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The complex and rapidly changing nature of global health care is constantly generating new challenges and questions. The Journal of Nursing Management welcomes papers from researchers, academics, practitioners, managers, and policy makers from a range of countries and backgrounds which examine these issues and contribute to the body of knowledge in international nursing management and leadership worldwide.

The Journal of Nursing Management aims to:

- Inform practitioners and researchers in nursing management and leadership
- Explore and debate current issues in nursing management and leadership
- Assess the evidence for current practice
- Develop best practice in nursing management and leadership
- Examine the impact of policy developments
- Address issues in governance, quality and safety

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- General Management and organisational theory and its application to nursing
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- Evidence-based management and research methods
- Continuing professional and practice development
- Organisational culture and context in the working environment
- Patient empowerment, participation and safety

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Advancing nursing practice through fundamental care delivery

1 | INTRODUCTION

There is growing awareness that there needs to be a reorientation of the nursing profession towards the *fundamentals of care* (Feo et al., 2019). These fundamentals often receive a low priority in clinical practice settings (Feo et al., 2019), and gaps in fundamental care provision are being exposed in nursing care internationally (McSherry et al., 2018). The concern is significant worldwide, and for this reason, many initiatives are developing to tackle the issue. The International Learning Collaborative (ILC) (2021), a global social learning and lobbying network, is leading the way on this. This network is committed to improving the delivery of person-centred and safe fundamental care, promoting excellence of fundamental care through the integration of clinical practice, research and education, and share the best evidence of Fundamentals of Care (FoC) (ILC, 2021; Kitson, 2018).

2 | BACKGROUND

Fundamental care is defined as follows (Feo et al., 2017; ILC, 2021):

Fundamental care involves actions on the part of the nurse that respect and focus on a person's essential needs to ensure their physical and psychosocial wellbeing. These needs are met by developing a positive and trusting relationship with the person being cared for as well as their family/carers

The fundamentals of care are conceptualized within three distinct dimensions of care: (1) the relationship, (2) the integration of care and (3) the care context (ILC, 2021). The relationship involves five core elements: developing and maintaining trust, focusing on the patient being cared for, anticipating the patients' needs, getting to know the patient and how best to provide care for them and evaluating the quality progress and outcomes of the relationship (ILC, 2021). The integration of care provides detailed outline of the physical psychosocial and relational aspects of the fundamentals of care (Table 1).

However, fundamentals of care are very frequently overlooked (Bagnasco et al., 2019), especially where resources are low (Aiken et al., 2014; Blackman et al., 2020; Kim et al., 2017). The reasons for these gaps vary and are the subject of much debate in the literature (Kitson, 2016), and there is often a limited perception of importance of such (fundamental) activities by nurses (Bentzen et al., 2013). As most human daily and social activities revolve around activities such

TABLE 1 Integration of care—physical psychosocial and relational aspects of the fundamentals of care (ILC, 2021)

Physical fundamentals of care (care recipient's needs and outcomes)

- Personal cleansing (including oral/mouth care) and dressing
- Toileting needs
- Eating and drinking
- Mobility, Rest and sleep
- Comfort (e.g., pain management, breathing easily, temperature control)
- Safety (e.g., risk assessment & management, infection prevention, minimizing complications)
- Medication management.

Psychosocial fundamentals of care (care recipient's needs and outcomes)

- Communication (verbal and non-verbal)
- Being kept involved and informed
- Privacy, Dignity, Respect
- Education and information
- Emotional wellbeing
- Having values and beliefs considered and respected

Relational fundamentals of care (care provider's actions)

- Active listening, Being empathetic
- Engaging with patients
- Being compassionate
- Being present and with patients
- Supporting and involving families and carers
- Helping patients to cope
- Working with patients to set, achieve, and evaluate progression of goals
- Helping patients to stay calm

as eating, drinking, washing, and eliminating, when any health change occurs, or unfamiliar circumstances arise (hospitalization, for example), these activities are often the first to be compromised (Kitson et al., 2010). Nurses do not always consider fundamental care as part of their role because health care assistants often carry out these activities (HSE, 2018; Kalisch, 2006; RCN, 2021). Interviews with nurses, for example, reveal that their role is perceived by care assistants as “paperwork and pills” with nurses increasingly “moving away from the bedside” leaving the fundamental care to care assistants (McGuire, 2019). Fundamental aspects of care that are particularly important are safety, dignity (Zahran et al., 2016) and communication/person-centred care (Dickson et al., 2017).

3 | WHERE IS FUNDAMENTAL CARE POSITIONED WITHIN ADVANCED PRACTICE?

One such area that could be accused of moving away from acknowledging the importance of getting fundamental care right for patients is advanced nursing practice. The ever-growing global population of nurses prepared to advanced level, to provide for advanced care of patients across the health care continuum. While core nursing competencies (and particularly those related to high quality fundamental care delivery) remain implicit, advanced practice competencies usually focus on developing higher order skills including skills of critical thinking, research, leadership in addition to advanced clinical skills. By default, the fact that as a profession we do not actually know what critical thinking, research and leadership skills are necessary to deliver (and manage the delivery) of fundamental care means we do not have the conceptual scaffolding to make this happen in practice. With the growing impetus on fundamental care, we wonder whether the concept of contemporary advanced nursing practice by its very nature opposes this concept? Can one be at the same time at the forefront of, and advancing nursing practice and also have a role in championing the further understanding of the fundamentals of care?

At the same time there is little research to support the importance of many fundamental activities or to guide evidence-based practice in these areas (Feo et al., 2019). The work of the ILC (2021) also encourages and promotes research. There are certainly gaps in this important topic, possibly due to limited funding opportunities, or a perception of low status topic areas (Richards et al., 2018). However, the increasing emphasis on impactful research means that there is scope now more than ever to revitalize research into fundamentals of care (Hewison & Taylor, 2019). Advanced practitioners, with their clear research agenda, are well positioned within clinical practice to advance research in this field, especially when the need for nursing research has never been stronger:

“Nursing research and scholarship have never been more important than it is today in developing the global profession and ensuring we provide the best, evidence-based care to our patients and communities. The most important aspect of high-quality nursing research is that it has impact—on patient care, service delivery, policy or the science of nursing” (Hayter, 2020, p. e6),

4 | CONCLUSION

It is our view that the advancement of nursing practice for the future is reliant on an acknowledgement and indeed a reorientation towards fundamental care delivery. Some of our team's experiences as advanced practitioners reveals that while these nurses are frequently occupied with physical aspects of fundamental of care,


such as medication management, infection control and safety, they are invariably presented with other aspects of fundamental care that require attention. Thus the higher order competencies such as critical thinking, research and leadership that shape advanced practice competencies need greater discussion to explore their contribution to supporting effective fundamental care delivery. These fundamentals also need to be viewed as central and core to all nursing practice. Without such dialogue advanced practitioners skills may become subsumed by the requirements for technical competence in advanced clinical skills and diagnostics, which do not necessarily highlight the requirements for continued attention to the fundamentals of care. Moreover, if limited attention is paid to these, as is the case in many parts of healthcare practice, then priority needs may go unrecognized leading to reduced patient satisfaction and lapses in care. It is important to note that many such lapses do not have immediate effect, such as inattention to relational aspects of care, comfort or dignity, but rather these have longer term effects on patient and family satisfaction with hospital care, perceptions of healthcare experiences and also engagement with health care services. Ultimately managers within the nursing profession need to consider the possible effect of subtle inattention to the fundamentals of care in the context of advancements and provision of high level of advanced nursing services. Managers need to lobby for increased awareness of the need to focus on these fundamentals, but also to begin to develop a more expansive evidence base to underpin their delivery.

