerebral injury and mental health issues or who are intoxicated, perhaps serving to further encourage under reporting and dismiss the effects. As such, the act of one individual severely harming another may not inherently be violent if the injured party had no intention to cause such injury.

A further issue with these definitions is the outcome (of violence) as injury or high risk of injury because actions can be violent, even when no damage to persons or property occurs, if there has been intent to do harm (Heitmeyer & Hagan, 2003). Therefore, violence can be conceptualized as resulting from the intent to cause harm irrespective of the ultimate outcome. The importance of intentionality is thus one of the most central and complex facets of the definition of violence.

Additionally, while the use of physical force appears to be consistent with many definitions and original understandings, and indeed at an etymological level the term is derived from "vis" (force) and "latus," which is the past participle of "fero" (to carry) meaning to carry force (towards something) (Springer & Le Billon, 2016), violence is not necessarily only physical. A variety of acts can be constituted as violent, resulting in a variety of physical and psychological outcomes (Khan et al., 2021). This raises the question of the precise link between violence in the occurrence of harm or injury, and makes it unclear as to whether the incidence of harm or the foreseeable risk of such harm is

an intrinsic feature of any violent act (Shi et al., 2017). Consequently, violence may be understood as a "spectrum of behaviors ranging from passive aggression to homicide" (Gormley et al., 2016) to capture the breadth of violent acts. Thus, greater clarification of the attributes, antecedents and consequences of ED violence against nurses by patients and visitors will help improve understanding of this complex concept.

3.2 | Defining attributes

Demonstrating a cluster of attributes is a core feature of concept analysis (Walker & Avant, 2011). Certain attributes can be used to develop a definition of violence against ED nurses by patients and visitors that is more realistically reflective of how policymakers and nurses use the term in the emergency department. Six common attributes including three core critical attributes and three others were identified from this analysis including: The three critical attributes are as follows: (1) A "patient and/or visitor who becomes an assailant" (Abdellah & Salama, 2017; Berlanda et al., 2019; Cannavo et al., 2019; Davey et al., 2020; Pich et al., 2011; Renker et al., 2015; Spelten et al., 2020); (2) the presence of "nurses who became a suitable target" (Ashton et al., 2018; Han et al., 2017; Kennedy & Julie, 2013; Renker et al., 2015); and (3) "the absence of capable guardianship in ED setting" (Hamdan & Abu Hamra, 2015; Renker et al., 2015). These three attributes are the most critical attributes because violent behavior requires a concurrence in space and time of a likely, a suitable target, and an absence of capable guardianship according to the key insight of routine activities theory (Cohen & Felson, 1979). In the concept of patient-related violence against nurses in the ED, patients and nurses change their roles to become assailants and victims, leading to violent behaviour occurring where guardianship is lacking. Guardianship can be interpreted in many ways including a person or an object that is effective in protecting the target and deterring attack to occur. Three other important critical attributes also emerge, namely, the demonstration of a "a work relationship between an assailant and a suitable target" (Sonis et al., 2018), which is configured as the fourth attribute. According to the typology of violence, patient-related violence against ED nurses is an interpersonal violence that occurs in the workplace, thus demonstrating a work relationship between an assailant and a suitable target is an important attribute (Krug et al., 2002; Canadian Nurses Association, 1996; Copeland & Henry, 2017). There is also "the intentional use of physical force or power" (Krug et al., 2002; Maguire et al., 2018; Murray et al., 2020; Khan et al., 2021), as the fifth attribute. In addition to the phrase "use of physical force," the use of the word "power" broadens the nature of a violent act and expands the conventional understanding of violence to include verbal abuse, such as threats and intimidation, as well as sexual and psychological abuse (Al-Qadi, 2020; Ashton et al., 2018; Krug et al., 2002; Partridge & Affleck, 2017; Pich & Kable, 2014). A sixth and final attribute emerges as either resulting in "or has a high chance of causing harm" (Aljohani et al., 2021; Krug et al., 2002; Sonis et al., 2018; Wolf et al., 2020).

3.3 | Antecedents

According to the literature, antecedents to violence against nurses in the ED by patients and visitors include factors related to patients and/or visitors, factors related to nurses, and factors related to ED setting. These will now be described.

3.3.1 | Factors related to patients and/or visitors

People visiting ED can be influenced to commit violence relatively easily. First, the trigger to incite violent behaviour of patients and/or visitors is being aware of the fact that one is deprived (Tadros & Kiefer, 2017). Patients and/or visitors are often in a state of severe mental distress and frustration (Abdellah & Salama, 2017) owing to the patient's perceived urgent medical problem, pain, fear of the unknown, and long wait (Davey et al., 2020; Landau & Bendalak, 2008). This in turn may lead to impaired rational judgment, increasing the likelihood of violence of patients and and/or visitors (Landau & Bendalak, 2008). Some patients may tolerate and cope with their fears, or even with their anger, and be cooperative in the hopes that they can resolve their problems, whereas others would treat the emergency department experience as a trigger and they would be more apt to become violent or abusive as a means of coping with their frustration and perceived deprivation (Lau et al., 2012). Therefore, when ED patients and/or visitors feel deprived, they may revolt and become violent. They may view it as "good" violence, or as a means to an end, that end being resolution to the problem that brought them to the ED, or perhaps a perceived punishment for the nurse who they perceive has not cared for them appropriately. Second, subcultures' adaptations of the "machismo" image is another trigger to incite violent behaviour of patients and/or visitors (Cannavo et al., 2019; Cikriklar et al., 2016). Visitors were more likely to be involved in episodes of violence in non-Western studies (Ashton et al., 2018; Hamdan & Abu Hamra, 2015; Krug et al., 2002; Nithimathachoke & Wichiennopparat, 2021; Tadros & Kiefer, 2017). Typically, this involved male assailants and the actions were against female nursing staff. This was thought to be related to the roles played by males in these cultures and the fact that violence towards women is more prevalent in countries such as Turkey and Iran due to male dominance in these cultures (Ayranci, 2005; Krug et al., 2002; Pich & Kable, 2014). Third, exposure to alcohol, drugs, and violent acts observed on popular media (and perhaps normalized as acceptable behavior in the circumstances, despite these being fictitious accounts of behavior) may bring a high risk for violent behaviour (Cikriklar et al., 2016; Harthi et al., 2020).

3.3.2 | Factors related to nurses

The vulnerability of the ED nurses

In the Routine Activity's theory, Cohen and Felson (1979) demonstrated that the "inertia" factor plays an important role in which

people become a suitable target in the violence event, which refers to how difficult it is to move or transport an object based on its natural attributes: weight, height, strength (Landau & Bendalak, 2008). In other words, it is much easier to attack the female nurse, whereas it is quite difficult to take action against male staff. Despite the fact that in terms of age, educational background, and professional experience, the profile of ED nurses in studies that explore violence varies, several studies have found that female nurses were more vulnerable to attack in the ED (ALBashtawy et al., 2015; Cannavo et al., 2019; Hyland et al., 2016; Johnsen et al., 2020; Landau & Bendalak, 2008; Partridge & Affleck, 2017; Ramacciati et al., 2015; Zhang et al., 2017).

The visibility and accessibility of the ED nurses

How suitable a target of attack is also depends on the visibility and accessibility of the ED nurses in the workplace (Cohen & Felson, 1979). Obviously, ED nurses in their position act as the major "gatekeepers" to the ED, in a public space that everyone can enter and are therefore easier to target compared to other departments in the hospital or health care setting (Ferri et al., 2020). Besides, working more weekly hours in the public domain also increases nurses' exposure to potential assailants and the higher the nurse's weekly workload in this context, the greater her/his chances of victimization to violence (McGuire et al., 2021; Partridge & Affleck, 2017).

3.3.3 | Factors related to ED settings

Owing to lack of guardianship, which can be a person or an object that is effective in deterring violence to occur (Boyle & Hassett-Walker, 2008), the ED has been recognized as an environment with a high potential for stressful interactions that are aggravated by a vicious cycle of misconceptions, frustration, and anger (Li et al., 2019). Factors specific to the absence of capable guardianship in ED perceived to have contributed to episodes of violence included easy access to the department, over crowdedness (Ashton et al., 2018; Hamdan & Abu Hamra, 2015; Sonis et al., 2018), long waiting times, slow response times from security, and a lack of metal detectors (Gillespie et al., 2017; Lau et al., 2012; Renker et al., 2015).

3.4 | Consequences

The consequences of violence are far-reaching in terms of nurses and patient outcomes. These may take the form of physical, emotional/psychological, and professional consequences. Physical consequences range from minor injuries to various body parts to severe disablement and death (Hassankhani et al., 2018; Zhang et al., 2017). Emotional and psychological consequences of violence are complex including posttraumatic stress disorder (PTSD), depressive symptoms, anxiety, feeling unwell and lacking self-esteem, and undesirable emotions. Professional consequences of violence manifested as dissonance between nurses' professional role as caregiver and the role as crime victim, reduced job satisfaction (Kowalenko et al., 2013), loss of self-confidence, avoidance of patients, decreased productivity, isolation from team bonding, burnout (Jimenez et al., 2019), sick leave absence, transfer to another position, duty change, and leaving the profession (Ferri et al., 2020; Han et al., 2017).

3.5 | A model case

Model cases of a concept are instances that clearly embody all the critical aspects of that concept (Walker & Avant, 2011). Below, we present a clear-cut model case of violence against a nurse in the ED.

At 1.30 AM, the triage area of the ED was still very crowded. Three nurses were on duty in the triage area. They occupied the triage area along with a crowd of patients and their accompanying families and visitors. The triage desk directly faced the main entrance to the ED. It was specifically designed in this way so that people who come to the ED go straight to the triage desk. A nurse in the ED was caring for a patient suffering from abdominal pain, nausea, diarrhoea, and pyrexia in the examination room located behind the triage desks. She attempted and failed to insert an intravenous cannula to commence an intravenous infusion. The patient became angry and began to shout at the nurse, and then pushed a large metal mobile stand (used to hold intravenous fluid) into her. The nurse sustained an injury and ran out of the room crying.

This model case exhibits all the key attributes of violence against a nurse by a patient in the ED. The violence occurred in the ED without capable guardianship, the patient became an assailant and attacked the nurse who was the suitable target as she was delivering the care for them. The assailant and the victim had a nurse–patient relationship, and the use of deliberate physical force together with verbal assault resulted in an injury coupled with psychological upset.

3.6 | A contrary case

Walker and Avant (2011) stated that a contrary case helps to improve the clarity of the concept under scrutiny by presenting a case that does not reflect the concept.

A nurse was caring for a patient suffering from abdominal pain, nausea, diarrhoea, and fever in an ED setting. The nurse took the patient's blood pressure and temperature and then explained to the patient that they will need to undertake a blood glucose measurement test. The nurse says, "I am afraid I have to prick your finger and take a drop of blood to test your blood sugar level." "Okay," the patient agrees, and the nurse undertakes their work without any issue arising.

In this case, no physical or verbal assault occurred, there was no actual or potential harm, and there was no victim or assailant such that no violence occurred in this scenario.

3.7 | A borderline case

Borderline cases are examples, which comprise almost all the aspects of a given concept, but with one attribute that differs substantially from that conceptual framework (Walker & Avant, 2011). An example is given below:

A nurse was caring for a motorcycle crash victim with a traumatic brain injury of the frontal lobe in the ED. The patient is agitated and exhibited reduced awareness of their environment. Sometime later, when washing the patient, the nurse is suddenly hit in the face with the patient's fist. The nurse experiences facial swelling and redness.

This borderline case encompasses almost all of the attributes of violence against nurses by patients and visitors in the ED, including a patient–nurse relationship, the ED setting, the use of physical force towards a nurse by a patient, and a resultant injury. However, as the patient had no intention to cause injury, this does not meet the criteria to be defined as an act of violence.

3.8 | Empirical referents

The last step when conducting a conceptual analysis is the determination of empirical referents for critical attributes of a given concept. These referents are classes or categories of phenomena that provide evidence of the existence of that concept (Walker & Avant, 2011). For the purposes of this concept analysis, ED violence is intentional behaviour, resulting from ED environmental factors, that involves physical force and/or verbal force to the nurse, by patients or visitors and results in or has a high chance of causing harm. An outline of this concept map is provided in Figure 3.

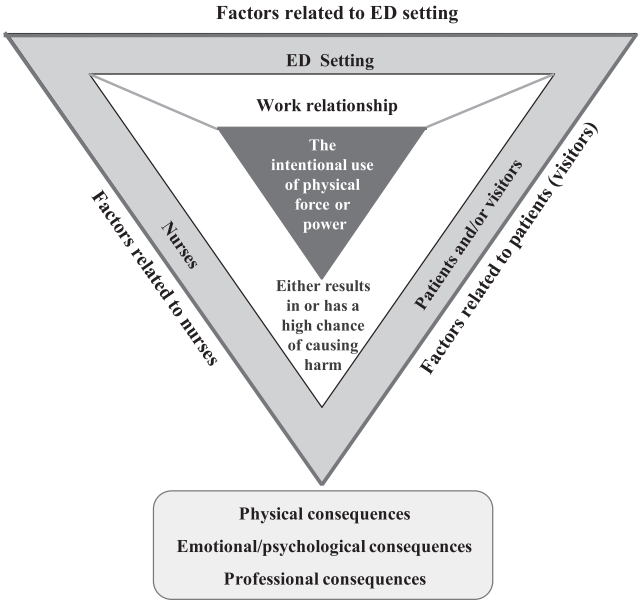

FIGURE 3 The attributes, antecedents, and consequences of violence against nurses by patients and visitors in the emergency department

4 | DISCUSSION

A safe practice environment for nurses is critical to the integrity of the health-care system and to the quality of patient care. However, the ED has been identified as a workplace with one of the highest risks of violence towards staff (Abou-ElWafa et al., 2015; WHO, 2012). Within this context, ED nurses are at a higher risk of verbal or physical violence compared with other health care professionals, or those working in other departments (Ferri et al., 2016; Kowalenko et al., 2012; Morphet et al., 2014; Wu et al., 2019). This concept analysis of violence against nurses by patients and visitors in ED reveals that violence is intentional behaviour, resulting from ED environmental factors, that involves physical force and/or verbal force to the nurse, by patients or visitors and results in or has a high chance of causing harm. This conceptualization supports, for the first time, a definition of ED violence that includes the effect of the environmental and organizational factors that have been identified by previous researchers (Ramacciati, Ceccagnoli, Addey, Lumini, & Rasero, 2018; Ramacciati, Ceccagnoli, Addey, & Rasero, 2018) but not categorized within current understandings or definitions of ED violence. This will contribute to a more holistic approach and understanding of ED violence for both research and practice, that considers the potential contribution of the ED environment to the occurrence of violence (Ramacciati, Ceccagnoli, Addey, Lumini, et al., 2018; Ramacciati, Ceccagnoli, Addey, & Rasero, 2018), thus assisting with measurement and prevention.

The fact that the ED is an environment with high likelihood for violence, harm prevention is an important factor for nurse managers to consider. Having a clear understanding of how nurses conceptualize such violence is integral to its management and prevention. This concept analysis suggests that although the term violence may be appropriate in a technical sense, it may not be effective or clinically useful at a practical level given that neither nurses nor patients typically utilize the term violence when referring to these behaviors, given that they are often understood as implicit effects of a high risk job (Maguire et al., 2018; Ramacciati, Ceccagnoli, Addey, Lumini, et al., 2018; Ramacciati, Ceccagnoli, Addey, & Rasero, 2018) and this may be a consequence of specific social norms (Buterakos et al., 2020).

Developing new awareness and understandings of ED violence towards nurses involves identification, recognition, and reporting of situations where there is intentional verbal and physical force that is potentially harmful while at the same time differentiating this from situations where there is no intent. This may be complex for ED nurses and will require effective support from nurse managers and policy, to be able to unpack, understand, manage, and report when an acts of violence occurs that are not intentional. Certainly, there may still be consequences for the ED nurse, including possible physical and psychological sequelae, but the intervention from a reporting and support perspective may be different. Additionally, much of the violence experienced by ED nurses arises from situations of patient mental health crises and/or intoxication, and it will be morally and ethically challenging for nurses in practice to elucidate whether there

was intent. Thus, the complex nature of violence against nurses by patients and visitors in ED settings and its resultant consequences underscore the importance of nurses being able to understand and report instances of violence (Ramacciati et al., 2017) and also the need to develop more sensitive measurement tools that will clearly identify environmental triggers.

However, there is also evidence suggesting that nurses lack information, experience, and interest in the early warning signs of violence and associated prevention strategies (Koller, 2016; Presley & Robinson, 2002). Indeed, nurses may not even recognize violent acts as violent, choosing to accept violence from patients and visitors as part of the job. ED nurses may also find this concept analysis to be of value therefore as a means of better recognizing potential triggers for violence in ED settings and use these to implement individualized comprehensive strategies to manage and respond to such violence (Copeland & Henry, 2017).

Instances of violence in health care settings are also thought to be an important factor associated with challenges in the recruitment and retention of nurses, increasing the risk of nursing shortages and negative outcomes for both health care organizations and patients. Environments that encourage violence prevention and management and that are actively supported by local leadership for this are essential to minimize and mitigate instances of such violence (Wax et al., 2016). By better understanding the violence against nurses by patients and visitors in EDs, policymakers and nurse managers may be better positioned to recognize the need for education and training related to such violence (Stene et al., 2015), and may be more likely to enact policies that are necessary to maintain a safe and healthy working environment (Gerdtz et al., 2013). By establishing a culture of justice and ensuring the rights of nurses to privacy when reporting incidents, injury care, debriefing, and counseling, nursing leadership have the potential to largely overcome many of the major barriers to violence reform in ED settings (Chappell, 2015; Sharifi et al., 2020).

For researchers, accurately comparing the incidence of ED violence across countries remains challenging owing to reporting deficiencies, research design and methodological issues, and inconsistencies with respect to how violence is defined (Maguire et al., 2018; Ramacciati, Ceccagnoli, Addey, Lumini, et al., 2018; Ramacciati, Ceccagnoli, Addey, & Rasero, 2018). More rigorous data-driven analyses and improvements in incident reporting, risk surveillance, successful mitigation, and the evaluation of violence-related interventions will only be possible if standardized definitions are used (Wolf et al., 2020). As such, this concept analysis has key implications for research in this area for the future. Consistently conceptualizing the violence against nurses by patients and visitors in ED settings represents a preliminary step in the context of theory development with the goal of refining and testing a conceptual model (Ghosh et al., 2019). Further research will be critical to establish the most effective prevention and mitigation strategies, to define educational priorities, which may aid nurses in recognizing high-risk patients and scenarios, and to determine the appropriate conditions for proactively reducing these instances of workplace violence (Azami et al., 2018).

5 | IMPLICATIONS FOR NURSING MANAGEMENT

The ED environment in which nurses work with patients and visitors from all aspects of society provides high-level care in challenging situations. Sadly, nurses practicing in this context run a high risk of being intentionally harmed by patients and visitors compared with other health care settings, and the potential for actual and cumulative harm experienced by staff is high. It is vital that the violence against nurses by patients and visitors in ED settings be understood, and the model cases discussed in this article are used as valuable tools for distilling the key aspects of such violent episodes. By considering the attributes, antecedents, and consequences of the violence against nursing staff by patients and visitors in ED environments, it may be possible to better aid in protecting against such violence through administrative, educational, environmental, and security interventions. However, such violence remains a highly complex and elusive complex, and there is thus an urgent need for the design of additional measurement and prevention strategies, including the education of nursing staff regarding approaches to recognizing potentially high-risk patients and the appropriate conditions for proactively intervening to reduce violent occurrences. This concept analysis provides a framework that can be used to clarify patient-related violence towards ED nurses. Nurse managers should adopt strategies that act on the factors related to attributes and antecedents and thus increase understanding of the factors that contribute to the occurrence of ED violence, while at the same time seeking to directly address these attributes in order to reduce the occurrence of intentional violent acts.

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CONFLICT OF INTEREST

No conflict of interest has been declared by the authors.

DATA AVAILABILITY STATEMENT

All data are available upon reasonable request.

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ORIGINAL ARTICLE

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Investigating the association between patient verbal aggression and emotional exhaustion among Italian health care professionals during the COVID-19 pandemic

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Abstract

Aims: To analyze whether patient verbal aggression would be related to emotional exhaustion and whether this relationship would be mediated by work–family conflict and moderated by dehumanization and resilience.

Background: Although patient verbal aggression has been identified as one of the most experienced forms of aggression, its effects on Italian health care providers during the pandemic are still poorly known.

Methods: A total of 197 Italian health care professionals completed paper-and-pencil questionnaires. Descriptive statistics and moderated mediation analyses were performed.

Results: Patient verbal aggression was positively related to health care professionals' emotional exhaustion, both directly and indirectly, as mediated by work–family conflict. Health care providers were more likely to become emotionally exhausted when they had low resilience and, simultaneously, tended to ascribe patients non-uniquely human traits.

Conclusions: Patient verbal aggression may spill over onto health care professionals' family lives. Dehumanization represents an ineffective coping strategy that exacerbates the effects of aggression on work–family conflict, whereas resilience represents a protective resource against emotional exhaustion.

Implications for nursing management: Hospital organisations could benefit from providing their staff with stress management interventions, aggression management, psychological support and psychological resilience training programmes. These programmes should incorporate coping skills on establishing work–home boundaries and balancing empathy with cognitive problem-solving abilities.

KEYWORDS
COVID-19, dehumanization, emotional exhaustion, patient aggression, resilience

1 | BACKGROUND

The COVID-19-related health emergency has posed unprecedented challenges for health care professionals worldwide. These include concern about transmitting the virus to their loved ones and extended shifts to handle the considerable volume of patient demand (Bhatti et al., 2021; Kakemam et al., 2021). Additionally, an alarming increase in aggression against health care personnel has been witnessed globally, especially in the form of patient verbal aggression (Bhatti et al., 2021; Lafta et al., 2021).

Patient verbal aggression (i.e., verbal expressions that make the professional feel devalued through words, tone or manner; Farrell et al., 2006) represents one of the critical factors in the generation of burnout because it is the most experienced form of aggression by health care personnel during normal and pandemic times (Liu et al., 2021). Indeed, due to their extended work shifts, health care professionals working during the pandemic were exposed longer to patients who sometimes vented on them their negative emotions elicited by the treatment received (e.g., long waiting times) through verbal aggression (Ożegalska-Trybalska, 2021). Drawing on the Conservation of Resources (COR) theory (Hobfoll et al., 2018), health care professionals who are exposed to patient aggression may feel that their working conditions and personal resources are threatened, or their investment of resources in relationships with patients does not generate a sufficient return of resources. This can deplete professionals' resources by eliciting negative emotions and recurrent thoughts about critical event(s) (Sommovigo et al., 2020; Zhou et al., 2019). In such a situation, health care professionals who cannot compensate for this loss of resources through the conservation of resource strategies are likely to develop emotional exhaustion. This core dimension of burnout refers to feelings of being exhausted by one's work (Maslach & Leiter, 2016). During the pandemic, the prevalence of burnout among health care providers has been estimated between 13% and 51% (Cotel et al., 2021), resulting in adverse psychological outcomes (Ghio et al., 2021), decreased patient care safety and quality (Kakemam et al., 2021). Specifically, emotional exhaustion has been the major symptom experienced by burned-out professionals (Roslan et al., 2021). Thus, understanding how to manage health care professionals' emotional exhaustion has practical implications for health care professionals and patients, affecting the health care system's ability to respond to health emergencies. However, although the frequency of exposure to patient verbal aggression was positively related to professionals' emotional exhaustion during pandemic times (Vincent-Höper et al., 2020), it is still unclear how and when this can happen. Therefore, more research is needed to clarify the relationship between patient aggression and professionals' emotional exhaustion to design effective interventions to support health care providers during the actual health emergency and possible future outbreaks (Cotel et al., 2021).

During the pandemic, some factors related to the Italian context put health care professionals at risk of experiencing work–family conflict (i.e., when the demands posed by the work role are incompatible with the requirements from the family domain; Bernuzzi et al., 2021). Italy was one of the nations most affected by the number of people infected during the first COVID-19 wave, which overwhelmed the national health care system and its staff (Romani et al., 2021). Italy also closed its schools longer than any other European country as a containment measure (Zampano, 2020). In this nation, women are the vast majority of the health care workforce (MEF, 2019). Together with extended shifts due to staff shortages, these factors made it difficult for Italian health care professionals to take care of their children and elderly family members (Giusti et al., 2020). Like other countries, most professionals were afraid to transmit the virus to their loved ones (Roslan et al., 2021). Additionally, many health care providers were quarantined, resulting in long isolation from their families and severe staff shortages, causing extra work and disturbances to work–life balance for their co-workers (Brooks et al., 2020). As a result, most health care professionals had trouble balancing work and family requirements (Schiff et al., 2021), thus experiencing work–family conflict. This is in line with the spillover theories stating that individuals may experience blurring of work–family boundaries, such that how they behave and feel in the work domain may spill over into the family domain (Bernuzzi et al., 2021). However, it is still unclear whether patient verbal aggression may spill over onto health care professionals' family lives.

None of the previous studies on health care professionals have provided explanation models containing patient verbal aggression, work–family conflict and emotional exhaustion. Nevertheless, the positive relationship between work–family conflict and emotional exhaustion has been well-documented (Reichl et al., 2014). However, to our knowledge, there is only one study that demonstrated that work–family conflict was a significant predictor of burnout among health care providers during the outbreak (Cotel et al., 2021), whereas no previous study has examined whether patient aggression can spill over onto health care professionals' family lives during this time. Integrating COR theory (Hobfoll et al., 2018) with spillover theories, professionals can perceive a loss of their resources when confronted with patient verbal aggression, which undermines their ability to combine work and family. This is because victims of aggression tend to worry about the critical event(s) even outside of work and carry negative feelings home, which can make them less capable of paying full attention to family matters and more prone to vent their anger at family members (Demsky et al., 2019; Lim et al., 2018). This leaves them with fewer resources to invest in the family domain (Hobfoll et al., 2018), resulting in work–family conflict (Zhou et al., 2019). When trying to reconcile work and family commitments, professionals must invest additional resources to protect those remaining from being lost, which, if unsuccessful, may lead them to lose further resources (Yeh et al., 2020). In such a situation, health care providers may lack the resources to maintain their functioning at work, and eventually emotional exhaustion may occur. However, professionals may react differently to patient aggression due to their resources and conservation of resource strategies (Hobfoll et al., 2018).

When investigating the effects of patient aggression, individual differences in dehumanizing tendencies (i.e., depriving patients of

uniquely human qualities; Capozza et al., 2016) could help explain the different reactions of professionals to aggression (Hobfoll et al., 2018). In this sense, ascribing patients a lower human status could represent a coping strategy that reduces the loss of resources resulting from encounters with aggressive patients. The scarcely available research suggests that because humanizing patients increases stress, health professionals tend to ascribe patients a lower human status as an unwitting form of dehumanization to cope with stressful encounters with patients (Capozza et al., 2016; Falvo et al., 2021). For instance, Trifiletti and co-workers (Trifiletti et al., 2014) found that attributing non-uniquely human traits relates to stress reduction among nurses. Additionally, this may facilitate patient care and clinical problem-solving (Haque & Waytz, 2012).

In addition to dehumanization, individual differences in resilience (i.e., a dynamic process that allows people to face stressful events and recover from adversities; Bernuzzi et al., 2021) could affect how professionals respond to stressors, such as work–family conflict (Hobfoll et al., 2018). Drawing on the COR theory (Hobfoll et al., 2018), resilience is a personal resource because it helps people face stressful situations (Maffoni et al., 2020). More specifically, resilience can allow professionals to fulfill multiple roles by adjusting to challenging conditions (Bernuzzi et al., 2021), thus protecting them against work–family conflict. Consequently, although some studies found that resilience buffered the negative impact of work–life conflict on employees' well-being (Balogun & Afolabi, 2021), its moderating role in the association between work–family conflict and emotional exhaustion among health care providers during the pandemic has not received enough attention. Because (de)humanization of patients can be promoted through medical practices (Haque & Waytz, 2012) and resilience can be fostered through training (Joyce et al., 2018), understanding their protective role against can inform practitioners about how to support health care professionals' well-being during pandemic times.

Therefore, our research questions were as follows: May patient verbal aggression be related to emotional exhaustion, directly and indirectly, as mediated by work–family conflict? Can dehumanization be an effective coping strategy against patient aggression? Can resilience be a protective resource against work–family conflict? Figure 1 shows our conceptual model.

2 | METHODS

2.1 | Sample

This cross-sectional study was conducted in an Italian public hospital located in the Lombardy Region between October 2020 and February 2021, during the second COVID-19 wave. This research intervention was commissioned by the Medical Direction (i.e., the board of medical directors that organizes and coordinates physician services and services provided by other professionals within the hospital), which authorized the study and informed staff about the research using email via the company intranet. The Ethical Review Board of the Hospital provided ethical approval for this research. To participate, professionals were required to be health care professionals employed in the hospital working in contact with patients during the COVID-19 pandemic and to provide an informed consent form. Additionally, a coordinator and a researcher presented the objectives of the research project to professionals during shift changes. After giving informed consent, a total of 201 participants (response rate: 41.44%) completed anonymous self-report paper-and-pencil questionnaires. Of these, four were eliminated because of incomplete responses. The questionnaire's cover sheet informed participants about the study's goals and ensured both the voluntariness of their participation and the confidentiality of the responses. Once completed, the questionnaires were placed in cardboard boxes to ensure anonymity of the data.

2.2 | Measurements

2.2.1 | Patient verbal aggression

Patient verbal aggression was assessed using the seven-item non-physical violence scale from the Hospital Aggressive Behaviour Scale-Users (Waschgler et al., 2013). Participants indicated how often they experienced aggressive verbal acts by patients (e.g., *Patients get angry with me because of delay*; $\alpha = .90$) on a 5-point Likert scale (0 = *never*, 4 = *always*). We chose this scale over other instruments because it was specifically developed to capture verbal aggression from users towards health care personnel.

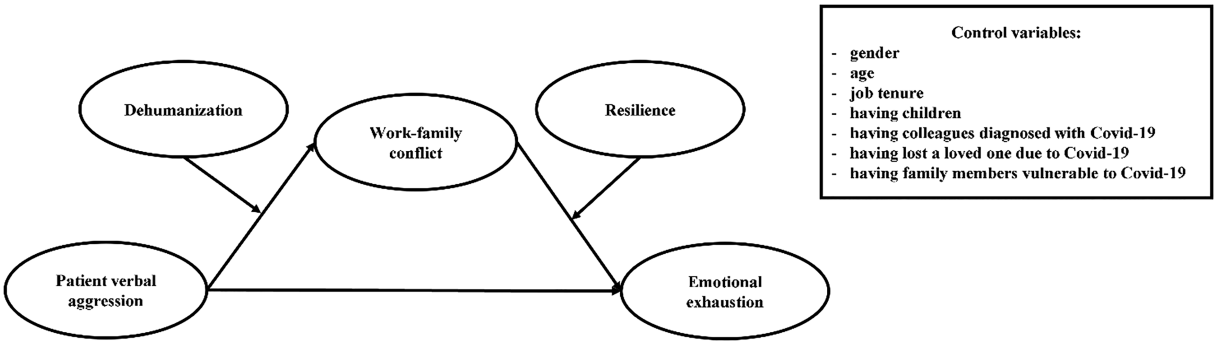

FIGURE 1 Conceptual model

2.2.2 | Work–family conflict

Work–family conflict was measured using the Italian version of the Work–Family Conflict Scale (Colombo & Ghislieri, 2008). This instrument comprises five items that assess the respondents' level of agreement with statements describing situations of work-to-family conflict (e.g., *The amount of time my job takes up makes it difficult to fulfill family responsibilities*; $\alpha = .90$) on a 7-point Likert scale (1 = *completely agree*, 7 = *completely disagree*).

2.2.3 | Emotional exhaustion

Emotional exhaustion was assessed using the five-item scale from the Italian version of the Maslach Burnout Inventory-General Survey (Borgogni et al., 2005). Respondents reported how frequently they experienced a state of feeling emotionally drained due to their work lives (e.g., *I feel emotionally drained by my work*; $\alpha = .92$) on a 7-point Likert scale (0 = *never*, 6 = *always*).

2.2.4 | Non-humanness attributions

Non-humanness attributions were measured using four non-uniquely human traits (e.g., *instinct*; Capozza et al., 2013; $\alpha = .92$). Health care professionals reported the extent to which they perceived patients in their hospital as characterized by non-uniquely human traits on a 7-point Likert scale (1 = *definitely false*, 7 = *definitely true*).

2.2.5 | Resilience

Resilience was measured using the six-item scale of the Italian version of the Psychological Capital Questionnaire (Alessandri et al., 2018). This scale consists of items that measure the participants' level of agreement with statements about ways of facing stressful work-related situations (e.g., *I usually take stressful things at work in stride*; $\alpha = .79$) on a 7-point Likert scale (1 = *completely agree*, 7 = *completely disagree*).

2.2.6 | Control variables

We controlled for gender (0 = *male*, 1 = *female*), age (in years), job tenure (in years) and having children (0 = *no*, 1 = *yes*) because the literature indicated that women, younger and less experienced health care workers were more likely to develop burnout, whereas parents had trouble balancing work and childcare during the pandemic. Moreover, we controlled for having had colleagues diagnosed with COVID-19 (0 = *no*, 1 = *yes*) or family members vulnerable to the virus (0 = *no*, 1 = *yes*) and having lost a loved one due to COVID-19 (0 = *no*, 1 = *yes*) because these experiences could have contributed to health care professionals' state of exhaustion and work–family conflict.

2.3 | Statistical analyses

A composite score was calculated for each scale by averaging its respective items. Data were checked for outliers and intercorrelations were explored using SPSS 23 (George & Mallery, 2016). Then, we performed confirmatory factor analyses (CFAs) with the maximum likelihood method, comparing our measurement model with competing models. After testing for common method bias, we conducted structural equation models (SEMs) using bootstrapping analyses and a bias-corrected 95% confidence interval (CI) with a resample procedure of 1000 bootstrap samples. In our moderated mediation model, we controlled work–family conflict and exhaustion for gender, age, job tenure, having children, having colleagues diagnosed with COVID-19, having lost a loved one due to COVID-19 and having vulnerable family members. Indirect and conditional effects were considered significant when CI did not include zero and the *p* value was less than .05. CFAs and SEMs were performed using Mplus 7 (Muthèn & Muthèn, 2012).

3 | RESULTS

3.1 | Sample description and correlations

Most respondents were female (77.70%) nurses (65.80%) with children (65.90%) who had an average age of 45.56 years ($SD = 10.23$) and an average job tenure of 15.45 years ($SD = 12.23$). Most participants had colleagues diagnosed with COVID-19 (77.80%) and loved ones among the most vulnerable (89.80%). Around one-third of the respondents had lost a loved one due to COVID-19 (29.20%). With the use of G*Power, we performed a power analysis for multiple regression analysis with 11 antecedents setting an alpha of .05, a power of .95, and a medium effect size. The results showed that our sample size was appropriate (i.e., a minimum of 178 subjects). All variables correlated with each other in the expected directions, except for non-humanness attributions, gender and COVID-19-related variables that were not statistically significantly correlated with exhaustion (see Table 1).

3.2 | CFA and common method bias check

The results of the CFA testing the five-construct dimensions of our conceptual model (see Table 2) showed that the five-factor model outperformed any alternative model ($\chi^2[314] = 648.92$, Root Mean Square Error of Approximation (RMSEA) = .07, standardized Root Mean Square Residuals (SRMR) = .07, Comparative Fit Index (CFI) = .91, Tucker–Lewis Index (TLI) = .92). The results from Harman's

TABLE 1 Descriptive statistics and correlations among the study's variables ($N = 197$)

	M	*SD*	Min/max	Skewness	Kurtosis	1	2	3	4	5	6	7	8	9	10	11	12
1. Patient verbal aggression	.72	.82	0/4	1.5	2.34	**.90**											
2. Work–family conflict	3.78	1.56	1/7	−.05	−.83	.31**	**.90**										
3. Resilience	4.90	.89	1/7	−.38	.04	−.15*	−.22**	**.79**									
4. Dehumanization	4.53	1.04	1/7	−.68	1.07	.05	.13	.03	**.83**								
5. Emotional exhaustion	2.21	1.51	0/6	.70	−.27	.35**	.56**	−.41**	.18*	**.92**							
6. Gender	-	-	-	-	-	−.01	.05	−.06	.05	.07	-						
7. Age	45.56	10.23	-	-	-	.16*	.16*	−.19*	.06	.25**	.11	-					
8. Job tenure	15.45	12.23	-	-	-	.06	.16*	−.25**	.07	.23**	.11	.68**	-				
9. Having children	-	-	-	-	-	−.02	.22**	−.27**	.07	.10	.12	.55**	.39**	-			
10. Co-workers diagnosed with COVID-19	-	-	-	-	-	.20**	.23**	−.15	.08	.14	.09	.22**	.17*	.15*	-		
11. Loss of a loved one	-	-	-	-	-	−.03	24**	−.02	.01	.11*	−.06	.22**	.13	.15	.03	-	
12. Vulnerable family members	-	-	-	-	-	.20*	.23*	.01	. 09	.23**	.10	.05	.01	−.05	−.02	.13	-

Note: Boldfaced numbers on the diagonal represent Cronbach's alpha; *M* = means; *SD* = standard deviations; min/max = minimum and maximum scores for each scale; gender: 0 = male, 1 = female; age: measured in years; job tenure: measured in years; having children: 0 = no, 1 = yes; Co-workers diagnosed with COVID-19: 0 = no, 1 = yes; loss of a loved one due to COVID-19: 0 = no, 1 = yes; family members vulnerable to COVID-19: 0 = no, 1 = yes.

*$p < .05$. **$p < .01$.

TABLE 2 Fit indices for the five-factor model and the alternative models

Model	χ^2	df	*p*	RMSEA	90% CI RMSEA	SRMR	CFI	TLI
Mediation model	406.33	227	.00	.07	[.05, .08]	.07	.91	.90
Five factor_cmb[a]	464.71	286	.00	.06	[.05, .06]	.05	.94	.93
Five-factor model[b]	648.92	314	.00	.07	[.06, .08]	.07	.91	.92
Four-factor model[c]	917.66	318	.00	.10	[.09, .11]	.10	.81	.79
Three-factor model[d]	1282.19	321	.00	.12	[.12, .13]	.11	.70	.67
Two-factor model[e]	1886.77	323	.00	.16	[.15, .16]	.14	.52	.47
One-factor model[f]	2198.48	324	.00	.17	[.16, .18]	.15	.42	.37

Abbreviations: CFI, comparative fit index; df, degree of freedom; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residuals; TLI = Tucker–Lewis index.

[a]Previous model with the inclusion of a common method latent variable on which make all the items loaded.

[b]Patient verbal aggression, resilience, dehumanization, work–family conflict and emotional exhaustion load on their respective factors.

[c]Resilience loads on one factor, work–family conflict loads on a second factor, patient verbal aggression loads on a third factor, dehumanization and emotional exhaustion load on a fourth factor.

[d]Resilience loads on one factor, work–family conflict loads on a second factor, patient verbal aggression, dehumanization and emotional exhaustion load on a third factor.

[e]Resilience loads on one factor, patient verbal aggression, work–family conflict, dehumanization and emotional exhaustion load on a second factor.

[f]All indicators load on a single factor.

[g]Fit indices of the mediation model having work–family conflict as a mediator of the relationship between patient verbal aggression and emotional exhaustion, while controlling work–family conflict and emotional exhaustion for gender, age, job tenure, having children, having colleagues diagnosed with COVID-19, having lost a loved one due to COVID-19 and having family members vulnerable to Covid-19.

single-factor test indicated that the first factor explained only 29.85% of the variance. Moreover, the hypothesized five-factor model generated a better fit to the data after including the unmeasured latent method factor. This factor explained 24.00% of the total variance (less than 25.00%, the average amount of method variance observed in self-report studies; Podsakoff et al., 2012), indicating that common method variance is unlikely to be a major concern.

3.3 | Hypotheses testing

In our moderated mediation model (see Table 3), patient aggression was positively associated with work–family conflict ($\beta = .43$, $SE = .18$, $p < .05$, 95% CI [.08, .79]) and exhaustion ($\beta = .40$, $SE = .14$, $p < .01$, 95% CI [.03, .68]). Work–family conflict was positively related to exhaustion ($\beta = .43$, $SE = .18$, $p < .05$, 95% CI [.08, .79]) and partially mediated the patient aggression-exhaustion link. The indirect effect was positive, suggesting that patient aggression increased work–family conflict, which, in turn, led to exhaustion. Non-humanness attributions strengthened the patient aggression-work–family conflict association ($\beta = .50$, $SE = .21$, $p < .01$, 95% CI [.10, .91]), whereas resilience buffered the work–family conflict–exhaustion relationship ($\beta = -.15$, $SE = .07$, $p < .05$, 95% CI [−.30, −.01]). Professionals with high dehumanizing tendencies reported a considerable increase in work–family conflict in the passage from low to high exposure to patient aggression conditions (see Figure 2a). Additionally, health care professionals with low resilience reported a considerably greater increase in exhaustion in the passage from low to high work–family conflict conditions than those with high resilience (see Figures 2b and 3). The indirect effect of patient aggression through work–family conflict on exhaustion was stronger when health care professionals had low resilience and, simultaneously, high dehumanizing tendencies ($\beta = .55$, $SE = .19$, $p < .001$, 95% CI [.18, .92]). This effect was also statistically significant for professionals with low/moderate resilience who had high/moderate dehumanizing tendencies. Conversely, this effect was statistically insignificant when professionals had high resilience regardless of their dehumanizing tendencies or when they had low dehumanizing tendencies regardless of their resilience levels.

4 | DISCUSSION

This study clarifies *how* and *when* patient verbal aggression may lead health care professionals to experience emotional exhaustion during the COVID-19 pandemic. The findings demonstrated that the association between patient verbal aggression and health care professionals' emotional exhaustion was mediated by work–family conflict but only when the professionals had low/moderate resilience and high/moderate dehumanizing tendencies towards their patients. Hence, this research makes several contributions to the literature.

First, by demonstrating the effects of patient verbal aggression can spill over to professionals' nonwork domain, this study adds to the growing body of research investigating the spillover effects of interpersonal stressors from work to family. In doing so, this study supports the notion based on COR theory (Hobfoll et al., 2018) that patient aggression may deplete professionals' resources due to the negative emotions and thoughts about the incident(s) (Zhou et al., 2019). In such a situation, health care professionals may struggle

TABLE 3 Path coefficients and conditional effects for the moderated mediation model

Paths	Effects		
	B	*SE*	95% CI
Gender → WFC	.01	.29	[−.74, .56]
Age → WFC	.01	.02	[−.04, .06]
Job tenure → WFC	−.01	.05	[−.14, .08]
Having children → WFC	−.05	.12	[−.04, .06]
Having colleagues diagnosed with COVID-19 → WFC	.67*	.34	[.10, 1.40]
Having lost a loved one due to COVID-19 → WFC	−.20	.25	[−.85, .30]
Having family members vulnerable to COVID-19 → WFC	.78	.45	[−.38, 1.67]
Gender → exhaustion	.28	.22	[−.16, .72]
Age → exhaustion	.01	.01	[−.02, .03]
Job tenure → exhaustion	.01	.01	[−.06, .08]
Having children → exhaustion	−.05	.09	[−.29, .14]
Having colleagues diagnosed with COVID-19 → exhaustion	−.24	.28	[−.95, .31]
Having lost a loved one due to COVID-19 → exhaustion	.52*	.21	[.11, .92]
Having family members vulnerable to COVID-19 → exhaustion	.72*	.30	[.12, 1.31]
Patient aggression → WFC	.43*	.18	[.08, .79]
Dehumanization → WFC	.14	.14	[−.14, .41]
Patient aggression * dehumanization → WFC	.50*	.21	[.10, .91]
Work–family conflict → exhaustion	.43***	.08	[.22, .58]
Resilience → exhaustion	−.19	.26	[−.70, .32]
Work–family conflict * resilience → WFC	−.15*	.07	[−.30, −.01]
Patient aggression → exhaustion	.40**	.14	[.03, .68]
Patient aggression → WFC → exhaustion	.25*	.17	[.02, .73]
Patient aggression * low dehumanization → WFC → exhaustion	−.01	.11	[−.30,.28]
Patient aggression * moderate dehumanization → WFC → exhaustion	.21*	.09	[.03, .46]
Patient aggression * high dehumanization → WFC → exhaustion	.44**	.15	[.06, .82]
Patient aggression → WFC * low resilience → exhaustion	.21*	.15	[.01, .49]
Patient aggression → WFC * moderate resilience → exhaustion	.01*	.08	[.03, .36]
Patient aggression → WFC * high resilience → exhaustion	.10	.06	[−.15, .04]
Patient aggression * low dehumanization → WFC * low resilience → exhaustion	−.04	.15	[−.33,.25]
Patient aggression * moderate dehumanization → WFC * low resilience → exhaustion	.25*	.12	[.03,.48]
Patient aggression * high dehumanization → WFC * low resilience → exhaustion	.55***	.19	[.18, .92]
Patient aggression * low dehumanization → WFC * moderate resilience → exhaustion	−.03	.11	[−.24, .18]
Patient aggression * moderate dehumanization → WFC * moderate resilience → exhaustion	.19*	.08	[.02, .35]
Patient aggression * high dehumanization → WFC * moderate resilience → exhaustion	.40**	.14	[.13, .67]
Patient aggression * low dehumanization → WFC * high resilience → exhaustion	−.02	.07	[−.16, .12]
Patient aggression * moderate dehumanization → WFC * high resilience → exhaustion	.12	.07	[−.01, .25]
Patient aggression * high dehumanization → WFC * high resilience → exhaustion	.26	.12	[−.15, .75]

*$p < .05$. **$p < .01$. ***$p < .001$

to balance work and family, which can, in unsuccessful cases, exacerbate their loss of resources and then make it challenging to maintain their work functioning, thus resulting in exhaustion (Bernuzzi et al., 2021).

