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EDITORIAL

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The conversations of leaders

It is well established across the leadership literature that good communication is paramount if the desired outcomes from individuals and teams are to be achieved. Timely, constructive communication is recognized as fundamental to effective leadership; research commonly claims that successful leaders spend a significant proportion of their time conversing with their team and significant stakeholders. As highlighted in a previous editorial (Henderson, 2015), leadership advice emphasizes conversations about creating a vision and inspiring the workforce; yet, equal attention should be devoted to maintaining and sustaining the created vision and the associated embedded values. For this to occur, leaders need to encourage and continue constructive behaviours that reinforce agreed values. High level interpersonal skills that faciltate engagement in conversations that share, model and reinforce behaviours reflective of these values are integral to everyday practice of successful leaders.

Prioritizing the endorsement and promotion of ideal behaviours is vital. Professional bodies have codes of conduct and standards that need to be upheld. Organisations require to adhere to legislation, and their performance is reviewed against particular criteria. In response to this, leadership conversations often revert to 'how do we show we meet this standard'; however, of equal responsibility is to the frontline staff to create the conditions where professional standards can be readily upheld and performance measures easily accounted for in everyday practice. In managing these requirements, the focus of leadership activity should not be on creating policy and procedures, often with accompanying rules that indicate compliance with such standards, as these can serve to curtail interest and motivation in work. The communication fundamental to leadership to address the obligations associated with requisite legislation and standards are conversations that serve to motivate and enact the operation of standards and values. Conversations are essential in relaying mutual respect. When respect is evident across a team, then conversations can be frank and honest without individuals feeling their integrity is threatened. This founding premise is paramount for conversations commensurate with growth and development of individuals, teams and the organisation to meet regulatory requirements.

Communication behaviours that demonstrate values include leaders being willing to listen, tolerate alternative ideas and accommodate periods of ambiguity. These are positive indicators to individuals and teams. These behaviours indicate to individuals and teams that fair and reasonable discussions can be conducted regarding work processes and practices. Important for nurses at all levels within their workplace is the responsibility to contribute to the open expression of ideas that assist with the production of possibilities of how the team can advance and improve their practice. Given the significance of individual contributions, a critical challenge for leaders is 'what are' the conversations that foster and enhance the broad scale adoption of receptive behaviours across teams. Leaders can initiate these conversations through simple exchanges during informal observation and participation in everyday work, for example, at appropriate times during a shift open questions such as – 'What wastes the most amount of your work time?' Or 'What would be the one thing that would significantly benefit your work?' These open and seemingly non-threatening questions give licence for the staff member to share frustrations regarding their work that is not progressing as scheduled. Responses are potentially broad, such as, 'It takes me at least 15 minutes to find electronic patient scales that work'; or 'There are no suitable rooms in this area to have a private discussion'. While these problems are generally not able to be instantly addressed, a good leader can raise the issues with the appropriate personnel in an attempt in the longer term to achieve resolution. Considered exploration of the question about weighing patients within the facility may result in either organising repair of the scales to be repaired or discussions with finance about procurement of new scales. These conversations are an important approach to making problems and long-term 'workaround' activities 'more visible' and showing staff that the leadership team are responding. Accordingly, effective leaders will seek to problem solve through the available avenues. For example, while it is not practical to build more rooms, negotiation around the best use of space or even some form of modification may offer a satisfactory outcome regarding private spaces. Seeking to address difficulties and arriving at a reasonable resolution with regard to individual frustrations conveys a message that a leader is committed to making a difference.

Further to seeking avenues to address problems and issues, leaders can ask pertinent questions about the purpose of work tasks. Specifically, asking questions when processes are underway about what is 'actually' needed and what is superfluous can also be insightful. Valuable information can be obtained regarding what is busy, yet 'empty' work, and what is helpful. Systematically reviewing and asking 'why' at numerous stages of a review process can assist in differentiating what is of importance in the activity and needs to be retained. It is not unusual for processes to be unnecessarily 'side tracked' resulting in the obfuscation of the intended purpose of the activity. The key essence is that leaders stand beside their teams so

leaders are cognizant of the demands that challenge work practices. When working alongside their teams they are well positioned to modify or explore how the requirements have been interpreted. This commitment can serve to optimize a culture of respect and trust.