ETHICS STATEMENT

Not required.


DATA AVAILABILITY STATEMENT

Author elects to not share data.

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Nurse leader agency: Creating an environment conducive to support for graduate nurses

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Abstract

Aim: The aim of the study was to gain insight on how nurse leaders manage a culture of safety for graduate nurses.

Background: Current theoretical approaches to safety culture tend towards a checklist approach that focuses on institutional characteristics, failing to examine the quality of interpersonal relationships. These interpersonal interactions are often seen as separate from the institutional realities of resource allocation, nurse–patient ratios, patient acuity or throughput. A theoretical approach is required to illuminate the dialectic between the structure of an organisation and the agency created by nurse leaders to promote patient safety.

Design: Qualitative exploratory descriptive study.

Methods: Semi-structured interviews were undertaken with 24 nurse leaders from hospital and aged care settings. Thematic analysis and Giddens structuration theory was used to describe the findings.

Results: Nurse leaders identified a range of reciprocal communicative and cultural norms and values, decision-making processes, personal nursing philosophies, strategies and operational procedures to foster patient safety and mentor graduate nurses. The mentoring of graduate nurses included fostering critical thinking, building and affirming formal structural practices such as handover, teamwork, medication protocols and care plans.

Conclusions: The study provides insight into how nurse leaders foster a culture of safety. Emphasis is placed on how agency in nurse leaders creates an environment conducive to learning and support for graduate nurses.

Implications for Nursing Management: Nurse leadership functions and decision-making capacity hinges on multiple factors including practicing agency and aspects of the social structure such as the rules for safe communication, and the various institutional protocols. Nurse leaders enforce these forms of engagement and practice

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through their legitimation as leaders. They have both allocative and authoritative resources; they can command resources, direct staff to attend to patients and/or clinical tasks, mentor, guide, assign, correct and encourage with the authority vested in them by the formal structure of the organisation. In doing so, they sustain the structure and reinforce it.

KEYWORDS

agency, graduate nurses, nurse leaders, patient safety, structuration theory, structure

1 | INTRODUCTION

This paper explores the way in which nurse leaders (NLs) actively pursue patient safety through strategic interactions with graduate nurses (GNs). In particular, NL mentorship at the ward level is important in fostering good work ethics, maintaining staff motivation and overall supportive and collegial workplace habits. In this paper, we present an overview of how the culture in nursing impacts patient safety. We introduce Giddens (1984) theory of structuration as a way of understanding how NLs at the ward level consciously practice creating a culture of safety with GNs. Additionally, we demonstrate how NLs exercise their agency through mentoring GNs and foster a culture of support conducive to patient safety.

2 | LITERATURE REVIEW

2.1 | Nurse role in patient safety management

Nurses are viewed as the 'safety nets', overseeing various practices of patient care and related safety practices. They engage in prolonged periods of direct patient care and are considered pivotal to preventing errors (Rosén et al., 2017). Nonetheless, it is widely acknowledged that safe nursing practice can be challenged by inappropriate staffing levels (Twigg et al., 2015), increased patient load, complexity of care and constrained timeframes (Duffield et al., 2011). According to Johnstone et al. (2008), the multi-faceted nursing role predisposes nurses to making preventable errors, thereby threatening quality of care and overall patient safety (Johnstone et al., 2008). In particular, GNs are at higher risk and vulnerable to errors due to their lack of experience in managing competing priorities and the complex workload. Documented evidence of the challenges faced by GNs includes the ability to handle an intense work environment (Regan et al., 2017), utilization of advanced medical technology (Orbaek et al., 2015) and management of high patient acuity (Duclos-Miller, 2011).

Of concern, GNs have been found to be largely uncomfortable in approaching senior nurse colleagues for support (Sahay & Willis, 2021). GNs have identified their need for support through effective mentorship (Laschinger et al., 2010) and rely on more experienced nursing colleagues for guidance (Sahay et al., 2015). Nevertheless, some studies indicate that GNs do not seek support from other

nurses if the colleague's behaviour is not conducive to learning (Laschinger et al., 2010; Sahay & Willis, 2021). This is where the NL role becomes paramount in fostering a culture of support and collaboration.

2.2 | Influence of unit-level nurse leadership on patient safety

Leaders proficient in effectively implementing a culture of safety are known to create a context where safety concerns are constantly discussed. Leader commitment and engagement in safety actions reinforces nurses' adherence to safety protocols while heightening an overall sense of safety for patients, colleagues and self. There is also evidence that NL commitment towards safety initiatives increases reporting of errors and incidents by nurses, thereby, increasing opportunities to learn and develop 'error wisdom', which refers to knowledge gained from errors (Reason, 2004, p. ii32). This aligns with the clinical governance framework, which suggests that NLs who foster an environment of support and a 'just culture', enable the delivery of safe clinical care. To gain an understanding of the underpinning principles behind a NL's actions, we have adopted Giddens's (1984) structuration theory as it allows exploration between the individual NL's decision making, the culture created and the structure of the organisation.

2.3 | Structure within the structuration theory

The evaluation of the many organisational changes in hospitals and health services attest to the gap between functionalist notions of structure and the ethnomethodological realities of everyday interactions. A social system exists within these structures as it is reproduced over time through the practices of its agents/individuals and groups (Mustafa & Mische, 1998). Giddens describes the 'social system as having three dimensions: signification, domination and legitimation, that in turn reflect three forms of interaction: communication, exercise of power and sanction' (Whittington, 2015, p. 148). Signification denotes the rules governing communication, and legitimation, the formal and informal rules and legal requirements of interaction. Domination depends on both allocative and authoritative resources.

Allocative resource capacity refers to objects and materials, while authoritative denotes command over individuals. Both allocative and authoritative resources are reproduced through agency: the first in practical ways through material production and the second within the social space where humans come together in actions of production, and service. It is within the authoritative realm that humans form groups and associations, and also where their position influences their life chances (Giddens, 1984). These forms of interactions and dimensions are not mutually exclusive; for example, the legitimization of the position of nurse manager speaks to their power and to the forms of communication they engage in, including the significance of their discourse (Whittington, 2015).

In Giddens's framework, structure is the various practices, behaviours, rules and norms that individuals operate under. It does include institutions such as the family, the legal or education system, but Giddens focuses more on the rules and patterns of everyday life (virtual) that create social structures, than the institutions themselves that provide the framework for behaviour (Braithwaite, 2006). Giddens proposes that structure and agency are co-dependent; that in effect the practices of the agent create the structure. One does not exist without the other. It is the agency of the various individuals that creates structure as they act upon the world. The structure of a society and its agents are in interaction with each other; they only exist because of the other, although they also exist independently. Individuals can think, reflect and act independently of a social structure, but what they think and do is a reflection in one way or another of the mutual dependence on the structure.

2.4 | Agency and structuration theory

The important starting point for understanding agency is in its reflexive capacity. Giddens refers to the intentional and purposeful direction of human behaviour as constituting agency. He distinguishes this act of agency from unintentional acts, arguing that agency is practiced when the actor is fully conscious, has a sense of what the outcome will be and that it is not a spontaneous or habitual action (Eteläpelto et al., 2013).