Second, to our knowledge, this is the first study to support the protective role of resilience against work–family conflict experienced by health care professionals facing aggressive patients during the pandemic. In this view, resilience represents a personal resource that allows professionals to perceive incompatible demands between work and family roles as a challenge to address by adopting effective coping strategies (Hobfoll et al., 2015). Indeed, given that resilient people tend to have a sense of control over their own life and an optimistic

view of the future, they are more likely to see the bright sides of demanding situations (Bernuzzi et al., 2021). Moreover, resilient workers have a vast reservoir of resources on which to draw to handle challenging situations (Hobfoll et al., 2015). Thus, they are well-equipped to reconcile work and nonwork role demands and recover their emotional resources, thereby being less vulnerable to emotional exhaustion (Maffoni et al., 2020).

Third, to our knowledge, this is the first empirical attempt to investigate whether dehumanization might help health care professionals deal with aggressive patients during the pandemic. Contrary to our expectations, the ascription of non-uniquely human traits to patients is an ineffective coping strategy to handle stressful demands posed by patient aggression. Based on COR theory (Hobfoll et al., 2018), it might be that this strategy does not allow health care professionals to restore their resources through pleasant encounters with other patients. Thus, dehumanization may undermine the health care professional-patient relationship and communication by compromising patient trust and care satisfaction (Capozza et al., 2016).

Finally, this study informs on how professionals' experiences with COVID-19 impacted their work–family interface and well-being. Having colleagues diagnosed with COVID-19 was positively related to work–family conflict, probably because the remaining staff had to cover absent co-workers, making their workload heavier and further interfering with their family life (Brooks et al., 2020). Additionally, having family members vulnerable to COVID-19 was positively related to professionals' emotional exhaustion, probably due to the increased fear of transmitting the virus to them. Furthermore, losing a loved one was positively associated with emotional exhaustion, probably because bereaved health care professionals could undergo a severe psychological crisis, along with worries about their family stability and financial situation (Mohammadi et al., 2021).

This cross-sectional study was limited to a single Italian hospital and relied merely on self-report measures. Thus, future studies should adopt longitudinal designs and collect multisource and multimethod data on more nationally representative samples. Replications should be made in other countries and include other personal characteristics and coping strategies.

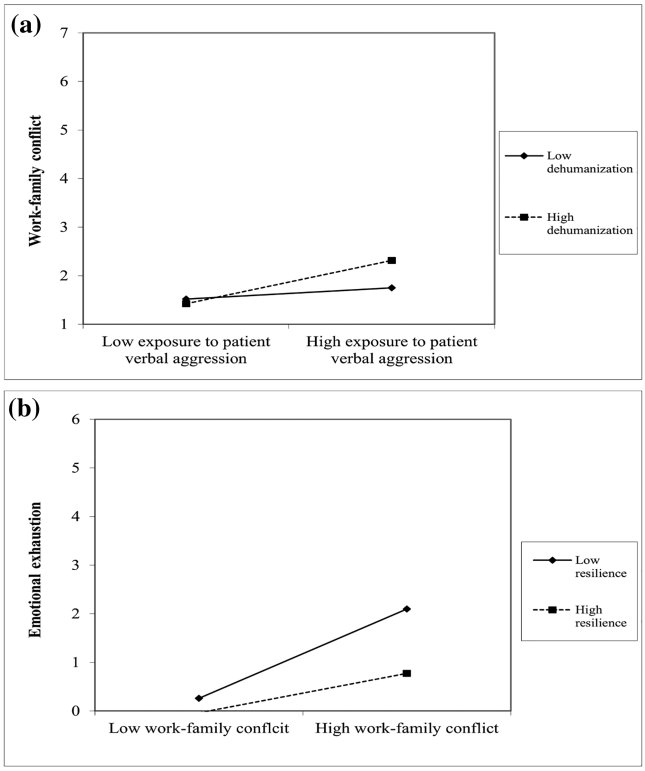

FIGURE 2 Moderating effects of dehumanization (a) and resilience (b) on the association between patient verbal aggression and emotional exhaustion through work–family conflict

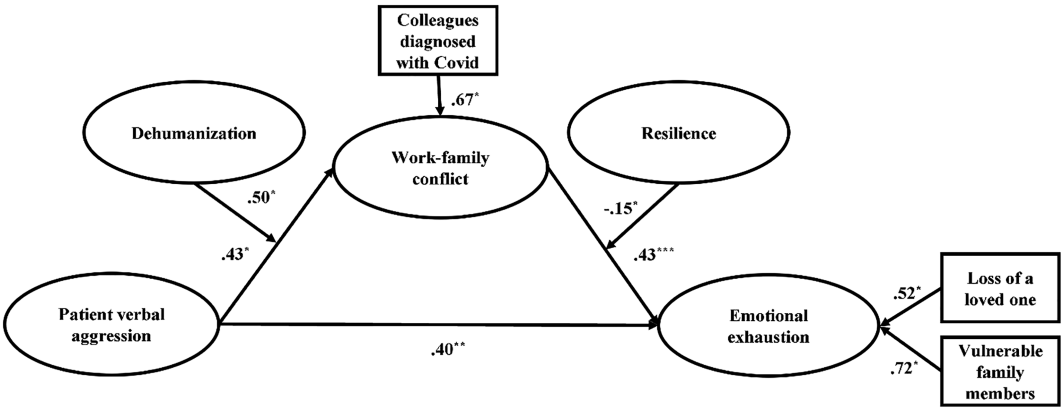

FIGURE 3 Model analysing the mediating role of work–family conflict in the association between patient verbal aggression and emotional exhaustion and the moderating effects of dehumanization and resilience, while controlling work–family conflict and emotional exhaustion for socio-demographic and COVID-19-related variables. *Note*: *$p < .05$, **$p < .01$

5 | CONCLUSION

This study demonstrated that when confronted with verbally aggressive patients during the COVID-19 pandemic, health care professionals with low/moderate resilience and high/moderate dehumanizing tendencies were at risk of experiencing work–family conflict and then emotional exhaustion. Therefore, hospital organisations could provide their staff with resilience and interpersonal skills training programmes to prepare them to handle patients during emergencies.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Hospital organisations should implement a zero-tolerance policy for patient aggression, ensuring institutional support, systematic monitoring and feedback practices (Dafny & Muller, 2021). Reporting of patient verbal aggression incidents should be encouraged by ward managers to identify strategies to prevent and de-escalate these events (Jakobsson et al., 2021). To this end, the ward managers could conduct periodic sharing and debriefing sessions where professionals are encouraged to share their experiences with aggressive patients and home problems, reflecting in teams on possible solutions. Health care professionals could benefit from stress management interventions, aggression management and scenario training programmes on de-escalating communicative skills to decrease the potential for aggression (Dafny & Muller, 2021). These programmes should also incorporate psychological resilience training and coping skills to establish work–home boundaries (Maffoni et al., 2020). Additionally, work-hour regulation programmes and services should be implemented, such as on-site childcare facilities or food delivery to workers' elderly family members. Furthermore, health care professionals should be aware of the risks related to the dehumanization of patients and educated on how to effectively balance empathy with cognitive problem-solving abilities through interpersonal skill training programmes (Haque & Waytz, 2012). Finally, hospital organisations could consider introducing psychological support programmes to support needy workers during normal and pandemic times.

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CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

ETHICAL APPROVAL

The study was commissioned by the Medical Direction (i.e., the board of medical directors that organizes and coordinates physician services and services provided by other professionals within the hospital, including the Ethical review board of the Hospital) and the Dean of Medicine with a protocol of understanding between the Hospital and the University of Pavia approved on 11 August 2020 (number 372) in which all parties agreed to conduct the study. In this protocol, the Ethical Review Board of the Hospital provided ethical approval for this research.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author (V.S.) upon reasonable request.

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ORIGINAL ARTICLE

WILEY

Caregivers facing violence in long-term care setting: A cross analysis of incident reports and caregivers speech

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Abstract

Background: Workplace violence is frequent, especially in long-term care, but often unreported.

Aims: The aim of this study is to identify workers experiences and coping strategies when they face physical aggression from residents and assess the value of incident reports for violence follow-up.

Methods: This mixed method study is based on incident reports collected over 3 years from two different long-term care geriatric facilities in France and thematic analysis of 20 semi-structured interviews of nurses and nursing assistants.

Results: The reported frequencies of physical aggression among respondents range from none to daily aggression. Only 76 incident reports were submitted. Aggressions were under-reported by caregivers who often felt guilty for not having avoided them. Coping strategies included banalization and seeking support from colleagues. Incident reports can constitute a warning signal for the management team but are not a reliable tool for workplace violence follow-up.

Conclusions: Our study emphasizes the complexity of workplace violence prevention in long-lerm care settings. Proposals can be formulated to train and support caregivers, but a shift from a task-oriented organisation to a patient-centred approach seems necessary to reduce violence.

Implications for Nursing Management: Situations to be reported should be better defined, aggression reporting encouraged and judgmental attitudes toward reports discouraged.

KEYWORDS
coping, incident reporting, mixed study, physical aggression, workplace violence

1 | BACKGROUND

The World Health Organization (2002) defines violence as "the intentional use of physical force or power, threatened or actual, against oneself, against another person or against a group or community, which either results in or has a high likelihood of resulting in injury, death, psychological harm." Violence in health care settings, especially against nursing staff, is a matter of concern in many countries (Babiarczyk et al., 2020; Enmarker et al., 2011; Estryn-Behar et al., 2008). Most affected sectors are psychiatric, geriatric and emergency departments (Babiarczyk et al., 2020; Spector et al., 2014). In France, a report by the "Network for surveillance of violence in the health care sector" (DGOS, 2021) shows that geriatric long-term care facilities (LTC) are the second largest source of reports of aggressive behaviours, after psychiatric care. Most victims are nursing assistants and registered nurses, and most aggressors are patients (70%). Nurses frequently do not report such aggressive behaviours because they consider it as part of their work and think it would be useless (Babiarczyk et al., 2020; Kvas & Seljak, 2014). Aggression can be defined as "a behavior that is intended to harm" (Allen & Anderson, 2017) and can take many forms. We will focus in this study on physical aggression.

Around 80% of people with dementia living in nursing homes experience at least one behavioural symptom of dementia, of which 32% are aggression as assessed by the Neuropsychiatric Inventory (Selbæk et al., 2013). Aggression is associated with male gender, poorer functional status and premorbid personality (Kolanowski et al., 2017). Caregiver attitudes may trigger aggressive behaviours, especially when resident's physical care is rapid or painful. On the other hand, a person-centred approach may reduce aggressive behaviours (Enmarker et al., 2011).

Exposure to aggression affects physical and mental health of health care workers (Jackson et al., 2002; Miranda et al., 2011). Workplace violence can have short-term repercussions, such as fear, anger, sadness, frustration, anxiety, irritability, apathy, feelings of guilt and helplessness (Lundström et al., 2007), but also long-term consequences, such as decreased job satisfaction and reduced quality of care provided to patients (Lanctôt & Guay, 2014), as well as increased staff turnover and absenteeism (Gerberich et al., 2004).

Qualitative studies are necessary to better understand how aggression is experienced by staff and why victims often prefer not to report it, but such studies are rare (Enmarker et al., 2011).

The aim of this mixed study is to understand how caregivers from two geriatric LTC experienced physical aggressions from residents, to identify their coping strategies and expectations. Such outcomes may shed light on consequences of incident reports in these facilities and allow to assess intensity to monitor workplace violence in LTC.

2 | METHODS

2.1 | Setting

Our study was conducted in two geriatric Long Term Care facilities of Rennes University Hospital. The nursing home contains three conventional units (1–3) for 94 residents (average age 85.2) (respectively, 31, 31 and 32 residents per unit) and a special care unit for people with dementia for 26 residents (average age = 86.4) with challenging behaviours. The Long Term Care Unit housed 120 patients (average age 82.7) with a poor health status who requested close medical monitoring. The care teams included 166 members composed of registered nurses, nursing assistants and hospital assistants.

2.2 | Qualitative study

We conducted semi-structured interviews with nurses and nursing assistants working in LTCs.

The interview guide was elaborated on the base of a literature review on violence in LTC. The guide was centred on the narratives of one physical aggression involving a patient. It involved questions about context, precipitating factors, consequences for caregivers and residents, reports and perceived support. In addition, the guide contained more general questions about frequency of aggressions by

TABLE 1 Main questions of interview guide

Topic	Example of questions
Physical aggressions	Can you tell us about an episode of patient violence against you? Did you file an incident report? Why or why not? How often have you been physically aggressed by a patient in the last year?
Patients	What are the triggers for patient violence? Which patients are most at risk? What are the consequences for the patient?
Consequences	Have you ever had a work stoppage due to a violent episode? Have you ever thought of changing job after such an episode?
Support	Do you feel supported by your colleagues? Your family? The institution? Have you received psychological support?
Training and solutions	Have you ever participated in a training on patient violence? Was that question addressed during your study? Is there debriefings following violent episode? According to you, what could help in reducing violence?

residents, reason for reporting them or not and training programmes on management of aggressive behaviours. Main questions are detailed in Table 1.

Caregivers were recruited according to purposive sampling among voluntary staff. In order to maximize the diversity of experiences concerning aggressions, we selected responders according to relevant features, such as gender, age, years of experience, place of work (nursing home vs. LTC unit), job (nurses vs. nursing assistants) and working hours (morning/afternoon/night). Doing so, we did not seek representativeness but maximal variability of possible replies. Hospital assistants were not included, as they are theoretically not involved in direct patient care.

Interviews were conducted by an investigator (MB), resident in family medicine, for the purpose of her medical thesis. Interviews were recorded and fully transcribed anonymously by MB with consent of respondents. In order to understand the subjective meaning of experience, we conducted an inductive and deductive thematic analysis to search for themes emerging from the data, though careful reading (Fereday & Muir-Cochrane, 2006). The first step was data-driven. Emerging themes were identified by MB and then discussed with a second researcher (AC) and organized into categories. The second step was deductive, theory-driven, grounded on Lazarus and Folkman (1984) model of coping. These authors differentiate two types of coping: problem-centred and emotion-centred. More recently, a third strategy, seeking social support, was described (Bruchon-Schweitzer & Boujut, 2014; Cousson-Gélie et al., 1996). These three strategies were used as codes to describe coping experiences.

Inductive analysis was conducted after each interviews, and interviews were stopped after two interviews adding no new relevant element, defining data saturation. Results were then summarized and discussed between coauthors. First results were presented to quality managers, head nurses and leading physicians of the departments concerned, to enrich the comprehension of the data.

Data collection with real-time inductive analysis took 1 year, and further analysis including theory-driven interpretation, researchers discussion, cross analysis with incident reports and return to management team one more year.

2.3 | Incident reports

To report an incident, staff members can complete an online form, accessible from the intranet website. The same form can be used for all incident report, including patient fall, drug side effect and problem with other unit. They are automatically transferred to quality managers and the management team. For the purpose of the study, we collected all incident reports concerning physical aggression against staff by patients in the nursing home and LTC unit of the Rennes University Hospital during the 3 years preceding the interviews. We excluded incident reports directed toward staff members that involved families of patients and aggressive behaviours between residents not involving staff members. Incident reports indicated the staff members' name and job, place and time/date of the incident, patient's date of birth, description of the incident, measures that were undertaken and consequences for the staff members. Descriptive data are presented and cross-analysed with qualitative data in the following section.

The research protocol has been approved for methodological and ethical aspects by the Family Medicine Department of Rennes University, according to university rules concerning medical thesis. In addition, the study has been examined and approved by Rennes University hospital ethical committee.

3 | RESULTS

3.1 | Caregivers' experiences of physical aggressions

The interviews ($n = 20$) lasted between 12 and 59 min. Mean age of interviewees was 43.4 years, and mean working experience in geriatrics was 10.3 years. Individual characteristics are presented in Table 2.

TABLE 2 Characteristics of the study population ($n = 20$)

Characteristics	Number of caregivers ($n = 20$)
Gender	
Female	17
Male	3
Age	
<30 years	2
30 to 39 incl	5
40 to 49 incl	8
≥50 years	5
Experience in geriatrics	
<3 years	4
3 to 5 incl	2
6 to 9 incl	2
10 to 14 incl	8
≥15 years	4
Job	
Registered nurses	6
Nursing assistants	14
Place of work	
Nursing home	6
Alzheimers unit	6
Long-term care unit	8
Shift	
Day	16
Night	4
Additional training (university diploma in geriatric care)	2

Most informants reported at least one episode of physical aggression over the last 12 months. Reported frequencies of physical aggression of respondents ranged from none at all to daily aggressions. The severity of aggressions was also subject to individual interpretation: "I no longer consider it as violence when patients try to hit or scratch us." *E4*. The deliberate nature of aggressive behaviours and cognitive status of aggressor conditioned how the act was interpreted. Aggressions deemed to be deliberate seemed to have a greater impact on caregivers.

Some caregivers considered themselves responsible for assaults because of their own behaviour or because they provided care that was too intrusive or hasty. Caregivers reported introspection when aggressive behaviours occurred, sometimes going as far as blaming themselves: "Did I do everything I had to do, maybe it was me […] who sent the wrong signal, did I perhaps make a mistake, […] an error? […] If someone hits me, perhaps it's because I did something wrong." *E2*. Caregivers felt guilty concerning these episodes, and their guilt increased when the patient self-injured as a result of the aggressive behaviour.

Caregivers questioned the responsibility of their institution in these violent incidents, referring to workload, lack of time devoted to residents, "obligations" such as bathing, activities lifestyle changes imposed by community living and residents' unease with the functioning of the unit. Informants described their job as physically arduous, with time constraints, in caring for increasingly dependent residents.

Some nursing assistants felt they had not accomplished their work if the resident had not been bathed, whether or not the resident consented. They argued that they washed the patient and attempted to divert any opposition he or she might express.

"I'm going to wash you anyway, I have to." "As we are on our own and we have objectives, we have to do it." *E7*.

Some staff members (a minority of respondents) reported feeling no latitude in decision-making and said that they were trapped by a task-oriented organisation.

About half of the caregivers from our sample reported having already been injured, with a declaration of an accident in the workplace or a sick leave following the assault. One even reported she had been off work because she feared an accident during her pregnancy.

Moreover, caregivers reported feeling "helpless," "powerless," "shocked," "scared," "weakened," "destabilized," "psychologically distressed" or "apprehensive" after having been physically aggressed.

> I have a difficult time when I'm kicked because I want to put the patient in a bed with vest restraints. I am not here to harm them, so I think we have to become hardened to it. *E9*

One caregiver was on sick leave because of burnout, which she attributed to difficulties of caring for some residents with aggressive behaviours.

Some caregivers thought about leaving their department because of aggressive behaviours, which adds to the workload and to a perceived lack of recognition and support. They reminisced their difficulty to cope with aggressive behaviours when they arrived in the geriatrics department or in the dementia unit.

3.2 | Caregivers' coping strategies

3.2.1 | Problem-focused coping

Caregivers sought information or advice to help them cope with violence, such as identification of residents and at-risk situations, information on the persons' life and preferences, and triggers of aggressive behaviours. Such data were judged useful to adapt their professional approach.

Informants said they tried to analyse aggressive behaviours to prevent and manage future episodes and to improve cares. In addition, they reported having used de-escalation techniques (relaxation methods, additional explanations of the care provided, massage and soft speaking) and distraction to cope with aggressive behaviours of residents.

Over half (11/20) of the caregivers from our sample followed a training programme on management of aggressive patients. However, most of them claimed that the training was not adapted, *especially* for people with dementia, because they considered that "you cannot reason with people [with dementia]" *E10*.

3.2.2 | Emotion-focused coping

Caregivers used different strategies to attenuate their emotions. Sometimes, they downplayed aggressive behaviours by considering them as part of their job or minimized the episodes and their consequences, "Because when someone just hits with their hands, it's not serious," (E10), or even showed fatalism, "You have to take a lot of distance from all of this, because we would not wash the residents in the morning," E16. One caregiver said that it was necessary to "harden oneself" and to "prepare psychologically to be hit." E9.

All caregivers sought excuses for residents' aggressive behaviours and to ascribe significance to it: "They cannot find their words and cannot express their feelings, so it has to come out one way or another" (E10). They emphasized that residents had no conscious desire to harm: "It's not his fault," E9, or "She did not do it deliberately," E3. They saw in this act a way of communicating: to express fear, anxiety, physical or psychological distress or annoyance, thereby suggesting that residents were not responsible for their behaviours. Others referred to their own responsibility for occurrence of aggressive behaviours, as described earlier with self-accusation mechanisms.

3.2.3 | Seeking social support

Almost all caregivers said they felt supported by their colleagues and reported helping one another when coping with an agitated person (providing care together and handing over to another professional).

They also stressed the importance of talking and sharing information and experiences. Despite such peer support, some staff members felt judged by their colleagues.

> You'll be considered as a bad caregiver. Judgmental attitudes between caregivers are common, and you can quickly be labeled as good or bad in situations like that. *E5*

Half of caregivers felt that the management team did not pay enough attention and reported lack of recognition or feeling guilty.

> Whether or not you feel bad or suffer from assaults, you must keep quiet and do the job. *E19*

> I sometimes even have the impression that … if we are victim of violence, they'll try to make us understand that we did not manage the situation properly. *E10*

3.3 | Caregivers' expectations

Caregivers emphasized the role of peer communication, especially concerning patients' personality or habits and triggers of aggressive behaviours.

> We need sufficient time […] to talk about patients, in particular those who regularly cause us problems, and we do not have that time. *E12*

Institutional meetings failed to meet the needs of caregivers. They sought recognition and support from colleagues and management team.

> We'd like nurses or managers to listen to us a bit more. *E11*

Caregivers expected informational support to come from training or debriefing, with special attention to newcomers.

> I think we need training […] training would help them see things differently. *E7*

Finally, material support is understood as workplace organisation (increased living space and individual bedrooms), occupational activities, increased number of caregivers to enhance availability and the recruitment of professionals interested in geriatrics.

3.4 | Incident reports

Only 76 incident reports concerning aggressions were registered during the 3 years prior the study and were retrospectively analysed. More than half of these reports came from the dementia unit (44, i.e., 57.9%), followed by 18 (23.7%) from the LCT unit, and 6, 1, and 7, respectively, from units 1–3 of the nursing home. Perpetrators of aggressions were more often men. These incident reports concerned 42 different patients, 15 of whom were responsible for more than one aggressive episode. Type and site of assaults are described in Table 3.

Aggressive behaviours mainly occurred in private spaces such as bedrooms or bathrooms. Aggressive behaviours were more likely to occur during hands on body care (washing/bathing and diaper changes), during bedtime, mealtimes and interpositions between patients.

One-hundred and eight aggressive acts were reported among the 76 incident reports (Table 2). Scratching was rarely reported (two reports), and only in association with other gestures, as was spitting. Two cases of biting alone were reported.

Reported consequences for caregiver were physical injuries for 16 incident reports, pain for 12 of them and psychological distress for 6 of them (fear, anxiety, burnout and fainting). The six caregivers who reported psychological distress were all in the LCT unit and did not report any other consequences.

Over 3-year period, 46 different caregivers submitted incident reports, and 14 submitted between 2 and 13 incident reports. Two caregivers submitted numerous incident reports (13 for one of them and 10 for the other). Most incident reports were submitted by nursing assistants on their own or with other personnel.

3.5 | Cross analysis of incident reports and qualitative data

Seven interviewed caregivers submitted from 1 to 10 of the registered incident reports. Nursing assistants submitted more incident reports than NRs, perhaps because they provide care requiring closer contact with patients. Caregivers working in the dementia unit submitted more incident reports. However, only one caregiver from the dementia unit estimated that the frequency of aggressions was several times a week, and none of them reported daily aggressions. One female caregiver explained that her incident reports corresponded to her early years working in the dementia unit and were due to the difficulties she had adapting.

The caregivers of unit 2 submitted very few incident reports, yet the patients they took care of did not differ from those from the other units. On the contrary, it turns out that there was an underestimation of aggressive events in this unit. Feedback from the management team indicated that caregivers of unit 2 were younger and that turnover was greater than in other units. Therefore, caregivers from this unit may have been less familiar with incident reporting procedures. Thus, the number of incident reports submitted by each unit does not seem to be correlated with frequency of aggressions.

We found various reasons why caregivers may refrain from proceeding to incident reports, such as perceived lack of utility

TABLE 3 Assaults by type and site

Type of aggression/unit	Unit 1	Unit 2	Unit 3	Alzheimers unit	LTC unit	Total	Percentage
Blows, slaps	4	1	4	29	10	48	44.4%
Grabbing/pinching	1	0	2	14	5	22	20.4%
Use of physical items	2	0	2	4	3	11	10.2%
Threatening gestures	1	0	1	4	5	11	10.2%
Biting	1	0	1	3	2	7	6.5%
Spitting	0	0	0	6	1	7	6.5%
Scratching	0	0	0	2	0	2	1.8%
Total	9	1	10	62	26	108	100%

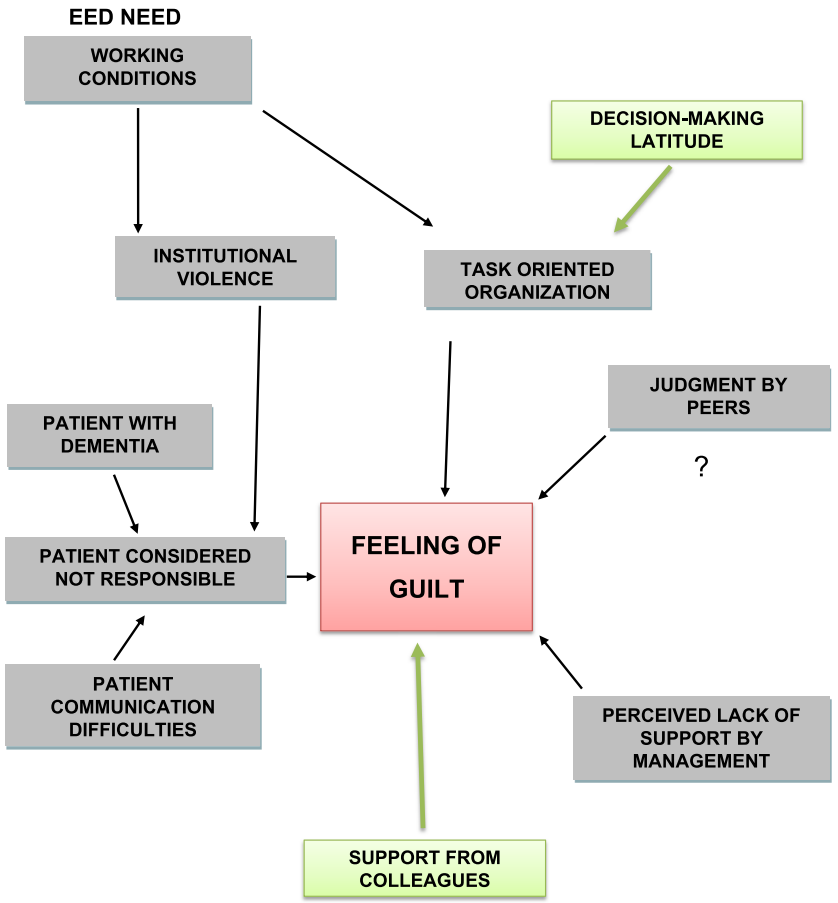

FIGURE 1 Schematic representation of the data from the semi-structured interviews concerning the mechanism of feeling of guilt (black arrows indicate positive actions and green/thick arrows negative actions)

(no administrative response and no additional drug prescribed to the resident) and fear of a negative reaction from supervisory personnel:

> I've already heard of colleagues being criticized for filing incident reports. *E4*

> I was rebuked the first time I submitted an IR, [...] a manager told me "aren't you sick of writing incident reports? [...] what is it you are always complaining about and filing incident reports for everything and anything." *E12*

We observe that psychological distress can trigger the submission of incident reports, which may serve as a warning signal regarding the caregiver's psychological state. One caregiver filed two incident reports about "fainting" and "burnout" shortly before going on sick leave. Yet feeling guilty could discourage submission of incident reports. Figure 1 shows the different factors that lead to such a feeling.

Caregivers sometimes used incident reports as a communication channel, to call attention to a recurring situation or to an increased workload caused by challenging behaviours of a resident.

4 | DISCUSSION

The number of incident reports per unit was not correlated with the number or impact of violent incidents. Yet filing IR forms seems to be an indicator of caregiver's psychological state, related to difficulties such as caring for a patient or job dissatisfaction, and thus constitute a warning signal for management.

We found that incidents were under-reported because of various obstacles referred to by caregivers and also found in other studies (Gerberich et al., 2004; Kvas & Seljak, 2014; Zeller et al., 2009). Guilt appears as a key factor in our qualitative study, whereas it seems less frequent in questionnaire surveys (Babiarczyk et al., 2020; Kvas & Seljak, 2014). One explanation could be the difficulty for caregivers to identify and express such a feeling in a questionnaire survey.

Our study also suggests that coping strategies involving emotions lead caregivers to minimize violence and consequently not to report it. Beyond caregiver's banalization, limited public awareness of such incidents constitutes an additional barrier to preventing actions (Brophy et al., 2019).

In our study, caregivers suggested that workload was a probable cause of residents' aggressive behaviours. Lack of time available to provide proper care leads to the feeling of rushing things with the patients, which may generate aggressiveness on their part (Morgan et al., 2008). Isaksson et al. (2009) has confirmed the association between caregivers workload and prevalence of aggressive behaviours. In our study, deleterious working conditions were sometimes the main reason for reporting aggressions. Given that incident reports alert on serious problems experienced by caregivers who are expecting solutions, they may be frowned upon by the middle management.

Caregivers often referred to the involuntary nature of aggressions of patients arguing that they were not responsible for their acts. Judging aggressive behaviours as involuntary enables caregivers to remain empathetic toward patients (Holst & Skär, 2017).

Magnavita (2014) has reported a significant association between physical aggression and poor social support. Morgan et al. (2008) noted that caregivers needed reassurance regarding the quality of their work and wanted their feelings to be acknowledged and validated. Vandecasteele et al. (2017) discuss the positive impact of communication between colleagues thanks to emotional support, which allows unburdening and "recovery" in the aftermath of aggressive situations. Workshops devoted to analysis of professional practices could be used to address problems situations reported by caregivers, without them feeling judged, and thereby improve provision of care (Lagadec, 2009).

Architectural design of care units also plays an important part in preventing aggressive behaviours by residents. Prevalence of challenging behaviours is often associated with unit size, spatial layout and homelike character. Units with over 30 residents, for example, reported an increase in the agitation and aggressiveness of residents (Chaudhury et al., 2017).

Several studies have pointed out that person-centred care is the best strategy in preventing and dealing with aggressiveness (Holst & Skär, 2017).

French heath authorities define good care practices as a way of being, acting and communicating that is mindful of the other person, responsive to her needs and demands, respectful of her choices and refusals and remaining vigilant of risks of mistreatment. Interviewed caregivers reported that they adopt such attitudes toward patients and know how to deal with aggressive behaviours. Adding training on good care practices may not be useful. On the contrary, caregiver may feel trapped between a task-oriented organisation of work that leaves little space for the unexpected and the injunction to slow down movements to provide person-centred care (Loffeier, 2015).

4.1 | Strength and limitations

To ensure the validity of our research, we strove to apply rigours criteria as presented by Forero et al. (2018), that is, credibility, dependability, confirmability and transferability. Credibility is provided by MB long-term commitment to the study, as she conducted the interviews, transcribed them, proposed categories and wrote the first draft of the article. We improved results dependability by systematic coding and iterative discussion between researchers. Recruiting voluntary caregivers could have constituted a bias, as they may have felt more concerned by workplace violence, although some informants did not report any aggressive behaviours. Cross analysis of two sources of data, incident report and interviews and return to management team allow triangulations that enhance confirmability of our results. Transferability is limited as our study was conducted in two French facilities only. Our results are certainly influenced by the quality improvement and managerial culture, in those facilities or more broadly in France. However, our findings are consistent with those of previous studies in other settings, thus strengthening their external validity.

5 | CONCLUSIONS

Our study confirms that incident reports are not a reliable tool for the follow-up of workplace violence, as they reflect neither the number of aggressions nor their impact on the health care workers. The number of incident reports is modulated by the banalization of such acts by caregivers and their psychological state. However, incident reports could serve as a warning signal for the management team. Caregivers do not share a common definition of aggressive behaviours, thus suggesting that situations to be reported in incident reports should be better defined. Incident reporting should be encouraged and judgmental attitudes avoided. Usefulness of incident reports needs to be clearly explained to caregivers.

Our study shows that guilt felt by caregivers was underpinned by their feeling that the patient was not responsible for his acts and by recommendations regarding good care practices. Guilt could be reduced if caregivers felt they had non-judgmental and tangible support from their colleagues and management team.

However, the question of aggressive behaviours of patients is part of a wider problem involving organisational and situational factors. It would be utopic to prone prevention of aggressive behaviours without considering the conditions in which they arise.

5.1 | Implications for nursing management

Incident reports can constitute a warning signal for management teams but are not a reliable tool for the follow-up of workplace violence.

Caregivers experiencing aggressions often feel guilt. They need non-judgmental support from their colleagues and managers.

Caregivers should be informed of what needs to be reported and on the purpose of incident reports.

Our study highlights the need of an organisational shift from a task-oriented organisation to a person-centred approach.

CONFLICT OF INTEREST

The authors declare no conflict of interest in the present study.

ETHICS STATEMENT

The research protocol has been approved by the Family Medicine Department of Rennes University for methodological and ethical aspect and has followed the institutional university process for medical thesis. It has also been validated by Rennes University Hospital Ethical Committee.

DATA AVAILABILITY STATEMENT

Verbatim cannot be on open access for confidentiality reason. They could be transmitted by the corresponding author on justified request.

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REVIEW ARTICLE

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Predictors of events of violence or aggression against nurses in the workplace: A scoping review

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Abstract

Aim: To identify predictors and consequences of violence or aggression events against nurses and nursing students in different work contexts.

Background: Workplace violence against nurses and nursing students is a very common and widespread phenomenon. Actions to manage or prevent violent events could be implemented knowing the risk factors and consequences. However, there is a lack of systematic reviews that summarize knowledge on the predictors and consequences of workplace violence.

Evaluation: A scoping review was conducted using electronic databases including APA PsycInfo, CINAHL, Cochrane, Ovid Medline, PubMed and Scopus.

Key issues: After full text analysis, 87 papers were included in the current scoping review. Risk factors of horizontal violence were grouped into 'personal' and 'Environmental and organizational', and for violence perpetrated by patients into 'personal', 'Environmental and organizational' and 'Characteristics of the perpetrators'.

Conclusions: The results of this scoping review uncover problems that often remain unaddressed, especially where these episodes are very frequent. Workplace violence prevention and management programmes are essential to counter it.

Implications for Nursing Management: The predictors and the consequents identified constitute the body of knowledge necessary for nurse managers to develop and implement policy and system actions to effectively manage or prevent violent events.

KEYWORDS
consequences, nurse, nursing students, predictors, scoping review, workplace violence

1 | BACKGROUND

The International Labour Organization defines 'workplace violence' as 'any action, incident or behaviour that departures from reasonable conduct in which a person is threatened, harmed, injured in the course of, or as a direct result of, his or her work' (ILO-International Labour Organization, 2003). The value of this definition lies both in its completeness (it covers all forms of violence), physical or psychological and in its inclusiveness (it does not exclude colleagues as a source of violence).

Health care professionals are often exposed to the risk of assault by patients or visitors. Workplace violence (WPV) among health care professionals, especially nurses, is the main occupational hazard in both developing and developed countries (Liu et al., 2019). A recent study reported that the prevalence of WPV against health care workers is high, especially in Asian and North American countries, psychiatric and emergency department settings, and among nurses and physicians (Liu et al., 2019).

More specifically, in North America, a survey conducted by the Emergency Nurses Association suggested that about one in every four nurses report having experienced physical violence more than 20 times in the previous 3 years and nearly a fifth report being verbally abused more than 200 times during the same period (Gacki-Smith et al., 2009). The Australian Incident Monitoring System showed that out of a total of 42.33 accidents, 9% ($n = 3621$) involved health care professionals in events of violence perpetrated by patients, relatives or visitors (Benveniste et al., 2005). Recently, a large study conducted in Australia showed that more than 75% of the nurses and midwives suffered from violence perpetrated by patients and visitors in the previous six months (Pich & Roche, 2020).

A European study conducted in 2019 showed that out of 260 nurses from five different countries, 20.4%, confirmed they had been physically assaulted in the workplace in the previous 12 months and 76.9% of these reported that it was unavoidable; 92.3% reported being assaulted by patients, family members or visitors in their professional career (Babiarczyk et al., 2019). In particular, the emergency room has been identified as a high-risk environment for WPV (Kowalenko et al., 2013), where nurses and trainees are the most exposed to this phenomenon (Chapman & Styles, 2006; Gerberich et al., 2005).

Although violent and aggressive patient behaviours are predominantly experienced by staff working in mental health units and emergency departments, patient violence and aggression are rising in other hospital areas, including general medicine and surgery units, paediatrics and intensive care (Ferri et al., 2016; Liu et al., 2019). Outside the hospital, episodes of violence and assaults have been suffered in-home nursing services by 50% of nurses during their carriers (Fujimoto et al., 2017) and community care by 36% of nurses (Fafliora et al., 2016), as well as in pre-hospital, ambulance and rescue services by 41% of nurses (Coskun Cenk, 2019; Velden et al., 2015).

Given the spread and the impact of this phenomenon, many studies have analysed the consequences of violence against nurses involving both physical and psychological consequences such as anger, fear or anxiety, post-traumatic stress disorder symptoms (Hong et al., 2021), guilt, acute stress, decreased productivity (Al-Ghabeesh & Qattom, 2019b), reduced job satisfaction (Berlanda et al., 2019), increased intention to leave, lower quality of life and even death (Çam & Ustuner Top, 2021; Heslop et al., 2019). The effects of violence in the health care setting may extend to the organization of the local service and entire health systems affecting the quality of services themselves. Health care organizations also incur in higher costs related to decreased productivity, poor job satisfaction and increased turnover (Speroni et al., 2014). Additional costs also result from lawsuits, compensation, and loss of revenue resulting from the negative image caused by violence incidents (Gerberich, 2004; Wax et al., 2016).

Although many health organizations around the world have implemented 'zero tolerance' policies for aggressors and established guidelines for the prevention and management of workplace violence, these policies often do not appear to work effectively in real life (Beattie et al., 2020; Hassankhani & Soheili, 2017; Morphet et al., 2014).

The most frequent risk factors of violence and aggression events include the characteristics of patients and nurses (e.g., gender, age and educational level) (Dangal et al., 2018; Zhu et al., 2021), weaknesses in leadership development or corporate policy implementation (Somani et al., 2021), poor training of personnel in the management of violence events (Jakobsson et al., 2021) and in recognizing risk situations, inadequate patient assessment and inadequate patient observation protocols (Palese et al., 2020), lack of communication between staff and patients, and their families (Yang et al., 2018) and deficiencies in the physical safety of the environment or in safety procedures (Babiarczyk et al., 2019; Najafi et al., 2018; Somani et al., 2021). All these factors and failure to recognize and respond to warning signals increase the risk of aggression or violence (Somani et al., 2021).

The identification of predictors or warning signals would enable health care professionals and managers to prevent and manage situations that could trigger events of violence in the workplace (Morphet et al., 2019). Furthermore, spreading the culture and knowledge of this phenomenon among health care professionals, managers and the general population could help to prevent the incidence of these episodes and protect both health care professionals and health service users.

TABLE 1 Inclusion criteria

Type of participants	Exposure (independent variable)	Outcomes (dependent variable)	Types of studies
All studies, involving: • Nurses • Undergraduate nursing students working in any health setting.	All studies where predictors of violence or aggression against nurses and nursing students were identified or assessed with different tools. Predictive factors included, but not limited to • external stimuli, such as institutional health systems and policies (often generating stressful situations) and work environment (structural, environmental and internal climate characteristics of work contexts) • internal factors, such as intrinsic characteristics of patients, family members and other healthcare professionals (including but not limited to social status, personality disorders, past history of aggression, stress, substance and alcohol abuse, medical conditions, insecurity, attitude problems, sense of powerlessness, poor control, poor communication, frustration, anxiety and fear, different experience, skill levels and training).	Findings of violence or aggression against nurses or nursing students reported by the authors have been included in the review. The most interesting specific results were found in the studies including verbal abuse, psychological abuse, physical abuse, threats, intimidation, physical assaults, horizontal violence and various forms of bullying, in work-related circumstances, carried out by users, family members or other healthcare professionals. The review included studies documenting outcomes on nurses and/or nursing students caused by • physical violence or assault events (including but not limited to fractures, lacerations, bruises, sprains, back pain, bites or injuries, deprivation sleep, nausea and headache) • emotional and psychological (including but not limited to stress, emotional exhaustion, burnout, anger, fear, loss of self-esteem, loss of self-confidence, anxiety, guilt, resentment, shock, embarrassment, humiliation, isolation and poor team cohesion) • professional (including but not limited to lack of concentration, decreased job satisfaction, burnout, increased sick leave and decreased sensitivity to others) • economic and/or organizational consequences caused by events of violence or aggression towards nurses or nursing students such as the reorganization of services, the implementation of time-consuming activities to development of new policies and procedures, train and educate healthcare professionals, provide counselling services to victims, revise the organization due to turnover, sick leave and transfer of nurses to other departments, and temporary interruption or reduction of services offered to patients.	A wide range of study designs was considered appropriate to be as comprehensive as possible and to include the most significant number of studies for this review. • Randomized controlled trials (RCTs) • observational studies (e.g., prospective and retrospective cohort studies) • case-control studies • cross-sectional analytical studies • Qualitative studies (e.g., phenomenological studies, ethnographic studies and Grounded Theory studies)

2 | OBJECTIVES

To identify predictors of violence or aggression against nurses and undergraduate nursing students in different health care settings.

Secondary objectives:

- Evaluate physical and psychosocial outcomes on nurses and undergraduate nursing students caused by violence or aggression and

the economic and organizational consequences (unavailability and restoration of services).
- Describe episodes of violence or aggression against nurses and nursing students in the community setting.

Scoping review question

What are the predictors of the violence or aggression against nurses and students in different work contexts that enable their prevention or management?

Secondary questions:

What are the physical and psychosocial outcomes on nurses and nursing students of violence or aggression and the economic and organizational consequences?

Which violence or aggression events against nurses and nursing students in the community are described in the literature?

3 | METHODS

3.1 | Study design

The present review was developed according to the Joanna Briggs Institute (JBI) guidelines for scoping reviews (M. Peters, Godfrey, et al., 2020). The scoping review methodology was further refined, and corresponding guidance was developed by a working group from JBI and the JBI Collaboration (JBIC) (Aromataris & Munn, 2020; Peters et al., 2015).

A research question was developed based on the PEO components: Population (types of participants), Exposure of interest (independent variable) and Outcome (dependent variable).

The PRISMA-ScR statement for scoping reviews (Tricco et al., 2018) was used to ensure the transparency of the study selection process.

The inclusion criteria are described in Table 1.

3.2 | Search strategies

3.2.1 | Electronic databases

Based on the review question, six databases were searched: APA PsycInfo, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane, Ovid Medline, PubMed and Scopus. Since no similar reviews were found, no time limit was set. Only papers in English and Italian were included.

The search terms were identified through the conceptual analysis conducted by Ventura-Madangeng and Wilson (2009) and a further research of the literature.

The initial search strategy was as comprehensive as possible to include the largest number of studies, which were then gradually reduced based on the inclusion and exclusion criteria. Specific search strategies were adopted for each database. Table 2 shows the search concepts according to the PEO method and the keywords. The terms included synonyms or specific terms according to each database. The terms were combined as subject headings and text words in APA PsycInfo, CINAHL, Cochrane, Ovid Medline, PubMed and Scopus. The study selection process included two phases:

1. An initial screening of titles, abstracts and keywords according to the inclusion and exclusion criteria. The papers were independently selected by four reviewers. Studies were excluded even if only one inclusion criterion was not met. All duplicates were removed.
2. Full texts eligible for inclusion were read and analysed.

An external expert in scoping reviews supervised the entire selection and analysis process. All the papers were separately examined by two researchers and in case of disagreement a third researcher was involved to reach an agreement. The reasons for the exclusion of the full texts were recorded to track the decisions that were taken.

3.3 | Data extraction

A data extraction sheet was developed according to the JBI guidelines for scoping reviews (M. Peters, Godfrey, et al., 2020).

The following data were collected:

Study design/methodology, purpose/objectives, research questions/hypotheses, study context (setting), sample description, sample size, exposure, tools for measuring results, results, methods of data analysis (statistical analysis), conclusions, comments and issues raised.