In order to elaborate on this purposeful action of the agent, Giddens makes a distinction between the concepts of discursive consciousness; practical consciousness; and unconscious motives/cognition (Giddens, 1984; Mustafa & Mische, 1998). These can be defined in order of consciousness: *discursive consciousness* is what we say about why and what we do; *practical consciousness* is what we do, by routine, even if we are not necessarily able to articulate why at the time; while *unconscious motives* are acts done without immediate understanding of why they are done, but clearly motivated by aspects of our social world and socialization. This is outlined in Figure 1.

Reflexivity operates mainly at the level of discursive and practical consciousness and is often articulated in hindsight (Braithwaite, 2006)

or based on experience or practical evaluation of past situations. It is the deliberate decision making about the appropriate course of action, even when the individual knows the evidence to be flimsy (Mustafa & Mische, 1998), or within the framework of trust based on ontological security (Giddens, 1990).

Giddens identifies that agency operates at the level of practical consciousness, as it is a cognitive exercise that leads us to reflect on why we do what we do, to think it through. These discursive and practical conscious acts are bound by the structures within which we operate. Our reflections follow the cultural and social rules of our particular time and place, which can be loosely defined as culture. The structure is bound by a particular time and space, given it is constituted by agents acting reflexively. As Giddens notes, 'All human action is carried on by knowledgeable agents who both construct the social world through their action, but yet whose action is also conditioned and constrained by the very world of their creation' (Giddens, 1981, p. 54). In arguing for intentional action, Giddens is clear that the individual must have the power both in terms of authority and resources to bring about the action; intention or knowledge of typification or schema is not agency. It requires action and an awareness that this is what we are doing, even when done under duress (Eteläpelto et al., 2013).

2.5 | Culture, structure and agency

We can further understand the duality of agency and structure by reflecting on the place of culture within the framework. The practices performed by the agents-individuals constitute the given culture of an organisation. The patterned form of interactions is of cultural practice. It includes the way we talk, act, or what is espoused. Braithwaite notes organisational culture is 'the way things are done around here' (page 97). In order for society to operate and function, there is a shared understanding of many of the practices, beliefs and norms. It is not simply a duality between one individual acting upon the social that creates the structure, but many individuals with a shared understanding of the norms, values and practices that create the structural component of Giddens's agency structure including the culture.

2.6 | Agency and identity

The interpretation the individual agent assigns to these cultural norms, values, symbols, beliefs and practices and how they respond to them builds up and reflects their identity. Without it there would be no redemption, personal change or self-improvement. It is our self-concept or identity that shapes our intentional actions, but they in turn are influenced in concert with social change. How individual NLS support their team and mentor GNs speaks to their agency, the culture they create on the ward and their own sense of identity as a leader.

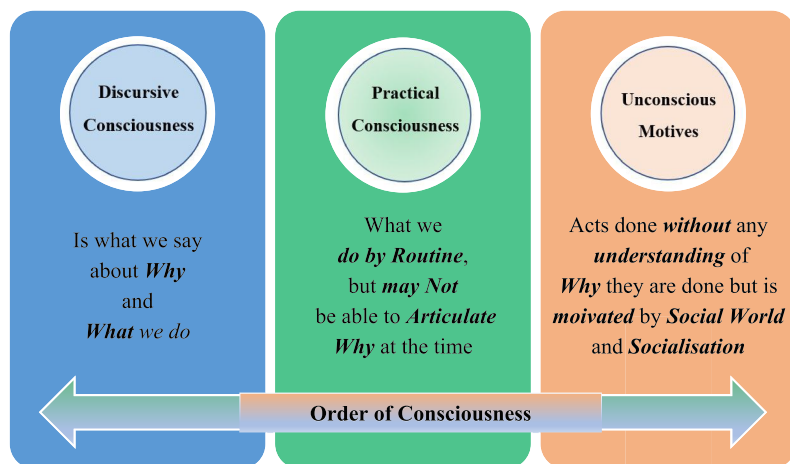


Illustration By: A.Sahay

FIGURE 1 Order of consciousness. Illustration by A. Sahay

3 | METHODS

Data presented here is from a larger study. The aim of the study was to gain insight on how NLs managed a culture of safety for GNs. Ethics approval was sought from a large hospital and health service and an academic institution. Data were gathered by the first author through a series of interviews with 24 NLs in Australia. The NLs were purposively selected and interviewed in a venue of their choice between May 2016 and June 2017. They were invited to engage in the study through responding to advertisements posted across several hospitals in Victoria (Australia) and in local libraries, and/or snowball approach. The interview schedule asked NLs to reflect on how they supported GNs to provide safe and quality patient care. The interviews were collected till data saturation, with member checking occurring with the NLs through a process of identifying themes. Table 1 provides the demographic details of the NLs.

3.1 | Analysis

The methods used in this paper are limited to an analysis of what these NLs said they did, rather than to what their practice was. In taking this approach, we have examined the interviews and used Braun and Clarke's (2012) six step guide to thematically draw on the concept of agency and its duality with structure. This has allowed us to take note of the words used, the norms espoused and the practices sanctioned. The interviews were examined to answer three questions about the NL's agency. These were as follows:

1. What did NLs intentionally do to assist GNs to ensure patient safety and/or to develop their critical thinking to enhance patient safety?
2. How were these actions linked to official practices to ensure patient safety?
3. What do these practices say about the safety culture of NLs at the ward-level in their interactions with GNs?

TABLE 1 Summary of nurse leader demographic details

Demographic details	Number (N = 24)	Percentage (%)
Gender		
Female	21	87.5
Male	3	12.5
Interview mode		
Face to face	20	83.3
Telephone	4	16.7
Employment capacity		
Full-time	11	45.8
Part-time	13	54.2
Years in leadership role		
1–10	9	37.5
11–20	6	25
21–30	6	25
31–40	3	12.5
Leadership positions held		
Nurse unit manager	5	20.8
Associate nurse unit manager	4	16.7
Nurse educator	4	16.7
Team leader	4	16.7
Clinical nurse specialist	3	12.5
Aged Care facility manager	2	8.3
Hospital nurse manager	2	8.3
Areas worked		
Aged Care	7	29.2
Intensive Care Unit (Adult and Neonatal)	5	20.8
Acute Medical or Surgical Ward	4	16.7
Primary Health care	4	16.7
Emergency Department	2	8.3
Paediatrics	2	8.3

The process of analysis involved reading the interviews with the three questions in mind for relevant responses and surrounding textual material. This was done in two stages with the first author organising the interview quotes into generalized themes, and the second author linked them to the research questions noted above. This approach mirrors template analysis where the researcher reads the data with a specific theoretical framework in mind and searches the text for confirmation (Waring & Wainwright, 2008). The pathway does not exhaust the data, or necessarily capture all there is to say about the context. Rather it identifies one of the salient features within the data and illustrates the theoretical links (King, 2004). The themes identified by the second author were then checked by the first author for coherence with the literature and the original thematic analysis. The two themes reflecting NL's agency included: Assisting GNs to maintain patient safety (through enhancing critical thinking) and enhancing structure through sanctioning official practices (through teamwork and handover).

4 | FINDINGS

4.1 | Theme one: Assisting GNs to maintain patient safety

This theme focuses primarily on how NLs foster critical thinking.

4.2 | Supporting GNs to enhance critical thinking

This sub-theme refers to NL perceptions on how nurse-to-nurse interactions strengthens GN's critical thinking skills. NLs expressed the view that supportive interactions advance GNs' ability to make appropriate clinical judgements and to apply sound reasoning to provide safe and high-quality patient care. Nurses are expected to assess and evaluate a situation from multiple perspectives, develop rationalized care plans and implement nursing practice that maintains patient safety. NLs stressed the importance of understanding the context, as well as the underpinning reasoning to specific nurse actions rather than being task centred. The comment below points to habitual action, or action without agency:

I think some people [GNs] ... just do things, and it's kind of like 'why would you do that?' and they do not have a reason. They are just jobs [clinical tasks] they do every half-hour. The problem seems deeper than that, and I think it's more than reflective practice. They're just doing, rather than thinking, about what they are doing ... you need to critically think and apply it to the care you are giving ... asking why ... people continue doing things without linking the two (NL 15).

To help develop GNs' critical thinking, NLs employed various approaches to increase safe practice.

A [GN] felt that the patient's stomach pain had increased over the last 24 hours and wanted some advice. I told him to think about the basics and eliminate using a process of elimination and think critically. Had the patient's bowels moved? Let us do bladder scan to make sure the pain is not related to retention, something that could be easily rectified. After doing that, then we escalated to the doctor to obtain pain relief for the patient (NL 5).

Quality of feedback was reported as essential to ensure GNs developed critical thinking skills and was seen to build confidence and reinforce safe practice. However, the way in which feedback is delivered by experienced nurses affects GNs' confidence. NL 11 explained that feedback is important in building the GNs' confidence. In her view, the way in which feedback is delivered affects how GNs perceive nursing:

I think very new nurses [GNs] ... get a lot from feedback and perhaps sometimes even if I am biting my tongue [not saying anything] and thinking, 'You could do that quicker', I would not necessarily say so. A 'pat on the back' [praise] goes a long way and can definitely affect how they feel about nursing and what sort of a nurse they will turn out to be if they are exposed to positive reinforcement (NL 11).

Other NLs commented that some experienced nurses may not have the proficiency to deliver constructive feedback. In her view, nurses would rather discuss performance issues with other NLs, avoiding an interaction with the actual individual to discuss how their clinical performance could be improved:

It's about being upfront and honest with GNs and being able to give constructive feedback. I do not think nurses are very good at giving constructive feedback. They say, 'A graduate is not doing this, this or this'. And then I say, 'Well have you told her?' And they say, 'no because she might get offended'. I think she will get more offended if she finds out you are whining about it to me. How about saying, "The way you are doing this is not great, why not try and do this, this way. It's going to impact on the patient, so you should really be doing it this way" (NL 15).

Nonetheless, other NLs expressed the view that validating GNs' concerns was an opportunity to deliver constructive feedback. The NLs commented that GNs lack confidence to inform effective clinical judgements and therefore rely on experienced nurses to validate their plan of care. NL 8 recalled that when GNs seek validation, she would either validate concerns and/or offer constructive feedback.

Being in a leadership role, it's important you listen to them [GNs]. You validate that they should be concerned,

'You've every right to call the medical officer,' 'Do not be fearful,' ... once they hear you say this, they will think 'Yeah, something needs to be done'. Or you might say, 'Have you done this assessment? Maybe do that prior to ringing.' So, it's taking the time, debriefing with them, and then offering them either some advice or some validation (NL 8).

Feedback can be given in various ways, and be viewed as positive, constructive and/or negative. However, the way feedback is perceived or interpreted could also play a role in how it is processed. The data indicate the quality of feedback impacts on GN confidence, competence and patient safety outcomes.

4.3 | Theme two: Enhancing structure through sanctioning official practices

As Giddens (1984) argues the decisions or agency of the individual finds expression in practice. The decisions made by NLS must be made concrete at the ward level in how handover or the medication rounds are conducted, and what pathways and protocols are followed. The discussion below reflects on how NLS created teams and how they used the structure of handover to make concrete the norms and values they wished to enforce in the interest of patient safety. Therefore, answering the question: How were these actions linked to structure and culture?

4.4 | Working as a team to improve patient care

NLS explained that interactions improve when nurses accepted each other as equals and there is clarity about team member roles:

[Teamwork is] about engaging with each other and seeing each other as equals and understanding that we all have a role to play ... If we lack that cohesiveness and collaboration, then it impacts on patient outcomes (NL 12).

However, NLS recognized that working as a team can sometimes present challenges, due to the multiple personalities that make-up a team. They noted that some nurses work well together, while others struggle to collaborate and interact with one another:

When nurses are unable to settle their differences, then it makes people work in isolation, and you cannot do that. Nurses do not discuss and clarify things with one another, and that's when mistakes happen. You need to work as a team and stay professional even if you reserve less favorable thoughts for your team members (NL 1).

Another NL emphasized the importance of appropriately matching and/or pairing team members to increase collegiality and team efficiency.

If I put three disinterested people in a pod, the care level would be 50%; the documentation would not be up to scratch ... the interactions will be poor. Pairing them with a stronger team member I find will get them to step-up a level ... You tend to find that's when a team comes together. It's being able to identify where to place someone in the unit so that it is a cohesive group (NL 18).

NLS also referred to constant interruptions during verbal handovers as another factor that affects the quality of nurse-to-nurse interactions. This subsequently impacts on the quality and type of information transferred, thereby resulting in omission of vital patient information. The data revealed that interruptions during handover were caused by two factors: environmental factors (e.g., patient discharges, phone calls, family concerns and new patient admissions,); and incoming nurse receiving the handover.

NLS reported that interruptions influenced by the ward environment were detrimental to the complete transfer of patient care information. This consequently resulted in the omission of information, such as planning to undertake blood tests and administration of antibiotics and other medications:

When the handover time is interrupted from the environment, then certain things do not get handed over properly. For example, blood tests do not get done because it's not told or not written down in the care plan. Antibiotics are not given when they are not pointed out, perhaps the [incoming] nurse has not got back to looking at the medication chart until two hours later and then realises that she's missed giving a medication - an antibiotic and that impacts on the quality of care (NL 8).

Further, some NLS commented that interruptions made by the incoming nurse during the handover process also impacted on the quality of information transferred. In one NL's view, constant interruptions by incoming nurses during handover are distracting and disrupts thought processes of the outgoing nurse delivering the handover. This subsequently results in the omission of vital patient information. NL 14 explained:

You are trying to follow the ISBAR, but you have got a nurse [who] constantly interrupts ... leads to omission of some information ... You are distracted, and thoughts are interrupted ... which then leads to more omissions (NL 14).

5 | DISCUSSION

As the first theme demonstrates, NLs actively mentor GNs through a process of ensuring they develop habits of reflective practice. They model this through a careful process of mentoring, modelling and questioning GNs about their patient care. This is an open act of discursive consciousness on their part, but it is also an attempt to raise the consciousness/awareness of the GN. Many of the quotes demonstrate this process of leading the GN to a process of critical thinking—a shorthand for agency. The NLs provided advice in a structured way and monitor the feedback they provide to GNs to ensure that it builds their confidence, rather than increasing their stress levels. At times they bracketed out other deficits such as time management to build the GN's confidence. They are mindful of the pitfalls of routinization and practice as habit, rather than active agency, validate the decisions made by GNs and encourage other senior staff to be frank, but positive in their interactions.