Data were extracted separately by two researchers.

3.4 | Data synthesis

The results of the included studies underwent narrative synthesis, using words and text to summarize and explain the results. Its form varied from a simple account and description of the characteristics of the study, to the context, the quality and the results. Tables were used to compare the characteristics of the studies and the extracted data (Soilemezi & Linceviciute, 2018).

4 | RESULTS

4.1 | Selection of the studies included in the review

A total of 15,523 records were initially identified after searching the databases. After titles and abstracts were screened, 121 papers underwent full text review. After reading the full texts, 87 papers were included in the current scoping review (see Figure 1, the PRISMA flow diagram).

TABLE 2 Search concepts and keywords used (with appropriate Boolean operators)

Population: Nurse/Nurse student	Exposure: violence predictors	Outcome: Consequences of workplace violence	
Subject heading: In CINAHL: ('nurses' and 'students, nursing') In APA PsycInfo: ('nurses' and 'nursing students') In Medline: ('nurses' and 'nursing students') In PubMed, Cochrane: ('Nurses'[Mesh] and 'Students, Nursing'[Mesh])	Subject heading: In CINAHL: N/A In APA PsycInfo: N/A In Medline: N/A In PubMed, Cochrane: N/A	Subject heading: In CINAHL: ('Workplace Violence') In APA PsycInfo: ('Workplace Violence') In Medline: ('Workplace Violence') In PubMed, Cochrane: ('Workplace Violence'[Mesh])	Subject heading: In CINAHL: ('costs') In APA PsycInfo: ('costs') In Medline: ('Workplace Violence') In PubMed, Cochrane: ('Costs and Cost Analysis'[Mesh])
Keywords: nurse[a] RN 'registered nurse[a]' 'nursing student[a]' 'student nurse[a]'	Keywords: predictor[a] Predicting antecedent[a] 'risk factor[a]' 'warning sign[a]' 'warning factor[a]' 'prediction sign[a]' 'prediction factor[a]' 'foreteller sing[a]' 'foreteller factor[a]' foreshad[a] forewarn[a] sign[a] factor[a] harbinger[a]	Keywords:'workplace violence' aggression[a] attack[a] violence[a] assault[a] hostility abuse[a] 'physical aggression[a]' 'physical attack[a]' 'physical violence[a]' 'physical assault[a]' 'physical hostility' 'verbal aggression[a]' 'verbal attack[a]' 'verbal violence[a]' 'verbal abuse[a]' 'verbal assault[a]' intimidation[a] badgering bludgeoning deceive brainwash browbeat bulldoze bully[a] 'horizontal violence' 'lateral violence' coerce constrain domineer harass intimidate oblige oppress persecute press push subjugate torment tyrannize	Keywords: cost[a] 'financial impact' 'financial burden' 'economic impact' 'financial cost[a]' 'economic cost[a]' 'monetary cost[a]' 'cost-of-illness' 'economic evaluation' 'illness cost[a]' 'medical cost[a]' 'health cost[a]' 'sick leave' 'turnover' policies policy procedure[a] 'service interruption' 'reorganization of service' 'physical consequence[a]' 'physical injurie[a]' 'broken bone[a]' laceration[a] bruise[a] sprain backache[a] bite[a] wound[a] 'sleep deprivation' nausea headache[a] pain 'emotional consequence[a]' 'psychological consequence[a]' disbelief 'power' 'autonomy' stress 'emotional exhaustion' depersonalization 'personal accomplishment' burnout anger fear 'self-esteem' 'self-confidence' anxiety 'self-blame'

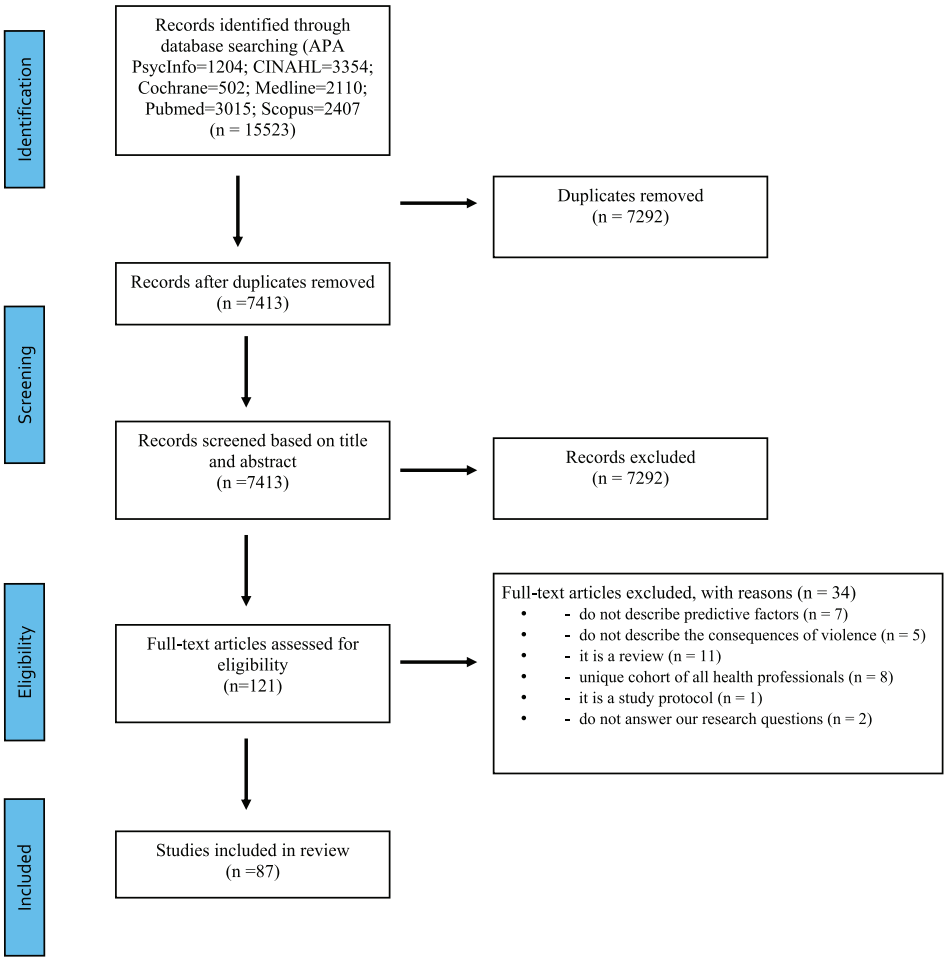
(Continues)

TABLE 2 (Continued)

Population: Nurse/Nurse student	Exposure: violence predictors	Outcome: Consequences of workplace violence
		resentment shock embarrassment humiliation isolation 'team cohesion'

[a]Any group of characters, including no character.

FIGURE 1 Flow diagram of the literature review process (PRISMA 2009)



4.2 | Overview of the studies included in the review

Twenty-eight studies were conducted in North America, 20 in Africa and the Middle East, 16 in Europe and 14 in Asia.

Of the studies included in the review, 59 analysed mainly the hospital setting and they involved all the departments ($n = 31$), the emergency room ($n = 15$), the psychiatric and mental health wards ($n = 9$), the operating room ($n = 2$), the medical and surgical departments ($n = 1$), the neonatal intensive care ($n = 1$) and in the trauma department ($n = 1$). Twenty-four studies involved both hospital and community settings, of these 22 included various departments, and 2 were in mental health. Studies that exclusively analysed the community context, in the home care setting, were the least represented ($n = 4$). All the details regarding the context and sample characteristics of the included studies are shown in Table 3.

Regarding the designs of the included studies, the cross-sectional descriptive design was adopted by 75 studies, 11 studies had a qualitative design and one a mixed-methods design (Table 4).

The population mainly included nurses (85 studies), and nursing students (2 studies). All studies had higher percentages of female

TABLE 3 Context and sample characteristics of included studies

Study reference	Country	Setting	Department	Sample description
Horizontal violence				
Al-Ghabeesh and Qattom (2019b)	Jordan	Hospital	Emergency department	120 ED nurses
Anusiewicz et al. (2020)	USA	Hospital	Various departments	15 hospital nurses
Bambi et al. (2014)	Italy	Hospital	Emergency, intensive care, operating room departments	1202 ED, ICU, Operating Room nurses
Bambi et al. (2019)	Italy	Community and Hospital	Various departments	930 hospital and community nurses
Bardakçı and Günüşen (2014)	Turkey	Hospital	Various departments	284 hospital nurses
Blackstock et al. (2015)	Canada	Hospital	Various departments	103 hospital nurses
Bloom (2019)	USA	Hospital	Various departments	76 hospital nurses
Budin et al. (2013)	USA	Community and Hospital	Various departments	1407 hospital and community nurses
Chatziioannidis et al. (2018)	Greece	Hospital	Neonatal Intensive Care	233 neonatal intensive care nurses
Clarke et al. (2012)	Canada	Community and Hospital	Various departments	674 nursing students
Difazio et al. (2019)	Russia	Community and Hospital	Various departments	438 hospital and community nurses
		Community and Hospital	Various departments	998 community and hospital nurses
Favaro et al. (2021)	Canada	Community and Hospital	Various departments	1080 hospital and community nurses
Fontes et al. (2018)	Brazil	Community and Hospital	Various departments	419 hospital and community nurses
Hampton and Rayens (2019)	USA	Hospital	Various departments	170 nursing leaders
Hartin et al. (2020)	Australia	Community and Hospital	Various departments	70 hospital and community nurses
Higgins and MacIntosh (2010)	Canada	Hospital	Operating room	10 operating room nurses
Kozakova et al. (2018)	Czech Republic	Hospital	Various departments	456 hospital nurses
Laschinger and Grau (2012)	Canada	Community and Hospital	Mental Health	165 Psychiatric mental health nurses
Laschinger and Grau (2012)	Canada	Community and Hospital	Various departments	342 new graduate nurses
Laschinger et al. (2010)	Canada	Hospital	Various departments	415 hospital nurses
Park and Choi (2020)	South Korea	Hospital	Various departments	205 hospital nurses
Reknes et al. (2014)	Norway	Community and Hospital	Various departments	2059 hospital and community nurses
Serafin and Czarkowska-Pączek (2019)	Poland	Community and Hospital	Various departments	404 hospital and community nurses
Yokoyama et al. (2016)	Japan	Community and Hospital	Various departments	825 hospital and community nurses
Violence perpetrated by patients and family members or visitors				
Avander et al. (2016)	Sweden	Hospital	Trauma Department	14 hospital nurses
Baby et al. (2014)	New Zealand	Community and Hospital	Mental Health	14 Psychiatric mental health nurses
Basfr et al. (2019)	Saudi Arabia	Hospital	Mental Health	

(Continues)

TABLE 3 (Continued)

Study reference	Country	Setting	Department	Sample description
				310 Psychiatric mental health nurses
Bimenyimana et al. (2009)	South Africa	Hospital	Mental Health	10 Psychiatric mental health nurses
		Hospital	Various departments	592 hospital nurses
Boafo and Hancock (2017)	Ghana	Hospital	Various departments	92 hospital nurses
Estryn-Behar et al. (2008)	Belgium, Germany, Finland, France, Italy, the Netherlands, Norway, Poland, Slovakia, UK	Community and Hospital	Various departments	39 898 hospital and community nurses
Evers et al. (2002)	The Netherlands	Community	Nursing Homes	551 community nurses
Farrell et al. (2014)	Australia	Community and Hospital	Various departments	1495 hospital and community nurses
Franz et al. (2010)	Germany	Community	Various departments	123 community nurses
Fujimoto et al. (2017)	Japan	Community	Mental Health	94 Psychiatric mental health nurses
Galián Muñoz et al. (2014)	Spain	Hospital	Emergency department	137 ED nurses
Gillespie et al. (2014)	USA	Hospital	Emergency department	177 ED nurses
Grainger and Whiteford (1993)	Australia	Hospital	Mental Health	717 incident report forms
Hahn et al. (2010)	Switzerland	Hospital	Various departments	291 hospital nurses
Hamdan and Hamra (2017)	Israel	Hospital	Emergency department	355 ED nurses
Hanohano (2017)	USA	Hospital	Mental Health	131 Psychiatric mental health nurses
Havaei et al. (2020)	Canada	Community and Hospital	Various departments	532 hospital and community nurses
Jenkins et al. (1998)	Ireland	Hospital	Emergency department	233 ED nurses
Jeong and Kim (2018)	South Korea	Hospital	Emergency department	246 ED nurses
Kobayashi et al. (2020)	Japan	Hospital	Mental Health	599 Psychiatric mental health nurses
Kowalenko et al. (2013)	USA	Hospital	Emergency department	117 ED nurses
Levin et al. (1998)	USA	Hospital	Emergency department	22 ED nurses
Ogundipe et al. (2013)	Nigeria	Hospital	Emergency department	81 ED nurses
Pinar and Ucmak (2011)	Turkey	Hospital	Various departments	255 hospital nurses
Ramacciati et al. (2019)	Italy	Hospital	Emergency department	816 ED nurses
Ray and Subich (1998)	USA	Hospital	Mental Health	78 Psychiatric mental health nurses
Rodney (2000)	Australia	Community	Nursing Homes	102 community nurses
Spelten et al. (2020)	Australia	Hospital	Emergency department	18 ED nurses
Speroni et al. (2014)	USA	Hospital	Various departments	762 hospital nurses
Tomagová et al. (2020)	Czech Republic	Hospital	Various departments	526 hospital nurses
Wolf et al. (2017)	USA	Hospital	Emergency department	16 ED nurses
Xing et al. (2015)	China	Hospital	Various departments	398 hospital nurses
Yang et al. (2018)	China	Hospital	Mental Health	290 hospital nurses
Zeng et al. (2013)	China	Hospital	Mental Health	387 Psychiatric mental health nurses

(Continues)

TABLE 3 (Continued)

Study reference	Country	Setting	Department	Sample description
Both bullying and violence perpetrated by patients and family members or visitors				
Abou-ElWafa et al. (2014)	Egypt	Hospital	Emergency and Medicine departments	134 ED nurses152 Internal medicine Department nurses
AbuAlRub et al. (2007)	Iraq	Hospital	Various departments	116 hospital nurses
AbuAlRub and Al-Asmar (2011)	Jordan	Hospital	Various departments	422 hospital nurses
AbuAlRub and Al Khawaldeh (2014)	Jordan	Hospital	Various departments	396 hospital nurses
Aksakal et al. (2015)	Turkey	Hospital	Various departments	538 hospital nurses
Al-Omari (2015)	Jordan	Hospital	Various departments	486 hospital nurses
Alameddine et al. (2015)	Lebanon	Hospital	Various departments	593 hospital nurses
Ceballos et al. (2020)	Brazil	Hospital	Emergency department	80 hospital nurses
Çelik and Çelik (2007)	Turkey	Community and Hospital	Various departments	622 hospital and community nurses
Cheung and Yip (2017)	Hong Kong	Hospital	Various departments	850 hospital nurses
Ferri et al. (2016)	Italy	Hospital	Various departments	125 hospital nurses
Hutton and Gates (2008)	USA	Hospital	Various departments	145 hospital nurses
Jafree (2017)	Pakistan	Hospital	Various departments	309 hospital nurses
Jaradat et al. (2016)	Palestine	Community and Hospital	Various departments	343 hospital and community nurses
Lash et al. (2006)	Turkey	Hospital	Various departments	73 nursing students
McKenna et al. (2003)	New Zealand	Community and Hospital	Various departments	551 hospital and community nurses
Merecz et al. (2020)	Poland	Community and Hospital	Various departments	413 hospital and community nurses
Nguluwe et al. (2016)	South Africa	Hospital	Mental Health	13 Psychiatric mental health nurses
Pai and Lee (2011)	Taiwan	Community and Hospital	Various departments	521 hospital and community nurses
Park et al. (2015)	South Korea	Hospital	Various departments	970 hospital nurses
Peters et al. (2020)	USA	Hospital	Various departments	279 hospital nurses
Read and Laschinger (2013)	Canada	Community and Hospital	Various departments	342 new graduate nurses
Sakellaropoulos et al. (2011)	USA	Hospital	Operating room	205 Nurse Anesthetists
Shi et al. (2017)	China	Hospital	Various departments	696 hospital nurses
Williams (1996)	USA	Community and Hospital	Various departments	345 hospital and community nurses
Wu et al. (2020)	China	Hospital	Various departments	1517 hospital nurses
Yang et al. (2012)	USA	Hospital	Various departments	176 hospital nurses

nurses or students (range = 58%–100%) except for the study by Xing. Nurses' work experience ranged between 1–23 years. The percentage of nurses with a diploma or (bachelor's) degree ranged between 38% and 93%. The Negative Act Questionnaire (NAQ) and the Workplace Violence in the Health Sector-Country Case Study (WHO tool) to detect bullying and violent incidents were used in four studies.

4.3 | Risk factors of violence

The forms of violence suffered by nurses and nursing students reported in the included studies are divided into *horizontal violence* perpetrated by professional co-workers or by other students and clinical instructors (including different forms of bullying and mobbing), and *violence perpetrated by patients, family members, visitors or informal*

TABLE 4 Designs of included studies (Total = 87)

Methodology	Number of articles	% of articles
Quantitative	**75**	**86.2**
Cross-sectional descriptive design	74	98.6
Case report	1	0.4
Qualitative	**11**	12.6
Qualitative descriptive design	9	81.8
Qualitative phenomenological design	1	9.1
Qualitative historical design	1	9.1
Mixed methods	**1**	**1.2**
Total	**87**	**100**

caregivers. Table 5 shows in detail all the risk factors of WPV reported in the included studies.

4.3.1 | Risk factors of horizontal violence suffered by nurses

Horizontal violence factors can be divided into personal and environmental/organizational factors.

Personal factors

Contrasting findings were reported with regard to nurses' gender; in some studies 'being a male nurse' was reported as a predictor (Chatziioannidis et al., 2018; Jaradat et al., 2016), whereas in others, 'being a female nurse' was considered a predictor (Anusiewicz et al., 2020; Park et al., 2015). In addition, being a young nurse (Bloom, 2019; Favaro et al., 2021; Reknes et al., 2014) or having few years of experience in the current workplace (Al-Ghabeesh & Qattom, 2019b; Chatziioannidis et al., 2018; Higgins & MacIntosh, 2010; Yokoyama et al., 2016) were described as factors related to the risk of being bullied. On the contrary, other authors found that a work experience of <5 years was a factor that protected nurses from horizontal violence (Bambi et al., 2019; Bardakçı & Günüşen, 2014).

Environmental and organizational factors

These factors included situation- or task-oriented leadership, rigid hierarchical structures (Favaro et al., 2021; Fontes et al., 2018; Hampton & Rayens, 2019; Laschinger & Grau, 2012; Laschinger et al., 2010; A. Peters, El-Ghaziri, et al., 2020), informal organizational alliances (i.e., covert coalitions of bullies) and the consequent abuse of organizational procedures (Blackstock et al., 2015). Furthermore, several studies identified the increase in workload and understaffing, pressure placed on workers (AbuAlRub et al., 2007; AbuAlRub & Al-Asmar, 2011; Anusiewicz et al., 2020; Hartin et al., 2020; Kozakova et al., 2018; Serafin & Czarkowska-Pączek, 2019; Yokoyama et al., 2016) and high levels of stress (Bambi et al., 2019; Bloom, 2019; Cheung & Yip, 2017) as factors facilitating mobbing or bullying. Numerous authors identified structural empowerment and authentic leadership as protective factors against bullying in the workplace with a statistically significant negative correlation between these variables (Favaro et al., 2021; Laschinger et al., 2010; Laschinger & Grau, 2012; Read & Laschinger, 2013; Yokoyama et al., 2016).

4.3.2 | Risk factors of horizontal violence suffered by nursing students

Personal factors

'Being female' is reported as a predictor of bullying for nursing students by Grainger and Whiteford (1993) and Lash et al. (2006). According to Jafree (2017), having an age between 20 and 29 years, single marital status, and following the Muslim religion are predictors of horizontal violence.

Environmental and organizational factors

Attending clinical internship during the day shifts is reported as a predictor of horizontal violence for students by Grainger and Whiteford (1993) and Jafree (2017).

4.3.3 | Risk factors of violence suffered by nurses perpetrated by patients, family members or visitors

These include personal factors, environmental/organizational factors and characteristics of aggressors.

Personal factors

Gender of health workers is controversially identified as a factor that increases the risk of suffering violence. In some studies, 'male gender' was associated with a higher risk of suffering WPV (Alameddine et al., 2015; Jaradat et al., 2016; Yang et al., 2018; Zeng et al., 2013), while, according to other studies, this risk was associated with 'female gender' (Boafo & Hancock, 2017; Cheung & Yip, 2017; Ferri et al., 2016; Grainger & Whiteford, 1993; Merecz et al., 2020; Ramacciati et al., 2019; Tomagová et al., 2020; Xing et al., 2015). Instead, according to Al-Omari (2015), being a female protects from violence. Another factor is younger age. Several studies found that those aged <35 years were most at risk (Boafo & Hancock, 2017; Cheung & Yip, 2017; Evers et al., 2002; Hahn et al., 2010; Kobayashi et al., 2020; Park & Choi, 2020; Sakellaropoulos et al., 2011; Yang et al., 2012). In particular, being younger than one's patients was another factor that increases the risk of suffering violence (Nguluwe et al., 2016). Other authors identified the 30-to 39-year age group (Ramacciati et al., 2019; Xing et al., 2015) as the one most at risk. Also, having a bachelor's degree or higher educational level has identified as predictor of WPV (Cheung & Yip, 2017; Hahn et al., 2010; Kowalenko et al., 2013; Zeng et al., 2013).

TABLE 5 Risk factors of workplace violence reported in included studies

Risk factors of horizontal violence suffered by nurses		References
Personal factors		
• Gender	• Female	Anusiewicz et al. (2020) Ferri et al. (2016) Park et al. (2015) Sakellaropoulos et al. (2011) Serafin and Czarkowska-Pączek (2019)
	• Male	Chatziioannnidis et al. (2018) Difazio et al. (2019) Favaro et al. (2021) Jaradat et al. (2016) Nguluwe et al. (2016)
• Age	• Age 35 years old or younger	Jaradat et al. (2016)
	• Age differences among nurses	Budin et al. (2013)
• Educational level	• College diploma	Favaro et al. (2021)
	• Bachelor's degree	Bambi et al. (2019) Cheung and Yip (2017) Pai and Lee (2011)
	• Master's degree	Hartin et al. (2020) Bardakçi and Günüşen (2014)
• Work experience	• <5 years (protective factor)	Bambi et al. (2014) Bardakçi and Günüşen (2014)
	• Being young nurses	Bloom (2019) Favaro et al. (2021) Reknes et al. (2014)
	• Less years of experience in current workplaces	Al-Ghabeesh and Qattom (2019b) Chatziioannnidis et al. (2018) Higgins and MacIntosh (2010) Yokoyama et al. (2016)
Environmental and organizational factors		
• Orientation of leadership towards situation or task • Rigid hierarchical structures		Favaro et al. (2021) Fontes et al. (2018) Hampton and Rayens (2019) Laschinger et al. (2010) Laschinger and Grau (2012) Peters et al. (2020)
• Low nurse manager ability		Bloom (2019) Fontes et al. (2018) Yokoyama et al. (2016)
• Informal organizational alliances • Tolerance of bullying		Blackstock et al. (2015)
• Understaffing • Increase in workload		AbuAlRub et al. (2007) AbuAlRub and Al-Asmar (2011) Anusiewicz et al. (2020) Hartin et al. (2020) Kozakova et al. (2018) Serafin and Czarkowska-Pączek (2019) Yokoyama et al. (2016)
• High levels of stress		Bambi et al. (2019) Bloom (2019) Cheung and Yip (2017)
• Unpredictability and constant change		Hartin et al. (2020)
• Excessive competition between professionals		Hartin et al. (2020) Serafin and Czarkowska-Pączek (2019)

(Continues)

TABLE 5 (Continued)

Risk factors of horizontal violence suffered by nurses		References
• Dayshift		Bambi et al. (2014) Bambi et al. (2019) Budin et al. (2013)
• Nightshift		Park and Choi (2020) Reknes et al. (2014)
• Structural empowerment (protective factor)		Favaro et al. (2021) Laschinger et al. (2010) Yokoyama et al. (2016)
• Authentic leadership (protective factor)		Laschinger and Grau (2012) Read and Laschinger (2013) Yokoyama et al. (2016)
Risk factors of horizontal violence suffered by nursing students		**References**
Personal factors		
• Gender	• Female	Grainger and Whiteford (1993) Lash et al. (2006)
• Age	• Age 20 and 29 years old	Jafree (2017)
• Marital status	• Being single	Jafree (2017)
• Religion	• Being Muslim	Jafree (2017)
Environmental and organizational factors		
• Morning shift		Grainger (1993) Jafree (2017)
Risk factors of violence suffered by nurses perpetrated by patients, family members or visitors		**References**
Personal factors		
• Gender	• Female	Ferri et al. (2016) Cheung and Yip (2017) Merecz et al. (2020) Boafo and Hancock (2017) Grainger and Whiteford (1993) Ramacciati et al. (2019) Tomagová et al. (2020) Xing et al. (2015)
	• Female as protective factor	Al-Omari (2015)
	• Male	Alameddine et al. (2015) Jaradat et al. (2016) Yang et al. (2018) Zeng et al. (2013)
• Age	• Age 35 years old or younger	Boafo and Hancock (2017) Cheung and Yip (2017) Evers et al. (2002) Hahn et al. (2010) Kobayashi et al. (2020) Park et al. (2015) Sakellaropoulos et al. (2011) Yang et al. (2012)
	• Age between 30 and 39 years old	Xing et al. (2015) Ramacciati et al. (2019)
	• To be younger than one's patients	Nguluwe et al. (2016)
• Work experience	• <5 years	Al-Omari (2015) Celik and Çelik (2007) Tomagová et al. (2020)
	• >5 years	Ceballos et al. (2020) Fujimoto et al. (2017) Galián Muñoz et al. (2014)

(Continues)

TABLE 5 (Continued)

Risk factors of violence suffered by nurses perpetrated by patients, family members or visitors		References
		Hahn et al. (2010)
• Educational level (Bachelor's degree or higher)		Cheung and Yip (2017) Hahn et al. (2010) Kowalenko et al. (2013) Zeng et al. (2013)
• Negative personal attitudes and behaviours		Hamdan and Hamra (2017) Christopher (1998) Wolf et al. (2017)
• Poor communication skills		AbuAlRub and Al Khawaldeh (2014) Nguluwe et al. (2016) Yang et al. (2018)
Environmental and organizational factors		
• Understaffing		Basfr et al. (2019) Bimenyimana et al. (2009) Grainger and Whiteford (1993) Ogundipe et al. (2013) Yang et al. (2018)
• Working department	• Work in emergency departments	Estryn-Behar et al. (2008) Farrell et al. (2014) Ferri et al. (2016) Hahn et al. (2010) Jenkins et al. (1998) Jeong and Kim (2018) Pinar and Ucmak (2011) Ramacciati et al. (2019) Speroni et al. (2014) Tomagová et al. (2020) Williams (1996)
	• Work in psychiatric settings	Estryn-Behar et al. (2008) Farrell et al. (2014) Ferri et al. (2016) Franz et al. (2010) Yang et al. (2018)
	• Work in geriatric settings	Estryn-Behar et al. (2008) Farrell et al. (2014) Ferri et al. (2016) Hahn et al. (2010)
	• Work in nursing homes and long-term care	Franz et al. (2010) Williams (1996)
• Working in shifts		Abou-ElWafa et al. (2014) Aksakal et al. (2015) Alameddine et al. (2015) Basfr et al. (2019) Ceballos et al. (2020) Cheung and Yip (2017) Estryn-Behar et al. (2008) Farrell et al. (2014) Ferri et al. (2016) Grainger and Whiteford (1993) Hanohano (2017) Pai and Lee (2011) Yang et al. (2018) Zeng et al. (2013)
• High workload • Time pressure • Physical load		Estryn-Behar et al. (2008) Evers et al. (2002) Hanohano (2017)

(Continues)

TABLE 5 (Continued)

Risk factors of violence suffered by nurses perpetrated by patients, family members or visitors	References
	Jafree (2017) Yang et al. (2012)
• Low quality of physical working environment	Havaei et al. (2020) Wu et al. (2020)
• Providing direct patient care • Being a front-line nurse	Cheung and Yip (2017) Gillespie et al. (2014) Hahn et al. (2010) Hutton and Gates (2008) Speroni et al. (2014) Xing et al. (2015)
• Long waiting time	Basfr et al. (2019) Gillespie et al. (2014) Hamdan and Hamra (2017) Levin et al. (1998) Kowalenko et al. (2013) Ogundipe et al. (2013) Yang et al. (2018)
• Unmet expectations of patients/families	Basfr et al. (2019) Hamdan and Hamra (2017) Ogundipe et al. (2013) Yang et al. (2018)
• Lack of anti-violence policies • Lack of procedures to report WPV	AbuAlRub et al. (2007) AbuAlRub and Al Khawaldeh (2014) Alameddine et al. (2015) Gillespie et al. (2014) Xing et al. (2015)
• Inadequate security system	Jenkins et al. (1998) Levin et al. (1998) Merecz et al. (2020) Ogundipe et al. (2013)
Characteristics of the perpetrators	
• Patient alcohol or drug abuse	Avander et al. (2016) Baby et al. (2014) Ferri et al. (2016) Hamdan and Hamra (2017) Nguluwe et al. (2016) Ogundipe et al. (2013) Spelten et al. (2020) Speroni et al. (2014)
• Mental status and patient conditions	Baby et al. (2014) Bimenyimana et al. (2009) Levin et al. (1998) Spelten et al. (2020) Yang et al. (2018) Cheung and Yip (2017)
• Dementia or Alzheimer	Speroni et al. (2014) Nguluwe et al. (2016)
• Pain	Hamdan and Hamra (2017)
• Anxiety • Fear	Hamdan and Hamra (2017) Christopher (1998) Pai and Lee (2011) Shi et al. (2017)
• Patients with aggressive behaviours	AbuAlRub and Al-Asmar (2011) Rodney (2000)
• Patients with unrealistic expectations	Gillespie et al. (2014)

(Continues)

TABLE 5 (Continued)

Risk factors of violence suffered by nurses perpetrated by patients, family members or visitors		References
		Hamdan and Hamra (2017) Pai and Lee (2011) Speroni et al. (2014)
Risk factors of violence suffered by nursing students perpetrated by patients, family members or visitors		**References**
Personal factors		
• Gender	• Female	Grainger and Whiteford (1993) Lash et al. (2006)
• Age	• Age between 20 and 29 years	Jafree (2017)
• Marital status	• Being single	Jafree (2017)
Environmental and organizational factors		
• Being the least knowledgeable and least powerful group		Lash et al. (2006)
• During patient refusing a request		Grainger (1993)
• Placement in a psychiatric ward		Grainger (1993)
• Placement in emergency room		Jafree (2017)
Characteristics of the perpetrators		
• Inexperienced clinical instructors		Lash et al. (2006)
• Patients with aggressive behaviours		Grainger (1993) Jafree (2017)

Work experience was also identified as a predictor of WPV. Controversially, some authors found that having <5 years of service increased the risk of suffering violence (Al-Omari, 2015; Çelik & Çelik, 2007; Tomagová et al., 2020), while for others this was higher in those with a career of >5 years (Ceballos et al., 2020; Fujimoto et al., 2017; Galián Muñoz et al., 2014; Hahn et al., 2010).

Environmental and organizational factors

Many studies have identified several departments as risk factors for WPV. Working in emergency departments (Estryn-Behar et al., 2008; Farrell et al., 2014; Ferri et al., 2016; Hahn et al., 2010; Jenkins et al., 1998; Jeong & Kim, 2018; Pinar & Ucmak, 2011; Ramacciati et al., 2019; Speroni et al., 2014; Tomagová et al., 2020; Williams, 1996), psychiatric settings (Estryn-Behar et al., 2008; Farrell et al., 2014; Ferri et al., 2016; Franz et al., 2010; Yang et al., 2018), geriatric settings (Estryn-Behar et al., 2008; Farrell et al., 2014; Ferri et al., 2016; Hahn et al., 2010) or in nursing homes and long-term care (Franz et al., 2010; Williams, 1996) expose nurses to a greater risk of violence. Various working organizational aspects and having scarce resources are identified as risk factors for WPV: inadequate staffing levels (Basfr et al., 2019; Bimenyimana et al., 2009; Grainger & Whiteford, 1993; Ogundipe et al., 2013; Yang et al., 2018), high workload, time pressure and physical load (Estryn-Behar et al., 2008; Evers et al., 2002; Hanohano, 2017; Jafree, 2017; Yang et al., 2012). The type of job contract is another predisposing factor. Working full-time and in shifts was associated with a higher risk of violence (Abou-ElWafa et al., 2014; Aksakal et al., 2015; Alameddine et al., 2015; Basfr et al., 2019; Ceballos et al., 2020; Cheung & Yip, 2017; Estryn-Behar et al., 2008; Farrell et al., 2014; Ferri et al., 2016; Grainger & Whiteford, 1993; Hanohano, 2017; Pai & Lee, 2011; Yang et al., 2018; Zeng et al., 2013). Another predisposing factor of violence is long waiting times for patients, especially in the emergency department (Basfr et al., 2019; Gillespie et al., 2014; Hamdan & Hamra, 2017; Kowalenko et al., 2013; Levin et al., 1998; Ogundipe et al., 2013; Yang et al., 2018).

Characteristics of violence perpetrators

Nurses caring for patients suffering from psychiatric disorders or advanced dementias both in the community and in the hospital, report higher rates of physical and verbal violence (Nguluwe et al., 2016; Speroni et al., 2014). Alcohol or drug abuse by patients (Avander et al., 2016; Baby et al., 2014; Ferri et al., 2016; Hamdan & Hamra, 2017; Nguluwe et al., 2016; Ogundipe et al., 2013; Spelten et al., 2020; Speroni et al., 2014) and their mental status and clinical conditions (Baby et al., 2014; Bimenyimana et al., 2009; Cheung & Yip, 2017; Levin et al., 1998; Spelten et al., 2020; Yang et al., 2018), as well as aggressive patients' behaviors (AbuAlRub & Al-Asmar, 2011; Rodney, 2000), expose nurses to a higher risk of violence.

4.3.4 | Risk factors of violence suffered by nursing students perpetrated by patients, family members or visitors

Personal factors

'Being female' (Grainger & Whiteford, 1993; Lash et al., 2006), having an age range of 20–29 years and being single (Jafree, 2017) increase the risk of suffering violence among nursing students.

Environmental and organizational factors

Being in the least knowledgeable and with the least decisional power (Lash et al., 2006) together with being present when a patient refuses a request (Grainger & Whiteford, 1993) are seen as environmental and organizational predictors of violence. Also, internships in psychiatric wards (Grainger & Whiteford, 1993) or the emergency room (Jafree, 2017) are other risk factors.

Characteristics of perpetrators

Usually, the perpetrators of violence towards nursing students are either inexperienced clinical instructors (Lash et al., 2006) or patients with aggressive behaviours (Grainger & Whiteford, 1993; Jafree, 2017).

4.4 | Consequences of violence

The consequences of workplace violence suffered by nurses and nursing students reported in the included studies are divided into '*Professional life*' and '*Emotional and psychological wellbeing*' for horizontal violence, together with '*Physical consequences*' *and* '*Consequences for the work environment, damage and costs*' for violence perpetrated by patients and visitors. Table 6 shows details of WPV consequences.

4.4.1 | Consequences of horizontal violence suffered by professional nurses

Professional life

The most frequent consequence is the increasing intention to change workplace or to leave the nursing profession (Bambi et al., 2014; Blackstock et al., 2015; Favaro et al., 2021; Fontes et al., 2018; Kozakova et al., 2018).

Emotional and psychological wellbeing

At the same time the increasing of impulsiveness, anxiety and depression is the most frequent emotional and psychological consequence (Bambi et al., 2014; Blackstock et al., 2015; Favaro et al., 2021; Fontes et al., 2018).

4.4.2 | Consequences of horizontal violence suffered by nursing students

Professional life

The most frequent consequences for nursing students of horizontal violence are the intention to leave the nursing programme (Clarke et al., 2012), the increased rates of absenteeism from internship placement (Lash et al., 2006).

Emotional and psychological wellbeing

The most frequently reported physical and emotional consequences are headache, loss of appetite and difficulty falling asleep (Lash et al., 2006).

4.4.3 | Consequences of violence suffered by nurses perpetrated by patients, family members or visitors

Professional life

The most frequent consequences suffered by professional nurses of violence perpetrated by patients are poor job satisfaction (AbuAlRub & Al Khawaldeh, 2014; AbuAlRub & Al-Asmar, 2011; Al-Omari, 2015; Galián Muñoz et al., 2014; Jaradat et al., 2016; Kobayashi et al., 2020; Merecz et al., 2020), increased absence from work (AbuAlRub & Al Khawaldeh, 2014; Jenkins et al., 1998; Speroni et al., 2014; Xing et al., 2015) and increased intention to change workplace and leave the profession (Bimenyimana et al., 2009; Hutton & Gates, 2008; Ogundipe et al., 2013; Pinar & Ucmak, 2011).

Emotional and psychological wellbeing

Stress and burnout due to violence perpetrated by patients, family members or visitors (Bimenyimana et al., 2009; Franz et al., 2010; Gillespie et al., 2014; Wu et al., 2020; Yang et al., 2018).

Physical consequences

The most common physical consequences are lacerations, musculoskeletal injuries, fractures, physical disability, chronic pain and head injuries (Baby et al., 2014; Levin et al., 1998; Nguluwe et al., 2016; Yang et al., 2018).

Consequences for the work environment, damage and costs

The consequences for the workplace environment range from damage to the furniture (Gillespie et al., 2014), tools and structures of health care facilities (Galian-Munoz et al., 2014). The physical consequences of the violent events also have economic repercussions in terms of loss of regular salary, cost of medical care and long-term leave from work for the recovery process (Favaro et al., 2021). WPV episodes increase staff turnover with a cost of up to $ 337,500; this leads to inability to hire, generating a toxic work environment and a lack of loyalty and cooperation (AbuAlRub et al., 2007). In a study conducted in the USA, the decrease in productivity was approximately $ 1300 for each nurse that experienced violence (Hutton & Gates, 2008).

4.4.4 | Consequences of violence suffered by nursing students perpetrated by patients, family members or visitors

Professional life

Consequences for students due to violence perpetrated by patients reported by the studies included in our review involve the increasing rates of absenteeism from internship placements (Clarke et al., 2012).

Emotional and psychological wellbeing

Studies reveal disturbing memories and negative thoughts (Clarke et al., 2012), loss of self-esteem and sense of helplessness (Lash

TABLE 6 Consequences of workplace violence reported in included studies

Consequences of horizontal violence suffered by nurses	References
Professional life	
• Professional life	Al-Ghabeesh and Qattom (2019b)
• Quality of care provided • Less adequate responses and low patient safety	Çelik and Çelik (2007)
• Greater precariousness of work and with less control on clinical practices	Park and Choi (2020)
• Poor overall job satisfaction	Hartin et al. (2020)
Emotional and psychological wellbeing	
• Increased impulsiveness • Anxiety • Depression	Bambi et al. (2014) Blackstock et al. (2015) Favaro et al. (2021) Fontes et al. (2018) Kozakova et al. (2018)
• Sadness • Burnout Emotional exhaustion	Laschinger et al. (2010)
• Sense of guilt	Bambi et al. (2014)
• Feeling victims	Chatziioannidis et al. (2018)
• Cynicism	Laschinger et al. (2010)
• Chronic fatigue • Low concentration • Sleep disturbances	Bambi et al. (2014) Difazio et al. (2019)
Consequences of horizontal violence suffered by nursing students	**References**
Professional life	
• Intentions to leave the nursing programme	Clarke et al. (2012)
• Increased rates of absenteeism from internship placement	Lash et al. (2006)
• Becoming super alert or watchful and on guard	Clarke et al. (2012)
Emotional and psychological wellbeing	
• Loss of appetite • Difficulty falling asleep • Headache • Tiredness	Lash et al. (2006)
Consequences of violence suffered by nurses perpetrated by patients, family members or visitors	**References**
Professional life	
• Poor job satisfaction	AbuAlRub and Al Khawaldeh (2014) AbuAlRub and Al-Asmar (2011) Al-Omari (2015) Galian-Munoz et al. (2014) Jaradat et al. (2016) Kobayashi et al. (2020) Merecz et al. (2020)
• Loss of interest in work	Bimenyimana et al. (2009)
• Increased fear of new episodes of violence at work	Park et al. (2015) Ramacciati et al. (2019)
• Constant state of alertness	Al-Omari (2015) Jafree (2017) Tomagová et al. (2020)
• Sense of diminished security	Ogundipe et al. (2013)
• Reducing to the minimum their contacts with patients and the time spent to treat patients	Hamdan and Hamra (2017)
• Increased absence from work	AbuAlRub and Al Khawaldeh (2014)

(Continues)

TABLE 6 (Continued)

Consequences of violence suffered by nurses perpetrated by patients, family members or visitors	References
	Jenkins et al. (1998) Speroni et al. (2014) Xing et al. (2015)
• Increased intention to change the workplace and leave the profession	Bimenyimana et al. (2009) Hutton and Gates (2008) Ogundipe et al. (2013) Pinar and Ucmak (2011)
Emotional and psychological wellbeing	
• Anxiety • Fear • Frustration	Farrell et al. (2014) Basfr et al. (2019) McKenna et al. (2003) Nguluwe et al. (2016) Pinar and Ucmak (2011)
• Depression • Anger • Cynicism • Nervousness • Helplessness	Galian-Munoz et al. (2014) Nguluwe et al. (2016) Yang et al. (2018) Bimenyimana et al. (2009)
• Depersonalization • Stress • Burnout • Emotional exhaustion	Wu et al. (2020) Yang et al. (2018) Bimenyimana et al. (2009) Franz et al. (2010)
• Recurring memories and thoughts related to violence • Nightmares • Sleep disturbances	Bambi et al. (2019) Levin et al. (1998) Ogundipe et al. (2013)
• Loss of appetite • Gastrointestinal disorders	Bambi et al. (2019)
• Drug abuse by nurses and alcoholism	Bimenyimana et al. (2009)
• High risk of post-traumatic stress disorder (PTSD) • Loss of self-confidence	McKenna et al. (2003)
Physical consequences	
• Scratches • Bruises • Abrasions • Swelling • Muscle tension	Yang et al. (2018)
• Fractures • Musculoskeletal injuries • Head injuries • Asphyxia • Lacerations • Sensory deficits • Physical disability • Chronic pain	Baby et al. (2014) Levin et al. (1998) Nguluwe et al. (2016) Yang et al. (2018)
• One to five days of sick leave • Medical examination • Specific treatment	Franz et al. (2010) Speroni et al. (2014)
• Death	AbuAlRub et al. (2007)
Consequences for the work environment, damages and costs	
• Damage to the furniture	Gillespie et al. (2014)
• Damage tools and structures of health care facilities	Galian-Munoz et al. (2014)
• Loss of a regular salary • Cost of medical care and long-term leave from work for the recovery process	Favaro et al. (2021)

(Continues)

TABLE 6 (Continued)

Consequences of violence suffered by nurses perpetrated by patients, family members or visitors	References
• Long-term health care • Rehabilitation • Victim reintegration • Unemployment • Retraining costs for victims who lose or leave their jobs • Injury benefits and treatment costs	Favaro et al. (2021) Speroni et al. (2014)
• Increasing staff turnover with a cost of up to $ 337,500 • Inability to hire due to turnover costs	AbuAlRub et al. (2007)
• Decrease in productivity	Hutton and Gates (2008)
Consequences of violence suffered by nursing students perpetrated by patients, family members or visitors	**References**
Professional life	
• Increased rates of absenteeism from internship placement	Clarke et al. (2012)
Emotional and psychological wellbeing	
• Disturbing memories • Thoughts • Images of the attack	Clarke et al. (2012)
• Sense of helplessness • Loss of self-esteem • Neglect of self-care	Lash et al. (2006)

et al., 2006) as the main emotional and psychological consequences for nursing students.

5 | DISCUSSION

The phenomenon of workplace violence is widespread and documented worldwide. The literature describes violence mainly in hospital settings and in emergency rooms but also in community services and in various hospital departments. The present review enabled to identify several risk factors of WPV.

5.1 | Risk factors and consequences of horizontal violence

Horizontal violence is facilitated by specific personal factors of victims such as gender, age educational level and work experience. A way to promote integration and respect among professionals and prevent horizontal violence could be creating teams of nurses that have a good balance in terms of gender, age, a mix of work experience and skills to achieve common goals and greater autonomy (Edmonson & Zelonka, 2019).

Several environmental and organizational factors, such as poor nurse manager skills, rigid and hierarchical structures, understaffing, high levels of stress, shift work and unhealthy competition between professionals have been reported as additional risk factors for horizontal violence. The replacement of the current situation-oriented or task-oriented leadership with structural empowerment processes (Goedhart et al., 2017) aimed at achieving goals through access to information, support, resources and opportunities (Moura et al., 2020) can reduce bullying and mobbing. Furthermore, constant organizational changes and staff shortages increase nurses' stress levels. High levels of stress and job dissatisfaction, as well as leading to adverse patient outcomes (Bloom, 2019; Brooks Carthon et al., 2021; Schlak et al., 2021), create a favourable substrate for horizontal violence.