Similarly, this reflective agency is made concrete in the structures of practice within the ward. Teamwork is encouraged and organised around skill, motivation and expertise. A culture of sharing the load is encouraged as it builds alliances and safeguards against errors. The NLs are mindful that if colleagues do not get along with each other this is detrimental to patient safety. Structural practices are rigorously enforced to ensure that the aims of the institution are met. The example provided here is of handover. Several NLs stressed the importance of communication using the ISBAR format: *Identifying and Solving BARRiers to effective clinical handover* (Hunter New England, 2009). It represents a set process or structure for handover instigated to mitigate errors. They also stressed the importance of maintaining medication charts, patient care plans, protocols and procedures, and minimizing interruptions. Interruptions during handover or claims to being too busy to communicate adequately were not tolerated. All these practices go towards creating the structure and culture on the ward, hospital and wider organisation with its focus on patient safety and are part of the legitimate exercise of power accorded to NLs.

The NLs also had the power to allocate staff to particular areas indicating their command over the labour of individual staff. They signalled to the team the need to be approachable for junior nursing staff, however, were aware that not all senior nurses were accommodating. What we did not find in the data, were examples of the approaches they took to change behaviours for senior staff who did not act as mentors for GNs. This suggests that their agency was not always positive.

A careful reading of the NL comments also provides an analysis of the culture of safety required on any ward where there are GNs. These NLs, exhibit discursive consciousness in what they say they do, and how they build up the culture of the ward or unit, in how they mentor GNs, encourage teamwork, or guard against routine habituated practice (Mustafa & Mische, 1998). In many ways much of this will have become practical consciousness. They may not be able to identify why they do it at the time, but spontaneously act in the interest of the structure of the organisation.

5.1 | Limitation

The study was designed to be descriptive. The participants were largely from within one state which makes the study geographically limited. However, participants were from different specialty areas, which enabled the collection of data from a diverse range of nursing settings. Furthermore, as the study aim was examined from the perspective of NLs only, it is not representative of all nurse groups (i.e., nurses at various levels of work experience) or nursing roles. It is possible that perceptions of the impact of nurse-to-nurse interactions on patient safety outcomes may differ among other nurse groups. Despite these limitations, the study has relevance, and important implications for practice and future research initiatives.

6 | CONCLUSION

In this article we have outlined the agency of NLs as they manage mentoring of GNs in order to ensure they develop the necessary critical skills, clinical expertise and time management. These skills are required to ensure patient safety. We demonstrated the way in which these NLs consciously instigate lines of communication with GNs as part of their mentoring. We also demonstrated the way they use their legitimate authority to ensure the various structural practices, such as handover, are adhered to. The very process of interviewing these NLs allowed them to bring to the surface (discursive consciousness) an awareness of how they create and re-create a culture of safety within the ward, while simultaneously mentoring GNs. We also highlighted their awareness of practical consciousness acts which are routine and lie somewhere between consciousness and the habitual. We have suggested that unconscious actions, while not always accorded agency, do arise from the individual's orientation or socialization and for that reason have currency. Importantly, the paper points to the fact that patient safety goes beyond the number of staff allocated to a shift, or the material resources available. It extends to the very culture of a ward or hospital, and to the interactions between nurses, doctors and other health staff. How these interactions play out, how they contribute to the expertise of junior staff are all matters of patient safety.

6.1 | Implications for nursing management

Nurse leadership functions and decision-making capacity hinges on multiple factors including practicing agency and aspects of the social structure such as the rules for safe communication, and the various institutional protocols. NLs enforce these forms of engagement and practice through their legitimation as leaders. They have both allocative and authoritative resources; they can command resources, direct staff to attend to patients and/or clinical tasks, mentor, guide, assign, correct and encourage with the authority vested in them by the formal structure of the organisation. In doing so, they sustain the structure and reinforce it.

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CONFLICT OF INTEREST

None.

DATA AVAILABILITY STATEMENT

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

AUTHOR'S CONTRIBUTIONS

Interviews, initial thematic analysis, tables and figures were conducted and developed by AS and supervised by DK and BR. Theoretical discussion on structuration theory developed by EW. Final editing by AS and EW.

ETHICS STATEMENT

Ethics approval for this study was sought and approved from Barwon Health Human Research Ethics Committee (HREC) (approval reference number: 16/30) and Deakin University HREC (DUHREC; approval reference: HEAG-H28_2016).


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Safety climate in hospitals: A cross-sectional study on the perspectives of nurses and midwives

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Abstract

Aims: To explore nurses' and midwives' perspectives of safety climate in Austrian hospitals as measurable elements of safety culture and to identify areas of quality improvement.

Background: Due to close contact with patients, nurses and midwives play a vital role in ensuring patient safety.

Method: An online survey among 713 nurses and midwives was conducted, using the 19-item Safety Climate Survey (SCS). To answer the survey, a 5-point Likert scale was provided with higher ratings indicating a more positive safety climate.

Results: Results demonstrate a positive safety culture (MD 4.09, SD 0.53). Significant group differences in overall safety climate score could be found regarding nurses and midwives in managerial positions, between gender and participants age with low effect size. High item missing rates focus aspects on management/leadership, institutional concerns, leadership by physicians, and handling of adverse events. In addition, these items present the lowest ratings in safety climate.

Conclusion: Results indicate potentials for optimization in the areas of leadership communication and feedback, the handling of safety concerns, and visibility or improvement of patient safety strategies.

Implications for Nursing Management: A regular, standardized safety climate measurement can be a valuable tool for nurse managers and (political) decision-makers to manage patient safety initiatives.

KEYWORDS

hospital, midwives, nurses, patient safety, safety climate, safety culture

1 | BACKGROUND

Health care facilities are complex organisations with a high potential in medical errors, which can be influenced by the existing organisational culture (Ettl & Offenberger, 2014). Safety culture can

be delineated as a general aspect of the organisational culture and is described as a phenomenon that includes norms, values, and beliefs of the organisation, not of the individual. Safety culture is reflected in the way safety and risks are dealt with and in the behaviour of those involved (Ausserhofer et al., 2012). The term 'safety culture' is

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understood to mean a shared set of knowledge, values, and symbols that increases the capacity of the organisation to improve patient safety (Schrappe, 2017). In order to assess the safety culture, the safety climate is used as a measurable parameter (Gehring et al., 2015). Safety climate as a critical element in terms of patient safety and quality care describes a psychological phenomenon, defined as employees' perception of safety-related aspects in their working environment at a certain point of time (Seibert et al., 2020). It influences staff behaviour, which in turn affects patient outcomes, and therefore can be expected to impact patient safety. Research findings demonstrate a reduction in medication errors (Fan et al., 2016), as well as lower 30-day readmission rates for patients treated in units where the safety climate is rated high by health care staff (Mascherek & Schwappach, 2017). A strong safety climate is characterized by two-way safety communication, management support, and appreciation for safety and safety systems and is considered a predictor of nurses' safety performance (Manapragada et al., 2019). An essential basic prerequisite for high-quality and safe care is appropriate staffing in nursing (McHugh et al., 2021). With the aim to ensure the development of a safety climate among employees, three basic characteristics have been identified: formation of a safe working environment by senior management (1), development of a common understanding of safety in the work environment, which includes adequate staffing (2), and effective dissemination of safety information (3) (Lin et al., 2017).

In order to identify, prospectively control, and monitor changes in safety-relevant aspects, safety climate measurements have been used in recent years. As a quantitative form of assessment, it provides a snapshot of safety culture manifestation (Manser, Brösterhaus, & Hammer, 2016) and can generally be considered an early indicator that offers information about possible risks before an accident has occurred (Pfeiffer & Manser, 2010). Assessment of safety climate can be performed differently using international instruments in health care organisations, that is, the 'Hospital Survey on Patient Safety Culture' (HSOPs) (Sorra & Nieva, 2004), quantifying safety climate at the level of the organisation, the 'Safety Attitudes Questionnaire' (Sexton et al., 2006), and the 'Safety Climate Survey' (SCS) (Sexton & Thomas, 2003), both focussing on the level of a health care team or unit (Manser, Frings, et al., 2016), with the SCS being the shortest and thus taking the least time for participants to respond (Sexton & Thomas, 2003).

Historically, the publication 'To Err is Human: Building a Safer Health System', published by the Institute of Medicine (IOM) in 1999, to which at that time around 44,000 to 98,000 people die annually from preventable adverse events (IOM, 2001), gained international importance, and marked the starting point in safety initiatives in health care organisations (Alsaalem et al., 2018). The World Health Organization (WHO) considers patient safety to be the reduction of the risk of unnecessary harm to health to an acceptable minimum (WHO, 2011). In Austria, in year 2013, the Patient Safety Strategy 2.0, an Austria-wide framework, pursues the goal of creating awareness for safe care and reducing risks in the care and/or treatment process among all actors (decision-makers, health care professions, and

population). Corresponding goals and measures to ensure patient safety in health care organisations were derived in policy development (1), organisational development (2), personnel development (3), and public development (4) (Federal Ministry Republic of Austria, 2018). Based on current national strategy as well as previous research, an initiative to strengthen the safety culture in an Austrian hospital company was started. The purpose of this study was to explore registered nurses' (RNs) and midwives' perspectives of the safety climate in hospitals and to identify areas of quality improvement.

As previous studies have shown that the assessment of safety climate is significantly influenced by the gender and age of the participants (Jiang et al., 2019) as well as by a leadership position and the hospital unit (Gehring et al., 2015), we included these characteristics in the rationale of our study. We hypothesized that there would be group differences in nurses and midwives reported safety climate rating based on sociodemographic characteristics, age (a), gender (b), hospital unit (c), professional experience (d), and/or managerial position (d). Hence, the following research questions were pursued:

1. How do registered nurses and midwives describe safety climate in their hospital and are there any differences by select sample characteristics?
2. What areas of quality improvement can be identified from the survey results in the sample and what factors are associated with safety climate?

2 | METHODS

2.1 | Design and sample

A cross-sectional, descriptive, exploratory, online survey was performed using the internationally recognized Safety Climate Survey (SCS) and the online tool Lime Survey. Population frame consisted of 3704 nurses and midwives in one hospital organisation in Austria. A convenience sample of registered nurses (RNs) with a diploma in nursing or a bachelor degree and midwives was applied, irrespective of professional experience, level of employment (full-time/part-time position), and managerial position (yes/no) from all clinical disciplines (e.g., surgery, internal medicine, and gynaecology) who had direct patient interaction. Nurses or midwives who were exclusively involved in organisational and administrative tasks and had no direct patient contact were excluded.

2.2 | Data collection

In cooperation with the hospital management, information was provided to the participants via the company's internal magazine and their homepage as well as in meetings with hospital managers. All eligible 3704 employees received an email invitation to voluntarily participate in the survey, which was generated anonymously in the

survey tool Lime Survey. After written informed consent, participation in the online survey was possible. In terms of questions or uncertainties, the research team could be contacted via email or phone.

Prior to data collection, a written pre-test ($n = 34$ participants from the target group) was conducted to check the comprehensibility of the survey and included answer options, as well as the feasibility of an online survey in the company. Based on the feedback to participants' written comments, the email cover letter, the collection of sociodemographic data, and organisation's spam filters were adjusted.

2.3 | Instrument

The German translation of the original Safety Climate Survey (SCS) was used (Gehring et al., 2015). The total number of items in the German SCS are 19 of 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree* and an answer option 'I can't say'. The survey is suitable for interviewing all health care staff in hospitals (Sexton & Thomas, 2003). Higher values in the participants' assessment correspond to a more positive safety climate. Psychometrics of the German survey correspond approximately to those of the original survey (Cronbach's α Original = 0.85, Kho et al., 2005, Cronbach's α German = 0.86) (Gehring et al., 2015). Due to the shortness of the survey, participants need about 10 min to answer all items. This aspect is a great advantage compared with other instruments, especially when interviewing health care staff (Stiftung Patientensicherheit, 2014).

To record participant's sociodemographic characteristics, age (years), gender, hospital unit (medical, surgical, or operating/recovery room), professional experience (categories in years), managerial position (yes/no), and a free field for further comments were added. Not all sociodemographic data were mandatory fields. Only the hospital unit had to be specified.

2.4 | Statistical analysis

The survey data from the online tool Lime Survey were exported into IBM SPSS Statistics for Windows, version 27, and descriptive statistics, frequencies, and percentages were calculated. Negatively pooled items were recoded to ensure that higher item values represented a more positive safety climate. We calculated measures to fully describe differences and variations in the safety climate, namely, the scale mean index, that is, the sum of all response values divided by the number of items, item means, standard deviations (SD), and the percentage of problematic responses (PPR) (Singer et al., 2008). PPR refers to the percentage of respondents, who scored ≤ 2 on the 5-point Likert scale. Accordingly, a low PPR is an indicator of a high safety climate (Singer et al., 2009). A reported PPR of more than 10% in one item is interpreted as an indication of a minor patient safety climate (Mascherek & Schwappach, 2017). To determine group differences and an influence of participants sociodemographic characteristics on the overall SCS scale mean index, t tests for independent

samples as well as one-way analysis of variance (ANOVA) were carried out. Homogeneity of the error variances was assessed by Levene's test, Cohen's d was used to calculate and interpret effect sizes for all significant findings, and Tukey post hoc test in ANOVA was used to examine differences among sample means for significance; 95% confidence intervals (CI) were calculated for differences in means. Statistical tests were two-tailed with a significance level of $p < 0.05$.

3 | RESULTS

3.1 | Sample characteristics

In summary, 713 nurses and midwives participated in the study (response rate 19.2%) from whom the majority were female (80.4%). The mean age of the participants was 41.5 years (SD 10.24). Around 15% of the survey participants also had a managerial position. The majority of nurses and midwives had more than 20 years of professional experience (44.3%), 13.8% 15 to 20 years, 13.1% 10 to 15 years, 13.5% 5 to 10 years, and 15.2% up to 5 years of professional experience. In summary, 427 participants were working on medical hospital units (59.9%), 216 (30.3%) on surgical units, and 70 (9.8%) were employed in operating areas or recovery rooms.

3.2 | Nurses' and midwives' perspectives of safety climate

Nurses' and midwives' overall perspective of safety climate was positive. The mean value of SCS scale index was 4.09 (SD = 0.53) and varied for individual items between 3.44 and 4.64. The highest mean values were given in nurses' and midwives' own responsibility for patient safety, in item 17 'The personnel in this clinical area take responsibility for patient safety' (4.64, SD = 0.58) and item 9 'I know the proper channels to direct questions regarding patient safety' (4.55, SD = 0.72). The lowest ratings focused safety concerns in item 7 'Management/leadership does not knowingly compromise safety concerns for productivity' (3.44, SD = 1.42) and item 16 'I believe that most adverse events occur as a result of multiple system failures, and are not attributable to one individual's actions' (3.51, SD = 1.13). Items related to participants' learning from mistakes and dealing with errors, personnel briefing activities, their own responsibility, and knowledge for patient safety as well as management consideration of suggestions made by health care staff were perceived positively (4.05 to 4.64) by nurses and midwives. Items that included aspects of listening, communication, and receiving feedback from leaders, as well as addressing staff implementation/adherence to patient safety measures, achieved item ratings of 3.44 to 3.97.