Nursing students suffer from WPV, too. Likewise, the students' personal factors such as gender, age, marital status and religion have been identified as risk factors of horizontal violence. In order to prevent the bullying of students, faculty members should acknowledge the inherent vulnerability of learners, their personal risk factors and also reflect on their own communication practices and how these impact on learners (Seibel & Fehr, 2018).

5.2 | Risk factors and consequences of violence perpetrated by patients or family members

In many studies included in this review, victims' personal characteristics such as gender, age, work experience and educational level, are reported to be risk factors for violence perpetrated by patients or family members. Limited professional experience not underpinned by appropriate communication skills, combined with inability to anticipate patient needs (Bottega & Palese, 2020), do not enable to notice the initial signs of aggression and consequently prevent it. Other studies have shown that specific interventions aimed at raising nurses' awareness about risk factors, such as young age and limited experience, are essential in reducing aggressive behaviors in patients and their families (Hill et al., 2015; Shi et al., 2017).

Organizational and environmental factors are the most frequently reported risk factors of violence perpetrated by patients. In particular, the emergency department is the setting where WPV is reported to occur by most studies. Understaffing and high workloads are reported as the most frequent risk factors for WPV. Staff shortages that have persisted for decades in hospitals have dramatically worsened over the past 2 years due to the COVID-19 pandemic. Patient-to-nurse ratios vary widely in hospitals, and when nurses have to care for an excessively high number of patients, the chances of causing harm to patients are high (Khera et al., 2021; Lasater et al., 2021). For this reason, the phenomenon of assaults perpetrated by patients may have increased in this period due to the critical shortage of nurses and the increased workload.

Long waiting times in the emergency department (Morphet et al., 2014) associated with patients' unrealistic expectations has also been described as a major risk factor of physical and verbal aggression. In these cases, waiting time management strategies providing timely information and assistance to users, and specific education programmes for emergency personnel, could reduce the cases of aggression (Gillespie et al., 2014; Touzet et al., 2019). The lack of protocols and policies for the management and prevention of violence, the absence of dedicated communication channels and specific means to inform managers and administrators about episodes of violence are described by several studies (Babiarczyk et al., 2019; Jenkins et al., 1998). These shortcomings often occur in contexts where the incidence of violence against nurses is high (Cannavo et al., 2019). In addition, characteristics of the perpetrators, such as their mental status, clinical conditions and alcohol or drug abuse, have been identified as common risk factors of WPV. Greater awareness of the role played by these characteristics in WPV and advanced skills that enable to adequately approach these types of patients could help to predict, prevent, or limit the development of aggressive behaviors (Liu et al., 2019).

Nursing students also suffer violence perpetrated by patients and their families. Likewise, personal characteristics (e.g., gender, age and marital status) and organizational factors (e.g., attending emergency department internship) have been identified as risk factors. Teachers and clinical preceptors have a great responsibility in ensuring a safe learning environment. When personal characteristics and organizational and environmental factors are recognized as risk factors, they must be considered, together with the inherent vulnerability of learners, so that actions that protect students during their clinical learning programme are in place (Seibel & Fehr, 2018; Tee et al., 2016).

The consequences of WPV impact specifically on individual nurses, and generally on the health organization. These affect the quality of care provided, professional life and the emotional, psychophysical and physical well-being of nurses and nursing students. Physical and verbal assaults are related to burnout in each of its three dimensions (Laschinger et al., 2010; Wu et al., 2020; Yang et al., 2018). In this regard, the availability of follow-up programmes for WPV victims, counselling and discussion with hospital administrators have been found to reduce emotional exhaustion and depersonalization, and increase personal accomplishment (Vincent-Höper et al., 2020). In addition, burnout generated by violence reduces nurses' level of attention when providing care (Al-Ghabeesh & Qattom, 2019a), increasing the likelihood of errors and putting patients' safety and health at risk. On the other side, the poor quality of the care is perceived negatively by patients, who may not feel actively involved and receive unsatisfactory responses to their needs due to distracted nursing care.

5.3 | Economic consequences of workplace violence

Very few studies examined the economic consequences of violence but showed how costs incurred by health institutions rise significantly due to compensation measures for professionals who become victims of violence, their reintegration into the workplace and increased turnover. As in other studies (Jeong & Kim, 2018; Olsen et al., 2017), workplace violence is a significant cause of turnover intent. Constant turnover is an impediment to effective teamwork and cohesion among colleagues, or even worse, it may reinforce any negative attitudes that may harbour in senior staff (Van Bogaert et al., 2017). Furthermore, some consequences of violence, such as burnout, depersonalization and physical harm, also increase intention of turnover and intention to leave the profession that can lead to enormous costs for the health care organizations that have to cope with this phenomenon.

5.4 | Preventing and managing workplace violence

Nurse leaders are in the position to promote a culture of safety that prioritizes the health, safety and wellbeing of their staff, patients and visitors. Health managers should promote policies that refuse violence as an inevitable part of professional practice and allocate resources for the prevention and management of violence and bullying (Johnson et al., 2018; Pariona-Cabrera et al., 2020). Some studies identified strategies to manage and prevent WPV episodes at different levels. For instance, allocating considerable funds to the prevention and management of WPV (Morphet et al., 2019), increasing staff numbers to prevent and manage WPV (Morphet et al., 2018), developing guidance materials evidence-based, focusing on education and training of staff to manage WPV (Geoffrion et al., 2020), implementing monitoring, responding and reporting systems (Burkoski et al., 2019; Ramacciati et al., 2021), sharing information between health services and other agencies and improving communication abilities (Collins, 2021) and implementing an effective security staff (Morphet et al., 2019).

6 | CONCLUSIONS

The results of this review bring to light critical issues often left unaddressed, especially where episodes of violence are very frequent. WPV prevention and management programmes and proactive

commitment are essential to reduce WPV and its consequences. Nursing leaders must explore and implement practices towards mitigating violence against nurses. Action research is needed to engage in a cycle of continuous improvement that supports eliminating violence in the health care sector.

Initiatives for the health and safety of nurses that establish objectives and responsibilities to monitor and curb WPV, and reports describing the outcomes of the measures adopted to prevent and manage episodes of violence should be on the agenda of every health administration. There is sufficient evidence for nurse managers to ensure that nurses and all health care professionals feel protected and safeguarded from verbal or physical abuse, and work in environments that ensure maximum safety for everyone.

6.1 | Limitations

This review included papers about WPV suffered by nurses and nursing students excluding other health professions. Despite the inclusion criteria for this study being wide, limitations can be found in language restrictions (English and Italian) that may have excluded significant studies written in other languages. Most of the studies included in this review were from the North American Continent and Europe, which limits the generalizability of our conclusions.

6.2 | Implications for nursing management

The predictors and consequences of WPV identified through this review constitute the body of knowledge necessary for nurse managers to develop and implement actions to manage or prevent WPV effectively.

Therefore, there is sufficient evidence for nurse managers to contribute to the development of a positive safety culture and awareness, putting at its centre the health, safety and wellbeing of health personnel, patients and visitors. Nurse managers must promote policies that decline violence as an inevitable part of nursing practice and invest resources to neutralize the onset of episodes of violence and transform it into an opportunity for professional and cultural development.

Evidence-based management of violence can contribute to implementing actions that ensure a violence-free working environment through permanent monitoring and reporting systems.

Furthermore, this message on the impact of WPV in health care must also be spread to a broader audience to promote and support change effectively.

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CONFLICT OF INTEREST

The authors of this manuscript have no competing interests as defined by the editorial policy of *Journal of Nursing Management*. They moreover have no other interests that may have influenced the results and discussion of this paper.

ETHICS STATEMENT

Since this is a review of the literature, no ethics approval is required.

AUTHORS' CONTRIBUTIONS

Nicola Pagnucci: Conceptualization, Writing-Original draft preparation.
Giulia Ottonello: Analysis, Writing-Original draft preparation.
Davide Capponi: Analysis, visualization.
Gianluca Catania: Supervision of the review process.
Milko Zanini: Supervision of the analysis.
Giuseppe Aleo: Reviewing and editing final draft.
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DATA AVAILABILITY STATEMENT

Authors do not wish to share the data.

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REVIEW ARTICLE

WILEY

Workplace violence in the Australian and New Zealand midwifery workforce: A scoping review

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Abstract

Aim: The aim of the study is to identify and map what is known about workplace violence involving midwives in Australia and New Zealand.

Background: Research from the United Kingdom demonstrates that workplace violence within maternity services is a pervasive issue with significant and wide-ranging clinical, individual and organisational consequences. To date, little is known about this issue within Australian and New Zealand maternity services.

Evaluation: A scoping review, guided by Arksey and O'Malley's framework, was conducted. Reporting followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews checklist. Just one identified study aimed to explore midwives' experiences of workplace violence. A further nine arrived at related results or themes.

Key issues: Workplace violence is present in a variety of forms across maternity services in Australia and New Zealand. Its prevalence is, however, yet to be understood. Workplace violence causes physical and mental health issues for midwives, premature workforce attrition, and jeopardizes the quality and safety of maternity care.

Conclusions: Workplace violence has been acknowledged as one of the key contributing factors towards premature attrition from the midwifery profession, with new graduate midwives most likely to leave. With the midwifery workforce ageing and evidence of serious clinical implications emerging, workplace violence needs urgent research and organisational attention.

Implications for nursing management: Workplace violence is a key contributing factor towards recruitment and retention challenges for managers. To help tackle this, managers have a key role to play in identifying and effectively addressing workplace violence by acting as positive role models, taking a zero-tolerance approach and fostering collegial relationships. Managers, holding key clinical leadership positions, are pivotal to ensuring all complaints raised are handled with transparency and

consistency regardless of one's position within the clinical hierarchy and organisational structure.

KEYWORDS
Australia, bullying, midwifery, New Zealand, workplace violence

1 | INTRODUCTION

Workplace violence (WPV), also referred to in the literature as *workplace bullying*, *incivility* or *mobbing*, has become a heavily researched field, in part because it is a pervasive public health issue affecting almost half of the working population (Fink-Samnick, 2017). WPV is often classified into behaviours targeting those of equal (*horizontal*) or lesser (*vertical*) power (Zhang & Wright, 2018). Health care organisations, with strong hierarchical structures and staff power imbalances, are places where both forms of WPV can thrive (LaGuardia & Oelke, 2021). Whilst there is no universally accepted definition of WPV, it broadly refers to *intentional* inappropriate behaviour or unfair treatment of an individual in the workplace (Van Fleet & Van Fleet, 2022). Within the Australian and New Zealand context, WPV involving nurses has attracted considerable research interest (Hawkins et al., 2021); however, little research has explored this issue related to *midwives*.

2 | BACKGROUND

The Ockendon Report (Ockenden, 2022), described in the *British Medical Journal* (BMJ) as 'another shocking review of maternity services' (Knight & Stanford, 2022 p. 1), revealed many serious incidents causing injury or death to women and infants at a maternity unit in the United Kingdom (UK). The report has drawn international focus to a body of work that has its origins in the mid-1990s (Hastie, 1995). Despite the ensuing three decades of research, evidence suggests that WPV continues to be an inherent part of midwifery culture today (Catling et al., 2017), a culture within which the future midwifery workforce is being socialized, learning and reciprocating poor behaviours (Capper et al., 2021). A growing body of literature, primarily from the United Kingdom, suggests that WPV in midwifery has adverse far-reaching impacts for individuals, employing organisations and the profession as a whole.

2.1 | Midwives and midwifery students

WPV is a key source of distress for midwives, contributing to a decline in physical and mental health, workplace absenteeism, burnout and job loss (Gillen, 2007; Yoshida & Sandall, 2013). Collectively, these consequences are costly to employers, exacerbating staffing costs and shortages (Kline & Lewis, 2019). In addition to registered midwives, it has been noted that midwifery *students* also experience WPV whilst on clinical placement (Capper et al., 2020a), again leading to attrition, in this case prior to registration (Capper et al., 2020b).

2.2 | Midwifery workforce provision and sustainability

There is a global shortage of midwives (United Nations Population Fund, 2021). With the Nursing and Midwifery Board of Australia (NMBA) December 2021 registration data revealing that over 40% of midwives are aged 55 or over (Nursing and Midwifery Board of Australia (NMBA), 2021), it can be assumed that as this group retires, clinical staffing levels and skill mix will be affected. Concerningly, Harvie et al. (2019) identified that early career midwives are the group most likely to leave the profession prematurely, suggesting that significant attrition can be anticipated from both ends of the workforce. The international literature demonstrates a correlation between premature workforce attrition and poor workplace culture, including WPV. The 2016 Royal College of Midwives (RCM) 'Why Midwives Leave' report presents the survey results of 2719 UK midwives, revealing that 19% cited bullying from colleagues and 11% from managers (Royal College of Midwives, 2016) as the impetus for departure.

2.3 | Care quality and safety

The broader literature has demonstrated a link between workplace factors including staff shortages, stressful work environments, poor working relationships and adverse patient outcomes (Sizmur & Raleigh, 2018). When translated into the midwifery context, where these workplace factors are common, the potential for harm to mothers and babies is evident. The recent release of the Ockenden Report (Ockenden, 2022) brought this into focus. The independent review of an English maternity service examined and reported upon high numbers of adverse clinical incidents spanning two decades. Staffing shortages and the presence of workplace incivility, underpinned by a strong culture of bullying and fear, were identified as causal towards these incidents. Staff had become desensitized to bad behaviours, with violence accepted as a cultural norm, lifting individual incivility to the level of organisational abuse. In this culture, whistleblowing even through formal pathways was avoided; midwives feared being perceived as troublemakers. The report suggested that failure to act at every level of the organisation resulted in the avoidable deaths of nine mothers and over 200 babies (Ockenden, 2022).

This is a UK example, but Australia and New Zealand have comparable maternity services structures and workforce challenges and thus may be vulnerable to the occurrence of similar incidents.

2.4 | Objective

In order to better understand and begin to address one of the key 'human factors' contributing to both premature workforce attrition and the risk of harm to mothers and babies, it is important to identify what is currently known about WPV involving midwives in Australia and New Zealand.

3 | METHODS

This scoping review was conducted following the Arksey and O'Malley five-step process (Arksey & O'Malley, 2005). This enabled the available evidence on the topic to be identified and mapped to determine the extent, nature and breadth of the literature (Munn et al., 2018). The Arksey and O'Malley (2005) framework consists of five stages: Stage 1: identifying the research question; Stage 2: identifying relevant studies; Stage 3: study selection; Stage 4: charting the data; and Stage 5: collating, summarising and reporting the results. Each step ensured transparency and rigour. Reporting was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist (Tricco et al., 2018).

3.1 | Identify the research questions

The research question is: 'What is known about workplace violence involving midwives in Australian and New Zealand?'

3.2 | Identify the relevant studies

A prior preliminary search of the literature was undertaken to identify any international studies exploring the phenomenon of interest. Frequently used words were identified in the article titles, abstracts and keywords and used to develop the search strategy for this scoping review. Once the search terms were agreed, the following combinations were applied to CINAHL, Web of Science, PubMed, Medline and EMBASE.

'midwife*' OR 'midwives' AND 'bullying' OR 'vexatious complaint*' OR 'workplace violence' OR 'vertical violence' OR 'horizontal violence' OR 'mobbing' OR 'workplace incivility' AND 'Australia' OR 'New Zealand'

The titles and abstracts of the articles were searched within the preselected databases, chosen due to the exhaustive coverage of the literature they provide (Bramer et al., 2017). A follow-up search in Google Scholar was undertaken using the same search terms to capture additional grey literature. The reference lists of the included articles were reviewed, followed by a hand search of any key identified journals.

An example of the database search in CINAHL is presented in Appendix S1.

TABLE 1 Inclusion and exclusion criteria

Included	Excluded
Primary research	Articles including only nurses
Full-text availability	Unable to differentiate the midwifery findings from nurses
Published in English	Reported upon the same dataset as another included paper
Published 1990–2021	Reported the development of an unrelated theoretical framework article
Participants are midwives in Australia/New Zealand	Reported the development of a survey tool
Practising or non-practising	Articles including only midwifery students

3.3 | Study selection

The exclusion and inclusion criteria are listed in Table 1.

The year 1990 was chosen as a start date as this was when midwifery workplace culture issues began to gain prominence. Initially the aim was to include only articles with the specific focus of exploring WPV in midwifery, however, as just one study, located in the grey literature was identified meeting this criterion, the decision was made to include articles that arrived at results or themes related to WPV.

In total, 156 articles were identified through the database and additional searches; 106 duplicate articles were removed leaving 50 articles for title screening. Fifteen papers were removed based on title leaving 35 for full-text assessment. Two reviewers screened the full-text documents and applied the inclusion and exclusion criteria to determine their eligibility. Differences were reconciled with the third author and resolved. This process resulted in the removal of a further 25 articles, leaving 10 studies for final review. The reasons for exclusion are included in PRISMA flow diagram (Page et al., 2021) (Figure 1).

3.4 | Charting the data

Three main types of data were retrieved from each article and charted using a standardized data abstraction tool. Author details, year of publication, country of origin, methods/methodology, aim/purpose, population and sample size were captured at the first stage. Quantitative data were retrieved if variables were present that were relevant to

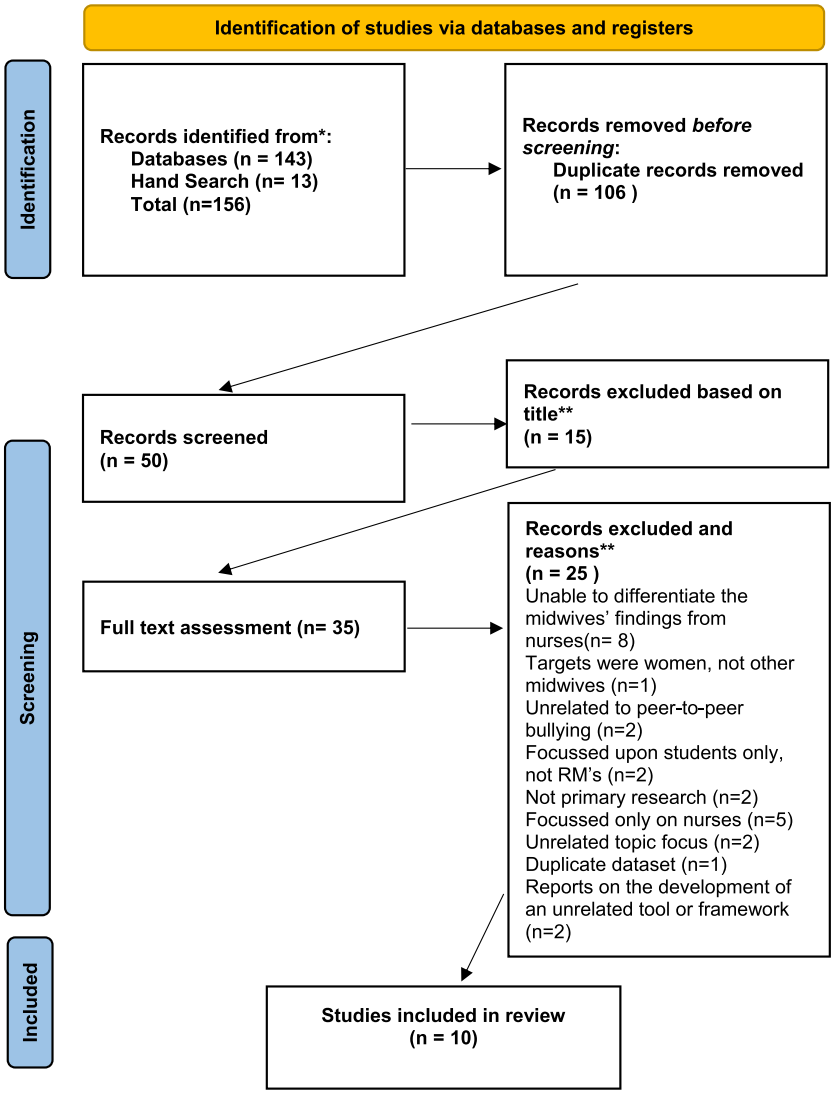

FIGURE 1 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow chart

the review question. Qualitative data, consisting of key findings related to the review questions, were finally charted. The charted data formed the basis for the collation, summarization and reporting of the results.

3.5 | Collating, summarising and reporting the results

Once the key data items were charted, the collation process was undertaken by two reviewers independently. The descriptive and quantitative data and the key relevant findings were placed into a Microsoft Excel document. Paragraphs from the corresponding articles that related to the review question were retrieved and added to the spreadsheet for analysis and to provide context.

The Krippendorff (2018) method of content analysis was selected to analyse and report the review findings. This approach enabled the data from the included articles to be systematically read and categorized according to the overarching and sub review questions. This review team was able to make inferences from the data, which were guided by the aim of the review and the review questions (Krippendorff, 2018). All members of the review team reached consensus.

4 | RESULTS

The charted data from the 10 articles is presented in Table 2. Of the 10 included studies, eight were from Australia, and two were from New Zealand (both from the grey literature). All studies included midwives from rural, regional and metropolitan areas, with data from a total of 1514 midwives captured across the studies. Eight studies employed a qualitative methodology, whereas two took a mixed-methods approach. The participants were at various stages of their midwifery careers ranging from new graduates to midwives with over 50 years of experience.

TABLE 2 Data extraction table

Author/s Year of publication Country of origin	**Aim**	**Population sample size**	**Methodology methods**	**Key relevant findings**
Alexander et al. (2021) Australia	To explore the lived experiences of clinical investigation and identify the personal and professional impact on midwives.	Twelve (12) midwives, seven (7) under investigation.	Qualitative	Confidential information was used against the midwife Felt bullied by supervised practice midwives and unable to speak up. Felt ostracized. Stigmatized at work—expertise not sought. Vexatious complaints had no repercussions. Singled out unfairly targeted. Used as a scape goat.
Catling et al. (2017) Australia	To explore the midwifery workplace culture from the perspective of midwives themselves.	Twenty-three (23) midwives	Qualitative	One theme: 'Bullying and resilience' Conflict and bullying common the workplace, many targeted by bullies. An 'us' and 'them' culture exists. New staff and students targeted as 'outsiders'. Victims were 'too tired' to fight. MGP/CoC midwives felt marginalized by the hospital midwives. Students and MGP midwives at the bottom of the pecking order. Physical symptoms of stress experienced and considered leaving.
Catling and Rossiter (2020) Australia	To examine Australian midwives' perceptions of workplace culture using a specifically developed instrument.	1st stage: (Qual): Twenty-Three (23) midwives 2nd stage: (mixed methods): 322 midwives completed a survey and 150 completed qualitative responses.	Mixed methods	One strong theme: 'Bullying' Bullying occurred horizontally between peers and vertically from managers to staff and staff towards students. Wanted to leave their job. The workplace was 'bitchy', 'backstabbing' and 'toxic'.
Fenwick et al. (2012) Australia	To explore the experiences of newly qualified midwives and described the factors that facilitated or constrained their development during the transition from student to registered midwife.	Sixteen (16) new graduate midwives.	Qualitative	'The pond'—clear and peaceful or murky and infested. There is a pecking order: not all equals: 'low life', 'bottom of the barrel' and 'a nobody' Given challenging and complex cases unsupported. Poor communication engendered feelings of blame and exclusion. Spoken to badly in front of women. Received mixed messages and were chastised. Had fingers pointed in their face and told off. Scared to ask questions. Ignored and left out. Senior midwives use their power

(Continues)

TABLE 2 (Continued)

Author/s Year of publication Country of origin	**Aim**	**Population sample size**	**Methodology methods**	**Key relevant findings**
				inappropriately. Feel excluded, belittled. Changeable behaviour. Passive aggressive behaviour included eye rolling, sighing—like high school… Felt small belittled, foolish and intimidated—humiliated Scared to speak out in case labelled as a troublemaker. The environment was hostile. Cycle of fear exists damaging confidence Palpitations and nervous stomach. Adrenal glands working overtime.
Fox et al. (2018) Australia	To explore the views and experiences of women, midwives and obstetricians on the intrapartum transfer of women from planned homebirth to hospital in Australia.	Twenty-one (21) were midwives	Qualitative	'Them and us' culture. Unpleasant animosity was present. Stereotyping, blaming and taking over were common. Home birth midwives seen as hostile and uncooperative by the hospital team whilst the home birth midwives felt intimidated and bullied by hospital midwives. Doctors demonstrated bullying behaviours.
Harvie et al. (2019) Australia	To determine the incidence of midwives indicating their intention to leave the profession and explore the reasons for this decision including what might cause the midwives to be dissatisfied.	1037 midwives	Mixed methods	Theme: 'My work environment is a nightmare'. 42.8% considered leaving midwifery. A culture of mistrust and rudeness exists. Fear of being reported and blamed. Game playing and power struggles exist. Horizontal meanness occurs. Relationships with doctors and managers were unsupportive and obstructive.
Javanmard et al. (2020) Australia	To explore the transitional experiences of internationally qualified midwives practising in Australia.	Eleven (11) internationally qualified midwives	Qualitative	Felt racially discriminated against. Bullying by peers occurred. Felt invisible, lost, isolated, outsider, intimidated, anxious, stressed, panicked, lost confidence. Pick holes in each other's work and blame each other. Backstabbing was common. Midwives gossip about others. Lacked respect due to their accent. Racial discrimination was evident—passed over for promotion. Entrenched cultures of bullying and discrimination Australian midwifery. The hierarchy of bullying within the Australian

(Continues)

TABLE 2 (Continued)

Author/s Year of publication Country of origin	Aim	Population sample size	Methodology methods	Key relevant findings
				workplace was very high. No support—if you spoke out of line, you would be the next victim. Ignored when asked a question. I wanted to give up my midwifery—completely destroyed my passion of wanting to be a midwife. I wanted to leave that workplace. Managers did not act on bullying complaints because the bully was quite high up. The ringleader. Not overly accepting of midwives come from overseas. More racism towards African midwives in the workplace. Skills and competencies acquired overseas were not respected or valued. Needed treatment for anxiety and panic disorder. Persistently had clinical practice and experience questioned. Bullying worse if first language was not English.
McIver (2002) New Zealand	To explore the experience of horizontal violence and the effects of that experience on the provision of midwifery care.	Twelve (12) midwives	Qualitative	Bullying fractured relationships and the stress created risk. Relationships with mothers suffered as did the quality of care provided. Felt isolated and feared communicating with peers. Midwives felt the risk to women was heightened as a result. Policies need to address workplace bullying. Midwives working in MGP need zero tolerance for bullying.
Sheehy et al. (2021) Australia	To explore the experiences of early career midwives in Australia and identify the organisational, work environment, personal factors and stressors that influence workforce participation.	Twenty-eight (28) new graduate midwives.	Qualitative.	Experiences of bullying were ubiquitous and described by most of the participants. New graduates experienced passive aggressive behaviour and 'eye rolling' from senior midwives. 'Rite of passage' mentality in order to be initiated into the profession. The graduates received sarcastic comments and were mocked. Midwifery was seen as a 'dog eat dog' 'every man for himself' and 'no one is going to look after you' profession. New midwives are vulnerable to bullying in the workplace due to being junior. The bullying culture is pervasive. Felt

(Continues)

TABLE 2 (Continued)

Author/s Year of publication Country of origin	Aim	Population sample size	Methodology methods	Key relevant findings
				belittled and questioned career choice. Considered leaving midwifery due to bullying.
Welfare (2018) New Zealand	To explore the experiences of midwives who transition work settings.	Nine (9) midwives	Qualitative	Sub-theme horizontal violence/bullying Every midwife interviewed had experienced bullying Unsupportive environment—culture of horizontal violence and bullying. Bullying has a negative effect on midwives and is present in every aspect of the midwifery workforce. Considered going to work overseas. Bullying was overt: snide comments, gestures, covert: ostracization, isolation and unsupported.

4.1 | Prevalence

Just one study specifically aimed to explore midwives' experiences of WPV and due to the purposive sampling method used to recruit participants was unable to provide insight into the prevalence of WPV (McIver, 2002). Despite the remaining nine papers arriving at findings related to WPV, demonstrating that this problem does exist in Australia and New Zealand, none provided insight into prevalence. One Australian study (Harvie et al., 2019) did however suggest that almost 43% of 1037 midwife participants surveyed had considered leaving midwifery in the preceding 6 months, of whom 48.6% cited dissatisfaction with their workplace relationships.

4.2 | Perpetrators

All 10 studies provided evidence related to perpetrators. Midwifery colleagues were consistently identified across all studies as being the principal perpetrator, acting either alone or in groups. Four of the 10 studies (Catling & Rossiter, 2020; Harvie et al., 2019; McIver, 2002; Welfare, 2018) described managers (in one case 'senior managers') (Catling & Rossiter, 2020) as complicit or enacting acts of vertical violence towards junior midwives or students. Two studies identified doctors as perpetrators (Catling et al., 2017; Javanmard et al., 2020). A consistent characteristic of the perpetrators of WPV was seniority within the workplace. In three studies, the participants spoke of the 'pecking order' or 'the hierarchy' and how being closer to the top increased the tendency for a midwife to target more junior staff (Catling & Rossiter, 2020; Fenwick et al., 2012; Javanmard et al., 2020).

4.3 | Targets

The studies provided no indication that a particular stage of career or clinical practice setting was differentially associated with WPV. Some midwives however felt that particular *characteristics* made them a target. For example, the two studies that captured new graduate midwives' experiences of WPV suggested bullying was ubiquitous, however, being at the bottom of the hierarchy or lacking in skills and knowledge, increased vulnerability (Fenwick et al., 2012; Sheehy et al., 2021). New midwives (regardless of their seniority) (Catling et al., 2017) and students (Catling et al., 2017; Catling & Rossiter, 2020) were likelier targets. Internationally qualified midwives (IQMs) felt that their accents and overseas qualifications were used as justifications/avenues for abuse (Javanmard et al., 2020), and midwives that were under investigation were also targeted (Alexander et al., 2021).

4.4 | Location and types of WPV

There is little reference in the literature as to the *where* of WPV. One paper did however refer to 'the ward' being a place where those at

the bottom of the pecking order are frequently targeted (Catling et al., 2017) and a second paper by Fenwick et al. (2012) referred to midwives being spoken to badly *in front of women*. It can therefore be assumed that such behaviours are being enacted in the clinical areas, in close proximity to mothers and babies.

WPV took several forms in the 10 included studies. Covert and passive aggressive behaviours were described in six studies (Alexander et al., 2021; Fenwick et al., 2012; Javanmard et al., 2020; McIver, 2002; Sheehy et al., 2021; Welfare, 2018) including being ignored, ostracized and excluded. Five papers outlined overt bullying behaviours including rudeness, sarcasm, mocking, finger pointing, snide comments and rude gestures (Fenwick et al., 2012; Harvie et al., 2019; McIver, 2002; Sheehy et al., 2021; Welfare, 2018). One paper described the abuse of the levers of power to bully junior staff (Fenwick et al., 2012); in a similar vein, vexatious complaints were made to harass and victimize targets (Alexander et al., 2021). One study outlined racist and discriminatory behaviour towards IQMs from Africa, Iran, Japan and the United Kingdom (Javanmard et al., 2020). The IQMs described being ignored, treated as outsiders, intimidated and repeatedly challenged on their knowledge and skills. Being unfairly blamed (Alexander et al., 2021; Fenwick et al., 2012) and used as a scapegoat (Alexander et al., 2021) was reported along with the deliberate use of poor communication, giving mixed messages (Fenwick et al., 2012) and 'game playing' (Harvie et al., 2019).

4.5 | The impacts of WPV

All 10 papers referred directly or indirectly to the impacts upon midwives both personally and professionally, employing organisations and the quality and safety of maternity care provided to mothers and babies.

4.5.1 | Personal impacts upon midwives

Both the personal and professional impacts of being the target of WPV were touched upon in the 10 papers. Midwives spoke of feeling powerless (McIver, 2002), ostracized (Alexander et al., 2021), isolated (Fenwick et al., 2012; Welfare, 2018), belittled (Sheehy et al., 2021), intimidated (Fox et al., 2018; Javanmard et al., 2020), humiliated and fearful (Harvie et al., 2019). Some midwives also experienced physical and mental health issues (Catling et al., 2017; Fenwick et al., 2012), whereas others felt fatigued, burned out and worried about their future (Catling & Rossiter, 2020).

4.5.2 | Professional impacts upon midwives

All but one study by Alexander et al. (2021) referred to the *professional* impacts that WPV had upon the midwives. Some felt disrespected by their wider colleagues (Fox et al., 2018), whereas others lost confidence in their skills and knowledge (Javanmard et al., 2020; McIver, 2002; Welfare, 2018), and some feared asking others for support (Fenwick et al., 2012). An IQM spoke of their impaired passion for midwifery as a result of being bullied, and another felt passed over for promotion due to not being Australian (Javanmard et al., 2020). Some participants questioned their career choice (Sheehy et al., 2021) or wanted to leave their job (Catling et al., 2017; Catling & Rossiter, 2020).

4.5.3 | Employing organisations

Every paper included in this scoping review apart from Alexander et al. (2021) and Fox et al. (2018) highlighted the impact on workforce attrition. Several studies specifically documented cases where midwives had left or were considering leaving their job due to WPV (Catling et al., 2017; Catling & Rossiter, 2020; Harvie et al., 2019; Javanmard et al., 2020; Sheehy et al., 2021; Welfare, 2018).

4.5.4 | Quality and safety of maternity care

A minority of the papers included in this review referred to the potential impact WPV poses to the safety and quality of care provided to mothers and babies, which was the key finding of the Ockendon report. Direct as well as indirect risks associated with staffing shortages, poor skill mix and unrealistic workloads were associated with WPV (Catling et al., 2017; Catling & Rossiter, 2020; Harvie et al., 2019). An example of direct risks was outlined in the paper by Fenwick et al. (2012) where participants spoke of being abandoned in complex clinical situations, and McIver (2002) described midwives lacking confidence in escalating care of mothers and babies due to poor collegial relationships (McIver, 2002). Fenwick et al. (2012) also reported new graduate midwives being denigrated in front of the women they were caring for impacting the women's childbearing experiences and damaging confidence in the profession.

5 | DISCUSSION

The results of this scoping review have identified and mapped what is currently known about WPV involving midwives in Australia and New Zealand. The evidence is scant. Although the literature provided no clear insight into prevalence, the significant numbers of midwives considering leaving the profession prematurely, many of which are early career midwives (Harvie et al., 2019), is a worrying indicator. The research suggests the presence of WPV within the Australian and New Zealand midwifery workforces, affecting midwives from a range of ethnic backgrounds, at various stages of their careers, working in all models of care. This aligns with the broader health care literature that demonstrates that WPV is a global issue impacting our nursing counterparts across their career trajectory, infiltrating all areas of clinical practice (Hawkins et al., 2021).

This raises significant concerns for the adequacy of the future workforce, emphasizing the vital need to urgently address the factors that lead to attrition. Nursing research suggests that early career nurses who fail to transition smoothly into a new work environment are more likely to leave, resulting in costly staff turnover and an over reliance on temporary staff (Hampton et al., 2021). Whilst research exploring the correlation between WPV and premature midwifery workforce attrition is in its infancy in Australia, literature from the United Kingdom has demonstrated that poor collegial relationships that are fraught with stress, poor teamwork and bullying, particularly when compounded by high workloads and staffing challenges, can lead to the decision to leave midwifery prematurely (Royal College of Midwives, 2016).

It is important to recognize that the types of workplace issues highlighted in this review, whilst leading to workforce burn out and attrition, also place the safety of mothers and babies at serious risk of harm, as demonstrated by the 2022 Ockenden report. Although the impacts of WPV identified in this review fell into three broad categories, some did in fact overlap, demonstrating that WPV often does not occur in isolation, and its drivers, impacts and the barriers to change can be somewhat cyclical in nature. This is supported by the nursing literature that suggests that WPV is self-perpetuating, fuelled by a toxic workplace culture (Krut et al., 2021).

This review identified that WPV takes a number of forms and is generally enacted by other midwives or midwifery managers towards more junior targets. This aligns with international research that demonstrates that employees within organisations with strong hierarchical structures experience power struggles that promote bullying behaviour (Witzel, 2019).

WPV was described as being 'led' by senior management, filtering down through the staffing structure (Catling & Rossiter, 2020). Targets were subsequently fearful of speaking up, assuming their concerns will not be heard, or acted upon, or will lead to further abuse (Fenwick et al., 2012). This again is in alignment with the findings from the Ockenden review (2022). Most WPV behaviours fall into two main categories of being overt or covert in nature; however, some can be more difficult to categorize. For example, making vexatious complaints or using a position of power inappropriately was also identified. Nursing research has suggested that managers, must, as positive role models, identify and address negative workplace behaviour (Krut et al., 2021). This must include supported escalation pathways that reduce the power imbalance, enabling victims to report WPV, regardless of its nature or their level of seniority in the hierarchy (Hawkins et al., 2021). This is the first literature review to identify and map what is known about WPV involving midwives in Australia and New Zealand. Identifying the key characteristics, contexts and consequences of WPV that this review has identified provides a starting point for the development of targeted interventions.

5.1 | Limitations

A very small pool of literature currently exists in this area, and the included 10 studies were primarily qualitative and did not provide clear insight into prevalence. Similarly, insight into geographical distribution or the distribution of organisational contexts of the problem is limited. Just two studies, both from the grey literature, examined the New Zealand context, together contributing just 19 participants. It could therefore be suggested that the existing research does not provide a true representation of the midwifery workforces across Australia and New Zealand.

6 | CONCLUSIONS

The focus the UK Ockendon report has drawn attention to the impacts that WPV can have upon the safety of mothers and babies. This highlights the need for reform: robust and transparent clinical governance, improved management structures and a change to procedures and culture within maternity services. This review has highlighted a gap in understanding about the status of WPV in the midwifery context in Australia and New Zealand, both of which share many characteristics of the UK model, suggesting that the problems identified in the United Kingdom could occur in Australia and New Zealand. Work needs to be done to explore the prevalence and organisational covariables of WPV in the midwifery context as a critical first step towards creating interventions to ensure such behaviours are eliminated from the workplace. In describing the characteristics of the problem, the existing literature hints at solutions. The insight into the role played by racial discrimination, for example, points to a need for increased workplace diversity training. The role played in power imbalances within the workplace, in turn, points to a need for a restructure of hierarchies within the clinical setting. Finally, evidence of the consequences for midwives, mothers and babies; the reputation of the profession; and the organisations in which midwives practice should act as a powerful driver of reform.

7 | IMPLICATIONS FOR NURSING MANAGEMENT

As recruiting and retaining midwives become increasingly challenging for maternity services across Australia and New Zealand, it is important to acknowledge WPV as a likely contributing factor towards premature attrition from both the workforce and midwifery education programmes. Nursing and midwifery managers play a key role in identifying and effectively addressing WPV to help stem premature attrition from the profession. Clinical managers must lead by example, taking a zero-tolerance approach to WPV and by encouraging strong collegial relationships between clinical staff. Whilst managers are central to ensuring that complaints of WPV are documented and relevant policies are followed in a consistent and transparent way, the evidence suggests managers are also potentially perpetrators in a systemic culture of WPV. It is vital that managers remain professional and impartial and ensure the complainant feels supported and empowered to *stand by* their complaint. If victims of WPV feel able to

come forward in a safe and supported context, managers will play a pivotal role in tackling WPV in midwifery.

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CONFLICT OF INTEREST

None.

ETHICAL STATEMENT

Ethical approval was not required for this scoping review of the literature.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analysed in this study.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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REVIEW ARTICLE

WILEY

What is the impact of patient violence in the emergency department on emergency nurses' intention to leave?

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Abstract

Aim: To examine the impact that patient violence, experienced in the emergency department, has on emergency nurses' intention to leave their job.

Background: Emergency departments have become known for their overcrowding, chaos, unpredictability and violence. Emergency nurses are at high risk of experiencing workplace violence, which is cited in the literature as having a direct effect on general nurses' intention to leave. A high rate of nursing turnover may lead to short staffing, jeopardize the quality of patient care and increase overcrowding and wait times.

Evaluation: A systematic review was undertaken in CINAHL, Medline and Psych INFO databases using published data until November 2021. Six articles were included, and PRISMA guidelines were adhered it.

Key Issues: Workplace violence in the emergency department had a direct impact on emergency nurses' intention to leave and decreased their job satisfaction. Verbal abuse is the most experienced form of workplace violence.

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Conclusions: Workplace violence experienced by emergency nurses in the emergency department had a direct positive impact on their intention to leave and subsequently negative impact on their job satisfaction.

Implications for Nursing Management: This review may inform clinical decision-making and aid in the development of clinical practice guidelines for a workplace violence prevention programme, specific to the emergency department.

KEYWORDS
emergency department, intention to leave, job satisfaction, types of workplace violence, violence

1 | BACKGROUND

The World Health Organization defines workplace violence (WPV) as the act or the threat of violence while a person is at work (WHO, 2019). WPV is a major global problem which appears to be growing (Chang & Cho, 2016; Jafree, 2017; Zhang et al., 2017) with staff subjected to verbal abuse, racial abuse, threatening behaviour, or physical assault (WHO, 2019). Nurses are seen as having the highest risk of facing WPV than any other hospital employee and are four times more likely to suffer an assault (Vogel, 2016). This is perhaps due to nurses accounting for the largest frontline discipline and having the closest proximity to direct patient and family contact (Angland et al., 2013; Scott, 2003). Hassankhani et al. (2018) describe WPV against nurses as a silent epidemic. The most common WPV experienced by nurses are verbal or emotional abuse, threats, sexual harassment and acts of physical abuse, for example, punching, kicking and slapping (Boyle & Wallis, 2016; Lanctt & Guay, 2014).

WPV is most prominent in the emergency department (ED) setting (Gacki-Smith et al., 2009; Jeong & Kim, 2018; Li et al., 2019). Notorious long wait times, unpredictability, overcrowding, high stress levels, misconceptions about staff behaviours, intoxicated patients, patients experiencing pain and discomfort, family and patient anxiety, anger and stress are just a few examples of why the ED is susceptible to violence (Jeong & Kim, 2018; Li et al., 2019, 2020). Coupled with a lack of staff training to recognize and respond to potentially dangerous patients, lack of security staff and lack of training to manage actual and potential aggression makes the ED an intimidating workplace (Gacki-Smith et al., 2009).

Concerningly, Pich et al. (2010) noted that nurses working in ED are so frequently subjected to both physical and verbal abuse while at work; it is becoming seen as a normal part of the job. Kelley (2014) found that in a single week, half of ED nurses had experienced WPV. Eighty percent of nurses who have experienced WPV did not report it (Abualrub & Al-Asmar, 2011; Esmaeilpour et al., 2011). Gacki-Smith et al. (2009) note lack of support and fear of retaliation as the main reasons for not reporting WPV. This underreporting of WPV reinforces the already difficult task of recording and tracking WPV (Taylor & Rew, 2010).

Being exposed to WPV can leave staff with feelings of frustration, fear, shock, stress, anxiety, depression and mental exhaustion and cause sleep disturbances while also having a detrimental effect on performance (ALBashtawy, 2013; Roldán et al., 2013). Nurses who have experienced WPV may provide incomplete care or withhold care altogether (El Ghaziri et al., 2014; Gates et al., 2011). WPV has been shown to potentially jeopardize the quality of care provided and lead to increased absenteeism, decreased staff morale and decreased job satisfaction (JS) (Cai & Zhou, 2009; Gates et al., 2003; Hesketh et al., 2003). Roche et al. (2009) noted that patient falls, delays in treatment and medication errors have all been linked to environments where nurses were subjected to threatening or intimidating behaviour.

WPV has even more wide ranging consequences with Jackson et al. (2002) noting how WPV has a major influence on nursing recruitment and retention. WPV has been recognized as being a contributory driver of general nurses' intention to leave (Zhao et al., 2018) not only in the workplace but within the profession itself (Chang & Cho, 2016). Unless this is addressed, it will further add to the global nursing workforce shortage (WHO, 2020).

Turnover intention is described as the prospect that an employee will leave their job within a certain time frame (Chao et al., 2015) and has been noted to be a strong predictor of actual turnover (Kim & Kim, 2014; Sousa-Poza & Henneberger, 2004). A high turnover of nursing staff can increase the workload for those remaining, decrease workplace morale and lead to additional turnover of nursing staff (Chapman et al., 2010). High turnover rates can further have a detrimental effect on already stretched EDs. Short staffing can further prolong wait times, increase overcrowding and negatively impacts the quality of patient care (Sawatzky & Enns, 2012).

Emergency nurses are a scarce resource, who require speciality training to enable them to provide high quality, safe and efficient care to a wide variety of patients presenting with a vast array of complaints. Given the significant issue of WPV in the ED and the fact that no systematic reviews have been published on the impact of patient violence in the ED on emergency nurses' intention to leave, the aim of this review was to examine the impact that patient violence, experienced in the ED, has on emergency nurses' intention to leave their job.

2 | METHODS

A systematic review was undertaken using the Preferred Reporting Items for Systematic Reviews and Meta Analysis (PRISMA) checklist (Figure 1). The PEO mnemonic, shown to improve the search strategy precision and yield decisive results (Boudin et al., 2010), was utilized for this review question to establish the conduct of the review and to guide concept mapping. The population being considered were nurses working in EDs exposed to workplace violence, and the primary outcome was the intention to leave. Secondary outcomes were job satisfaction and forms of violence. A strict and explicit inclusion and exclusion criteria following the PEO components were identified. This provided a clear framework for determining which studies to include or exclude and was strictly applied.