All items demonstrated missing responses (0.80 to 23.80%). In four items (items 7, 14a, 15, and 16), there were more than 100 missing values. These focused management/leadership and institutional concerns as well as leadership by physicians and adverse events. In

addition, these items showed the lowest ratings in safety climate. The PPR of the overall scale was 14.85%. In summary, 13 out of 19 items showed a PPR higher than 10% and varied from 3.30% in item 17 to 32.90% in item 7 (Table 1).

3.3 | Group differences in nurses' and midwives' safety climate perspectives

Calculation of group differences demonstrated more positive safety climate ratings in nurses and midwives holding a managerial position

($T = 2.818$, $p = 0.005$), in females ($T = 3.245$, $p < 0.001$), and between age categories ($F = 3.488$, $p = 0.016$). Nurses and midwives in the age of 50 years and older scored significantly more positive than those under the age of 30 years ($T = 3.126$, $p = 0.016$). Details for all group differences are presented in Table 2.

4 | DISCUSSION

This is the first known companywide study in Austrian hospitals using the Safety Climate Survey (Sexton & Thomas, 2003) in nurses and

TABLE 1 Participants' perspectives on safety climate

Items in SCS	Mean	SD	PPR (%)	Missing (%)
1. The culture of this clinical area makes it easy to learn from the mistakes of others.	4.05	0.95	10.50	5.3
2. Medical errors are handled appropriately in this clinical area.	4.09	1.01	12.30	5.5
3. The senior leaders in my hospital listen to me and care about my concerns.	3.55	1.14	26.30	6.2
4. The physician and nurse leaders in my areas listen to me and care about my concerns.	3.97	1.02	14.90	1.1
5. Leadership is driving us to be a safety-centred institution.	4.00	1.08	12.60	7.6
6. My suggestions about safety would be acted upon if I expressed them to management.	4.33	0.94	8.30	7.3
7. Management/leadership does not knowingly compromise safety concerns for productivity.	3.44	1.42	32.90	21.9
8. I am encouraged by my colleagues to report any safety concerns I may have.	4.23	0.94	7.80	4.2
9. I know the proper channels to direct questions regarding patient safety.	4.55	0.72	3.60	1.4
10. I receive appropriate feedback about my performance.	3.80	1.17	19.40	1.7
11. I would feel safe being treated here as a patient.	4.09	0.93	9.20	5.3
12. Briefing personnel before the start of a shift (i.e., to plan for possible contingencies) is an important part of safety.	4.56	0.79	4.80	5.6
13. Briefings are common here.	4.12	1.11	13.80	8.3
14. I am satisfied with the availability of clinical leadership (please respond to all three):				
a. Physician	3.81	1.10	19.40	14.2
b. Nursing	4.39	0.91	7.90	4.3
c. Pharmacy	4.10	1.00	10.80	1.7
15. This institution is doing more for patient safety now, than it did one year ago.	3.85	1.11	15.30	23.8
16. I believe that most adverse events occur as a result of multiple system failures, and are not attributable to one individual's actions.	3.51	1.13	25.30	19.4
17. The personnel in this clinical area take responsibility for patient safety.	4.64	0.58	3.30	1.0
18. Personnel frequently disregard rules or guidelines that are established for this clinical area.	3.93	1.15	17.90	4.5
19. Patient safety is constantly reinforced as the priority in this clinical area.	4.43	0.85	5.80	0.8
SCS scale mean index (19 items)	4.09	0.53	14.85	7.19

TABLE 2 Group differences in SCS mean values

Variable	Mean (SD)	n	p value	Test statistics (df)	CI 95% _{Diff.}	<i>d</i> _{Cohen}
Managerial position						
Yes	4.22 (0.48)	110	<i>p</i> = 0.005	<i>T</i> = 2.818 (690)	[0.05; 0.26]	0.293
No	4.07 (0.54)	582				
	Missing response	21				
Gender						
Male	3.92 (0.61)	106	<i>p</i> < 0.001	<i>T</i> = 3.245 (133.43)	[0.08; 0.33]	0.388
Female	4.13 (0.51)	573				
	Missing response	34				
Professional experience in years (categories)						
<5	4.10 (0.48)	107	<i>p</i> = 0.737	<i>F</i> = 0.499 (4)	n.s.	n.s.
5 < 10	4.03 (0.61)	95				
10 < 15	4.10 (0.50)	92				
15 < 20	4.08 (0.57)	97				
>20	4.11 (0.53)	311				
	Missing response	11				
Hospital unit						
Medical	4.10 (0.52)	427	<i>p</i> = 0.860	<i>F</i> = 0.151 (2)	n.s.	n.s.
Surgical	4.07 (0.56)	216				
Operating/Recovery room	4.10 (0.58)	70				
	Missing response	0				
Age in years (categories)						
≤30	4.02 (0.51)	141	<i>p</i> = 0.016	<i>F</i> = 3.488 (3)	n.a.	0.247 ^a
31 ≤ 40	4.05 (0.54)	183				
41 ≤ 50	4.09 (0.56)	203				
>50	4.20 (0.51)	166				
	Missing response	20				
Post hoc test for significant group differences in age categories (≤30 vs. >50)						
≤30	4.02 (0.51)	141	<i>p</i> = 0.016	<i>T</i> = 3.126 (305) ^b	[0.03; 0.34]	0.358
>50	4.20 (0.51)	166				

Abbreviations: CI 95%, confidence interval 95%; *d*_{Cohen}, effect size by Cohen's *d*; Diff., difference of means; *df*, degrees of freedom; *F*, statistic ANOVA; n.a., not applicable; n.s., not significant; SD, standard deviation; *T*, statistic *T* test for independent samples.

^aBased on $\eta^2 = 0.015$.

^bBased on pairwise *T* test for independent samples.

midwives with the aim to explore safety climate, assess group differences, and identify areas of patient safety improvement. Despite our efforts to inform the participants about the survey via team meetings, newsletters, and email response rate in our study was low at 19.2% with high missing responses, an overall mean value of 4.09 (SD = 0.53), and items mean vary from 3.44 to 4.64. PPR-analysis showed that 13 out of 19 items are higher than 10%, with three items (items 3, 7, and 16) above 20%. Highest ratings were shown in item 17 (4.64), lowest ratings in item 7 (3.44). Comparable data demonstrated in a Swiss study (Gehring et al., 2015), in which 3153 health professionals, including 1321 nurses, completed the survey. Within a response rate of 64%, the nurses in this sample reported mean SCS of 3.75, which was slightly lower than in the Austrian sample of nurses and midwives (4.09). Scores at item level in the Swiss study ranged

from 3.18 to 4.38. In line with our findings, the highest item rating was observed in item 17 (4.18). Also, present studies' results of PPR proved similar to Gehring et al. (2015). The Swiss PPR of 11.76% was slightly lower than in our study (14.85%). At item level, 14 out of 19 items showed a PPR higher than 10%, and two items (also items 7 and 16) returned a PPR higher than 20%.

However, our Austrian sample focused only on perspectives of the safety climate of nurses and midwives and therefore cannot be fully likened to the results of the Swiss survey. Furthermore, it should be noted that the sample size shows an influence on the level of PPR and the influence of each individual is stronger in small groups (Mascherek & Schwappach, 2017). This aspect could have an impact on our sample of 713 participants, and the results are therefore only comparable with the Swiss sample to a limited extent.