2.1 | Search strategy

A sensitive and specific, comprehensive search strategy was utilized for this review, and a precise record of the search strategy was recorded to ensure both transparency and reproducibility. The search strategy was undertaken in the CINAHL, Medline and PsycINFO databases up to November 2021 using predetermined key search terms. See Table 1 for key search terms. No restriction was applied to the publication dates to allow all relevant data to be sourced. However, English language filters were applied.

2.2 | Data extraction, quality appraisal and data analysis

Relevant data were extracted to an excel spreadsheet by one author and reviewed by a second. The use of a recognized, validated tool ensures the validity and authenticity of included studies (Glynn, 2006), and the Evidenced-Based Librarianship (EBL) quality appraisal tool was utilized to score and systematically assess the rigour and methodological quality of included studies. A narrative analysis was undertaken due to the heterogeneity of the included studies' research designs, sample sizes and the number of research sites studied. See Table 2 for data extraction table.

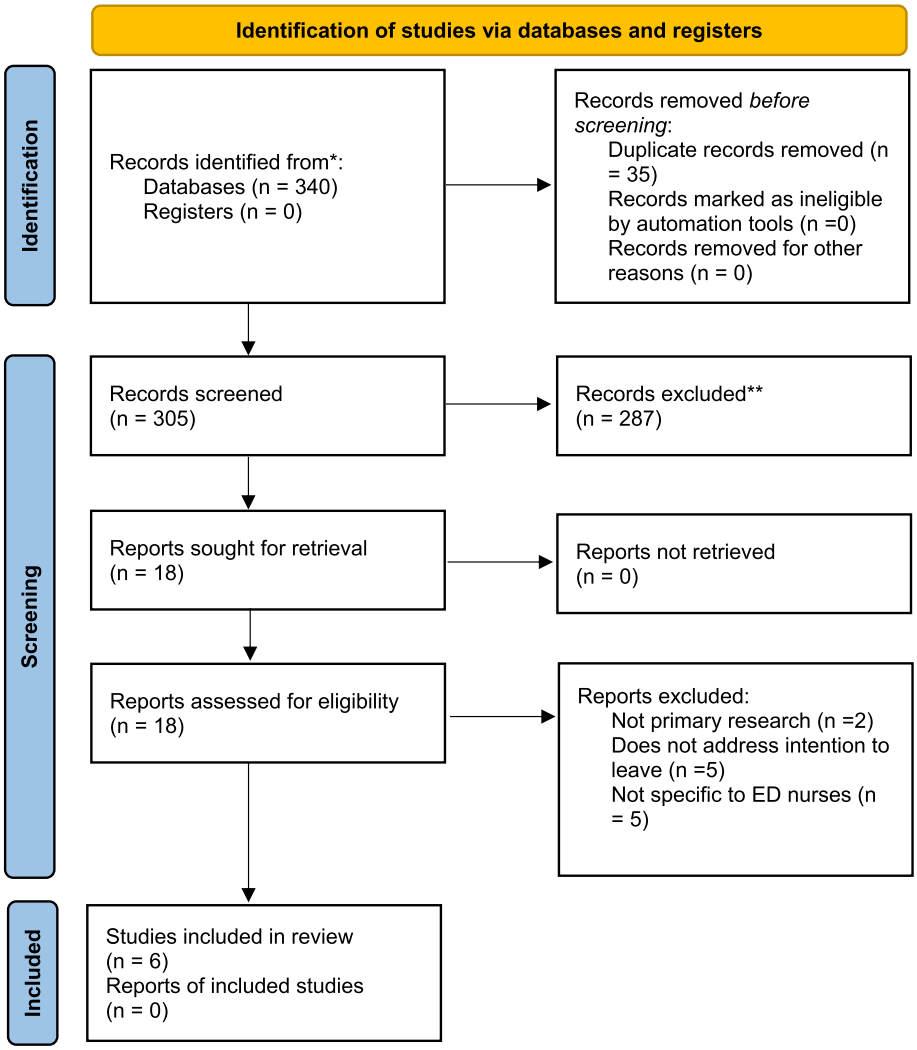


FIGURE 1 Overall PRISMA 2020 flow diagram

TABLE 1 Key search terms

Population	Exposure	Outcome
Emergency nurse	Patient aggression	Intention to leave
Emergency nursing	Patient violence	Intention to resign
ED	Workplace violence	Retention
A&E	WPV	Resign
Accident and emergency	Hostility	Resignation
Casualty	Violence	Turnover
ER	Violent	Turnover intention
Emergency department	Aggressive behaviour	Intend* to leave
Emergency room	Aggressive behaviour	Intent* to leave
		Attrition
		Job change

3 | RESULTS

A total of 340 studies were identified during the systematic search. Duplicated studies were removed, and the remainder were screened resulting in 287 being excluded. Eighteen studies with relevant titles and abstracts underwent full text review with 12 excluded and 6 original research studies being included in the review (Bordignon & Monteiro, 2019; Jeong & Kim, 2018; Li et al., 2019, 2020, 2018, 2021).

Sample size in the included studies ranged from 123 participants to 415 with the overall number included in the review being 1536. The included studies were conducted in Beijing (Li et al., 2019, 2020), Taiwan (Li et al., 2018, 2021), South Korea (Jeong & Kim, 2018) and Brazil (Bordignon & Monteiro, 2019).

3.1 | Quality appraisal

The results of the quality appraisal are presented in Figure 2. As can be seen, the mean score for the quality appraisal was 88.5% (SD: ±2.44%; min 80%, max 100%). All studies were deemed valid.

The primary outcome for this SR was the intention to leave for emergency nurses after experiencing WPV; all six studies addressed this outcome, and all found a direct correlation. Li et al. (2019) reported that 89.9% of participants had experienced WPV in the previous year, with 70.6% reporting being threatened while at work. Turnover intention scores were also high at 2.75 ± 0.58 (mean- ± standard deviation).

Li et al. (2020) report similar results with 50% of participations reporting experiencing moderate frequency of WPV in the previous year and 90.2% reporting a high level of turnover intention. Up to 89.8% of participants in the study undertaken by Li et al. (2018) had experienced WPV in the previous 6 months, with the average turnover intention score was 2.81 ± 1.402.

Participants in the study by Jeong and Kim (2018) reported their experience of WPV from both patients and relatives; results showed that 17.3% had been verbally abused once a day by their patients and 15.9% by patient's relatives. Of the 214 participants, 61% reported that WPV had a direct impact on their intention to leave. Worryingly, Jeong and Kim (2018) also reported that 97.2% of participants endured WPV and did not report it.

Similarly, Bordignon and Monteiro (2019) reported how WPV had a direct effect on their participants' intention to leave, with 19.8% reporting medium or high intention to leave post WPV. Likewise, Li et al. (2021) report how 57.6% of participants experienced WPV in the previous year. The average turnover intention score was 15.43 ± 4.76 with a direct correlation again between WPV and intention to leave.

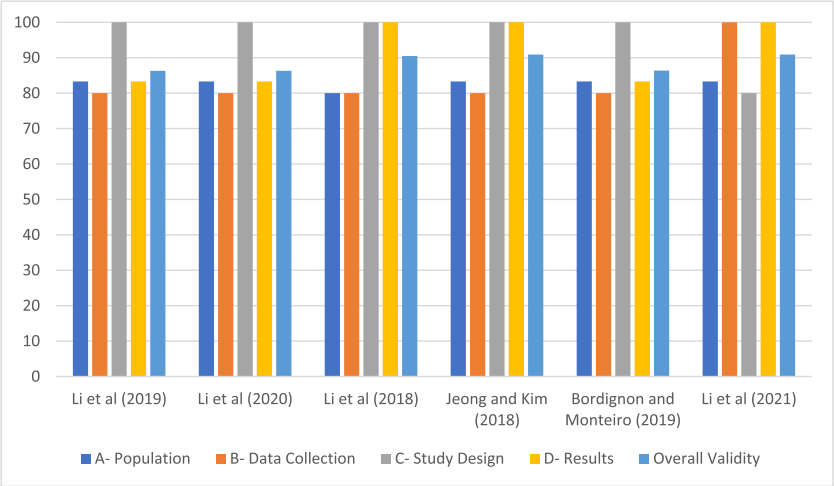
The first secondary outcome for this SR was the JS of emergency nurses post experiencing WPV; four of the studies addressed this phenomenon, and all four found that WPV had a direct negative effect on emergency nurses JS (Bordignon & Monteiro, 2019; Jeong & Kim, 2018; Li et al., 2019, 2020). In both Li et al. (2019) and Li et al. (2020), the average score for JS of emergency nurses was below 3.03, which dictates a low level of JS; both studies also found that WPV had a direct negative effect on JS. Jeong and Kim (2018) presented similar results, with the mean JS score of 24.37 out of 40; WPV was also noted as having a negative effect on JS. Likewise, results from Bordignon and Monteiro (2019) indicate that WPV had a direct negative effect on emergency nurses JS with the average score being 2.9 (SD 3.4).

The second secondary outcome for this SR was the types of WPV experienced by emergency nurses, and four of the included studies discussed this (Jeong & Kim, 2018; Li et al., 2018, 2019, 2021). Up to 89.8% of participants in Li et al. (2018) had experienced WPV in the previous 6 months, and of these, 94.3% experienced verbal abuse, 65.8% threats of violence and 26% were victims of physical violence. Li et al.'s (2019) results are very similar with 89.9% reported experiencing verbal abuse, 70.6% had been threaten while at work, 20.5% reported being physically assaulted and 3.9% sexually harassed. Li et al. (2021) report similar results with 53.8% of participants having experienced verbal abuse, 20.5% threaten at work and 12% physically assaulted. Jeong and Kim (2018) were the only study to address participants' experience of WPV from both patients and relatives; 87.9%

TABLE 2 Data extraction table

Author(s)	Country	Study design	Sample and site(s)	Primary outcome: Intention to leave	Secondary outcome: Job satisfaction	Secondary outcome: Types of WPV experienced
Li et al. (2019)	Beijing	Cross-sectional study	$n = 385$ 13 sites	89.9% had experienced WPV in previous year. 61% were verbally abused on 3+ occasions. WPV had a positive effect on intention to leave.	JS is low at <3.03. WPV had a negative effect on JS.	89.9% verbal 70.6% threats 20.5% physical 3.9% sexual harassment
Li et al. (2020)	Beijing	Cross-sectional study	$n = 415$ 13 sites	50% experienced moderate frequency WPV. 90.2% express high turnover intention. WPV had a positive effect on intention to leave.	JS is low at <3.03. WPV had a negative effect on JS.	N/A
Li et al. (2018)	Taiwan	Cross-sectional study	$n = 123$ 8 sites	89.8% experienced WPV. WPV had a positive effect on intention to leave.	N/A	94.3% verbal 65.8% threats 26% physical abuse
Jeong and Kim (2018)	South Korea	Cross-sectional study	$n = 214$ 7 sites	17.3% verbal abuse once a day from pts and 15.9% from relatives. 7.5% physical threat once a day from pts and 7% from relatives. 61% report intention to leave post WPV.	JS is low at 24.37/40. The lower the JS, the higher the turnover intention post WPV.	Patients: 87.9% verbal 77.6% threats 26% physical Relatives: 89.3% verbal 73.9 threats 18.3% physical
Bordignon and Monteiro (2019)	Brazil	Cross-sectional study	$n = 267$ 7 sites	WPV had a significant positive effect on intention to leave. 19.8% medium-high intention to leave post WPV.	WPV had a direct negative effect on JS.	N/A
Li et al. (2021)	Taiwan	Cross-sectional study	$n = 132$ 1 site	57.6% experienced WPV in the last year. Direct correlation between physical violence and intention to leave.	N/A	53.8% verbal 20.5% threats 12% physical

FIGURE 2 Evidenced-based librarianship results



and 89.3% of participants reported experiencing verbal abuse from patients and relatives, respectively, while physical threats were 77.6% and 73.9% and physical assault 26% and 18.3%.

3.2 | Discussion

EDs, psychiatric facilities and intensive care units are seen as the health care environments with the highest exposure for WPV (Gerberich et al., 2005; Taylor & Rew, 2010). Overcrowding, delays, uncomfortable environments, understaffing, poor security and patients under the influence of alcohol or illicit drugs are all risk factors for WPV (Emergency Nurses Association, 2008). WPV is not just experienced in busy urban or metropolitan areas with Opie et al. (2010) showing similar results among nurses working in remote areas. Opie et al. (2010) report that 80% of their participants, in the previous year, had been verbally abused, 29% physically assaulted and 23% experienced sexual harassment.

WPV is one of the most arduous concerns for health care worldwide (Taylor & Rew, 2010). Li et al. (2019) and Li et al. (2020) both noted how WPV can evoke feelings of anger, cause low work productivity, leave emergency nurses feeling unsafe and fearful while at work and decrease their overall JS. These results are consistent with those of Arnetz et al. (2015) and Blanchar (2011) who report that WPV has a negative influence on nurses' job performance, increases absenteeism and burnout and leads to increased staff turnover.

All six studies found a high turnover intention of emergency nurses post experiencing WPV in the ED. Having an intention to leave after experiencing WPV is not just pertinent to emergency nurses; WPV is cited as having a direct impact on general nurses' intention to leave (Chang et al., 2018; Choi & Lee, 2017; Zhao et al., 2018). Up to 90.2% of emergency nurses in Li et al. (2020) had a high or very high turnover intention. In the study by Jeong and Kim (2018), 61% of emergency nurses had intention to leave post experiencing WPV; interestingly, their study also found that nurses who had a low JS and were female had the highest turnover intention. This is a worrying result as nurses account for the largest health care discipline and work in closest proximity to patients and relatives (Campbell et al., 2011). Li et al. (2019) also note how emergency nurses are very easily re-employable due to this advanced skill set and training. This is a worrying result, due to the speciality and advanced skill set required to work in an ED, the expense incurred to retrain new nurses and the increased workload placed on those remaining (McNamara, 2010).

Li et al. (2019) in their research describe JS as a mediator between WPV and turnover intention. When emergency nurses experience WPV, this has a direct impact on turnover intention contrastingly, having experienced WPV results in decreased JS, which too leads to increased turnover intention. Multiple previous studies also found a direct correlation between JS and turnover intention (Burmeister et al., 2019; Coomber & Barriball, 2007; Dutra et al., 2018). JS is a crucial component of nurses thriving in the workplace. When nurses are dissatisfied at work, this may negatively impact productivity, jeopardize the quality and safety of care provided and negatively influence retention (Sherin Aldoski & Aziz, 2010).

The included studies are based in China and Brazil. High levels of verbal abuse towards emergency nurses are not solely related to these countries. Verbal abuse has also been cited as the most common form of WPV experienced by Australian emergency nurses. Studies in Melbourne, Southeast Queensland and New South Wales describe how 60–90% of emergency nurses experience frequent verbal abuse at work (Brookes & Dunn, 1997; Crilly et al., 2004; Lyneham, 2000). Wolf et al. (2014) report similar findings in the United States, Ramacciati et al. (2015) in Italy and Knowles et al. (2013) in the United Kingdom.

WPV is worryingly now a common phenomenon. Bowers (2021) reports that between 2015 and November 2021 in Ireland, 33,341 nurses and 733 doctors have reported being assaulted. This author would question if we need to take caution interpreting these statistics, as they include reported cases only; how many cases go unreported every year?

Nowrouzi-Kia et al. (2019) note how nurses are often reluctant to report WPV as if no injury is sustained; they believe it is not classified as violence and reporting can be burdensome and futile. Measures must be taken to educate staff on methods to recognize, manage and mitigate WPV. Examples seen in the literature include the use of conflict resolution, stress reduction training, de-escalation techniques, simplified reporting methods and behaviour management skills (Ashton et al., 2018; Gillespie et al., 2013; Speroni et al., 2014; Stowell et al., 2016).

3.3 | Limitations

All six included studies used convenience sampling for their participants, which is non-random and may limit the generalization of results. Participants were also asked to recall events of WPV; this long period may lead to recall bias and may reduce the efficiency of some results. A cross-sectional design was also utilized in all studies, which could possibly limit explanations. Bordignon and Monteiro (2019) report a lack of available valid measures to assess WPV in Brazil and have cited this as a study limitation. However, measures were taken to obtain expert evaluation of their WPV questionnaire during the face validity process. Finally, included studies are limited to Asia and Brazil, which may limit the generalization of results.

4 | CONCLUSION

The aim of this review was to examine the impact that WPV, experienced in the ED, has on emergency nurses' intention to leave their job. A pre-defined protocol was utilized, to ensure a structured, transparent and integral approach was taken to appraise and synthesize the best available evidence, to produce trustworthy findings. Results show that WPV is widely prevalent and has negative consequences for those affected. A direct correlation between WPV and emergency nurses' intention to leave was found. WPV positively influences emergency nurses' intention to leave and subsequently has a negative influence on job satisfaction.

5 | IMPLICATIONS FOR NURSING MANAGEMENT

This review highlights the pivotal aspect of a nursing manager's role to encourage a just culture of reporting, where staff is encouraged to report incidents of WPV. Perhaps by having an open reporting culture, where staff feel safe and supported, there may be a positive effect on JS and an increase in retention and organisational commitment.

It is hoped that the results of this review have provided the reader with a comprehensive, structured and transparent synthesis of the best available evidence and of the negative impact of patient violence in the ED on the intention to leave of emergency nurses and aid in the development of clinical practice guidelines for a WPV prevention programme, specific to the ED. WPV prevention programmes, with clear aims and objectives, should be formed with the aid of an interdisciplinary approach. These programmes would require regular evaluation from participants and require annual revision and adjustment to respond to the changes occurring within the ED.

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CONFLICT OF INTEREST

The authors declare that no conflicts of interest exist with regards to this study.

ETHICS STATEMENT

Ethical approval was not required as this is a systematic review.

DATA AVAILABILITY STATEMENT

Authors do not wish to share the data.

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REVIEW ARTICLE

WILEY

Nurse leaders' resilience and their role in supporting nurses' resilience during the COVID-19 pandemic: A scoping review

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Abstract

Aim: To explore nurse leaders' resilience and their role in supporting nurses' resilience during the COVID-19 pandemic.

Background: The COVID-19 pandemic has challenged health care systems on a global level. Nurse leaders are tasked with ensuring high-quality care, even during crises, which requires active problem-solving and confidence in the future—resilience from leaders.

Method: A scoping review was conducted using inductive thematic analysis and the PCC (Participants, Concept, Context) framework. The PubMed, Scopus, CINAHL, and PsycINFO databases, as well additional studies and grey literature, were searched from December 2019 to June 2021.

Results: The review included 12 studies. Nurse leaders' self-awareness, self-reflection, and coping strategies described their resilience during the pandemic. A relational leadership style, supportive and safe work environment, and adequate communication were found to support nurses' resilience.

Conclusions: There is scarce research concerning nurse leaders' resilience during the COVID-19 pandemic. Future research needs to address nurse leaders' personal resilience due to the link with nurses' resilience.

Implications for Nursing Management: A healthy work environment is essential for nurses' resilience. During crises, nurse leaders should adopt relational leadership styles and actively interact with nursing staff.

KEYWORDS
COVID-19 pandemic, nurse, nurse leader, resilience, scoping review

1 | BACKGROUND

A total of 183,525,264 COVID-19 cases have been confirmed by 28 June 2021 (WHO, 2022a). The current pandemic has introduced considerable stress to health care professionals' work. This stress (Haravuori et al., 2020), along with the lack of resources (Senek et al., 2020) and personal protective equipment, has challenged health care systems, professionals, and leaders on a global scale (Niehaus & Hod, 2020).

Nurse leaders are important to ensuring high-quality care and supporting nurses in exhausting situations (Senek et al., 2020). Surviving the pandemic requires action and commitment from nurse leaders (Cooper et al., 2020), along with problem-solving skills and confidence in the future. These aspects are components of resilience (Connor & Davidson, 2003), which is defined as a process that helps an individual confront stressors and adversity while the individual resources such as self-efficacy, work–life balance, humour, optimism, support from others (Cooper et al., 2020), and positive professional relationships (Tabakakis et al., 2019) are important. Moreover, resilience is associated with work engagement (Cao & Chen, 2019) and buffers against mental illness (Manomenidis et al., 2018).

There is no clear definition of nurse leaders' resilience, as only a few studies have covered this topic (Spiva et al., 2020; Tau et al., 2018). Based on previous research, nurse leaders' resilience covers the ability to deal with adversity in the workplace (Tau et al., 2018) along with their personal strength (Spiva et al., 2020; Tau et al., 2018). However, nurse leaders with low resilience may find it difficult to empower others (Tau et al., 2018). Before the COVID-19 pandemic, nurse leaders showed varying levels of resilience, ranging from moderate (Tau et al., 2018) to high (Spiva et al., 2020).

Most studies concerning resilience in the field of nursing have been published during the last decade (Zanatta et al., 2020) The results have shown that training may improve the resilience of nurses (Kunzler et al., 2020) and nurse leaders (Spiva et al., 2020). Furthermore, resilient nurse leaders may empower nurses by exuding confidence, caring about their well-being (Tau et al., 2018; Wei et al., 2018), helping them identify and utilize their strengths, nurturing their professional development, and encouraging self-care (Wei et al., 2018).

Enhancing relationship management abilities and promoting professional development might be effective ways to improve nurse leaders' resilience (Spiva et al., 2020). Moreover, relational leadership styles (e.g., transformational, authentic, servant, and ethical leadership) can foster a healthy work environment and positively impact nurses' job satisfaction, recruitment, and retention. Leaders must be able to encourage, motivate, and inspire their employees towards mutual goals, as well as mentor and guide employees, which entails scheduling adequate time for personal discussions (Cummings et al., 2018).

This scoping review aimed to explore nurse leaders' resilience and their role in supporting nurses' resilience during the COVID-19 pandemic. A preliminary search was conducted and no published or ongoing reviews on the topic were identified. To the best of our knowledge, the current study represents the first scoping review of this phenomenon. A scoping review was appropriate, as this method can clarify the range and nature of current evidence and highlight future avenues for research (Peters et al., 2015).

2 | METHODS

The scoping review was conducted using thematic analysis (Vaismoradi et al., 2013) according to the methodology for systematic scoping reviews and the PCC framework (Participants, Concept, Context) (Peters et al., 2015).

2.1 | Ethical considerations

The ethical approval is not required for the systematic scoping review.

2.2 | Study aim and review questions

This scoping review aimed to explore nurse leaders' resilience and their role in supporting nurses' resilience during the COVID-19 pandemic. The review questions were as follows:

1. What is known about nurse leaders' resilience during the COVID-19 pandemic?
2. What is a nurse leader's role in supporting nurses' resilience?

2.3 | Inclusion criteria

2.3.1 | Participants

The research concerned professionals who worked as nurse leaders *(nurse leader, nurse manager, nurse executive, nurse administrator, charge nurse, head nurse, chief nurse, nurse director)* between December 2019 and June 2021. No limitations were set for the country or unit in which nurse leaders worked during the pandemic.

2.3.2 | Concept

The included research could be either studies that assessed nurse leaders' resilience through validated scales (e.g., Connor-Davidson Resilience Scale, Wagnild and Young Resilience Scale) or qualitative studies, texts, opinion papers, and documents that presented evidence related to the study aim. In this scoping review, resilience (*resilience*, *resilient*, *resiliency*) is defined as a nurse leader's ability or role in supporting nurses' resilience, along with their personal strength to deal with adversity.

2.3.3 | Context

The research concerned all kinds of health care settings across the world in which nurse leaders worked during the *COVID-19* pandemic between December 2019 and June 2021.

2.4 | Search strategy

A preliminary search of PubMed, PROSPERO, and the Cochrane and JBI Databases of Reviews was conducted, and no published or

ongoing reviews on the topic were identified. Next, the PubMed, Scopus, CINAHL, and PsycINFO databases were searched to identify relevant articles. In addition, the search of grey literature focused on organisations such as the WHO and United Nations. Google Scholar was also searched. Both published and unpublished studies were considered. The reference lists of all studies were screened to identify additional studies. The searches were performed between December 2019 and June 2021. The search terms were *nurse leader*, *nurse manager*, *nurse executive*, *nurse administrator*, *charge nurse*, *head nurse*, *chief nurse*, *nurse director AND resilience*, *resilient*, *resiliency AND COVID-19* (Figure 1). Studies published in English were included. As the COVID-19 pandemic began in December 2019 in Wuhan, China (WHO, 2022b), we included studies that had collected data during the pandemic and would therefore be published no earlier than December 2019.

This scoping review considered experimental and quasi-experimental study designs, analytical and descriptive observational studies, qualitative studies, and systematic reviews, as well as texts, discussion papers, documents, and grey literature that presented evidence which answered the study question.

2.5 | Selection phase

Following the search, all of the identified citations were uploaded into the Covidence systematic review management system (Covidence, 2021). The titles and abstracts of relevant studies were assessed against the inclusion criteria by independent reviewers; this was repeated for the full-text versions of selected citations. Reasons for exclusion were discussed. The search results and study inclusion process reported in this review are presented in a flow diagram according to Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping reviews (PRISMA-ScR) guidelines (Figure 1) (Tricco et al., 2018).

2.6 | Data extraction

Data were extracted manually by three independent reviewers. The extracted data included details about the authors, year of publication, country, population, context, methods, themes, subthemes, and key findings. Any disagreements were resolved through discussion.

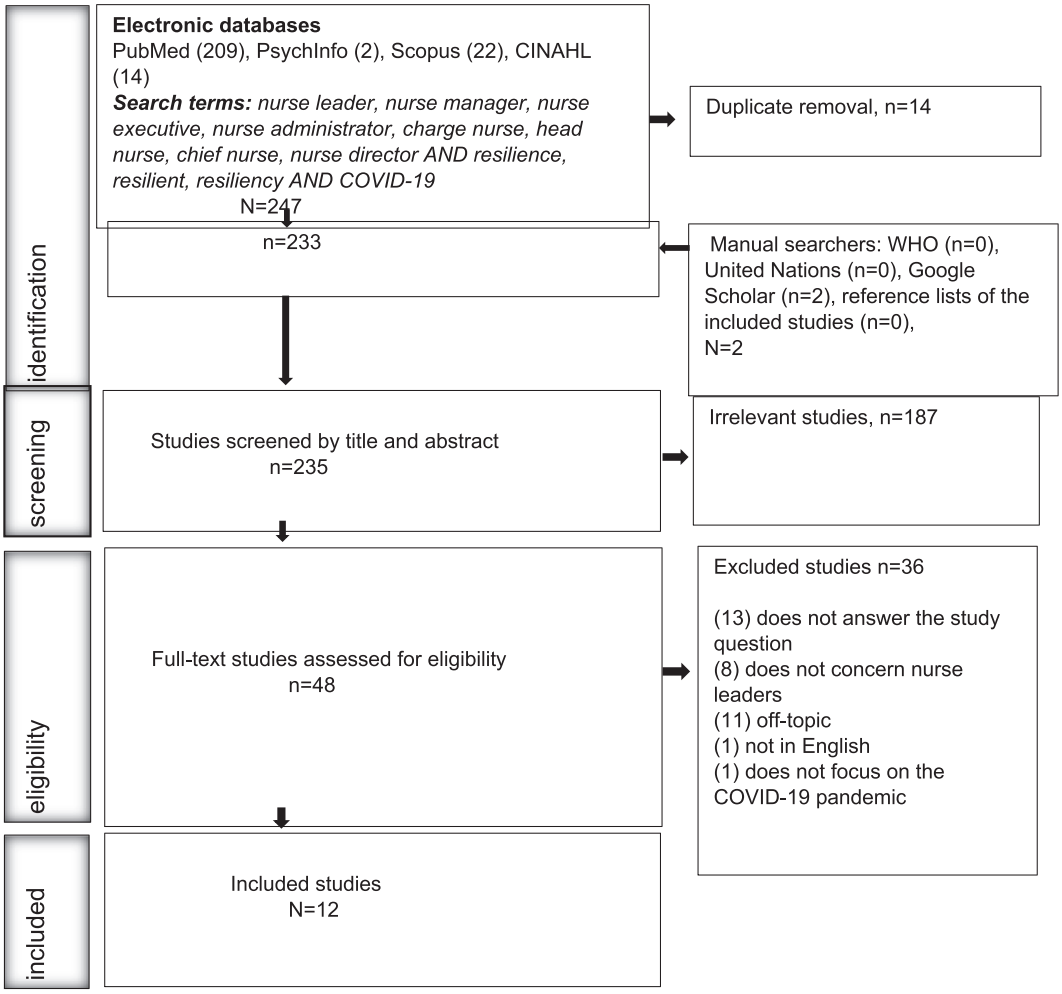

FIGURE 1 PRISMA (ScR) flowchart of study selection

2.7 | Synthesis of results

The results were analysed through inductive thematic analysis. The included articles were read through carefully, after which the text was coded and organized into themes. The reviewers referred to the study questions throughout the analytical process (Vaismoradi et al., 2013). The results are summarized as tabulated findings.

3 | RESULTS

Of the 12 included studies, five were research articles, and seven were discussion papers. Grey literature was not found. Three of the research studies applied the quantitative and two qualitative methods. The studies addressed nurse leaders' resilience (Duncan, 2020; Jeffs et al., 2020) and their role in supporting nurses' resilience during the COVID-19 pandemic (Abd-EL Aliem & Abou Hashish, 2021; Berkow et al., 2020; Cariaso-Sugay et al., 2021; Chesak et al., 2020; Dimino et al., 2020; Duncan, 2020; Heuston et al., 2021; Jeffs et al., 2020; Kreh et al., 2021; Leng et al., 2021; Markey et al., 2021; Prestia, 2021) (Table 1). The themes and subthemes identified from these articles are presented in Table 2.

3.1 | Nurse leaders' resilience during the COVID-19 pandemic

Of the 12 selected studies, two addressed nurse leaders' personal resilience (Duncan, 2020; Jeffs et al., 2020). Duncan (2020) based the reported resilience of nurse leaders on available literature, whereas Jeffs et al. (2020) used semi-structured interviews with four chief nurse executives (CNEs) to gauge nurse leaders' resilience.

Both Duncan (2020) and Jeffs et al. (2020) presented that strong resilience is needed during a pandemic. In these studies, resilience was seen as a nurse leader's ability to reflect and cope. Jeffs et al. (2020) found that the first months of the pandemic challenged CNEs' resilience. More specifically, CNEs were challenged by heavy workloads, long hours, an absence of information and/or data, rapid decision-making, ethical dilemmas, and the prioritization of scare resources. Both papers stated that resilience was associated with self-awareness, while Duncan (2020) highlighted the importance of coping strategies and self-efficacy.

Nurse leaders can help others when they practice effective coping strategies (Duncan, 2020; Jeffs et al., 2020). Resilience requires self-reflection and self-care abilities, both of which help leaders make decisions in difficult situations (Duncan, 2020). Sometimes leaders are even surprised by how novel conditions can make them modify their own leadership styles. During this pandemic, some nurse leaders also experienced strong support from their team and colleagues (Jeffs et al., 2020).

3.2 | Nurse leader's role in supporting the resilience of nurses

3.2.1 | Relational leadership styles

Authentic, exemplary, ethical, and transformational leadership styles were presented to benefit nurse leaders in supporting nurses' resilience during the COVID-19 pandemic (Abd-EL Aliem & Abou Hashish, 2021; Dimino et al., 2020; Duncan, 2020; Jeffs et al., 2020; Leng et al., 2021; Markey et al., 2021; Prestia, 2021). The studies showed that crisis require nurse leaders to have a strong understanding of the situation as well as a visible leadership style (Dimino et al., 2020; Jeffs et al., 2020).

Dimino et al. (2020) stated that nurse leaders need to understand nurses' psychological capital (PsyCap), which encompasses an individual's levels of hope, efficacy, resilience, and optimism; all of these characteristics are also attributes of an authentic leader. Authentic nurse leaders also understand that there is a reciprocal relationship between leaders and staff members. Nurse leaders with the aforementioned attributes are well equipped to lead frontline nurses through the challenges of the COVID-19 pandemic and help them develop resilience (Dimino et al., 2020; Jeffs et al., 2020). Moreover, nurse leaders should focus on skilled communication, collaboration, effective decision-making, and appropriate staffing, as well as the meaningful recognition of staff. It was also proposed that authentic and transparent leadership styles support staff and organisational resilience (Duncan, 2020).

Regular communication was one method through which a nurse leader supported staff during the adaptation, change, progress, and promotion of resilience associated with remote work. The ability to inspire, i.e., Kouzes' and Posner's theory of Exemplary leadership, was reported to be invaluable during crises (Prestia, 2021). In addition, nurse leaders have a vital role in empowering nurses and supporting an organisation's commitment to safe and quality care (Markey et al., 2021).

An ethical leadership style was also considered valuable during a crisis since it maintains a nurse leader's ethical attention via empathy, compassion, and active listening in a time when nurses may experience physical and emotional fatigue. It was highlighted that nurse leaders need periodic training and support about ethical leadership (Markey et al., 2021).

3.2.2 | Supportive and safe working environment

The included studies highlighted a supportive and safe working environment as one main theme to ensuring nurses' resilience (Abd-EL Aliem & Abou Hashish, 2021; Berkow et al., 2020; Cariaso-Sugay et al., 2021; Chesak et al., 2020; Dimino et al., 2020; Duncan, 2020; Heuston et al., 2021; Jeffs et al., 2020; Kreh et al., 2021; Leng et al., 2021; Markey et al., 2021; Prestia, 2021).

Some of the included studies discussed professional (Markey et al., 2021) and organisational resilience in addition to how nurse

TABLE 1 Details of studies included in the scoping review

Author (year), Country	Design	Population, Context	Study methods	Main theme and focus	Subthemes	Key findings
Abd-EL Aliem & Abou Hashish (2021), Saudi Arabia	Research article	First-line nurse managers (n=60) and nurses (n=211) in Saudi Arabia.	Descriptive correlational research	**Main theme:** • Nurse leader's ability and role in supporting the resilience of nurses **The focus:** Nurse managers' role in supporting the resilience and job involvement of nurses. The research aimed to determine the relationship between transformational leadership practices of FLNMs and nurses' organisational resilience and job involvement.	**Subthemes:** • Relational leadership styles • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	First-Line managers' leadership practices accounted for 43% and 40% of the variance of nurses' organisational resilience and job involvement, respectively. Leaders have an essential role in supporting nurses' resilience and job involvement. Shared governance, a respectful working atmosphere, and showing gratitude are good strategies to promote positive work attitudes.
Berkow et al. (2020), USA	Discussion paper	Nurse executives	Discussion paper based on literature.	**Main theme:** • Nurse leader's ability and role in supporting the resilience of nurses	**Subthemes:** • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	The article outlines the five actions that executives should take account: 1) ensure staff safety 2) Reinvigorate sfatt input channels 3) Do not sugarcoat the challenges ahead 4) Plan for worst-case scenarios 5) Executives should reduce managers' workload.
Cariaso-Sugay et al. (2021), USA	Research article	Nurse leaders (n=50) at Magnet-designated acute care hospitals (n=2).	A quality improvement project (PDSA=Plan, Do, Study, Act), Intervention study with pre- and post-intervention surveys. Intervention is based on social cognitive theory (SCT) and the concept of self-efficacy.	**Main theme:** • Nurse leader's ability and role in supporting the resilience of nurses **The focus:** Educating the nurse leaders (unit supervisors, managers, directors, executive directors or above) to promote resilience, improve their knowledge and confidence in managing disasters that impact the acute care setting.	**Subthemes:** • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	A Quality improvement (QI) intervention significantly improved participants' perceived knowledge and confidence levels in disaster management in the acute care setting. Nurse leaders became more confident and skillful in supporting their nursing staff.

(Continues)

TABLE 1 (Continued)

Author (year), Country	Design	Population, Context	Study methods	Main theme and focus	Subthemes	Key findings
Chesak et al. (2020), USA	Discussion paper	Health care leaders	Discussion paper based on the Mayo Clinic experience.	**Main theme:** • Nurse leader's ability and role in supporting the resilience of nurses **The focus:** Presenting three comprehensive resiliency strategies and examples from the Mayo Clinic experience; Medical staff resiliency.	**Subthemes:** • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	Modeling resilient leadership and communication, establishing strong peer support, stress management, and fostering organisational resilience
Dimino et al. (2020), USA	Discussion paper	Nurse leaders and nurses on the frontlines.	A discussion paper based on human psychological capital (PsyCap) characterised by having high levels of HERO (hope, efficacy, resilience, and optimism).	**Main theme:** • Nurse leader's ability and role in supporting the resilience of nurses **The focus:** Strategies that nurse leaders can utilise to foster PsyCap in their nurses. Effective communication and support.	**Subthemes:** • Relational leadership styles • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	Developing a multidisciplinary strategy team, recruiting senior leaders to meet nurses to communicate, offering leadership training (communication, conflict management, team building and stress management), arranging support from psychologists and social workers, recognising the risks associated with distress, cultivating a culture of caring and encouraging approaches.
Duncan (2020), Ireland	Discussion paper	Nurse leaders and nurses	Peer-reviewed discussion paper	**Main theme:** • Resilience among nurse leaders during the COVID-19 pandemic • Nurse leader´s ability and role in supporting the resilience of nurses **The focus:** How nurse leaders can support staff and show organisational resilience. Also, how nurse leaders can develop their resilience.	**Subthemes:** • Ability to reflect, be self-aware and cope • Relational leadership styles • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	Nurse leaders can support resilience, both their own and of staff members, by using healthy coping strategies, positive language and managing their own efficacy. The focus should be on skilled communication, collaboration, effective decision-making, appropriate staffing, meaningful recognition of staff, and authentic and transparent leadership to

(Continues)

TABLE 1 (Continued)

Author (year), Country	Design	Population, Context	Study methods	Main theme and focus	Subthemes	Key findings
						support and improve staff, and organisational resilience.
Heuston et al. (2021), USA	Discussion paper	Chief nursing officer (CNO) and associate CNO (ACNO), intensive care managers, and nurses in intensive care unit	A virtual program (Fill Your Cup) with pre- and post-tests. Three 75-minute virtual sessions over a two-week period. 1) General content and discussion about resiliency and resiliency-boosting strategies, shared information between participants. 2) A call to action regarding adding meaning to work.	**Main theme:** • Nurse leader's ability and role in supporting the resilience of nurses **The focus:** Nurses' moral distress and grief, strategies to build resiliency, shared experiences and opportunities to connect.	**Subthemes:** • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	Educating and supporting staff, observing, listening, and identifying signs of moral distress and fatigue, as well as involving staff in selecting and planning resiliency programs and resources.
Jeffs et al. (2020), Canada	Research article	Chief Nurse Executives (n=4) (CNEs) in an urban regional hospital network	Semi-structured Interviews.	**Main theme:** • The resilience of nurse leaders during the COVID-19 pandemic • Nurse leader's ability and role in supporting the resilience of nurses **The focus:** How chief nurse executives navigate the balancing act of organisational- and system-level accountabilities.	**Subthemes:** • Ability to reflect, be self-aware and cope • Relational leadership styles • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	Recommendations for CNEs: ensure resiliency and safety; be present and build trust; recognise and value staff; engage in transparent and timely communication; leverage influence; learn from others; and proactively plan.
Kreh et al. (2021), Austria, Italy, Germany	Research article	Healthcare workers (n=13) from Italian and Australian hospitals. Of these n=2 head nurses, n=1 chief registered nurse	Interviews, data analysis using grounded theory methodology.	**Main theme:** • Nurse leader's ability and role in supporting the resilience of nurses The focus: Investigation of the nature of health care workers' experiences of resilience and stress during the COVID-19 pandemic.	**Subthemes:** • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	Good, honest and timely information, along with support, is recommended. Organisations should enhance connectedness. Protecting staff by providing protective equipment and taking their opinions, needs and concerns into account. Staff should be provided with a space to rest and recover. Shared decision-making and preparing for

(Continues)

TABLE 1 (Continued)

Author (year), Country	Design	Population, Context	Study methods	Main theme and focus	Subthemes	Key findings
						new tasks improves self and collective efficacy.
Leng et al. (2021), China, USA	Research article	Nurses (n=90) caring for patients with COVID-19 at the intensive care unit (ICU) in Wuhan, China. Nurses were clinical, senior and charge nurses.	A cross-sectional study design	**Main theme:** • Nurse leader's ability and role in supporting the resilience of nurses **The focus:** The nurse manager's role in supporting nurses through communication and appreciation	**Subthemes:** • Relational leadership styles • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	Although the included nurses had been selected based on high levels of clinical performance and resilience, 5.6% of these nurses had post-traumatic stress symptoms and 22.22% experienced harmful levels of stress. The isolated environment, concerns about PPE shortage and usage, physical and emotional exhaustion, intensive workload, fear of being infected, and insufficient work experience with COVID-19 were major sources of stress.
Markey et al. (2021), Brazil, Ireland	Discussion paper	Nurse managers	Discussion paper based on literature	**Main theme:** • Nurse leader's ability and role in supporting the resilience of nurses **The focus:** The necessity of fostering ethical leadership in the recovery of COVID-19	**Subthemes:** • Relational leadership styles • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	Ethical behaviour and resilience can powerfully influence the actions of others. Fostering ethical vigilance, nurturing self-caring behaviours, and professional resilience, as well as inspiring, motivating, and empowering the nursing team, is recommended.
Prestia (2021), USA	Discussion paper	Nurse leaders	Discussion paper and a case presentation	**Main theme:** • Nurse leader's ability and role in supporting the resilience of nurses **The focus:** The nurse leader´s role to support nurses through adaptation, change, progress, and promotion of resiliency.	**Subthemes:** • Relational leadership styles • Supportive and safe working environment • Nurse leaders' communication during the COVID-19 pandemic	The ability to inspire is an essential leadership trait, invaluable in times of crisis.

TABLE 2 Themes related to the resilience of nurse leaders and their role in supporting nurses' resilience

Theme	Nurse leaders' resilience during the COVID-19 pandemic	Nurse leader's role in supporting nurses' resilience
Subthemes	• Ability to reflect, be self-aware, and cope	• Relational leadership styles • Supportive and safe working environment • Nurse leaders' communication

leaders support nurses' resilience (Abd-EL Aliem & Abou Hashish, 2021; Chesak et al., 2020; Duncan, 2020; Kreh et al., 2021). *Professional resilience* was presented as the ability to increase work performance and ensure safe and quality care during crisis (Markey et al., 2021), while *organisational resilience* concerned a nurse leader's ability to ensure a supportive and safe work environment (Abd-EL Aliem & Abou Hashish, 2021; Chesak et al., 2020; Duncan, 2020; Kreh et al., 2021). A good working atmosphere was reported to enhance both nurses' professional (Markey et al., 2021) and organisational resilience (Abd-EL Aliem & Abou Hashish, 2021; Duncan, 2020; Kreh et al., 2021), improve nurses' engagement with their work (Berkow et al., 2020; Prestia, 2021), and benefit nurses' job involvement during a crisis (Abd-EL Aliem & Abou Hashish, 2021).

A supportive and safe working environment requires good communication (Abd-EL Aliem & Abou Hashish, 2021; Duncan, 2020; Jeffs et al., 2020), leaders who enable others to act (Abd-EL Aliem & Abou Hashish, 2021), cooperation (Abd-EL Aliem & Abou Hashish, 2021; Chesak et al., 2020; Duncan, 2020; Kreh et al., 2021), shared vision (Abd-EL Aliem & Abou Hashish, 2021; Duncan, 2020) and decision-making (Chesak et al., 2020; Dimino et al., 2020; Duncan, 2020; Kreh et al., 2021), sufficient personal protective equipment (Berkow et al., 2020; Chesak et al., 2020; Duncan, 2020; Kreh et al., 2021; Leng et al., 2021), and an adequate amount of information (Chesak et al., 2020; Jeffs et al., 2020; Prestia, 2021).

Supportive atmosphere included showing respect for nurses, leading them with empathy (Markey et al., 2021), considering various opinions, and listening to nurses' concerns (Kreh et al., 2021; Prestia, 2021). This entails a non-judgmental environment, which can build professional resilience, support open discussion, and encourage ethical vigilance (Markey et al., 2021). Moreover, a good atmosphere will improve nurses' personal resilience as well as answer the needs of vulnerable and high-risk staff (Abd-EL Aliem & Abou Hashish, 2021; Chesak et al., 2020; Dimino et al., 2020; Jeffs et al., 2020; Kreh et al., 2021).

Leng et al. (2021) found that resilient nurses can also experience mental stress while an isolated environment, physical and emotional fatigue, and intensive workload can be major sources of stress among nurses. For this reason, various researchers have recommended flexible working hours during the pandemic (Duncan, 2020; Kreh et al., 2021). Furthermore, all nurses should have received adequate training and orientation, while a caring and authentic nursing leadership style can be a source of psychological support (Leng et al., 2021).

During the COVID-19 pandemic, leaders were recommended to observe nurses for any signs of distress and fatigue (Heuston et al., 2021). Good communication, developing a mentoring relationship, social support, and encouraging hopefulness (Duncan, 2020), as well as the provided opportunities to connect and share experiences (Heuston et al., 2021) were expected to build resilience among employees. Moreover, it was stated that resilience can be supported by encouraging staff to utilize their personal abilities, collaborate, find solutions to problems, recognize nurses' contributions, and help employees manage their disappointments (Dimino et al., 2020). According to Berkow et al. (2020), leaders are also expected to prepare for the worst-case scenario and organisational changes, as well as avoid making promises they cannot keep.

When supporting nurses, nurse leaders should foster authentic connections and proactively interact with staff (Cariaso-Sugay et al., 2021; Dimino et al., 2020; Duncan, 2020; Heuston et al., 2021; Jeffs et al., 2020; Kreh et al., 2021; Prestia, 2021). This ability to encourage nurses and create an emotional connection with them is an important part of promoting resilience. Nurses have reported that they appreciate having a connection to management (Kreh et al., 2021; Leng et al., 2021). In this way, recognizing and valuing staff has been highlighted as a good strategy for ensuring resilience among nurses (Jeffs et al., 2020). Furthermore, staff members appreciate being listened to, the fact that their problems are addressed, and that they are affording opportunities for discussion (Kreh et al., 2021; Markey et al., 2021).

3.2.3 | Nurse leaders' communication during the COVID-19 pandemic

The included studies unanimously reported that nurse leaders' communication skills are essential to supporting nurses' resilience during a pandemic (See Table 1). Leaders should encourage hopefulness (Duncan, 2020) and optimism by sharing past experiences (Dimino et al., 2020) and empowering staff to look forward to future opportunities (Dimino et al., 2020; Markey et al., 2021). Providing timely (Chesak et al., 2020; Jeffs et al., 2020) and accurate information (Chesak et al., 2020; Prestia, 2021), along with conveying clear organisational goals (Dimino et al., 2020), were considered important actions for leaders. During the pandemic, nurse leaders should focus on efficiency (Kreh et al., 2021), rely on evidence (Prestia, 2021), use open dialogue (Berkow et al., 2020; Markey et al., 2021), and be transparent when discussing organisational challenges (Berkow et al., 2020).

The included studies also emphasized that nurse leaders should be emotionally intelligent; in other words, they should proactively listen to nurses' opinions and concerns as well as recognize their moods (Heuston et al., 2021; Jeffs et al., 2020; Kreh et al., 2021; Markey et al., 2021; Prestia, 2021). Using positive language (Duncan, 2020), encouragement (Chesak et al., 2020; Dimino et al., 2020; Prestia, 2021), inspiration (Dimino et al., 2020; Leng et al., 2021; Markey et al., 2021; Prestia, 2021), and gratitude (Abd-EL Aliem &

Abou Hashish, 2021; Dimino et al., 2020; Leng et al., 2021) were listed as important actions for nurse leaders during the COVID-19 pandemic.

Cariaso-Sugay et al. (2021) found that an intervention aimed at increasing nurse leaders' knowledge and confidence in disaster management can provide an effective approach for promoting nurses' resilience. In their study, the intervention had the most noticeable effect on the communication and connectivity knowledge subscale. The intervention framework was based on social cognitive theory (SCT) and the concept of self-efficacy (Cariaso-Sugay et al., 2021).

4 | DISCUSSION

This scoping review aimed to explore nurse leaders' resilience and their role in supporting nurses' resilience during the COVID-19 pandemic. The findings indicate that there is a lack of research concerning nurse leaders' personal resilience, only two studies investigated this topic. In these studies, the findings were based on available literature (Duncan, 2020) and semi-structured interviews (Jeffs et al., 2020). Instead of addressing nurse leaders' personal resilience, most of the research published during the COVID-19 pandemic focused on the leaders' ability to ensure nurses' resilience (Abd-EL Aliem & Abou Hashish, 2021; Berkow et al., 2020; Cariaso-Sugay et al., 2021; Chesak et al., 2020; Dimino et al., 2020; Heuston et al., 2021; Kreh et al., 2021; Leng et al., 2021; Markey et al., 2021; Prestia, 2021). Studies published prior to the current pandemic have shown a similar focus (Spiva et al., 2020; Tau et al., 2018). Based on the findings of this review, nurse leaders can help others when they possess effective coping strategies (Duncan, 2020; Jeffs et al., 2020).

The included studies demonstrate that nurse leaders require strong resilience, which was mainly described through a leader's ability to reflect and cope. Furthermore, resilience requires nurse leaders to be aware of themselves (Duncan, 2020; Jeffs et al., 2020) and the repercussions of their actions (Abd-EL Aliem & Abou Hashish, 2021; Berkow et al., 2020; Cariaso-Sugay et al., 2021; Chesak et al., 2020; Dimino et al., 2020; Duncan, 2020; Heuston et al., 2021; Jeffs et al., 2020; Kreh et al., 2021; Leng et al., 2021; Markey et al., 2021; Prestia, 2021). However, information on the factors that impacted nurse leaders' resilience and what were the outcomes of their resilience was scarce. Previous studies have shown that resilience is a crucial part of effective nursing leadership (Cao & Chen, 2019; Hudgins, 2016; Tau et al., 2018). Most of the included studies discussed how nurse leaders support nurses' resilience, while several studies also highlighted the importance of relational leadership styles (Abd-EL Aliem & Abou Hashish, 2021; Dimino et al., 2020; Duncan, 2020; Jeffs et al., 2020; Leng et al., 2021; Markey et al., 2021; Prestia, 2021), a supportive and safe work environment (Cariaso-Sugay et al., 2021; Dimino et al., 2020; Duncan, 2020; Heuston et al., 2021; Jeffs et al., 2020; Kreh et al., 2021; Prestia, 2021), and communication skills in crisis management (Abd-EL Aliem & Abou Hashish, 2021; Berkow et al., 2020; Cariaso-Sugay et al., 2021; Chesak et al., 2020; Dimino et al., 2020; Duncan, 2020; Heuston et al., 2021; Jeffs et al., 2020; Kreh et al., 2021; Leng et al., 2021; Markey et al., 2021; Prestia, 2021).

The included studies showed that—during crises—nurse leaders must demonstrate strong understanding and visible leadership (Dimino et al., 2020; Jeffs et al., 2020), both of which fall under relational leadership styles (Abd-EL Aliem & Abou Hashish, 2021; Dimino et al., 2020; Duncan, 2020; Jeffs et al., 2020; Leng et al., 2021; Markey et al., 2021; Prestia, 2021). These relationship styles also emphasize reciprocal relationships between nurse leaders and staff (Dimino et al., 2020; Jeffs et al., 2020), along with the ability to empower employees (Markey et al., 2021) and support organisational resilience (Duncan, 2020). In a study published before the COVID-19 pandemic, Cummings et al. (2018) demonstrated that relational leadership styles benefit nurses' well-being and job satisfaction, as well as organisational functioning (Cummings et al., 2018).

All of the included studies linked a nurse leader's communication skills and support with nurses' resilience. These attributes included active interaction, a respectful working atmosphere (Abd-EL Aliem & Abou Hashish, 2021; Leng et al., 2021; Markey et al., 2021), timely (Chesak et al., 2020; Jeffs et al., 2020) and accurate information (Chesak et al., 2020; Prestia, 2021), clear organisational goals (Dimino et al., 2020), and open dialogue (Berkow et al., 2020; Markey et al., 2021). The included studies also presented participative ways to lead (Abd-EL Aliem & Abou Hashish, 2021; Chesak et al., 2020; Dimino et al., 2020; Duncan, 2020; Kreh et al., 2021) and the provision of adequate personal protective equipment (Berkow et al., 2020; Chesak et al., 2020; Duncan, 2020; Kreh et al., 2021; Leng et al., 2021) as parts of a supportive and safe work environment. A previous systematic review showed that lighter workloads and social support were positively related to resilience among medical doctors (McKinley et al., 2019). In the context of the COVID-19 pandemic, Markey et al. (2021) stated that nurse leaders have an essential role in supporting nurses to continue working, increasing job performance, and ensuring safe and quality care. Previous studies have shown that a good work environment (Ying et al., 2021) and resilience (Jo et al., 2021) can improve nurse retention. Moreover, nurse leaders may empower nurses in participative ways, i.e., encourage them through confidence and care for their well-being (Tau et al., 2018; Wei et al., 2018). It should also be noted that resilience is a prerequisite of high-quality health care in the future (Hudgins, 2016; Tau et al., 2018). This is because resilient nurse leaders are more likely to be satisfied with their job, which means they will remain in their position and inspire their staff to do the same (Hudgins, 2016).

4.1 | Strengths and limitations

This review includes some strengths and limitations. The first strength is that an information specialist was consulted during the search process, and the PRISMA-ScR extension tool for scoping reviews was used to structure the search. Another strength is that data extraction was performed by three independent reviewers. Concerning limitations, this scoping review included 12 search results, with only five

representing research articles (Table 1). This indicates that more research is needed. Nevertheless, the review confirmed the importance of a nurse leader' s personal resilience during crises (Duncan, 2020; Jeffs et al., 2020). Future research should address nurse leaders' personal resilience and its levels because this attribute has profound effects on nurses' resilience and organisational functioning (Cline, 2015).

4.2 | Conclusions

There is scarce research on nurse leaders' resilience during the COVID-19 pandemic. Future research should address nurse leaders' personal resilience, which is integral to supporting nurses' resilience.

4.3 | Implications for nursing management

A healthy work environment benefits nurses' resilience, while nurse leaders play a crucial role during pandemics. These professionals need sufficient preparation and training to work effectively in acute situations. During crises, nurse leaders should adopt relational leadership styles and actively interact with their employees.

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CONFLICT OF INTEREST

There is no conflict of interest in this project.

ETHICS STATEMENT

Ethical approval was not required for this paper.

AUTHOR CONTRIBUTIONS

S.S. conceived the study design, performed the searches, and uploaded relevant citations into a systematic review management system. S.S., T.K., and A.N. selected the included studies, extracted data, and conducted a synthesis of the results, as well as drafted the manuscript. T.K. and A.N. approved the final version of the manuscript.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable. The article is a scoping review and entirely theoretical research.

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ORIGINAL ARTICLE

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Burnout and intent to leave during COVID-19: A cross-sectional study of New Jersey hospital nurses

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Abstract

Aim: The aim of this work is to examine staffing, personal protective equipment (PPE) adequacy and physical exhaustion that contributed to burnout and intent to leave among hospital nurses during the first peak of the COVID-19 pandemic.

Background: Burnout is associated with adverse nurse and patient outcomes. Identifying the magnitude of burnout that occurred during the pandemic can prepare managers for the long-term mental health effects on nurses.

Methods: A cross-sectional, electronic survey was administered to examine perceptions of burnout and intent to leave among all New Jersey hospital nurses from October 6 to October 26, 2020.

Results: A total of 3030 nurses responded with 64.3% reporting burnout and 36.5% reporting intent to leave the hospital within a year. There was a significant association between high levels of burnout and intent to leave ($\chi^2 = 329.4$; $p = .001$). There was no association between staffing and burnout; however, reporting inadequate PPE (OR = 1.77 [95% CI: 1.34–2.34]) and physical exhaustion (OR = 3.89 [95% CI: 3.19–4.76]) remained predictors of burnout among nurses.

Conclusion: Inadequate PPE and physical exhaustion coupled with short staffing contributed to burnout and intent to leave.

Implications for Nursing Management: Managers should continue to utilize evidence-based mental health interventions and advocate within their nursing professional organizations for relief funds to reduce burnout.

KEYWORDS
burnout, COVID-19, hospitals, intent to leave

1 | INTRODUCTION

In March 2020, health care providers in the United States began to grapple with the COVID-19 pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Schuchat, 2020). During the early months, nurses cared for their patients while dealing with fear of exposure to COVID-19 and the uncertainty regarding the availability and allocation of resources including staffing and personal protective equipment (PPE). Among all frontline acute providers, registered nurses (RN) had the most direct, extensive frequent contact with patients, which placed them at disproportionately greater risk of exposure (Cohen & van der Meulen Rodgers, 2020; Lai et al., 2020).

2 | BACKGROUND

A seminal study examining hospital nurse staffing and burnout defines burnout as an occupational condition with emotional exhaustion, depersonalization, and low job satisfaction (Aiken et al., 2002). In a meta-analysis of nurse staffing and burnout, a greater nurse-to-patient ratio was consistently associated with a higher degree of burnout (Shin et al., 2018). Inadequate staffing from greater workload, extra shifts, and physical exhaustion were found to be predictors of burnout among clinical nurses (Rozo et al., 2017).

During the peaks of waves of the pandemic, the effects of inadequate staffing were exacerbated as hospitals surged with COVID-19 patients. During this time, nurses reported a higher level of anger, depression, and anxiety with increased workload as they provided care during the pandemic (Shen et al., 2021). In a recent systematic review and meta-analysis, researchers found that factors that increased nurses' burnout included working in high-risk environments, working in hospitals with inadequate PPE, increased workload, and lower level of training for caring for COVID-19 patients (Galanis et al., 2021).

Reducing burnout and intent to leave is important for nurses' mental health and mitigates shortages that may be exacerbated by the pandemic. Nurse burnout is associated with adverse patient outcomes, medical errors, decreased patient satisfaction, and intent to leave the profession in the hospital setting (Brooks Carthon et al., 2021; Hämmig, 2018). Intent to leave is defined as the likelihood that nurses would leave their current hospital position for another nursing position outside the hospital setting and the probability of permanently leaving the organization (Gebregziabher et al., 2020; Phillips, 2020). Nurses who intend to leave their jobs because of burnout report a stressful work environment and inadequate staffing as major factors (Shah et al., 2021). Evidence from burnout and intent to leave during the first wave can help managers to develop better strategies and to prepare the workforce for subsequent waves and future pandemics (Galanis et al., 2021; Shah et al., 2021).

As we approach almost 2 years into this pandemic, there is a need to empirically determine the magnitude of nurse burnout and intent to leave among clinical nurses. However, the extent to which data-based research has identified factors, such as staffing, PPE adequacy, and physical exhaustion that may have contributed to nurse burnout and intent to leave during the COVID-19 pandemic is limited. Although evidence is emerging about COVID-19 burnout, none of the existing evidence link burnout and intent to leave considering these factors. Therefore, the purpose of this study was to examine the association between RN staffing, PPE adequacy, and physical exhaustion on burnout and intent to leave among frontline acute care RNs during the first peak of the COVID-19 pandemic in New Jersey (NJ).

3 | METHODS

3.1 | Sample

In October 2020, we conducted a cross-sectional survey of 135,253 actively licensed RNs (New Jersey Collaborating Center for Nursing, 2020) during the first peak of COVID-19, defined as the time period between 13 March 2020 until 1 June 2020 in the state of NJ (New Jersey COVID-19 Hub, 2021). Prior to any data collection, we obtained approval by the State University of New Jersey Institutional Review Board Pro 20200001775 under minimal risk and exempt category 2 based on Title 45, Part 46.101(b) of the Code of Federal Regulations. We sent recruitment emails to 107,477 actively licensed RNs who provided an e-mail address to the NJ Board of Nursing and excluded nurses who did not have a mailing address in either NJ, New York, Pennsylvania, Connecticut, and Delaware based on the logic that RNs had to be geographically close to work in a NJ hospital during the first wave. This sampling strategy likely eliminated travel RNs. We targeted RNs who provided direct patient care in an emergency department (ED), observation or an adult, inpatient unit at a NJ acute care hospital during the first peak of COVID-19. To ensure that nurses worked in hospitals during the peak of the first wave, we excluded those RNs who did not work in acute care, did not work in a NJ hospital and whose primary role during the peak was of an advanced practice nurse.

In 2020, there were 20,179 RNs working in hospitals who provide direct patient care in NJ (New Jersey Collaborating Center for Nursing, 2020). To ensure a representative sample, we compared our survey respondent demographics to the demographics of NJ workforce. Of the 5880 RNs who consented to participate in the survey, 3030 nurses met our inclusion criteria.

3.2 | Setting

With a population of approximately 9 million people, NJ was one of the states most impacted by COVID-19 in March 2020. At the peak of first wave on 18 May 2020, there were 3153 hospitalized COVID-19 patients among 71 hospitals (The New York Times, 2021). On 6 October 2020, there were 209,342 cumulative cases of COVID-19 with 601 hospitalized patients and 67 patients on ventilators and within three weeks there were 957 hospitalized patients and

80 patients on ventilators on indicative of the beginning the second wave (New Jersey Department of Health, 2021). COVID-19 vaccinations became available in NJ on 15 December 2020, and there were no official state policies in place to assist the workforce, yet some hospitals offered resiliency trainings.

3.3 | Survey instrument

We created a self-administered, electronic survey (available upon request) composed of five main components including the following: (1) Staffing; (2) PPE adequacy; (3) Physical exhaustion; (4) Burnout; (5) Intent to leave. We included baseline demographic characteristics such as identified gender, age, race, ethnicity, and nursing specialty because staffing ratios differ by specialty. To establish content validity, we piloted the survey among eight clinical RNs that worked in a NJ hospital during the first wave. Based on that process, we removed several questions to reduce the length. Based on the pilot, the survey took an average of 12 min to complete.

3.4 | Measures

3.4.1 | Staffing

We measured staffing by asking RNs to self-report the number of patients they were assigned in a typical shift prior to and during the peak of [the first wave] of the COVID-19 pandemic. We also asked RNs the safest number of non-COVID-19 and COVID-19 patients they should be assigned in a typical shift. Nurse staffing by self-report of nurse staffing is validated and more reliable than using administrative data sources in which administrative datasets tend to calculate nurses that do not provide direct patient care (Aiken et al., 2010).

3.5 | PPE adequacy

We developed four main questions to measure PPE adequacy because of the lack of psychometrically tested measures of PPE adequacy at the time. We asked RNs to identify what PPE they lack on their unit as a select all that apply with nine options including (1) face shields, (2) gloves, (3) goggles/eye protection, (4) gowns, (5) hair protection, (6) N95 respirators, (7) shoe covers, (8) surgical masks, and (9) sufficient supplies. We collapsed those eight categories and recoded the variable into lacking on whether an item was selected or not lacking on whether the item was missing, or "sufficient supplies" was checked. We then asked RNs if they had to ration and reuse with other options (i.e., expired, use donated, and use their own) also as a select all that apply and repeated the same process as above. Using a 5-point Likert scale, RNs identified how confident that the PPE they used protected them from COVID-19 transmission and how confident they were the hospitals had adequate PPE for them. We dichotomized these confidence measures into little or no confidence ($\leq$3) and confident as >3.

3.6 | Physical exhaustion

We created a physical exhaustion scale based on a numeric rating scale from 1 to 10 for pain assessment that clinicians frequently use, with high psychometrics for reliability and validity (Karcioglu et al., 2018). We dichotomized physical exhaustion as $\geq$7 out of 10 on the numeric scale.

3.7 | Burnout

We measured burnout by the Dolan single-item measure that is reliable and validated among primary care staff (Dolan et al., 2015). The single-item measure has a sensitivity of 83.2%, specificity of 87.4%, positive predictive value of 79.3%, and negative predictive value of 90.0% with the area under the curve of .93 (Dolan et al., 2015). Although Dolan et al. tested this measure among primary care staff, other researchers have validated the instrument among clinical nurses (Edwards et al., 2018). Using a 5-point Likert scale, RNs were asked to identify their symptoms of burnout by (1) "I enjoy my work. I have no symptoms of burnout"; (2) "Occasionally I am under stress, and I don't always have as much energy as I once did, but I don't feel burned out"; (3) "I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion"; (4) "The symptoms of burnout that I'm experiencing won't go away. I think about frustration at work a lot"; (5) "I feel completely burned out and often wonder if I can go on. I am at the point where I may need some changes or may need to seek some sort of help." Following existing methodology to conduct multivariable logistic regression models, we dichotomized this measure into no symptoms of burnout ($\leq$2) and "burning out/burnt out" as $\geq$3 (Harris et al., 2018).

3.8 | Intent to leave

Staff nurse intent to leave as a single item measure has strong reliability (Shang et al., 2013). We measured intent to leave by asking whether RNs intended to leave their current position within the next year (yes/no).

3.9 | Data collection

We followed the Dillman method for recruitment which recommends personalized, repeated contacts to increase response rates (Dillman et al., 2014). We sent an initial invitation email followed by two reminder emails to noncompleters. To increase recruitment, we offered participants the opportunity to enter a lottery for 70 $100 Amazon electronic gift cards. We obtained online consent from all

TABLE 1 Nurse demographics compared with state workforce

	Survey		State workforce		$p < .05$
n	$N = 3030$		$N = 20{,}179$		
Age, mean (SD), y	38.7	12.3	44.7	13.2	***
Identified gender	***n***	**%**	***n***	**%**	
Female	2331	76.9	17,815	88.3	***
Male	283	9.3	2364	11.7	***
Other, transgender, genderqueer	6	0.2	0	0.0	
Prefer not to disclose	410	13.5	0	0.0	
Identified race					
American Indian, non-Hispanic	4	0.1	14	0.1	
Asian	376	12.4	3621	17.9	***
Black or African American	207	6.8	1619	8.0	***
Native Hawaiian/Pacific islander	17	0.6	187	0.9	
White	1746	57.6	10,754	53.3	
Multiple/other	188	6.2	563	2.8	***
Prefer not to disclose	492	16.2	3421	17.0	
Identified ethnicity					
Hispanic/Latinx	255	8.4	1201	6.0	***
Non-Hispanic/Latinx	2202	72.7	16,758	83.0	
Prefer not to disclose	573	18.9	2220	11.0	

participants as approved by the IRB. The survey was open for 20 days from 6 October through 26 October 2020.

3.10 | Analysis

We used *t*-test and chi-square tests to examine differences between our RN study sample and the overall RN acute care workforce in NJ by age, gender identity, and race and ethnicity. We used descriptive statistics to identify the mean staffing ratios by specialty (i.e., ED, intensive care unit [ICU], step down unit [SDU], and medical/surgical units) both prior to and at the peak of the pandemic. We used *t*-tests to test the difference between the mean number of patients assigned and the perceived number of the safest patients that should be assigned to an RN by specialty prior to the peak. We then repeated that analysis to test the difference between number of COVID-19 patients assigned and the number of safest COVID-19 patients by specialty. We used chi-square test to examine associations between the PPE variables, physical exhaustion, burnout, and intent to leave by specialty. We then tested the associations between the PPE variables and intent to leave. We also used chi-square test to test associations between physical exhaustion and burnout by intent to leave, respectively. We used multivariable logistics regression to measure the associations between burnout and each measure of staffing, PPE adequacy, and physical exhaustion while controlling for hospital specialty. All statistical analyses were performed using STATA version 16.0 (Stata LP, College Station, Texas).

4 | RESULTS

4.1 | Nurse demographics

Following the STROBE checklist for cross-sectional reporting (von Elm et al., 2007), our final sample included 3030 RNs (15% response rate). The comparison of respondents to the general NJ acute care RN workforce reflected a younger demographic (39 years compared with 45 years, $p < .05$) with fewer males, (9.4% compared with 11.7%, $p < .05$), fewer participants that identified as Black (6.1% compared with 8.0%, $p < .05$) and as Asian (11.6% compared with 17.9%, $p < .05$) and a greater proportion that identified as Hispanic as compared with the 2020 NJ RN Workforce (8.4% compared with 6.0%, $p < .05$) (Table 1).

4.2 | Nurse staffing

Prior to the pandemic, RNs reported that they were assigned, on average, six patients in the ED and medical/surgical units, five patients on the step-down units, and two patients in the ICU (Figure 1). For all four specialties, the perceptions of what RNs perceived as a safe number of non-COVID-19 patients significantly differed from what they were assigned ($p < .05$). Similarly, the perceptions of what RNs perceived as a safe number of COVID-19 patients that they should be assigned significantly differed from what they were assigned ($p < .05$). The number of patients assigned per RN was similar at the peak as

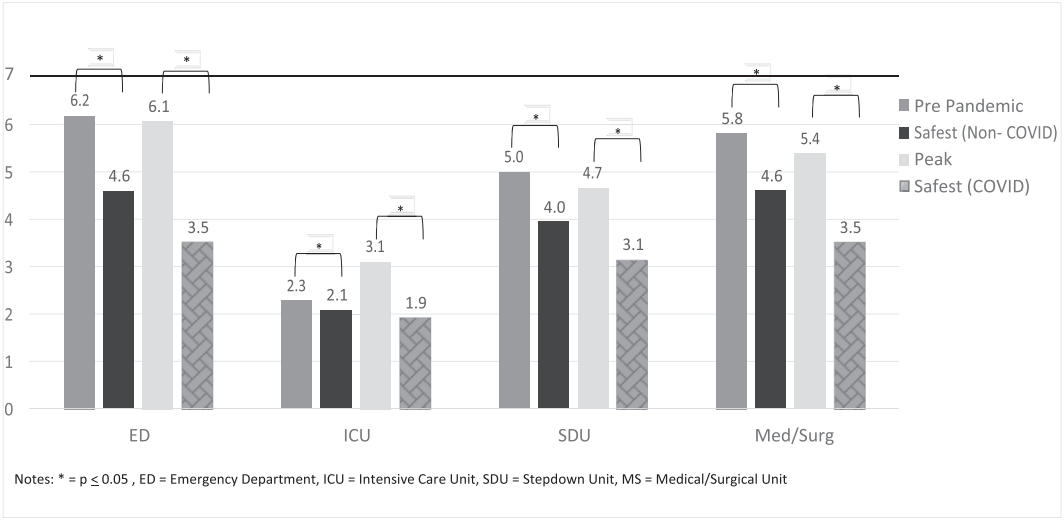

FIGURE 1 Number of patients assigned during COVID-19. Notes: *$p \leq .05$, ED = emergency department, ICU = intensive care unit, SDU = stepdown unit, MS = medical/surgical unit

TABLE 2 PPE inadequacy, physical exhaustion, burnout and intent to leave by specialty

	Total		ED		ICU		MS		Other[a]		
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	χ^2
Lacked PPE[b]	2394	79.0	343	77.8	859	82.7	966	84.1	226	71.2	145.1*
Rationed and reused PPE[b]	2642	87.2	384	87.1	927	89.2	1069	90.3	262	87.6	214.0*
Lack of confidence in PPE protection	1974	65.1	286	64.9	675	65.0	828	69.9	185	57.3	66.1*
Lack of confidence in PPE adequacy	2228	73.5	323	73.2	777	74.8	926	78.2	202	64.8	104.8*
Physical exhaustion	2426	80.1	330	74.8	876	84.3	982	82.9	238	71.5	42.9*
Burnout	1908	64.3	294	66.7	659	63.4	769	65.0	186	58.1	26.9*
Intent to leave within 12 months	1106	36.5	167	41.4	378	39.3	477	43.3	84	30.0	31.7*

Abbreviations: ED, emergency department and includes observation units; ICU, intensive care unit and includes step-down units, MS, medical/surgical unit; PPE, personal protective equipment.

[a]Other = Maternal health units, recovery room, reassigned units.

[b]PPE included face shields, gloves, gowns, eye protection, caps, N95s, shoe covers, and surgical masks.

*$p < .05$.

compared with prior to the pandemic except for the ICU in which the staffing ratio in the ICU increased by almost one full patient to a ratio of one RN to three COVID-19 patients at the peak.

4.3 | PPE inadequacy, physical exhaustion, burnout, and intent to leave by specialty

Almost 80% ($n = 2394$) reported lacking PPE and nearly 90% ($n = 2642$) reported needing to ration and reuse PPE (Table 2). Almost 75% ($n = 2228$) of the RNs lacked confidence that the hospital had adequate PPE. When examining by specialty, medical/surgical RNs lacked the most confidence in PPE protection and PPE adequacy and reported the need to ration, reuse, or use nonhospital PPE most frequently. The ICU RNs reported the highest level of physical exhaustion as compared with other specialties. The ED RNs reported the highest percentage of burnout (64.3%, $n = 1908$). Among all specialties, 36.5% of the RNs ($n = 1106$) reported their intent to leave within 12 months with medical-surgical RNs demonstrating the highest percentage of intent to leave.

4.4 | PPE adequacy, physical exhaustion, and burnout by intent to leave

We observed significant differences between lacking PPE ($\chi^2(2) = 26.0$; $p = .001$), lack of confidence in PPE protection ($\chi^2(2) = 61.3$; $p = .001$), and lack of confidence in PPE adequacy ($\chi^2(2) = 74.3$; $p = .001$) and intent to leave (Table 3). We also observed a significant difference between high levels of physical exhaustion and intent to leave ($\chi^2(2) = 57.8$; $p = .001$). We also observed significant differences in the ordinal measurement of burnout when stratified by intent

TABLE 3 PPE inadequacy, physical exhaustion, and burnout by intent to leave

	Intent to leave	%	No intent to leave	%	χ^2
Lacked PPE					
No	95	8.5	229	15.0	26.0*
Yes	1017	91.5	1301	85.0	
Rationed and reused PPE					
No	33	3.0	75	4.9	6.1
Yes	1079	97.0	1455	95.1	
Lack of confidence in PPE protection					
No	229	20.6	526	34.4	61.3*
Yes	883	79.4	1004	65.6	
Lack of confidence in PPE adequacy					
No	131	11.8	382	25.0	74.3*
Yes	981	88.2	1148	75.9	
Physical exhaustion					
No	150	13.5	391	25.6	57.8*
Yes	962	86.5	1139	74.4	
Ordinal burnout					
I enjoy my work. I have no symptoms of burnout	25	2.3	151	9.9	507.5*
Occasionally I am under stress, and I don't always have as much energy as I once did, but I don't feel burned out	188	16.9	675	44.3	
I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion	396	35.7	517	33.9	
The symptoms of burnout that I'm experiencing won't go away. I think about frustration at work a lot	275	24.8	146	9.6	
I feel completely burned out and often wonder if I can go on. I am at the point where I may need some changes or may need to seek some sort of help	226	20.4	35	2.3	
Dichotomized burnout					
No	213	19.2	826	46.0	329.4*
Yes	899	80.8	704	54.0	

Note: $n = 2642$ for relationship between dichotomized burnout and intent to leave.
Abbreviation: PPE, personal protective equipment.
*$p = .001$.

to leave, such that nurses who intended to leave had a greater presence of burnout compared with nurses who did not intend to leave ($\chi^2(2) = 507.5$; $p = .001$).

4.5 | Predictors of burnout

Controlling for covariates, in the multivariable regression analyses estimating the odds of burnout, we found no significant relationships between staffing and burnout (Table 4). However, RNs who reported lack of confidence in PPE protection had 1.59 (95% CI: 1.26–2.00, $p = .001$) times the odds of burnout compared with RNs who did not lack the confidence in PPE protection. Additionally, RNs who reported lack of confidence that the hospital had sufficient PPE had 1.77 (95% CI: 1.34–2.34, $p = .001$) times the odds of burnout compared with RNs who did not lack confidence that the hospital had sufficient PPE. Nurses who reported physical exhaustion of 7 or more on a 10-point scale had 3.89 (95% CI: 3.19–4.76, $p = .001$) times the odds of burnout compared with RNs who did not report high levels of physical exhaustion.

5 | DISCUSSION

This large cross-sectional survey of over 3000 RNs indicates that inadequate staffing, inadequate PPE, and high levels of physical exhaustion that occurred during the first wave of the COVID-19 pandemic contributed to over 65% of acute care RN workforce reporting burnout. As the COVID-19 pandemic continues, empirically determining the burnout level as early as October 2020 when the COVID-19

TABLE 4 Multivariable regression analyses estimating the odds of burnout related to staffing, PPE confidence, and physical exhaustion ($n = 2860$)

Characteristic	ORs (95% CI)	*p*
Peak staffing[a]	1.02 (0.99–1.06)	.222
Lack of confidence in PPE protection		
No	Ref	
Yes	1.59 (1.26–2.01)	.001
Lack of confidence in PPE adequacy		
No	Ref	
Yes	1.77 (1.34–2.34)	.001
Physical exhaustion		
No	Ref	
Yes	3.89 (3.19–4.76)	.001

Abbreviations: PPE, personal protective equipment; OR, odds ratio.
[a]Adjusted for unit type, lack of PPE, rationed and reused PPE, pseudo-$R^2 = .0848$.

rates were lower than March 2020 in NJ provides evidence that burnout existed. To reduce the effects of mental health, managers need to continue to monitor frontline clinical nurses for signs of physical and emotional signs and symptoms of burnout.

Among all specialties, 64.3% of the RNs reported burnout with 36.5% of them reporting an intent to leave. Existing work confirms that burnout is a significant predictor of the intent to leave (Bourdeanu et al., 2020; Lee et al., 2020). The International Council of Nurses is reporting a global shortage of with intention to leave rates doubling to 20–30% (Nebehay, 2021). High levels of burnout are associated with adverse patient outcomes such as fatal medical errors, falls and urinary tract, and surgical site and infections (Cimiotti et al., 2012). Additionally high frequency of end-of-life care that occurs during the pandemic conflicted with the strong emotion regulation required of RNs may contributed to burnout (Ricou et al., 2020).

Medical/surgical RNs reported the highest intent to leave as compared with the ICU, ED, and other departments. There has always been a high intent to leave among medical/surgical RNs (Phillips, 2020). Medical/surgical nurses also reported the highest numbers of lacking, rationing, and lack of confidence in PPE adequacy as compared with the nurses in the ICUs and EDs. An additional stressor for clinicians during COVID-19 was the fear of having to ration resources and facing limited supplies (Butler et al., 2020), which may explain burnout and intent to leave.

We found no association between staffing and burnout, which may be explained by consistent ratios prior to the pandemic and at the peak. However, in the ICUs, RNs reported an additional patient increasing the ratio from 1:2 (the accepted standard) to 1:3 COVID-19 patients. Coupled with high physical exhaustion and inadequate PPE set the stage for burnout among these nurses. Additionally, RNs reported only the number of patients which does not account for patient acuity which may explain why we found no effect. Therefore, when preparing for future pandemics, although the number of patients may remain the same, the work environment, the lack of adequate resources, the physical exhaustion all needs to be considered to reduce burnout.

Only one out of five RNs felt confident that the hospital had adequate PPE during the first wave with medical/surgical RNs having the least confidence. The PPE inadequacy contributed to nurse burnout for all specialties. All RNs felt that their hospital lacked sufficient PPE, which was likely exacerbated by shortages of PPE nationwide. This finding highlights the need for managers to maintain adequate PPE by removing profit motives and the need to strengthen the capacity of local, state, and federal governments to effectively distribute stockpiles during future pandemics (Cohen & van der Meulen Rodgers, 2020).

All RNs reported high levels of burnout related to physical exhaustion with the highest reports in the ICUs. This may be due to proning of ventilated patients as well as donning and doffing PPE several times a shift. There were significant associations between the prevalence of physical symptoms and psychological outcomes among health care workers during COVID-19 (Chew et al., 2020) and the compounding effect of suppressing emotions while working the frontlines during one of the world's toughest health crisis likely increased burnout.

5.1 | Limitations

There are several limitations of this study. First, this survey was a snapshot of perceptions that occurred in October 2020, and due to the cross-sectional design of the study, we cannot infer causality. Longitudinal studies measuring burnout levels are needed to examine the effect of the pandemic on nurse burnout throughout this protracted period of time. This study was conducted among licensed RNs in NJ which limits the generalizability to other geographic areas and health care settings. Additionally, the response rate may have been higher if acute care nurses were recruited directly through hospitals rather than emailing all NJ licensed RNs. However, we felt that recruiting RNs through the hospital may have created a sense of compulsion for the participants. Regarding measures, the burnout measure was psychometrically tested in primary care, but limited in acute care and we lost of granularity of the ordinal burnout variable by dichotomizing it to run our models. We also recognize that the evidence was limited at the time in presenting psychometrics for PPE adequacy; therefore, we created our own measures for PPE adequacy that was based on a subjective rating of PPE adequacy, which is a threat to the overall study's validity. Further, the overall survey was self-administered and may be subject to self-report bias and selection bias in that RNs that participated in the study may have been more affected by COVID-19.

6 | CONCLUSIONS

During the peak of the first wave of the COVID-19 pandemic, staffing, PPE inadequacy, and physical exhaustion all contributed to

frontline, acute care nurse burnout. This burnout was associated with higher levels of intent to leave the profession. Mental health interventions are vital to nurse well-being as well as managers working with nursing professional organizations for relief funds to reduce the effects of burnout.

7 | IMPLICATIONS FOR NURSING MANAGEMENT

Burnout is an international problem facing all nurses during the COVID-19 pandemic. Our findings support existing evidence that demonstrate an immediate need for proactive planning for crisis management and mental health assistance to meet provider needs (Butler et al., 2020). Immediate interventions include training managers to recognize the mental health effects of their frontline clinical staff and to refer them to employee assistance programs. Other strategies include supporting nurses with wellness seminars and conversations to decrease moral distress when caring for COVID-19 patients (Hofmeyer & Taylor, 2021). These efforts need to be sustained and supported by hospitals. Block scheduling may also allow nurses to recover from the effects of physical exhaustion.

Nurse managers should engage with nursing professional specialty organizations and work with them to identify grassroot initiatives to reduce burnout. Some nurse organizations have committed their mission to improve frontline nurse health, encourage peer-to-peer support, and provide resources for nurses (New Jersey Nursing Initiative, 2021). Organizations such as the American Association of Critical Care Nurses for ICU RNs address issues that are specific to their membership. Managers also should elicit help from culturally based organizations like the National Association of Hispanic Nurses or the National Black Nurses Association.

Senior-level nurse leaders should seek out COVID-19 relief funding as an essential resource for investing in the nursing workforce. These funds can assist in developing policy initiatives such as improved staffing ratios, improving the work environment, and ensuring adequate resources. We also encourage leaders in nursing schools to train students in caring for COVID-19 patients and invest in resiliency training during clinical rotations. Given the empirical evidence that burnout and intent to leave levels are high, leaders are charged to advocate on behalf of their staff to mitigate the burnout and intent to leave.

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CONFLICT OF INTEREST

The authors have declared no conflict of interest.

ETHICS STATEMENT

Our work was approved by the Rutgers, the State University of New Jersey Institutional Review Board Pro 20200001775 under minimal risk and exempt category 2 based on Title 45, Part 46.101(b) of the Code of Federal Regulations.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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ORIGINAL ARTICLE

WILEY

Organizational climate and interpersonal interactions among registered nurses in a neonatal intensive care unit: A qualitative study

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Abstract

Aim: The aim of this work is to describe the organizational climate and interpersonal interactions experienced by registered nurses in a level III neonatal intensive care unit.

Background: Neonatal nurses have a demanding task in caring for a varied, highly vulnerable patient population and supporting patients' families. Nurses' psychosocial work environment affects quality of care as well as nurses' job satisfaction and organizational commitment.

Method: Semistructured interviews with 13 nurses, covering numerous aspects of their psychosocial work environment, were analyzed using thematic analysis.

Results: High staff turnover and a preponderance of inexperienced nurses were described as stressful and detrimental to group cohesion. Work at the unit was considered overly demanding for newly qualified nurses, while senior nurses expressed frustration at the work of training new nurses who might not stay. While some were very satisfied with the group climate, others complained of a negative climate and incivilities from some experienced nurses toward new recruits.

Conclusions: High turnover and variable competence among staff present challenges for maintaining a positive organizational climate.

Implications for Nursing Management: Management should communicate a clear sense of the nature of neonatal intensive care when recruiting, foster group cohesion (e.g., by creating stable work teams) and reward commitment to working at the unit.

KEYWORDS
group cohesion, hospital personnel management, industrial psychology, job satisfaction, qualitative research

1 | BACKGROUND

Neonatal intensive care is a highly specialized area of health care, involving an extremely vulnerable patient group with a wide array of medical conditions. Advances in neonatology have led to increased survival and better outcomes for extremely premature infants and term infants with severe, life-threatening conditions (Patel, 2016). At the same time, the medical care of these infants has become significantly more complex. In addition to the exacting task of caring for patients, nurses in the neonatal intensive care unit (NICU) have to support

patients' parents in various ways. Nurses help parents gradually assume a parental role vis-à-vis their infant and have to be prepared to respond to parents' expressions of worry and distress. The implications of the complexity of modern neonatal care and of increased parental presence in the NICU for nurses' work have not been adequately studied and thus not necessarily addressed in a satisfactory way by health care organizations (Bry & Wigert, 2022; Coats et al., 2018).

The importance of the organizational context in which NICU staff work for the quality of care as well as for nurses' well-being is increasingly being recognized (Lake et al., 2016; Tawfik et al., 2017). A thorough understanding of both positive and negative aspects of nurses' psychosocial work environment is essential to efforts to improve their work conditions. Nevertheless, research on NICU nurses' work environment is sparse.

The concept of organizational climate refers to how employees collectively experience their work environment and the psychological meanings they attach to it (Schneider et al., 2013). In other words, organizational climate is not so much a specific factor contributing to the psychosocial work environment as a summation of how the work environment and its impact are perceived by employees. Organizational climate and job satisfaction are, by definition, closely linked concepts (Thumin & Thumin, 2011). Further, a number of empirical studies have shown a link between the quality of the organizational climate and organizations' turnover rates, though the precise relationship between climate and turnover remains insufficiently understood (Ehrhart & Kuenzi, 2017). In nursing, a positive organizational climate has been associated with better physical and psychological occupational health outcomes for nurses, including lower rates of burnout (Gershon et al., 2007; Ren et al., 2020) as well as a higher frequency of caring practices, that is, direct interaction with patients (Roch et al., 2014).

Organizational climate can be studied on several levels, from individuals' experiences to the climate of organizations as wholes (Baltes et al., 2009). In the present study we focused on an intermediate or group level, that is, the climate as perceived by nurses at the unit collectively rather than higher-level organizational considerations or individual experiences. In the NICU, good teamwork is particularly vital to delivering high-quality care. The organizational climate, in particular its interpersonal aspects such as the climate of communication and cooperation among team members, affects the quality of teamwork in the NICU (Tawfik et al., 2017). Hence, in this study, we focused particularly on interpersonal aspects of the climate at the unit. The qualitative approach we used is well suited to identifying what participants themselves see as particularly significant features of their organizational climate and possible heterogeneity in their perceptions and interpretations, as well as aspects that may not have received sufficient attention in previous studies.

1.1 | Aim

The aim of this study was to describe the organizational climate experienced by registered nurses in a level III NICU, with particular reference to interpersonal interactions within the group.

2 | METHODS

2.1 | Setting

The study took place at a level III NICU at a university hospital in Sweden, Northern Europe's largest delivery hospital. The hospital is the referral hospital for three regional hospitals. The sickest and most immature infants from these hospitals are transferred to the university hospital NICU antenatally or soon after birth. Once patients are in sufficiently stable condition not to require intensive care any longer, they are transferred back to the regional hospitals or to the level II NICU in the same hospital (located on a different floor and with its own nursing staff). Thus, the level of patient acuity at the unit studied is high.

The unit has 15 beds in an open-bay layout. The staff includes about 50 registered nurses.

At the time of the study, the unit used a scheduling system where nurses plan their schedules on an individual basis, as opposed to stable teams of nursing staff regularly working together.

2.2 | Participants

With the permission of management at the unit, all registered nurses working there were informed orally (at a staff meeting) and in writing (by email) of the purpose and procedure of the study. It was emphasized that the researchers were interested in interviewing nurses with different degrees of experience. Nurses were invited to contact one of the researchers if they wanted to participate. Interviews continued until a number of nurses with work experience ranging from brief to very long had been interviewed, and further interviews no longer produced new information (i.e., until data saturation was reached).

Thirteen nurses with varying degrees of experience of neonatal nursing and of work at this particular NICU participated in the study. The participants had been registered nurses for between 6 months and 32 years (median 12 years, mean 13.9 years). Their experience as NICU nurses ranged from 6 months to 27 years (median 6 years, mean 9.3 years). All were female (as were all the nurses employed at the unit) and native Swedish speakers.

2.3 | Procedure

Individual semistructured interviews were conducted by an interviewer previously unknown to the participants (first author). Interviews took place between 2 May and 11 June 2019, in an undisturbed room at the participants' workplace. Each interview began in an open fashion with participants being invited to describe their perceptions of both positive and negative aspects of what it was like to work as a nurse at the unit. Using an interview guide, a number of specific aspects of nurses' psychosocial work environment at the unit were then covered, including but not limited to communication, workload, relationships with colleagues as well as with other professions and with management, scheduling, and sources of support and

appreciation. Care was taken to avoid leading questions (e.g., questions containing assumptions about the existence or nature of problems in the nurses' work environment).

The duration of the interviews ranged from 26 to 54 min (mean 39.9 min, median 40 min). Interviews were audio-recorded and transcribed verbatim.

2.4 | Analysis

Thematic analysis as described by Braun and Clarke (2006) was performed. The qualitative data analysis software NVivo 2020 was used to organize data. The interviews were first read several times to obtain a general sense of their content. Coding initially covered all aspects of the psychosocial work environment as described in the interviews, with an inductive approach. Codes were sorted according to content and themes were generated based on patterns found among the codes. During this process, reference was continually made to the interview transcripts to ensure that coded extracts were interpreted in a way appropriate to their context and that important viewpoints were not overlooked.

The Consolidated Criteria for Reporting Qualitative Research (COREQ) (Tong et al., 2007) were consulted to ensure quality of reporting.

2.5 | Characteristics of the researchers

The first author, who performed the interviews, was a psychologist. She was previously unacquainted with the participants. The second author was a pediatric nurse with previous experience of working in neonatal intensive care. The two authors thus brought different pre-understandings to the research process, based on their respective professional backgrounds. The authors' different viewpoints were discussed as the analysis progressed and provided complementary ways of understanding the material.

2.6 | Ethical considerations

The study was deemed exempt from ethics review by the Swedish Ethical Review Authority (approval number 2019-02131). Participants gave their consent having been fully informed of the purpose and procedure of the study, the confidentiality of their answers and their right to discontinue their participation at any time and for any reason.