The SCS was also used in a 2-year national quality improvement programme in Switzerland. Scale means from health care professionals' perspective (physicians = 1075, nurses = 2089, others = 599) were measured at two times, before (3.80, SD = 0.50) and after (3.90, SD = 0.60) surgical checklist implementation with significant improvement but low effect size (Mascherek et al., 2016).

In Turkey, nurses' perception of safety climate ($n = 350$) was quite low with a safety climate scale mean of 3.50 (SD = 0.62), compared with the Austrian and Swiss sample. In addition, 15 out of 19 items reached a PPR higher than 10% with the lowest item mean in item 3 (2.64, SD = 1.18), the same as in our study, followed by item 10 (3.22, SD = 1.18). The highest ranking was given in item 12 (4.14, SD = 0.91) (Dirik & Seren Intepeler, 2017).

Considering mean scores at item level in our study, the participants pointed out that their hospital as well as leadership is safety-centred, the organisational culture enables learning from mistakes of others, briefings are common, and medical errors are handled in an appropriate manner. But on the other side, they give lower safety climate ratings to aspects of listening, communication, and receiving feedback from leaders than in aspects of their own responsibility. These results are consistent with insights from another study, where nurses reported that management did not address staff concerns, so these assumptions that patient safety is not a priority for management (Wagner et al., 2019).

As demonstrated in a hospital safety climate study including the perspective of nurses in four European countries, nurses perceived patient safety, and their ability to report incident data is correlated with dimensions of 'organisational learning' and 'feedback and communication about error' (Gurková et al., 2020). Areas of quality improvement in this Pan-European survey can be identified in ensuring safe productivity by leadership as well as in their communication within team members and giving feedback to nurses and midwives, physician accessibility to staff, and transparency of/or improved patient safety strategies. Comparable studies also show potential for optimization in the area of organisation learning/continuous improvement with regarding hospital safety culture (Mascherek et al., 2016; Saleh et al., 2015). Ensuring effective communication, feedback, committed leadership, and an environment that focuses on learning from errors emerge as appropriate ways to do this (Okuyama et al., 2018).

According to the findings of previous studies (Jiang et al., 2019), our results show small significant differences in safety climate ratings between gender and ages. In particular, participants with an age above 50 years evaluate the safety climate significantly more positively than participants who were younger than 30 years. It is therefore surprising that professional experience is not an influencing characteristic in the assessment of the safety climate in this study. In addition, higher safety climate ratings have been demonstrated in nurses and midwives hold on managerial positions. Their perception of safety climate was more positive than those of participants without this position. Direct patient contact and seniority are mostly associated with a more critical perception of safety-related aspects. In particular, working directly with patients generally makes patient safety issues more prominent over time. Study results illustrate that maintaining a safety

climate by providing feedback on errors and maintaining open communication is positively related to the frequency of incident reporting. Nurses perceive higher levels of patient safety when there is enough staff on the ward (Saleh et al., 2015). Otherwise, nurses in larger teams perceive a lower safety climate. This correlation can possibly be explained by a decrease in the frequency of communication in larger groups and an associated loss of communication. However, it is also possible that nurses in larger teams consciously engage less (Seibert et al., 2020).

A higher culture of patient safety is associated with better patient outcomes (Fan et al., 2016; Mascherek & Schwappach, 2017). High-quality care in hospitals aim to provide multidisciplinary care to patients with minimal risks (Okuyama et al., 2018). Organisational culture and the active support throughout hospital managers play a key role in promoting and maintaining safety culture (Levine et al., 2020). Above all, a connection between organisational culture and safety climate is shown in the view of failure as system errors and not as individual errors, which is why organisational processes should be continuously analysed and improved. Nurses and midwives hold on managerial positions must be strengthened in anticipating the weak points in the organisational system and in forcing organisational team learning. Patient safety workshops to promote a culture of safety, as well as team training to raise managers' personal awareness and challenge routines show themselves to be suitable ways of doing so (Kanerva et al., 2013).

4.1 | Strengths and limitations

Data collection was conducted online during working time, using an internationally approved and practicable tool. Nevertheless, we had a certainly high number of missing answers in our survey. This could either be an indication that the questions themselves were not well understood by the participants and reflect a misunderstanding, or that 'risky items' were deliberately not answered due to a fear of consequences. Also, the aspect of social desirability response, which is often noticeable in surveys, that is, that participants may give biased answers that are coherent with prevailing social values (Polit, 2021), cannot be precluded.

Currently, the theoretical basis of measurement tools to assess safety climate has been limited and demonstrates potential for optimization. In addition, further research is needed to evaluate the relationship between safety culture and patient outcomes (Alsalem et al., 2018). However, the safety climate as measurable element of safety culture is not a static phenomenon (Seibert et al., 2020), but is subject to constant organisational change. The results of our survey therefore refer exclusively to the time of data collection and may already have changed over time. Another note of care should be taken when interpreting and generalizing the data to other hospitals as data analysis and results are limited to nurses and midwives in one hospital operator in Austria. Furthermore, due to recommendations of the works council in the hospital, it was not possible to evaluate the data between these two professions separately. Nevertheless, we have no

reason to assume that our sample differs essentially from the general population in terms of gender, age, or professional experience. Participation in the survey was voluntary, which can result in the involvement of particularly motivated health care staff and thus represent a possible misrepresentation of the results.

5 | CONCLUSIONS

This is one of the very rare studies in German-speaking countries to analyse safety culture and nurses and midwives' perspectives of safety climate. While safety culture was evaluated rather positive overall, several essential improvable explicit aspects of safety climate were identified. Nurses and midwives rated their own responsibility for patient safety higher than items related to safety concerns, whereas the lowest ratings refer to listening, communication, and received feedback from staff in a managerial position. Although stating only weak effects, results indicate that safety climate perspectives might vary by gender, age, and managerial position of participating nurses and midwives, while neither professional experience, nor hospital unit proved significant. Results might further demonstrate, that, despite existing national demands, efforts to record safety culture as an indicator of patient safety and quality of care are not yet sufficiently recognized.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Management can significantly influence nurses' safety behaviours by engaging leaders as role models for safety, promote an open, two-way channel for safety-related communication, and acknowledge and support safety systems in the workplace (Manapragada et al., 2019). Through a coordinated interaction of leadership management, environmental factors and work processes, the fundamentals for learning from errors among nurses and midwives can be established and an improvement in patient safety supported. Training of nurses and midwives to deal with errors and to improve their communication should be an integral part of continuing educational activities in hospitals. Leadership has an important task to enable health care staff in building a culture of safety (Fischer et al., 2018; Levine et al., 2020; WHO, 2011). As the largest professional group within hospitals nurses' and midwives' perspectives of safety climate can be considered as a leading indicator of the currently dominant safety culture. Regular, standardized safety climate measurement may offer valuable information to hospital leaders and (policy) decision-makers to maintain as well as continuously improve the culture of patient safety.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

MG was responsible for the study design and data collection. MG, KK, and PK were responsible for the data analysis. MG, KK, PK, and NN were responsible for the manuscript writing.

DATA AVAILABILITY STATEMENT

Data are openly available in a public repository that does not issue DOIs.

ETHICS STATEMENT

Participation in the survey was voluntary and anonymous. It is not possible to track back answers in the survey to individual persons. The right to withdraw from the survey at any time was pointed out and consent to the general data protection regulations was obtained. Furthermore, the worker's council of the hospital organisation was informed and gave their agreement. Permission to use the original SCS was obtained from Patient Safety Switzerland.

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