3 | RESULTS

The analysis resulted in four themes describing the organizational climate and interpersonal interactions among nurses at the unit:

- High staff turnover as a source of stress and unease
- Seeking camaraderie in subgroups within the group
- Atmosphere in the group: the good and the bad
- Incivilities experienced by new nurses.

3.1 | High staff turnover as a source of stress and unease

Participants described a sense of insecurity and strain among staff because of turnover and the high proportion of recently hired nurses and nursing assistants at the unit. Some commented that this not only decreased the sense of cohesion in the group but also made work more difficult, because having many colleagues one was unfamiliar with meant one could not be certain of their abilities in various areas. Turnover thus made mutual trust among colleagues more difficult and communication more demanding.

A number of participants commented that work at the unit was excessively challenging and stressful for newly graduated nurses. The view was expressed that high turnover both led to and was maintained by the hiring of nurses who were poorly prepared for work at the unit because of lack of experience of intensive care. Many newly hired nurses were also considered to have unrealistic expectations of what work in a NICU entailed.

> I think a lot of people don't really know what kind of unit they are starting [to work] at. It feels like a lot of them think you sit and feed a baby from a bottle in your lap, and that it's a really … cute environment so to speak. And do not understand about intensive care in the first place, what it's like. (Interview 9)

The high level of turnover resulted in an increased workload for the more experienced nurses who were required to supervise and train the new nurses who had no previous NICU experience. Some experienced nurses said their awareness that new colleagues might soon leave was discouraging and made it less rewarding to train the new nurses and get to know them. Meanwhile, the preponderance of recently hired nurses was also said to make it harder for the new arrivals to find their place.

> It's enjoyable to teach people, but it's also a strain, because you have to have time for your own work and also to supervise the person you are teaching. So it's often stressful, also psychologically, because you feel inadequate on both fronts […] and a fairly high percentage [of the nurses you train] leave quite soon. So sometimes it feels like a bit of a thankless task. (Interview 10)

3.2 | Seeking camaraderie in subgroups within the group

Participants described a tendency among nurses at the unit to seek a sense of belonging by forming subgroups within the large and

changing group of coworkers. Some nurses had worked together for a long time and were socially close. On the other hand, nurses who had come to the unit recently tended to interact with each other. This type of group formation was described in both positive and negative terms. Having a particular social group that one knew well and trusted was described as an important source of satisfaction, making work more enjoyable, and as counteracting the sense of anonymity caused by working at a large unit without stable work teams.

> When you find someone in the work group that you form a relationship to, […] that person becomes important to you at work, and you feel they … it makes work more pleasant to have some people you become closer with. That can be a reason for staying, I think. (Interview 11)

In other words, feeling connected to a subgroup could be seen as enhancing team continuity. On the other hand, the tendency to identify with a specific subset of staff and prefer working and socializing with them was seen by some as disadvantageous to the group cohesion or sense of "being a team" of the unit as a whole, and as making it more difficult for newcomers to find their place.

> I think those who are completely new talk a lot to each other. And those who have been here for a long time, you can hear them talk [to each other] about things […] I feel it's more divided here than at other workplaces I've been at. (Interview 2)

Some participants wished for team building activities to enhance cohesion in the group and help nurses get to know each other more broadly.

3.3 | Atmosphere in the group: The good and the bad

Some participants spoke of a climate of grumbling and habitual diffuse negativity regarding the workplace.

> It's so easy to complain […] people can focus the whole time on what a work at the unit instead of being like, 'but wait, things went great today, how come?' […] when you are so new it's hard when it feels like … [the negativity] is sort of pervasive. It feels like more of a work climate at this particular unit. (Interview 4)

In the view of some, the negativity resulted from stress and high workload. Others, however, associated negativity with periods when there was relatively little to do and felt that shared challenges tended to improve the group's atmosphere and morale.

At the same time, a highly positive view of the atmosphere at the unit was expressed in some interviews, by nurses with varying degrees of experience. These participants described kind and supportive colleagues and a cheerful, welcoming atmosphere where nurses felt united by shared satisfactions and challenges.

> There's a lot of joy, a lot of laughter, a lot … we have a good time together and we struggle together. (Interview 11)

Some praised a climate of mutual helpfulness among coworkers and a style of communication that was usually open and uncomplicated, notably in high-stress situations.

> Since I started I've felt welcome here, you feel seen as a person. […] There's a good atmosphere in the group mostly and we can talk to each other in a good way and cooperate and so on. (Interview 3)

Nurses' collaboration with other professions, for example, physicians and nursing assistants, was described as unhierarchical and generally functioning well. Finally, many participants said their work in itself was interesting and rewarding, productive of positive feelings of hope and engagement.

> I rarely leave for work feeling any Monday anxiety, rather I come to work and sort of feel at home. So it's a nice workplace [because] there's a pleasure in our work. We feel that what we do is important. (Interview 10)

3.4 | Incivilities experienced by new nurses

Participants described a pattern of incidents where nurses who were new to the unit felt belittled or socially excluded, or their efforts or questions were met with impatience and harshness by experienced nurses. These behaviors were said to be initiated by a limited number of nurses who had worked at the unit for many years and who were described as overly critical of some recently hired nurses. Open conflicts among the nurses were viewed as rare; rather, the incivilities were comments whose intent to hurt could be disclaimed by the person responsible.

> I feel there's quite a harsh climate sometimes […] Most people are really, really nice and good colleagues and helpful and so on, but there are people who are really tough, especially to new [nurses] but also in general […] and like to tell you what you do wrong and … There are some people who I have not heard say anything positive to me at all since I started. I think it's an awful shame, because I think it scares away a lot of new [nurses], so before they have even really had time to get started many quit. (Interview 6)

Perceptions of the seriousness of the problem varied. Some participants described the incivilities as highly distressing and a major contributing factor to recently hired nurses' lack of satisfaction and decision to leave. In their view, being exposed to incivilities from colleagues risked outweighing efforts on the part of the organization to support recently hired nurses. Also, the incivilities made less experienced nurses hesitant to communicate with certain colleagues, which was viewed as potentially detrimental to patient safety.

On the other hand, some participants were of the opinion that the negative comments were part of a direct, brusque style of communication that tended to arise in the task-oriented, stressful environment of the intensive care unit and should not be taken personally. The unstable staffing and heterogeneity of the group were sometimes mentioned as a contributing factor. There were also participants who were aware that others complained of incivilities but said they personally had not witnessed such incidents.

Some participants perceived a generational shift in attitudes concerning senior nurses' communication with recently graduated colleagues. According to this view, comments that the senior nurses had been exposed to during their own training and saw as more or less innocuous could be interpreted as unacceptable incivilities by today's new nurses.

> If you haven't worked with this type of care there's such a lot to learn and you have to tolerate being corrected, 'we don't do it that way, we do it like this'. A lot of the younger [nurses] have a really hard time taking that. One has to choose one's words in a really special way compared with when I was new. I think it has to do with the times we live in, that they take it so personally. (Interview 12)

The view was also expressed that some of the most experienced nurses at the unit felt frustrated and slighted by the emphasis placed by management on retaining recently hired nurses, and in a sense took their frustration out on the latter.

> We invest a lot of effort in the new nurses and nursing assistants […] those who make the [uncivil] comments are the ones who have worked for a long time, so I think they feel a certain exhaustion at constantly having to train new [colleagues] … it's not okay to make these [uncivil] comments but it's also a symptom of something, of not feeling good […] I think when you have worked for a long time you don't really feel seen. You feel taken for granted. And I think they need to be reinforced as well in the feeling that they are actually the pillars that the unit stands and falls by, in a way. So they need encouragement and support, [a sense] that they're important. (Interview 11)

Participants said that management was aware of the incivilities and had tried to address the problem mainly by individual conversations with people involved, by modeling kindness in their role as supervisors and by reminding the staff collectively of the importance of mutually respectful behavior. However, management was seen as having limited influence in this regard.

4 | DISCUSSION

The present study aimed at describing the organizational climate experienced by registered nurses in a level III NICU, with particular reference to interpersonal interactions within the group. We studied the perceptions of nurses with levels of experience of NICU work ranging from a few months to several decades. Generally, participants saw the high level of staff turnover as leading to a problematic sense of instability and a lack of group cohesion. The fact that many nurses came to the unit with little or no previous experience was described as stressful. This was the case not only for these inexperienced nurses themselves but also for the more experienced ones who were responsible for training and supervising them in the high-intensity environment of the NICU, where the infants cared for are often critically ill and in an unstable condition. Some nurses reported a high degree of satisfaction with their work and the climate within the group, whereas others complained of an at times negative atmosphere and of incivilities experienced by some inexperienced nurses.

Despite the problems reported at the unit, some participants found their work highly rewarding and enjoyed camaraderie with their colleagues. Participants recognized that the specialized job of NICU nursing demands competence and tolerance for the stressors of intensive care, but that nurses considering working at the NICU do not necessarily have a clear idea of the intensity and technically advanced nature of the work. A question for management to address is how to communicate the nature of NICU work in a realistic way, so as to appeal to nurses who might be attracted to and a good fit for this setting and avoid giving a misleading impression of what work with critically ill newborns is like.

The existing research has usually focused on the impact of organizational climate on turnover rather than on how turnover may affect morale and job satisfaction among those without intent to leave (Ehrhart & Kuenzi, 2017), a topic deserving further study. In our study participants described frustration and stress caused by colleagues' leaving after only briefly working at the unit, despite diligent efforts by senior colleagues and management to train and support them. In a situation like this one, a vicious cycle may arise whereby turnover negatively affects the climate in the group, which in turn leads to more nurses leaving. Efforts by the organization to prevent or counteract such a negative cycle are therefore called for.

Participants varied widely in their evaluations of the organizational climate at the unit, some depicting it in largely negative terms while others expressed a high degree of satisfaction. A low degree of within-group consensus regarding organizational climate is termed a weak climate (Schneider et al., 2013). A weak organizational climate is associated with a lower degree of group cohesion (Luria, 2008), something that participants in the present study found to be the case at

their unit. This aspect of the psychosocial work environment would be important to address, since group cohesion can protect nurses against burnout and promote job satisfaction (Li et al., 2014). There is also evidence that efforts to improve work group cohesion can decrease turnover among nurses (Halter et al., 2017). Efforts to foster group cohesion and positive collegial relationships among nurses would also be important for ensuring good teamwork, communication and patient safety. Teamwork requires mutual trust among group members. For this it is necessary that members have sufficient knowledge of each other's abilities, and that they feel they feel free to express their thoughts and questions (Salih & Draucker, 2019; Tawfik et al., 2017). At the unit we studied, subsequent to this study, plans have been made to test a scheduling model based on stable teams regularly working together as opposed to individual nurses constructing their schedules independently of one another. Despite its disadvantages with respect to nurses' control over their individual schedules, this model may potentially afford greater cohesion and stronger relationships within teams.

Nurse–nurse incivilities like those found at the unit we studied are a well-known and prevalent problem, with consequences that can include intention to leave, burnout and compromised patient safety (Sanner-Stiehr & Ward-Smith, 2017; Spence Laschinger et al., 2009). Nurses who are new to the profession are at particular risk of being targeted, as also found in the present study. Incivilities directed at inexperienced nurses are especially problematic in a situation where recently hired nurses are dependent on senior nurses' support for on-the-job learning. Empirical evidence as to the causes of incivility in this context and ways to counteract it remains limited (Keller et al., 2020). In particular, not many studies have examined situational and organizational influences on incivilities (as opposed to individual-level factors such as personality). High patient acuity and high workload, staffing shortages and low group cohesion are among the factors that have been found to contribute to experiences of incivility among nurses (Keller et al., 2018).

An inherent feature of incivility as conceptualized in the literature is the ambiguity of the intent to harm (Andersson & Pearson, 1999). In the present study, a style of communication that was deemed beyond the pale by certain participants was perceived by others as fairly innocuous. Curbing incivilities within a work group evidently becomes a harder task if no consensus exists as to what constitutes acceptable and unacceptable communication. Communication training for nurses might encourage the development of more civil and effective communication among NICU staff and greater awareness of the importance of communication as an integral part of teamwork in the NICU.

A situation where group cohesion is low and working relationships among colleagues are superficial may exacerbate tendencies to incivility and harsh communication (Keller et al., 2020). Some participants in our study commented that turnover decreased their motivation to train and get to know new arrivals, who might soon leave anyway. Not knowing one's colleagues of different degrees of seniority well can perpetuate stereotypical views of one's own as well as other generations and polarization within the group (Van Rossem, 2021).

In our study, the opinion was expressed that some senior nurses might feel slighted by the contrast between the efforts of management to support new nurses and the relative lack of attention they themselves, with their history of commitment to the unit and proven competence, received from management. These types of comparisons, it was argued, might cause frustration and resentment and consequently provoke incivilities toward recently hired colleagues. Possible relationships between uncivil behaviors by nurses, or poor morale, and the sense of being inadequately rewarded or recognized for one's work would merit further investigation. The fact that, in Sweden, there is no generally applicable career structure for nurses whereby experience and competence guarantee an improved salary or formal status (Alenius et al., 2019) possibly plays a role in this context. Our previous study of the work environment of a level II NICU unit also showed a need of greater support and appreciation for experienced nurses (Bry & Wigert, 2022). Efforts to affirm and reward the contributions of experienced nurses would be called for, while at the same time providing a supportive and welcoming environment for new nurses.

A limitation of the present study is its focus on a single NICU in the specific context of a Swedish university hospital. Care should be taken when applying the results to NICUs whose organizational and cultural conditions may differ in various ways from those in the present study.

5 | CONCLUSIONS

Because of the demanding nature of neonatal nursing together with organizational factors like the difficulty of recruiting competent staff, maintaining a positive and supportive organizational climate in the NICU presents challenges. Nevertheless, as seen in the present study, NICU nursing can be highly rewarding for nurses who feel competent to deal with the complex requirements of their job and enjoy a sense of camaraderie at work.

The development of group cohesion among NICU nurses tends to be hampered by factors including the size of the workplace, high staff turnover and nurses' varying degrees of competence. Our results point to a need for active efforts to counteract the tendency to polarization and negative interactions among nurses and foster group cohesion. There is also a need to address the effect of challenging organizational conditions on the level of stress and demands that nurses are exposed to. Nurses with little experience of NICU work face a steep learning curve, while training new colleagues represents a significant addition to senior nurses' workload.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

In recruiting nurses to work in the NICU, it would be important for management to communicate a clear idea of the demands of the job while also bringing out its positive aspects. This could help to avoid

having new nurses begin work in the NICU with unrealistic expectations about the care of sick and premature newborns, and at the same time attract those who might be stimulated by the variety and acuity of NICU nursing.

An effort to encourage group cohesion should be made for the sake of both nurses' job satisfaction and quality of care. A scheduling system that is team-based rather than individual-based is one possible avenue to improved group cohesion and teamwork.

While continuing to support nurses who are new to the job, management should show that they value the contributions of nurses who have demonstrated a high degree of competence and commitment to work at the NICU. This should include positive feedback and appreciation but also concrete rewards in terms of salary and career advancement.

ETHICS STATEMENT

The study was deemed exempt from ethics review by the Swedish Ethical Review Authority (approval number 2019-02131).

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None.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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ORIGINAL ARTICLE

WILEY

From anticipation to confidence: A descriptive qualitative study of new graduate nurse communication with physicians

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Abstract

Aim: The aim of this study was to understand how new graduate nurses experience communication with physicians.

Background: Communication is necessary for high-quality health care delivery. With poor patient outcomes as a driving force, knowledge of the dialogue that occurs between new graduate nurses and physicians has been rarely explored.

Methods: This qualitative descriptive study involved 13 new graduate nurses from an academic teaching hospital in the south-eastern United States. Data for this study were collected using face-to-face and virtual interviews with a focus on having nurses describe their experience communication with physicians in their current practice.

Results: Analysis led to four themes that describe new graduate nurses experience communicating with physicians. Those themes were gaps in preparation, developing confidence, learning to communicate, and interprofessional care.

Conclusions: Effective communication with physicians is a stressor for new graduate nurses as they transition to practice. For these nurses, negative emotions in their anticipation of communicating with physicians were developed during their educational experience.

Implications for Nursing Management: The findings of this study emphasize the importance of enhanced interprofessional training in education and practice that facilitate effective communication between the two professions in the practice environment.

KEYWORDS
communication, education, interprofessional, patient safety, qualitative

1 | BACKGROUND

Disorganised and broken communication is a major source of adverse events within the health care setting (Ahmed et al., 2018). Despite

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various methods of communication in the health care environment, breakdowns in communication between nurses and physicians play a role in more than half of adverse events that occur in hospitals (Müller et al., 2018). Effective communication between nurses and physicians may contribute to an organisation's ability to improve patient outcome reliability (Stucky, Wymer et al., 2022). Despite the hope of technology integration as a means of improving communication, there is still work to be done regarding information exchange and its impact on patient care delivery (Haykal et al., 2020).

A consistent finding for poor communication is the perception by nurses that hierarchical attitudes limit physician acceptance of their input into the patient plan of care. Nurses have historically reported difficulty speaking up in patient care conversations during patient rounds, a perceived lack of resolution in disagreements with physicians, and believe that their input is not well received by the physician (Thomas et al., 2003). The power imbalance between nurses and physicians continues to emphasize the physician has decision making authority (Strachan et al., 2018). This authority may deepen the limited role nurses perceive they have in communicating with physicians. Hierarchical structures not only limit the voice of the nurse but also lead to variations in how nurses and physicians perceive communication. Recent research on the physician's perspective of communication with nurses found that, from the resident physician's perspective, communication with nurses was based on getting work done (Forbes et al., 2020).

When members of the interprofessional team can contribute their individual expertise to patient care, a collective force, effectively and efficiently, functions to provide health care. For each team member's contribution to be valuable, communication is necessary. When adverse events occur, the results may be death, or permanent harm. With poor patient outcomes as a driving force, and a persistent interest in nurse physician communication, significant improvements have not been made in improving the dialogue that occurs between nurses and physicians. The research portfolio of nurse–physician communication is not lacking in interventions that are narrow in scope and only applicable to specific contexts (Wang et al., 2018), but there is a lack of research investigating the experience of each discipline communicating with each other. An even larger gap in the literature is an understanding of how new graduate nurses perceive communication with physicians.

The new graduate nurse transition to practice is a highly researched field. Although numerous studies have discussed new graduate nurse and physician communication (Fink et al., 2008; Missen et al., 2016; Song & McCreary, 2020; Theisen & Sandau, 2013), they have focused on the new graduate's broad experience in the transition from student nurse to the health care environment. Much of this research has not specifically investigated how new graduates experience communication with physicians. Chandler's (2012) focus on the knowledge, relationships, skills, and attitudes in the first year of practice found new graduate nurse's experience "blurring" (p. 106) of roles on the interprofessional team. Deppoliti's (2008) qualitative focus on the new graduate's construction of professional identity discovered negotiations for power and authority occurred between nurses and physicians. Nurses that experienced disrespectful behaviour from physicians found ways to cope with this behaviour through increasing knowledge, experience, and observing other nurses (Deppoliti, 2008). Pfaff et al.'s (2014) focus on new graduate nurse confidence provides insight into the factors that challenge and facilitate confidence, such as respect, experience, difficult communication, and lack of experience, to engage in interprofessional collaboration. While these findings are important in understanding the new graduate's intent to participate in the interprofessional relationship, these studies do not differentiate the barriers between roles on the interprofessional team or provide a specific explanation of the new graduate's experience. A renewed focus on their experience will provide a better understanding of communication between new graduate nurses and physicians.

Elicited by a single open-ended question asking for difficulties in transitioning from student nurse, a seminal study by Casey et al. (2004) found that communication with physicians is difficult for new graduate nurses. A secondary analysis of qualitative data collected using the Casey-Fink Graduate Nurse Experience Survey also found concerns among new graduates related to their assertiveness with physicians (Fink et al., 2008). Analysis of this open-ended question provides some insight into the difficulties of new graduate nurses, but the ability to understand the depth of the experience of new graduate nurses communicating with physicians is lacking. Therefore, the purpose of this study is to understand how new graduate nurses experience communication with physicians.

2 | METHODS

2.1 | Design and sample

This study uses a qualitative descriptive design to understand the perspective of new graduate nurses' communication with resident physicians. Fourteen new graduate nurses agreed to take part in this research, nine females and four males. Participants were recruited through email campaign. Participants were included in the study if they had less than 2 years' experience as a nurse and worked in a setting where communication with resident physicians occurred daily. The experience of participants ranged from 7 to 24 months. Ten nurses were employed on adult medical-surgical units, and four were employed in paediatric units.

2.2 | Data collection

This study received IRB approval before participant recruitment. Data for this study were gathered in the form of virtual or face-to-face interviews. The authors interviewed each participant as a faculty-student dyad. The lead author has experience in qualitative interviewing and analysis. The student team member received training on interview technique prior to participating in this study. Virtual interviews were conducted due to a modification in the study protocol due

to social distancing guidelines as a result of the COVID-19 global pandemic. The researchers used semi-structured interview technique and began each interview with the over-arching question of "Tell me about your experience communicating with physicians in your current practice?" Probing questions were asked for clarification and further investigation of participant responses. All interviews were audio-recorded and transcribed verbatim. Consecutive interviews were scheduled with ample time between to ensure participants were not cross-exposed. Data collection and analysis occurred concurrently. Repeated themes were evident after 12 interviews were completed. The research team continued with two additional interviews to ensure data saturation.

2.3 | Trustworthiness

Two hours were allocated for interviews to ensure that participants were given as much time as needed to discuss their experiences communicating with physicians. The researcher ensured confidentiality of the participants to facilitate trust between the researcher and participant. Participants were informed that records of their experiences would remain in the possession of the researchers. Transcribed interviews were de-identified. Transcriptions were read multiple times to prolong engagement with the data.

Triangulation can also be achieved during the analysis of qualitative data. Having multiple researchers analyse qualitative data allows for the similarities and differences in findings to be investigated further. Each member of the research team analysed data independently. Regular meetings between the research team were scheduled to review findings and validate themes. Discrepancies were resolved by collectively returning to the raw transcripts that composed each theme and ensuring themes remained grounded in the participant data.

2.4 | Data analysis

Transcribed interviews were read multiple times prior to analysis. The overarching question was clearly delineated and reviewed during the analysis. With a clear understanding of the research questions, transcribed interviews were analysed line by line. Once line-by-line analysis and thematic extraction were completed, the researcher began to group themes into categories and continued until no further categories could be created.

Patterns and connections, within and between, categories were identified next. The data collected for this research were focused and analysed individually and by groups according to gender and years of experience. The data were also analysed for themes, key ideas, similarities, and differences in responses. Once categories were delineated within the data, the researcher compared responses between participants on similar themes. The researcher also analysed the data for relative importance of categories. The categories developed in this study were tallied and ordered to show importance. Finally, the data were interpreted for meaning and significance. Once data were analysed and triangulated by colleagues, the researcher took time to reflect on the analysis. Notes taken during analysis were reviewed prior to interpretation. Interpretation was completed with constant awareness and reflection on the purpose of this research.

3 | RESULTS

This study provides a beginning understanding of how novice nurses experience communication with physicians. Initial coding revealed 15 concepts from the transcribed interviews. Further analysis led to the development of four themes. The four themes interact to describe the new graduate nurse's experience communicating with physicians. Descriptive themes are gaps in preparation, developing confidence, learning to communicate, and interprofessional patient care. They support that effective and efficient communication with physicians is a stressor for new graduate nurses as they transition to practice. While a mixture of adult and paediatric nurses participated in this study, no differences in themes were observed during the analysis.

3.1 | Gaps in preparation

The preparation of new graduate nurses for communicating with physicians emerged as a theme in this study. More specifically, participants expressed a lack of preparation during their educational programs. Interactions with physicians were limited during clinical rotations. Limitation ranged from not allowing students to contact physicians, "I never called a physician. We weren't allowed to call physicians" (RN3) and "… you talk with your nursing instructors, but you never communicate with the physicians" (RN2), to discouragement from communicating with physicians, "In the program I went through they did not encourage physician interaction" (RN5). Participants also discussed a gap in the training they received and actual practice, "We studied about it [communication] from an academic standpoint through textbooks and simulation, but it's different" (RN6) and "… There's things they [instructors] told us, and we would be doing a lot, and it's completely different when you're out in the real world." (RN7). Simulation was mentioned as a methodology participants used to learn how to communicate with physicians. In these instances, the nursing instructor would take the role of the physician and sometimes imitate negative physician behaviour.

Participants also discussed the influence of stories related to bad physician behaviour. Other students and nursing colleagues in the workplace shared their stories of negative communication with physicians. Listening to these stories heightened participant's anxiety related to communicating with physicians, "I've heard different stories of, if you didn't come with the correct facts you might get fussed out" (RN4). Again, nursing instructors contributed to the anxiety by also telling stories of bad physicians' behaviour, "You hear these horror stories from people who are in your nursing class with you and from people you know, like even from our own teachers" (RN5). These

stories translate into fear in the practice environment. One participant spoke about her fear of interacting with physicians specifically fear in appearing "… dumb or overstepping" (RN8) when providing insight into the patient's condition with physicians.

When discussing education related to physician's communication, participants were also asked about their use of the mnemonic device SBAR. SBAR was found to be a subconscious guide to communication with physicians after they transitioned to practice. While learned in a very structured manner during their education, conversation with physicians used a less formal structure, "Before I make a phone call to a physician or walk up to speak to on, I try to formulate a little bit in my mind … kind of a subconscious SBAR I guess" (RN11). In some instances, SBAR was viewed as too detailed a device to effectively communicate with physicians. The amount of detail required by the physician was less than the amount of detail the new graduate nurses learned to communicate during their educational programs, "The doctor knows the patient, I don't have to go through SBAR. I feel like in school they wanted us to give more detail" (RN10).

3.2 | Developing confidence

All participants reported nervousness or anxiety when beginning to communicate with physicians as they transitioned to practice. Participants used words such as "scared" (RN3), "nerve-racking" (RN1), nervous (RN4), "frustrating" (RN6), and "flustered" (RN7) when describing communication with physicians. In describing the first impression of communicating with physicians, RN1 stated "… it was really nerve-racking … it was a lot of phone encounters versus face to face so that was painful." Another participant stated, "It's definitely gotten a lot better. When I first started, I was very nervous. I didn't know how or what to say to them" (RN4). RN3, referring to what made communication uncomfortable in the beginning, stated "When you first get started, they [physicians] know what's going on and you don't."

As confidence in their new roles improved, comfort with physician communication also improved. When asked what made RN4 more confident, he stated that "time and experience and getting used to it [communicating]" had improved his confidence. RN7's confidence was increased as she transitioned from student to licensed nurse, "When you actually get your license, you're a little bit more confident about it … but when you're a student, it's terrifying to talk to a physician." RN4 stated, "I'm more confident now. Before, I feel like I was on the phone stuttering … I didn't know if it was important to say, but now I can critically think more." Another participant highlighted that as nursing judgement improved in practice, confidence in making suggestions to physicians improved, stating "I used to jot give too many suggestions … the more my judgement improves the more I typically know what they [physicians] need."

Two participants did not express the initial low confidence of the other nurses. Instead, they had previous life experiences, before their nursing career, that allowed them to be more comfortable when they interacted with physicians as new graduate nurses. RN6 stated that he had no anxiety when communicating with physicians. He attributed his comfort with his prior experience in sales and his many years in the job market. RN5 had been a paramedic before entering the nursing field and a nursing assistant while in nursing school. According to this participant, this experience alleviated any preconceived notions of communication with physicians upon entering the nursing field.

3.3 | Learning to communicate

When speaking about their communication with the resident physicians, all the new graduate nurses spoke to how the actual format of the communication was almost universally informal and lacking structure. Most of the nurses claimed that most communication with resident physicians was not face-to-face interaction, but rather via various electronic programs offered through their hospitals. These programs often are compared with "text messaging apps" (RN8), or "like paging" (RN13), where nurses and resident physicians often cannot send more than a sentence's worth of information per message. All these methods of communication in turn have created an informal environment for the interprofessional communication to occur; the new graduate nurses (NGNs) describe multiple situations where they were both helpful and hurtful in terms of communicating the plan of care.

RN14 noted that this informal and brief method of communication is popular among the new residents and is often the preferred form of information dispersion. "I feel like they love to use secure chat because you can automatically send them a text page or whatever instead of having to call them." However, he continues to speak about how this sentiment is not shared by all the doctors, stating "the other facility that I was at they didn't like us using text communication because it was becoming a point to where it was interfering with the patients care, because some doctors were looking at it and some doctors were not."

Much of the informal communication described by nurses was associated with developing confidence through their transition to practice, and learning how to communicate with physicians was important. Communication was modified to meet the demands of the physician. Each participant reported this communication as "getting straight to the point" (RN2) or "straight to business" (RN1). In describing her perception of the physician, RN1 explained:

> You have to be to the point. What is it that you want from me kind of conversation? It's different from communicating with other nurses cause it's a lot more factual … They [physicians] are not going to necessarily care what else is going on with [the patient]. What is it that you need? Yes or No.

Patient information may be omitted when communicating with physicians. "I knew I needed to give them facts of what was going on, but some of it [patient information] I didn't" (RN4). "I feel the need to like leave other things out like how they did over night" (RN1). Patient

information is often modified depending on the physician, "When it comes to patient information obviously that's the facts, but how do you want me to present that to you [the physician]" (RN1). "… You kind of know what each doctor's gonna want … and you give them just that bucket of information" (RN7).

3.4 | Interprofessional patient care

Participants were also asked about their experience with interprofessional interactions. Specifically, participants were asked about their experience and participation in interprofessional rounds. This relationship did not exist in some instances, "He's doing his thing and I'm doing my thing … it's like two separate jobs instead of working as a team" (RN9). In other instances, nurses had to actively seek out interprofessional opportunities, and the level of activity depended upon the time available, "we barely see them … maybe if we had more time, we would be able to communicate" (RN10).

If participants were able to attend a conference with the physician and patient, they reported having little input or participation in the conversation but remain behind to answer clarifying questions for patients. "I have no input, but I'll listen to what they have to say … when they leave I'll stay behind to make sure they [patient] understood what just happened" (RN4). RN6 made a similar response, "Most of the time I just sit there and listen … a lot of times patients have questions after the physician leaves." In lieu of limited participation on interprofessional rounds, participants were asked how they developed their plan of care. Most participants developed their own plan of care from interpretation from written notes in the electronic health record, "I usually just follow along with what they say…relative to communication I would only have to go by the note … it's a guessing game" (RN1). The overarching consensus from this analysis was captured in this statement from RN3:

> At first it wasn't easy. You know as a student, you don't really communicate with physicians that much, and I mean when you call a doctor it's a huge, big deal…. Then when I first started, I had a preceptor, and even then I wasn't quite comfortable talking to them. … And then you get put on your own and it's all on me now.

4 | DISCUSSION

This qualitative study described the communication between resident physicians and new graduate nurses. Communicating with physicians is a demanding activity on the emotions of the new graduate nurse. Before ever communicating with physicians in practice, new graduate nurses have developed negative emotions in their anticipation of the experience. This negative anticipation may be influenced, in part, by poor academic preparation for real-world communication (Song & McCreary, 2020). This anticipation influences the quality and quantity of patient information that are transferred between the two providers of care.

The participants in this study identified a gap between their education preparation for communication with physicians and how this interaction manifested itself in practice. Similarly, Forbes et al. (2020) found that resident physicians perceived that their relationship with nurses varied based on the experience level of nurses. While an importance is placed on nurses communicating with physicians during educational preparation, sufficient experience communicating with physicians does not occur. In an era of health care that is pressuring interprofessional education and collaboration to improve the quality of health care, nurses must not remain isolated from physician partners. Furthermore, interprofessional education must continue in the practice environment after professionals leave the academic setting (Stucky, Wymer et al., 2022). It is not logical to expect nurses and physicians to practice interprofessional care but educate them separately. Instead of developing skill at collaborating with physicians' colleagues in reality-based situations, new graduate nurses' knowledge of communicating with physicians is developed through story telling with other students, colleagues, and nursing instructors. This perspective, void of any actual experience, creates anxiety and fear among new graduate nurses. As a result, communication with physicians becomes a skill learned after the new graduate transitions to practice with little guidance from peers and lacking and evidence base for best practices.

While simulations have gained popularity in the education of nurses, simulation is only as effective as how closely it models reality. Nursing instructor's imitations of physicians in simulations do not effectively model reality. The instructor, as model physician, is biased by their experience and perspective of communication with physicians. They are unable to model actual physician behaviour that is shaped by the physician's education and practice. This type of simulation only supports the segregated education of nurses and physicians and inadequately prepares new graduate nurses for the reality of communication with physicians.

The development of confidence among new graduate nurses has been documented (Casey et al., 2004). This study supports Casey et al.'s (2004) findings that confidence is gained during the first year of practice. Casey et al. (2004) addresses confidence gained from the new graduate nurses' clinical knowledge and critical thinking. The findings from this study provide a beginning understanding of the confidence of the new graduate nurse with communicating with physicians. A lack of confidence in communicating with physicians developed from inadequate preparation for communication in educational programs. In this study, the new graduate's confidence during communication with physicians varied according to previous life experiences. Participants with nursing as a second career used previous experiences to mitigate the lack of confidence evidenced their peers. For those who choose nursing as a first career, gaining confidence in communicating with physicians occurs once they transition to practice.

Communication is modified, based on experience, to meet the demands of physicians. In response to physicians' reactions to the content and quality of communication, new graduate nurses learn what the physician deems valuable independently from their own interpretations of what is important. Pertinent patient information is omitted due to the low value placed on some information. In these instances, communication is shaped by the physician's preference rather than the patient's presentation.

Health care team members lower in the communication hierarchy are often silent even when they have an opportunity to make a valuable contribution to care (Stucky, De Jong et al., 2022). This type of silence may be seen an attempt at saving face and illustrates how hierarchies can influence communication between nurses and physicians (Gardezi et al., 2009). This study supports the finding that the fear of being perceived as incompetent exists as a major barrier to communication between nurses and physicians. This fear results in withholding of patient information and conjures a range of emotions that limit the nurse's ability to effectively communicate important patient information to physicians.

Speaking up to employees of authority in the workplace is often viewed as challenging authority rather than simply asking questions or suggesting improvement (Kish-Gephart et al., 2009). The fear of challenging authority causes the employee to contemplate the negative consequences of speaking up. Kish-Gephart et al. (2009) state that workplace silence does not have to be activated by a bad encounter, but the cultural role of a dominant figure elicits a fear response in the employee to refrain from speaking up. Anticipated negative response from physicians greatly inhibits the nurse from openly communicating with physicians.

The new graduate nurse's experience communicating with physicians is shaped by multiple factors. Qualitative investigation provides a unique view of this experience. This study has attempted to show how this experience is shaped by gaps in education, confidence, conforming communication, and interprofessional patient care. The actual experience must be understood before effective interventions can be developed that improve the communication that occurs between new graduate nurses and physicians.

5 | CONCLUSION

The purpose of this study was to gain an understanding of the new graduate's experience communicating with physicians. Their experience was shaped by gaps in preparation, developing confidence, conforming communication and interprofessional patient care. This study adds to the understanding of the experience of communication by having new graduate nurses explain their real-world experience. This study is limited by its small sample size. Additionally, all participants were sampled from a single site. Future studies should be done to assess the physicians' experience communicating with nurses. Comparing the nurse's and physician's perspective may guide interventions that are better suited to address the deficiencies that persist in communication between these disciplines.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Understanding the perceptions of communication between new graduate nurses and physicians is critical for developing clinical environments that support high-quality patient care. Clinical leaders play a critical role in facilitating the transition of new graduate nurses to professional practice. While the implementation of transition to practice strategies remains important, nurse leaders must also recognize their role in picking up where academic education stops. With confidence not fully developed, and entering an environment where oversight and communication may be less structured, new graduate nurses may rely on nurse leaders to facilitate the development of positive nurse and physician communication. This study provides nurse leaders with insights that can assist with designing programs and strategies that facilitate new graduate nurse confidence in communication and contribution to the interprofessional team.

CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose related to this research study.

ETHICS STATEMENT

This study received IRB approval from the University and Medical Center Institutional Review Board at East Carolina University (ID: 19-002037).

DATA AVAILABILITY STATEMENT

Research data are not shared.

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ORIGINAL ARTICLE

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Resilience and job satisfaction among out-of-hospital emergency medical service professionals: A cross-sectional multi-centric study

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Abstract

Aim: We aim to describe the relationship between job satisfaction and compare levels of resilience among out-of-hospital emergency medical service professionals.

Background: The study of the impact of the working environment on health professionals has raised great interest. Job-related variables and resilience can be a protective factor against stressful and demanding events at work.

Methods: A cross-sectional survey comprising sociodemographic and job-related variables was conducted among 406 workers (doctors, nurses, psychologists, and ambulance technicians) from the out-of-hospital emergency medical system in Spain. Resilience was self-reported using the Connor-Davidson Resilience Scale.

Results: Nursing professionals were less resilient compared with ambulance technicians (score difference 1.709, $p = .008$). As age increased, resilience was lower ($r = -.118$). Professionals with higher resilience scores were more satisfied in their work (OR = 1.06, 95% CI: 1.02–1.11), and professionals with higher psychological strength, gained from working with other colleagues, also showed greater job satisfaction (OR = 5.47, 95% CI: 2.55–11.73).

Conclusion: There was a positive association between resilience, job satisfaction and collaborative work. Professionals with greater psychological strength, gained from working with other colleagues, also showed higher levels of job satisfaction.

Implications for Nursing Management: Managers can use these results to influence the work environment to enhance job satisfaction and hence improve the resilience of the out-of-hospital emergency health care professionals.

KEYWORDS
emergency medical services, health care worker, job satisfaction, resilience

1 | INTRODUCTION

Health is a resource that enables individuals to reach their full potential and contribute to the overall development of society. Health in work-related contexts implies the adoption of an approach based on the positive perspective, which seeks a balance between preventive actions and actions that improve the health of individuals and communities (Cassetti et al., 2019). Among these actions is the capacity for resilience, understood as a set of intrinsic factors that characterize all individuals and that is involved in the process of overcoming adversity (Eakman et al., 2019; Ramirez-Granizo et al., 2020). Health in work contexts is composed of multiple factors, including resilience (Delgado et al., 2020; Feng et al., 2017). Resilient people have positive emotions in stressful situations and maintain a great interest in everything that happens in their lives (Fredrickson et al., 2020).

Health professionals are a fundamental asset of health systems (World Health Organization, 2020). Health in work-related contexts allows people to face their professional challenges, facilitating their adaptation to stressful working conditions, management of emotions, the development of coping strategies, improvement of well-being and their professional growth (Foster et al., 2018). Likewise, other authors have proposed the term 'professional resilience' to refer to the ability to adapt to changing circumstances, even when threatening changes occur (Sommer et al., 2016). The growing research on the study of resilience among health care professionals highlights the need for more evidence on the subject, specifically on the study of resilience among out-of-hospital emergency medical care professionals.

Out-of-hospital emergency medical care professionals provide care to people in health emergencies, often dealing with difficult cases in complex and traumatic environments (Shakespeare-Finch & Daley, 2017). They include nurses, emergency technicians and medical staff and are responsible for providing health care at the individual and/or collective level, in a critical situation. In addition, nursing professionals are also present in coordination centres and in service management. Service management integrates the work of all health care workers and is responsible for clinical practice and quality of care to ensure patient and professional safety. Their contributions are vital to the planning of organizational and emergency responses in a critical situation. Due to the nature of their work, out-of-hospital emergency medical care professionals are at a higher risk of developing mental health disorders than the general population. For example, 74% of emergency medical care professionals in Iran reported moderate levels of stress (Seyedjavadi et al., 2014). Preserving and improving the emotional health of out-of-hospital emergency health care workers is critical not only for the professionals themselves but also for the community to which they provide health care (Halpern et al., 2009).

Resilience is a multidimensional characteristic that refers to the personal qualities that enable an individual to thrive in the face of adversity (Charney, 2004; Connor & Davidson, 2003; Davidson et al., 2005). It has also been described as a context-dependent, individual dynamic phenomenon capable of improving the quality of clinical services by reducing work-related stress and thereby increasing well-being (Flanagan & Flanagan, 2002). Resilience enables individuals to cope with their professional challenges (Grant & Kinman, 2014; McDonald et al., 2016), facilitating adaptation to stressful conditions, emotion management, the development of coping strategies, improved well-being and personal growth (Stephens, 2013). Conceptual models of psychological resilience in nurses have been proposed, but most focus on individual characteristics (Foureur et al., 2013; Gillespie et al., 2007; Rees et al., 2015) rather than work-related factors. For this reason, it is important to study how resilience processes develop and what are the factors that can influence the work of individuals exposed to adverse conditions (Ribeiro et al., 2011). There are several factors that can improve the level of resilience of out-of-hospital emergency health care professionals and promote service quality. Among these factors, scene safety and security, decision-making, self-efficacy and religious support were found to be effective in improving resilience and quality of care in emergency professionals (Froutan et al., 2015). In another study, a meta-analysis was conducted to determine how workplace interventions influence nurses' job satisfaction. The interventions were primarily educational and were found to be effective in improving job satisfaction (Niskala et al., 2020). This study highlighted the need to consider the implementation of effective interventions to improve job satisfaction among health care professionals. Workers with higher levels of resilience score and higher score in creative thinking have higher job satisfaction and cope better with adversity (Golparvar et al., 2013).

Regarding the evaluation of the construct, the following questionnaires can be highlighted: Baruth Protective Factors Inventory – BPFI (Baruth & Carroll, 2002); Brief-Resilient Copping Scale - BRCS (Sinclair & Wallston, 2004); Adolescent Resilience Scale – ARS (Oshio et al., 2003); Resilience Scale for Adults (Friborg et al., 2003) and the Connor & Davidson Resilience Scale – CD-RISC (Connor & Davidson, 2003). The latest has been shown to be a valid and reliable instrument for measuring individual psychological resilience. It has been used in the general population and in health care workers.

This study of the relationship between resilience, sociodemographic and job-related variables in out-of-hospital emergency service professionals can help health service managers to understand the level of job satisfaction and coping mechanisms among these professionals. We aim to describe the relationship between job satisfaction and compare levels of resilience among out-of-hospital emergency medical service professionals in the health region of Catalonia, Spain. The questions that guided this study were as follows: (i) Are there any differences among professionals in terms of level of resilience? (ii) Do sociodemographic and job-related variables influence job satisfaction and, consequently, the resilience of out-of-hospital emergency medical services professionals? And (iii) Can job satisfaction increase the level of resilience in out-of-hospital emergency medical services professionals?

2 | METHODS

2.1 | Study design

A cross-sectional and correlational study design was used to investigate the relationship between sociodemographic variables—sex, age, household members and dependent family members—and job-related variables—professional category, type of contract, work shift, collaboration with other institutions and job satisfaction and resilience in out-of-hospital emergency medical care professionals.

2.2 | Participants

The population consisted of 493 out-of-hospital emergency health care professionals from the health region of Catalonia, Spain, belonging to the following professional categories: doctors, nurses, psychologists and ambulance technicians, from eight emergency health care bases. Out-of-hospital emergency medical services are publicly managed, attached to the Department of Health of the Generalitat de Catalunya, Spain. They are specifically designed, staffed and equipped for the emergency care of patients. This service is provided by a team of professionals, whose main objective is to respond to out-of-hospital health emergencies and emergencies quickly, efficiently and with the highest level of quality, 24 h a day, 365 days a year. The sample size was calculated to detect an effect size of Cohen's between two groups of 0.30, with a power of 80% and a risk α of 5% (Cohen, 1988). A minimum of 175 participants was required in each group. Professionals who had been in their current job for more than a year and were willing to voluntarily consent to participating in the study met the inclusion criteria. Health care professionals on refresher courses or internships were excluded. A total of 406 health care professionals finally took part.

2.3 | Data collection

The care managers of each base participating in the study were contacted, and a presentation of the project was scheduled at each one. The presentation included an explanation of the research objectives, the measurement instruments, informed consent and the procedure for distributing the data collection booklet in which the participants were informed of the voluntary nature of participation, anonymity and confidentiality of the data. On the same day as the study was presented, a member of the research team delivered the questionnaires and an envelope to the care manager. The same procedure took place at all eight bases. The participants were given 30 days to answer the questionnaires. Once the questionnaires had been answered, they were placed in the sealed envelope and returned to the manager of each base, who in turn kept them in a sealed box until collection. Data collection was carried out between September and October 2017, by a member of the research team.

TABLE 1 Sociodemographic variables

Characteristics	Explanation
Age	
Sex	
Women	
Men	
Number of persons in household	The term 'household' includes all the people occupying a housing unit. Includes the family householder and all other people in the living quarters who are related to the householder by birth, marriage, or adoption.
Living alone (0)	
Living with partner/family (1)	
Dependent family members	A dependent family member is a person who relies on someone else for financial support and can include children or other relatives.
Yes I have dependents, partner/children/other (1)	
No, I do not have dependents, partner/children/other (0)	

2.4 | Measurements

A self-completed form containing the following four items was used to measure the sociodemographic variables: *Age*; *Sex*; *Household members*: I live alone (0), with family/partner (1); and *Dependent family members*: I have dependents, partner/children/other (1), I do not have dependents, partner/children/other (0). The sociodemographic variables of the study sample are shown in Table 1. Participants self-completed a further five items to measure the job-related variables: *Professional category*: doctor (1), nurse (2), ambulance technician (3), psychologist (4); *Type of contract*: permanent (1), temporary (2); *Work shift*: 24-h shifts: the professional works 24 h at a time (a full day) and then has a 24-h break (1); rotating shifts: the professional works day or night shifts, which are shorter. The duration depends on the care provided to the population (2); *Job satisfaction* understood as the degree of overall job satisfaction: In relation to health care work, what is your overall degree of job satisfaction?: not at all satisfied (1), not very satisfied (2), quite satisfied (3), very satisfied, (4) totally satisfied (5); and last, *Collaboration with other institutions*, measuring the degree to which collaborative work with other institutions (justice, law enforcement authorities) gave the health care professionals strength in the positive sense of the term: In general, does working with/collaborating with colleagues from other institutions give me strength?: not at all (1), rarely (2), sometimes (3), often (4), always (5).

Resilience was measured using the Connor-Davidson Resilience Scale (CD-RISC), designed by Connor and Davidson (2003). The CD-

RISC scale was developed for clinical practice as a measure of resilience. The original scale is made up of 25 Likert-type items where high scores indicate a higher level of resilience. In this study, we used the version adapted to Spanish, the 10-item CD-RISC scale (P1, P2, P3, P4, P5, P6, P7, P8, P9 and P10), validated in a population of non-institutionalized adults aged between 60 and 75 (Serrano-Parra, 2012). The 10-item CD-RISC scale in Spanish had satisfactory content, concurrent and discriminant validity, and Cronbach's α of .81, indicating a high internal consistency reliability (Serrano-Parra, 2012). The scale was self-administered, and the 10 items were organized in a one-dimensional, summative Likert-type scale: *not at all* (1), *rarely* (2), *sometimes* (3), *often* (4), *almost always* (5). The scale ranged between 10 and 50 points where the higher the score, the greater the resilience.

2.5 | Statistical analysis

The data were analysed using SPSS 22.0 version (IBM CORP., Armonk, NY). Descriptive statistics were used to describe the levels of resilience and sociodemographic and job-related variables. Central tendency values were obtained for the quantitative variables, and the frequency and percentage calculated for each of the categories to describe the qualitative variables. Student's *t*-tests and one-way ANOVA were performed to compare mean scores in resilience with the following variables: household members, professional category, type of contract, work shift, job satisfaction, and collaboration with other institutions. Post hoc comparisons were performed for statistically significant associations using the Bonferroni test. The relationship with age was analysed using the Pearson correlation coefficient. Bonferroni correlation for multiple comparisons was performed for univariate analysis. A multivariate logistic regression analysis was performed to generate the odds ratio for being more satisfied with work and to analysed the relationship with the total resilience score. In this model, the job satisfaction variable was categorized into two categories (less satisfied = not at all satisfied/not very satisfied/quite satisfied and more satisfied = very satisfied/fully satisfied). We adjusted for age, sex, professional category (doctors, nurses and ambulance technicians) and CW = gives me strength (less strength = not at all/rarely and more strength = sometimes, often and always). The odds ratio and its 95% confidence interval were calculated for univariate and multivariate analyses. The reliability of the CD-RISC scale was also analysed in this sample using Cronbach's alpha coefficient for the total scale. Probability values (*p*-values) of less than .05 were considered significant.

3 | RESULTS

A total of 406 professionals from the out-of-hospital emergency health care system participated in the study. The majority of participants were men (66.3%), and the average age was 38.2 years (SD 7.5). The majority lived with their partner and/or family at the time of the study (83.5%) and had dependents (63.3%). Regarding the professional category, 49.3% of the sample studied were ambulance technicians, 39.2% were nurses, 10.1% were doctors and 1% were psychologists. Because the percentage of psychologists employed by the out-of-hospital emergency health system at the time of the study was very low, this professional category was not included in the subsequent statistical analyses. A total of 88.4% of participants had a permanent contract, and 39.4% did rotating shift work. The sociodemographic and job-related variables of the study sample and levels of resilience in relation to the study variables are shown in Table 2. Significant differences were obtained in the professional category. In post hoc comparisons, nurses showed lower resilience compared with ambulance technicians (mean difference 1.709; $p = .008$; Cohen's effect d = 0.33). Doctors also showed lower resilience compared with ambulance technicians, although the differences were not statistically significant (mean difference 2.177; $p = .067$; Cohen's effect d = 0.43). As age increased, resilience was lower ($r = -.118$; $p = .018$), and those who were more resilient were workers who reported greater job satisfaction and those who claimed that working with other co-workers gave them greater strength, although the differences were not statistically significant.

The overall resilience levels of the professionals in the out-of-hospital emergency medical system and the mean scores per item are shown in Table 3. The 10 items that make up the CD-RISC scale are presented in English and Spanish versions. In detail, the item that obtained the highest mean score was item P1 'I am able to adapt when changes occur' (mean = 4.54, SD = 0.71), whereas the item obtaining the lowest mean value was P10 'In facing life's problems and difficulties, sometimes you have to act on a hunch without knowing why' (mean = 3.25, SD = 1.01). According to the results, the mean total score on the resilience scale for the participants in the study was 40.6 (SD 5.0), with minimum and maximum scores of 19 and 50 points, respectively (range = 31).

In the multivariate analysis, the final model showed that the variables related to the degree of job satisfaction were resilience scores and the strength gained from working with other colleagues (Table 4). The professionals with higher resilience scores were more satisfied in their work (OR = 1.06; 95% CI: 1.02–1.11). Health workers with higher strength gained from working with other colleagues also reported greater job satisfaction (OR = 5.47; 95% CI: 2.55–11.73). Furthermore, in this study, the reliability of the CD-RISC scale was analysed. Cronbach's α for internal consistency was 0.78, which is considered adequate (Nunnally & Bernstein, 1994).

4 | DISCUSSION

Our study was conducted to describe the relationship between job satisfaction and compare levels of resilience among out-of-hospital emergency medical service professionals. The professionals' resilience was moderate to high, with the highest mean observed in the ability to adapt to changing environments, which is important considering that the activity of out-of-hospital emergency medical services

TABLE 2 Relation between sociodemographic and employment variables and the Connor-Davidson Resilience Scale (CD-RISC) of the study sample ($n = 406$)

Characteristics	*n*	%	Mean	SD	*p*
Sex					
Women	134	33.0	40.2	5.0	.362[a]
Men	269	66.3	40.7	5.0	
Number of persons in household					
Living alone	65	16.0	40.8	5.4	.677[a]
Living with partner/family	339	83.5	40.5	4.9	
Dependent family members					
Yes	257	63.3	40.4	5.1	.268[a]
No	139	34.2	41.0	4.8	
Professional category					
Doctor	41	10.1	39.2	4.8	.004[b]
Nurse	159	39.2	39.7	4.8	
Ambulance technician	200	49.3	41.4	5.1	
Psychologist	4	1.0	40.2	2.5	
Type of contract					
Permanent	359	88.4	40.5	5.1	.686[a]
Temporary	39	9.6	40.8	3.7	
Work shift					
24-h	139	34.2	41.2	4.9	.057[b]
Rotating shifts	160	39.4	39.8	5.2	
Dont know/no answer	107	26.4	40.8	4.8	
Degree of job satisfaction					
Not at all satisfied	3	0.7	34.0	13.0	.061[b]
Not very satisfied	20	4.9	38.2	8.5	
Quite satisfied	141	34.7	39.9	4.8	
Very satisfied	190	46.8	40.9	4.5	
Totally satisfied	39	9.6	42.3	3.9	
CW 'gives me strength'					
Not at all	14	3.4	37.7	9.0	.020[b]
Rarely	28	6.9	41.2	4.3	
Sometimes	125	30.8	39.6	4.7	
Often	163	40.1	40.8	4.6	
Always	64	15.8	42.1	5.1	

Abbreviations: CW, 'collaborative work', p, level of significance = 0.005 (Bonferroni correction); SD, standard deviation.
[a]Student's *t*-test and Fisher's exact test.
[b]ANOVA.

professionals is carried out mostly in unexpected situations. In another study, the resilience of health care professionals in emergency services was shown to be moderate to low (Sánchez-Zaballos & Mosteiro-Díaz, 2021). In our study, professionals with the professional category of nurses showed lower resilience compared to ambulance technicians, results that would be in line with other studies conducted with nurses working in public hospitals (Guo et al., 2017; Zou et al., 2016). The fact that ambulance technicians showed greater resilience may be due to the fact that ambulance technicians are the first to arrive at the scene of an emergency. Due to the variability of the emergencies they attend to, they are likely to develop more resilience, especially when the experience is more unpleasant. Future studies should consider analysing different professional groups to report on measures for improving levels of resilience among health professionals. For their part, Clark et al. (2021) found in their study on nurses in emergency services, that resilience was higher when job satisfaction was greater and as age increased. In our study, resilience was lower ($r = -.118$) as age increased. Along these lines, a study examining the fit of different equivalent measurement models for the factor structures of the Connor-Davidson Resilience Scale (CD-RISC)

TABLE 3 Descriptive statistics of Connor-Davidson Resilience Scale (CD-RISC) items

Summarized item contents		Mean	SD	% floor	% ceiling
P1	I am able to adapt when changes occur *Soy capaz de adaptarme cuando ocurren cambios*	4.54	.711	1.0	63.1
P2	I can deal with whatever comes my way *Puedo enfrentarme a cualquier cosa que se me presente*	4.28	.773	1.0	44.1
P3	I try to see the humorous side of things when I am faced with problems *Intento ver el lado divertido de las cosas cuando me enfrento a los problemas*	3.90	.992	2.7	32.5
P4	Having to cope with stress can make me stronger *Enfrentarme a los problemas puede hacerme más fuerte*	4.20	.833	.5	43.1
P5	I tend to bounce back after illness, injury or other hardships *Tengo tendencia a recuperarme pronto tras enfermedades, heridas o adversidades*	4.38	.798	.7	53.9
P6	I believe I can achieve my goals, even if there are obstacles *Creo que puedo lograr mis objetivos incluso si hay obstáculos*	4.17	.796	1.0	37.4
P7	I stay focused and think clearly under pressure *Bajo presión me centro y pienso claramente*	4.01	.875	1.0	33.0
P8	I am not easily discouraged by failure *No me desanimo fácilmente con el fracaso*	3.65	1.048	3.2	22.9
P9	I think of myself as a strong person when dealing with lifes challenges and difficulties *Creo que soy una persona fuerte cuando me enfrento a los retos y dificultades de la Vida*	4.22	.814	1.0	42.6
P10	In dealing with lifes problems and difficulties, sometimes you have to act on a hunch, without knowing why *Al enfrentarme a los problemas y dificultades de la Vida, a veces actúo por un presentimiento sin saber porqué*	3.25	1.01	3.7	11.3
	Total CD-RISC	40.6	5.0		

Abbreviations: P1 to P10, 10 item CD-RISC; SD, standard deviation.

concluded that age was not a decisive variable (Pulido et al., 2020). Consequently, the study would have to be extended to older professionals to provide further evidence.

The variables related to resilience were the degree of job satisfaction and the psychological strength obtained when working with other colleagues. Coinciding with the results of this study, researchers have previously found an association between job satisfaction and resilience (Larrabee et al., 2010; Matos et al., 2010). Along the same lines, results with samples of professionals working in hospital settings showed that resilience is positively related to job satisfaction (Yang et al., 2017). In another study conducted with psychiatric nurses in Singapore, a positive and significant association was obtained between resilience and job satisfaction (Zheng et al., 2017). Hou et al. (2020) reported that job satisfaction and resilience have a significant influence on job performance. In his study, Hudgins (2016) reported significant relationships between resilience, job satisfaction and anticipated turnover. Zhao et al. (2021) also reported that resilience indirectly influences turnover intention through job satisfaction and social support.

Another study that investigated nurses' resilience (Öksüz et al., 2018) noted that the significant factors in their participants' resilience were perceived social support and job satisfaction, among other variables. A study on health professionals in emergency services (Sánchez-Zaballos & Mosteiro-Díaz, 2021) concluded that professional resilience is influenced by sociodemographic and occupational factors, all of which support our findings. Other studies (Kuokkanen et al., 2009; Teo et al., 2013) have found a positive association between organizational commitment and job satisfaction, highlighting those organizational changes that have a direct effect on the work environment in terms of empowerment and job satisfaction. These results are consistent with our study insofar as out-of-hospital emergency medical services professionals with greater strength gained from working with other colleagues also reported higher job satisfaction.

This study has some limitations. First, the exploratory, cross-sectional design of the study limited our ability to infer causal relationships between contract type, work shift, job satisfaction, collaborative work with other institutions and resilience. The use of a longitudinal approach would be appropriate in future research to explain causal relationships and variables influencing long-term resilience. Second, response bias could have affected the results, as the study was based on self-completed measurements. Although Catalonia, Spain, is a large health care area, the sample might not reflect the perceptions of other out-of-hospital emergency health care professionals in other countries.

TABLE 4 Multiple logistic regression model to analyse variables associated with job satisfaction ($n = 384$)

	Analysis univariate			Analysis multivariate		
Characteristics	**OR**	**95% CI**	***p***	**OR adjusted**	**95% CI**	***p***
CD-RISC	1.06	1.02–1.11	.003	1.06	1.02–1.11	.005
Age	1.00	0.97–1.03	.985	1.00	0.97–1.03	. 794
Sex						
Men	1			1		
Women	0.67	0.44–1.03	.070	0.77	0.48–1.23	.273
Number of persons in household						
Living alone	1					
Living with partner/family	1.18	0.68–2.04	.546			
Dependent family members						
Yes	1					
No	0.84	0.55–1.28	.426			
Professional category						
Doctor	1			1		
Nurse	1.49	0.75–2.98	.251	1.41	0.67–2.97	.363
Ambulance technician	2.05	1.03–4.04	.039	1.60	0.75–3.42	.226
Type of contract						
Temporary	1					
Permanent	0.48	0.22–1.02	.057			
CW 'gives me strength'						
Not at all/rarely	1			1		
Sometimes/often/always	5.28	2.51–11.10	.0001	5.47	2.55–11.73	.0001

Abbreviations: CI, confidence interval; CD-RISC, Connor-Davidson Resilience Scale; CW, 'collaborative work', OR, odds ratio.

5 | CONCLUSION

In our study, out-of-hospital emergency professionals had moderate to high levels of resilience. By professional category, nurses working in out-of-hospital emergency medical services were less resilient compared to ambulance technicians. Among the important findings, as age increased resilience was lower. Resilience was positively related to job satisfaction and psychological strength gained from working with colleagues. Professionals with greater psychological strength gained from working with colleagues also showed higher levels of job satisfaction.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Our results indicate that there is a positive association between resilience, job satisfaction and collaborative work in out-of-hospital emergency medical service professionals. Considering that the work of these professionals is performed in changing and challenging environments, managers should take into account working conditions in order to influence the work environment and enhance job satisfaction and, therefore, improve the resilience of their staff.

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CONFLICT OF INTERESTS

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

ETHICS STATEMENT

Ethical approval was obtained from the Clinical Research Ethics Committee on Clinical Research of the Emergency Medical System (SEM). Also, participants were informed about the aim of the study before data collection, and their permissions were obtained. The principles defined in the Declaration of Helsinki were followed.

AUTHOR CONTRIBUTIONS

SM and MTLL conceived and designed the study. JR and SM supervised the conduct of the data collection. JR and GR provided

statistical advice on study design and analysed the data; SM, MTLL, GR and DJ drafted the manuscript, and all authors contributed substantially to its revision. MTLL takes responsibility for the paper as a whole.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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ORIGINAL ARTICLE

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Front-line staff perspectives on a caring culture in Chinese hospitals: Validation of a Chinese version of the Culture of Care Barometer

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Abstract

Aims: The aim of this study is to examine the psychometric properties of the Chinese version of the Culture of Care Barometer in health care organizations.

Background: There is a lack of tools to gauge the caring culture in Chinese hospitals. The Culture of Care Barometer is a psychometrically sound measure for caring culture developed in Western settings.

Methods: This study was guided by Sousa and Rojjanasrira's methodological approach. A total of 2365 staff were recruited from two tertiary hospitals. The Barometer was administered with the Hospital Culture Evaluation Index and Minnesota Satisfaction Questionnaire.

Results: The content validity index was calculated as 0.99. The goodness-of-fit indices, apart from the model chi-square, which was statistically significant, all exceeded established thresholds for adequate fit. The internal consistency was very satisfactory. Pearson's correlation indicated that the tool has good concurrent and convergent validity.

Conclusions: The Barometer is a reliable and valid instrument to assess front-line staff perspectives on a caring culture in Chinese hospitals.

Implications for Nursing Management: Nursing managers can use the Barometer to gauge the caring culture in China. Tailored interventions can be designed to address specific domains, and additional support can be provided to more vulnerable departments or staff groups.

KEYWORDS
caring culture, China, Culture of Care Barometer, measurement, validation

1 | BACKGROUND

The culture of care in health care organizations refers to the contextual structures that influence how individuals make and express meaning in the care of patients through creating dominant values, norms, and beliefs (Rytterstrom et al., 2013). The culture of care describes the part of culture that follows the common good as its guiding principle (Salmela et al., 2017). The concept of caring in health care systems represents a broader meaning than 'patient-' or 'person-'centred care, in that it recognizes the need for staff themselves to work in an enriched environment if they are to create such an environment for patients and their carers (Rafferty et al., 2015). A caring culture is positively related to interprofessional collaboration, employee well-being, job performance and organizational commitment (Luthans et al., 2008; Wei et al., 2019). Evidence has demonstrated that the well-being of staff is closely linked to the well-being of patients, and staff commitment is a key predictor of a wide range of outcomes in health care organizations (Powell et al., 2014).

To foster a caring environment, it is a paramount to assess the culture of care from the perspective of staff. An initial analysis of the literature revealed a lack of instruments for measuring 'care cultures' as distinct from organizational culture or patient safety culture (Hesselink et al., 2013). The attributes of care culture for patients or staff are also not captured in the extant measures for quality and performance in health care organizations (Hesselink et al., 2013). The Culture of Care Barometer (CoCB) tool was thus developed to gauge the different attributes of care culture perceived by health care staff (Rafferty et al., 2017). The CoCB comprises 30 items organized into four domains: organizational values, team support, relationships with colleagues and job constraints. The CoCB can act as a 'diagnostic' measurement to assess the culture of care of health care organizations, and as a 'dialogic' tool, designed to prompt reflection on the underlying issues involved in creating a caring culture (Rafferty et al., 2017). The tool has been tested with nurses and other health care providers in England and indicated good reliability and validity (Rafferty et al., 2017). Further studies, to adapt and test the tool in other countries, are needed to enable validation of the tool in a global context.

Given its significance for care quality and staff engagement, the nurturing of a caring culture is relevant to all health care systems globally. This includes China where in recent years, promoting patient safety and reducing the turnover rate of nurses are government priorities. According to an analysis of the database of China Patient Safety Incidents Reporting System, the number of incident reports increased from 815 in 2012 to 8088 in 2017 (Gao et al., 2019). As well as negative consequences for patients, unsafe practice including practice errors has also triggered hospital violence against staff in China (Jia et al., 2014). It is known that patient safety is positively associated with the work environment, directly and indirectly (Sun et al., 2018). In addition, it was reported in another study that 36% (279/778) of experienced nurses who were employed for at least 5 years in China had a high-level of turnover intention, measured by Farh's Turnover Intention Scale (Wan et al., 2018). Scale scores were negatively associated with work environment and mediated by work engagement. It is imperative therefore to create enriched caring environments in health care organizations in China to improve care quality, staff retention and well-being.

The purpose of this research is to test and implement the Chinese version of the CoCB in two health care organizations in China. Specifically, the objectives are as follows: (a) to translate the CoCB into Chinese, (b) to determine the psychometric properties of the CoCB with a sample of Chinese nurses and physicians and (c) to assess front-line staff perspectives on caring culture in Chinese hospitals using the CoCB. This is the first Chinese version of an instrument that assesses caring culture in health care systems. The findings of this cross-sectional study will enable health care organizations and researchers to develop interventions that aim to improve the culture of care. It is hoped that improving patient safety and reducing nursing staff turnover could also be achieved.

2 | METHODS

2.1 | Study design

Sousa and Rojjanasrirat's (2011) methodological approach for translation, adaptation and validation of instruments for use in cross-cultural health care research was adopted to guide the study. Three stages were undertaken, namely, cross-cultural translation, pilot testing and full psychometric testing (Sousa & Rojjanasrirat, 2011). The STROBE checklist for observational research has been followed for presenting the research (see File S1 in the supporting information).

2.1.1 | Cross-culture translation

The CoCB was translated into Chinese following the standard procedures including forward translation, comparison of the two translated versions, blind back-translation and comparison of the two back-translated versions with the original tool (Sousa & Rojjanasrirat, 2011). First, a native Chinese bilingual nursing postdoctoral fellow and a professional translator with over 5 years of experience in translation made the forward translation of the CoCB into simplified Chinese. Some idiomatic expressions in the scale like 'trust, line manager' were changed to 'hospital, direct supervisor' in discussion with the authors of the CoCB. Second, a second nursing postdoctoral fellow compared the two translated versions. Any ambiguities and discrepancies were discussed and resolved by a committee which comprised the two translators, three doctoral nursing graduates and a clinical nurse. Third, the preliminary translated version of the CoCB was back-translated into English by a Chinese bilingual doctoral nursing graduate and a professional translator with 12 years' experience. Finally, a comparison between the back-translations of the CoCB and the original CoCB was made by a committee which comprised the other members of the research team and all involved individuals (the two translators, two fellows, three nursing graduates and one clinical

nurse). The similarity of the items regarding wording, sentence structure, meaning and relevance was evaluated and discussed. This process resulted in the Chinese version of the CoCB (CoCB-C) that was digitalized and tested.

2.1.2 | Pilot testing

Pilot testing of the CoCB was conducted using expert review and a small-scale cross-sectional survey. A panel of six experts from two tertiary hospitals (Sousa & Rojjanasrirat, 2011), including a vice president, two heads of department, a nursing director, a nursing manager and an associate professor of medicine in the research management department, were invited to identify the semantic equivalence and content validity of the CoCB-C. The comments were also solicited. Tertiary hospitals in China refer to the comprehensive or general hospitals at city, provincial or national level with a bed capacity exceeding 500. Each panel member rated all individual items for semantic equivalence using a dichotomous scale (yes or no) (Sousa & Rojjanasrirat, 2011). Any item or instruction that is found to be unclear by at least 20% of the participants must be revised and re-evaluated (Sousa & Rojjanasrirat, 2011). Each item was rated as 'clear' by more than 80% of the panel members (range, 83.3%–100%). The inter-rater agreement was 96.7%.

The experts were also invited to evaluate the content validity of the CoCB-C. Each expert rated the content relevance of each CoCB-C item in measuring the culture of care in the hospital in China. An ascending 4-pointing Likert scale was used. The content validity index at the item level (i.e., the percentage of experts who rated the items as 3 or above on the Likert scale) and at the scale level (i.e., the mean percentage of items that were rated as 3 or above on the Likert scale) in the first round was calculated as 0.83–1.00 and 0.99 respectively, which indicates good content validity for the CoCB-C (Polit et al., 2007). A few comments about wording and sequence of items were proposed by experts. Minor modifications were made after intensive discussion in the translation committee and research team. There were no additions or deletions of items. This process resulted in the final Chinese version of the CoCB (see Appendix).

A total sample of 20 (Sousa & Rojjanasrirat, 2011) registered nurses and physicians working for at least 6 months in the surgical department of a tertiary hospital in Hangzhou city, China, was recruited through a convenience sampling approach to complete the CoCB-C. A total of nine nurses and 11 surgeons participated; they were also asked to rate the tool items and instructions for clarity using a dichotomous scale (clear or unclear). No modifications were needed. Cronbach's alpha coefficient was 0.95, indicating very good internal consistency (DeVellis, 2016).

2.1.3 | Psychometric testing

A convenience sample of 2365 staff was recruited from two tertiary hospitals in Hangzhou, Zhejiang Province, China, between November and December 2019.The trained local collaborators, including a surgeon and an assistant to the director of the hospital, administered the invitation letters, the participant information sheets and the link of the survey to the staff using the official internal online working groups. The survey was conducted anonymously through a secure online survey system called Questionnaire Star. Inclusion criteria were (i) registered nurses, medical doctors, dentists, allied health professionals, administrative and clerical staff, estates and facilities staff; (ii) working for at least 6 months in the participating hospitals; and (iii) Chinese ethnicity. Staff who had come to the hospital for temporary training were excluded. The 'Rule of 10 subjects per item of the instrument' was used to guide the sample size planning for conducting confirmatory factor analysis (CFA), with a target of at least 300 participants (Gonzalez & Griffin, 2001; Sousa & Rojjanasrirat, 2011). All 4738 staff received the study information from the trained local collaborators. Those eligible for inclusion were invited to participate, and a total of 2672 staff completed the survey of whom 2365 were eligible for statistical analysis. Records with potential response biases, for example, records with the same answer option for all items of the scale, or a response time of less than 3 min (mean $= 8.00 \pm 17.12$), or not meeting the target criteria, were excluded.

2.2 | Instruments

2.2.1 | CoCB (Chinese version; CoCB-C)

The original English version of the CoCB measures the cultural attributes of environments in which care is delivered. It is a 30-item self-reported questionnaire. Responses are measured on a 5-point Likert scale from 'not at all' to 'fully agree', with higher scores representing a better caring culture of care in the settings. Cronbach's alphas of 0.70 to 0.93 were reported in the original study (Rafferty et al., 2017). The exploratory factor analysis of the CoCB provides evidence of good construct validity (Rafferty et al., 2017).

2.2.2 | Hospital culture evaluation index (HCEI)

The 32-item HCEI was administered to health care workers to assess the organizational culture of the hospitals (Chang & Cheng, 2009). This instrument includes four aspects of hospital culture, namely, the material culture, behavioural culture, institutional culture and spiritual culture. Responses are measured on a '1–5' Likert scale from 'fully disagree' to 'fully agree', with higher scores representing a more positive hospital culture. It has been used and validated in the Chinese hospital, which indicated good internal consistency (Cronbach's $\alpha = 0.81$) and good validity (content validity index 0.78) (Xi et al., 2016). The HCEI is a reliable and valid measure having similar constructs to the CoCB-C. The results of this scale were then used to conduct convergent validity testing of the new tool.

2.2.3 | Minnesota Satisfaction Questionnaire (MSQ)-short form

The 20-item MSQ short form (Weiss, Dawis & England, 1967) was used in this study to measure the job satisfaction of employees. It has three dimensions: intrinsic job satisfaction, extrinsic job satisfaction and general job satisfaction. A 5-point Likert scale from 'very dissatisfied' to 'very satisfied' is used to rate each statement, with higher scores representing better job satisfaction. Cronbach's alphas of 0.84 to 0.93 were reported, indicating good internal consistency of the tool (Weiss et al., 1967). The Chinese version of the MSQ short form is presented on the website of the University of Minnesota (http://vpr.psych.umn.edu/instruments/msq-minnesota-satisfaction-questionnaire). It has been used in hospitals in China (Jiang et al., 2018; Xi et al., 2016) and with good reliability and validity; Xi et al. (2016) reported a Cronbach's α of 0.92, and the value of Kaiser–Meyer–Olkin was 0.92. The MSQ is a well-used instrument and is stable over the time. It assesses a concept that is often related to the culture of care in the hospitals. The findings of this scale were then used to conduct concurrent validity testing of the CoCB-C.

2.3 | Data analysis

Descriptive statistics were used to summarize the participants' characteristics. The attributes of reliability assessed for the CoCB-C were internal consistency and item-to-total correlations. Cronbach's alpha values of 0.70 or greater indicate adequate internal consistency (DeVellis, 2016).

The percentages of participants scoring the minimum (floor) and maximum (ceiling) possible scores were calculated. The important floor or ceiling effects were defined as more than 15% of participants achieving the lowest or highest score, respectively (Terwee et al., 2007). The initial discrimination ability of CoCB-C was examined by contrasted-groups validity (Molassiotis et al., 2007). High and low score groups of CoCB-C were taken from upper and lower 27% of participants, respectively (Hingorjo & Jaleel, 2012). Based on the literature, we anticipated that responses in high score group would show significantly higher positive hospital culture and better job satisfaction than those in low score groups (Luthans et al., 2008; Rafferty et al., 2015).

CFA was used to test whether the data confirm the proposed four-factor CoCB model. The CoCB-C items were treated as ordinal variables in the analysis due to the distribution of item scores, many of which were skewed towards the upper end of the 5-point scale. Goodness-of-fit was examined using the comparative fit index (values >.90 indicating acceptable model fit), the Tucker–Lewis index (values >.90 indicating acceptable model fit), the root-mean-square error of approximation (values <.08 indicating adequate model fit) and the standardized root-mean-square residual (values <.08 indicating reasonably good model fit) (Brown, 2015).

Concurrent validity (i.e., correlations between different instruments designed to assess two presumably related constructs) was examined by hypothesis testing. The hypothesis was that staff working in a more caring culture (CoCB-C) would have better job satisfaction (Luthans et al., 2008). Convergent validity (i.e., correlations between different instruments designed to assess a common construct) of the CoCB-C was examined using its correlation with the HCEI, which was used to measure organizational culture in hospitals. Pearson product–moment correlations were used to test all the relationships, with positive and statistically significant correlations ($p < .05$) indicating good concurrent and convergent validity.

CFA was performed using the R Lavaan package (Rosseel, 2012) and all other analyses using IBM SPSS 24.0 software (IBM Corp, 2016).

2.4 | Ethical considerations

Ethical approval was obtained from the Ethics Review Committee of King's College London (Reference number: LRS-18/19-11872), and access permissions were sought from the study sites. The participants had been informed that the completion of the survey constituted consent to participate and all data collected to be used.

3 | RESULTS

3.1 | Participants' characteristics

The demographic characteristics of the participants are summarized in Table 1. Nearly four of five participants were female (77.3%, $n = 1828$), and 35.3% ($n = 836$) were aged 30 years or younger. One third of the participants had less than 6 years work experience. Over half of participants were nurses (58.2%, $n = 1377$), compared with just over a fifth who were medical doctors (21.1%, $n = 498$). The majority (85.7%, $n = 2027$) of participants held a bachelor or master's degree. Regarding professional title, about half of them were the junior titles (e.g., resident doctor and nurse practitioner) (45.1%, $n = 1067$). About 14.4% ($n = 340$) were team managers. Only two out of 21 hospital managers responded to the survey. Floor or ceiling effects for COCB-C total scores were reported in Table S1. The percentages of respondents with either floor ($n = 0$, 0%) or ceiling effects ($n = 320$, 13.5%) were below the threshold of 15%.

3.2 | Contrasted-groups validity

The scores of HCEI and MSQ in the two groups of participants (upper 27% and lower 27%) were compared and were found to be significantly different (All $P < .001$), with high score group demonstrating higher positive hospital culture (HCEI, mean = 158.95 vs. 115.26) and better job satisfaction (MSQ, mean = 97.55 vs. 68.76), as expected.

TABLE 1 Participants characteristics ($n = 2365$)

	Percentage (%)		
	Hospital 1 ($n = 2087$)	Hospital 2 ($n = 278$)	Overall ($n = 2365$)
Gender			
Female	77.4	76.3	77.3
Male	22.6	23.7	22.7
Age groups, years			
19–30	34.4	42.8	35.3
31–40	35.5	41.7	36.2
41–50	21.3	12.2	20.2
51–60	8.9	3.2	8.2
Work experience, whole years			
0.5–5	32.5	37.8	33.1
6–10	24.3	28.4	24.8
11–20	19.1	25.5	19.8
>20	24.1	8.3	22.2
Staff group			
Medical doctor/dentist	19.6	32.0	21.1
Registered nursing staff	57.6	62.9	58.2
Allied health professionals	12.6	1.8	11.3
Administrative and clerical staff	6.1	3.2	5.8
Estates and facilities	4.1	0.0	3.6
Education			
High school	2.8	0.4	2.5
Associate degree	6.8	14.0	7.6
Bachelor degree	70.8	59.0	69.4
Master's degree	15.4	23.0	16.3
Doctoral degree	4.3	3.6	4.2
Professional title[a]			
Junior	44.4	50.3	45.1
Intermediate	41.2	33.1	40.2
Senior	14.4	16.5	14.7
Position			
Hospital manager	0.1	0.0	0.1
Team manager	15.0	9.4	14.4
General staff	84.9	90.6	85.5

[a]**Junior professional titles** refer to resident doctor, nurse practitioner, pharmacist, nurse, assistant pharmacist and so on. **Intermediate professional titles** refer to attending doctor, nurse-in-charge, pharmacist-in-charge and so on. **Senior professional titles** refer to (associate) chief physician, (associate) chief nurse, (associate) chief pharmacist and so on.

3.3 | CFA of CoCB-C

The overall CFA model chi-square statistic was significant ($\chi^2 = 5975.22$, 399 *df*, $P < .0001$). The other goodness-of-fit indices, the comparative fit index (0.998), Tucker–Lewis index (0.998), root-mean-square approximation (0.074) and standardized root-mean-square residual (0.036), all exceeded the thresholds for an adequate fitting model. Taken together, these findings indicate that the data showed an acceptable fit to the original four-factor model. As presented in Table 2, the factor loadings of the items were all greater than 0.55, indicating adequate relevance to their respective factors.

3.4 | Reliability of CoCB-C

The internal consistencies (Cronbach's α) for the four factors were all above the required thresholds (organizational values, 0.96; team support, 0.95; relationship with colleagues, 0.86; and job constrains,

TABLE 2 Factor loadings of culture of care barometer (Chinese version; CoCB-C)

Culture of care barometer (Chinese version; item no. and content)	Factor 1 (organizational values)	Factor 2 (team support)	Factor 3 (relationship with colleagues)	Factor 4 (job constraints)
(4) I am proud to work in this hospital	0.84			
(6) The hospital values the service we provide	0.85			
(7) I would recommend this hospital as a good place to work	0.83			
(13) There is strong leadership at the highest level in the hospital	0.79			
(15) Hospital managers know how things really are in the hospital	0.84			
(19) A positive culture is visible where I work	0.84			
(22) Staff successes are celebrated by the hospital	0.84			
(23) The hospital listens to staff views	0.88			
(24) I get the training and development I need	0.86			
(25) I am able to influence the hospital how things are done in the hospital	0.67			
(26) The hospital has a positive culture	0.87			
(29) I feel well informed about what is happening in the hospital	0.82			
(5) My direct supervisor treats me with respect		0.82		
(8) I feel well supported by my direct supervisor		0.87		
(9) I am able to influence the way things are done in my team		0.68		
(10) I feel part of a well-managed team		0.85		
(11) I know who my direct supervisor is		0.57		
(12) Unacceptable behaviour is consistently tackled in the team		0.71		
(16) I feel able to ask for help when I need it		0.84		
(18) I feel supported by the team to develop my potential		0.87		
(21) My direct supervisor gives me constructive feedback		0.88		
(27) I am kept well informed about what is going on in our team		0.84		
(30) My concerns are taken seriously by my direct supervisor		0.89		
(2) I feel respected by my co-workers			0.67	
(14) When things get difficult, I can rely on my colleagues			0.83	
(20) The people I work with are friendly			0.81	
(28) I have positive role models where I work			0.81	
(1) I have the resources I need to do a good job				0.87
(3) I have sufficient time to do my job well				0.78
(17) I know exactly what is expected of me in my job				0.61

0.77). All corrected item-to-total correlations for the factors were greater than 0.40, indicating homogeneity with their respective factor (organizational values, 0.65 to 0.87; team support, 0.55 to 0.87; relationship with colleagues, 0.61 to 0.76; and job constraints, 0.47 to 0.74). The subscales were strongly intercorrelated ($r = 0.75$ to 0.91, all $P < .001$), giving further support to the use of the overall scale of the CoCB-C. The overall internal consistency of the CoCB-C was 0.82.

3.5 | Concurrent validity and convergent validity

Significant and positive correlations were found between the overall score of CoCB-C and scores on MSQ and HCEI, indicating a good concurrent and convergent validity. A better caring culture was associated with greater job satisfaction ($r = 0.92$, $P < .001$) and a better organizational culture ($r = 0.88$, $P < .001$). Examination of the subscales found that these relationships occurred more strongly for

organizational values and team support (MSQ, $r = 0.90$, 0.89; HCEI, $r = 0.90$, 0.81) than for relationship with colleagues and job constraints (MSQ, $r = 0.82$, 0.80; HCEI, $r = 0.76$, 0.74).

4 | DISCUSSION

This study conducted a cross-culture translation and validation of the CoCB (Rafferty et al., 2017). This was the first Chinese version of an instrument that assesses the caring culture in health care systems from the perspective of front-line staff. Results indicated that the CoCB-C has a stable factor structure, reasonable model fit and high internal consistency. No notable floor and ceiling effects were detected for the CoCB-C total score. Its strong significant correlation with the theoretically linked constructs including job satisfaction of employees and organizational culture of hospital is evidence of its concurrent and convergent validity. The findings concurred with the psychometric testing of the original version of the CoCB developed in England for health care providers (Rafferty et al., 2017). With minor revisions (e.g., wording of items to fit the context), the CoCB can be used in Chinese tertiary hospitals, yielding internationally comparable results.

The use of a strict method for validation (Sousa & Rojjanasrirat, 2011) strengthens the results from this study. A large, convenience sample of 2365 staff generated data for psychometric testing. The response rate of the two settings was uneven (59.0% vs. 23.2%). A possible reason was that one local collaborator, currently a hospital manager, was more appealing to the staff than the other surgeon collaborator. Nevertheless, our sample size exceeds the number recommended for CFA (Gonzalez & Griffin, 2001; Rosseel, 2012; Sousa & Rojjanasrirat, 2011) and is larger than the sample ($n = 1698$) used to develop the CoCB in the UK (Rafferty et al., 2017). Given the differences in the medical system and health care administration, some adjustments were made in the Chinese translation to enable front-line staff to better understand the questionnaire. The adaptation of the items attained a high rate of agreement (96.7%) among the panel members, and each item has been rated as 'clear' by more than 80% of the medical staff participating in the pilot testing. Therefore, it can be stated that its semantic equivalence between the translated version and original version was achieved.

In this study, a Cronbach's alpha coefficient of 0.82 for the overall scale was obtained which exceeds the threshold of 0.70 for adequate internal consistency (DeVellis, 2016). The values obtained for the four factors were similar to the original scale (CoCB vs. CoCB-C: $\alpha = 0.93$, 0.93, 0.84, 0.70 vs. 0.96, 0.95, 0.86, 0.77) (Rafferty et al., 2017), so both the English and Chinese versions have good and equivalent internal consistency. Content validity was high, indicating that all items are measuring the same construct as the overall scale. Furthermore, the CoCB-C was able to show initial discrimination between groups theoretically demonstrated as experiencing disparate hospital culture and job satisfaction.

CFA is an appropriate analytic technique when there is a previous study that specifies the item composition of theoretically meaningful latent factors (Brown, 2015). In this study, the overall chi-square statistic of the goodness of model fit index was statistically significant ($P < .001$). The chi-square test is known to be sensitive to large sample size (Brown, 2015); therefore, we made use of other common measures of fit. All of them were acceptable. For the factor loadings of the items, values obtained were slightly higher than those from the UK study (CoCB vs. CoCB-C: organizational values, 0.40 to 0.84 vs. 0.67 to 0.88; team support, 0.40 to 0.87 vs. 0.57 to 0.89; relationship with colleagues, 0.56 to 0.81 vs. 0.67 to 0.83; and job constraints, 0.41 to 0.79 vs. 0.61 to 0.87) (Rafferty et al., 2017). Therefore, the results supported the generalizability of the CoCB factor structure.

A high convergent validity of the CoCB-C was shown through its correlation with the HCEI. Although both scales measure the culture in health care organizations, the CoCB-C emphasizes caring culture from the perspectives of staff. This is an essential but often overlooked issue in China, where the cultural value of collectivism is advocated (Voronov & Singer, 2002). Chinese people, especially health care professionals, are expected to give more consideration to the needs and interests of others than to themselves. As an example, in the context of the COVID-19 pandemic, a heavily pregnant nurse who worked in a highly contagious environment was regarded as a self-sacrificing hero by the state media (Zhu et al., 2021). Hence, greater attention to understanding front-line staff perspectives and needs for a caring culture in their workplace is paramount.

Our study identified a strong positive relationship between a hospital's perceived caring culture and staff job satisfaction, which occurred more strongly on macro and meso levels than on micro level. This result echoes previous evidence about the positive effects of a good caring culture in work organizations on the job satisfaction of employees (Luthans et al., 2008). Such findings have important clinical implications in China where nearly half (735/1473) of the nurses (Liu, Zheng, et al., 2019) and 64.8% (473/730) of medical doctors (Liu, Yu, et al., 2019) were dissatisfied with their current job. As a consequence of the current COVID-19 pandemic, health care workers have reported increased psychological distress and job stress (Lai et al., 2020; Zhan et al., 2020), which would possibly result in poorer job satisfaction and trigger turnover intention (Cai et al., 2021). Therefore, it is essential for hospital leaders and nurse managers to establish a caring culture in which care is delivered, particularly on the levels of organization and team.

The CoCB-C can contribute to advancing research. It is the first Chinese scale measuring caring culture for health care workers in the tertiary hospitals. It can be used to facilitate the design of a theoretical framework which explains the components of a caring culture in the Chinese hospital context. While there is evidence on the effects of culture of care on health care workers in the Western settings, very little is known about this in non-Western cultures. The CoCB-C is a validated measure that can be used in future investigations within the Chinese context and increases our understanding of the culture of care in hospitals.

There are limitations in this study. It recruited staff in the tertiary hospitals, which may limit the generalizability of the findings to those in other settings, such as primary or secondary hospitals, community health care centres or mental health hospitals. In addition, the test–retest reliability and predictive validity of the CoCB-C were not conducted owing to the cross-sectional study design and this can be considered in the design of future studies using the scale.

5 | CONCLUSIONS

A caring culture is paramount to a positive staff and patient experience. This study indicated that the CoCB-C is a reliable and valid instrument for the core attributes of a caring culture in the Chinese hospital context. It may result in greater communication between front-line staff and hospital leaders about their perceptions of the work environment and then potentially lead to better job satisfaction, staff retention and patient outcomes. The CoCB-C can be used to advance our knowledge of how the main dimensions of a caring culture manifest in health care organizations and its impact on staff and patient outcomes.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

The CoCB-C can be used to get feedback from different groups of staff to identify areas of weakness in the culture of care, and to evaluate change over time. Tailored interventions can be designed to address the specific dimensions, and additional support can be provided to more vulnerable departments or staff groups.

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CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

ETHICS STATEMENT

The Ethics Review Committee of King's College London granted an approval for the present study (reference number: LRS-18/19-11872).

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

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APPENDIX

The original English and Chinese versions of the Culture of Care Barometer.

English version	Chinese version
(1) I feel respected by my co-workers	我觉得自己受到同事们的尊重
(2) I have sufficient time to do my job well	我有充足的时间来做好我的工作
(3) I have the resources I need to do a good job	我有做好工作需要的所有资源
(4) I am proud to work in this trust	在这家医院工作让我感到自豪
(5) I know who my line manager is	我知道我的直属领导是谁
(6) My line manager treats me with respect	我的直属领导尊重我
(7) The Trust values the service we provide	医院重视我们所提供的服务
(8) I would recommend this Trust as a good place to work	我会推荐他人来这家医院工作
(9) I feel well supported by my line manager	我觉得我的直属领导很支持我
(10) I am able to influence the way things are done in my team	我能够影响我们团队的工作方式
(11) I feel part of a well-managed team	我觉得我所在的团队有着良好的管理
(12) unacceptable behaviour is consistently tackled	不可接受的行为在团队中会受到同样的处理
(13) There is strong leadership at the highest level in the Trust	医院最高层拥有强大的领导力
(14) When things get difficult, I can rely on my colleagues	遇到困难时, 我可以依靠我的同事
(15) Trust managers know how things really are	医院管理者清楚医院的实际情况
(16) I feel able to ask for help when I need it	我觉得需要时可以寻求帮助
(17) I know exactly what is expected of me in my job	我很清楚自己的工作职责
(18) I feel supported by the team to develop my potential	我得到团队的支持使我能发挥自身潜力
(19) A positive culture is visible where I work	我所在团队有积极向上的文化氛围
(20) The people I work with are friendly	与我共事的人都很友好
(21) My line manager gives me constructive feedback	我的直属领导会给我建设性的反馈意见
(22) Staff successes are celebrated by the Trust	医院会庆祝员工的成功
(23) The Trust listens to staff views	医院会倾听员工的意见
(24) I get the training and development I need	我得到了我所需的培训和发展
(25) I am able to influence the Trust how things are done in the Trust	我能够影响医院里的工作方式
(26) The Trust has a positive culture	医院具有积极向上的文化氛围
(27) I am kept well informed about what is going on in our team	我能及时获悉团队里发生的事情
(28) I have positive role models where I work	我在团队里有正面的学习榜样
(29) I feel well informed about what is happening in the Trust	我能及时获悉医院里发生的事情
(30) My concerns are taken seriously by my line manager	我的直属领导重视我关心的问题

[Correction added on 8 June 2022, after first online publication: In the Appendix, the missing Chinese characters on items 5, 10, 11, 12, 13, 18, 19, 21, 23, 26, 27, and 28 have been reinstated in this version.]

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