Considered conversations can affect the capacity for change. Effective leaders have conversations that directly assist the realization of values, as they encourage different ways of thinking and give legitimacy to different ways of approaching work. When the leader stands beside their team when challenges arise, the teams begin to trust themselves, each other and their leader. Teams will review and consider their work with the appropriate encouragement of leaders. It is this gradual collective modification in tasks and behaviour that can bring about change in how things are done and eventually a change in culture. Through meaningful and constructive conversations leaders can successfully guide teams to appraise and determine how practice can achieve the desired outcomes in the most expedient manner.

ETHICAL APPROVAL

Not required.

CONFLICT OF INTEREST

None.

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ORIGINAL ARTICLE

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Front-line nurses' responses to organisational changes during the COVID-19 in Spain: A qualitative rapid appraisal

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Abstract

Aims: To identify the organisational changes faced by front-line nurses working with COVID-19 patients during the first wave and describe how they responded to these changes.

Background: The COVID-19 pandemic has altered the provision of care and the management of health care around the world. Evolving information about SARS-CoV-2 meant that health care facilities had to be reorganised continually, causing stress and anxiety for nurses.

Methods: Qualitative study based on Rapid Research Evaluation and Appraisal (RREAL). The research took place in hospital and community health settings of the Spanish national health system with a purposive sampling of 23 front-line nurses. Semi-structured interviews were conducted between May and June 2020. The duration was 30–45 min per interview. We used the Dedoose® data analysis software to perform a thematic analysis.

Results: Nurses responded to organisational changes using the following strategies: improvisation, adaptation and learning.

Conclusion: Our rapid approach allowed us to record how nurses responded to changing organisation, information that is easily lost in a disaster such as the COVID-19. Implications for nursing management: Knowing about their strategies can help planning for future health disasters, including subsequent waves of the COVID-19.

KEYWORDS

COVID-19 (coronavirus disease 2019), health care facilities, nursing, organisation and administration, qualitative research

1 | INTRODUCTION

In the face of COVID-19 pandemic, all aspects of the provision and management of health care were affected. Spain implemented measures to prevent the spread of COVID-19: quarantine, isolation, social distancing and a stay-at-home order, which were insufficient. Spain was among the countries to suffer the highest mortality in the first wave in Europe and around the world (Sánchez-Villena & de La Fuente-Fig uerola, 2020).

Health systems should have well-defined plans to maintain control of the situation and to ensure the ability to provide care. If the health system cannot guarantee this, nurses feel abandoned and unsafe (O'Boyle et al., 2006). Health managers should consider these concerns because they can affect pandemic response (McMullan et al., 2016). During the first wave of the pandemic, health systems were disorganised and often lacked organisational support to help nurses cope with the situation.

What is already known about the topic?

- The increased demand for health care and prioritization of COVID-19 patients resulted in a work overload for health care professionals. Effective leadership among nursing managers helps institutions meet organisational challenges. However, this support was often lacking at the beginning of the pandemic, as health systems were overwhelmed by the flow of patients.

What this paper adds?

- Understanding the organisational changes that took place during the COVID-19 pandemia and how nurses responded to them can inform planning for future health disasters.
- Front-line nurses reported developing self-management strategies to find solutions to the organisational changes they faced during the first wave: problem-solving, adaptation and learning.

2 | BACKGROUND

The increased demand for health care and prioritization of COVID-19 patients resulted in a work overload for health care professionals. The complexity of care due to the lack of knowledge about the virus and its transmission pathways, the scarcity of personal protection equipment (PPE) and the lack of specific treatments for COVID-19 resulted in a marked increase in stress among health care workers (Mo et al., 2020). The need to adapt the provision of services as information on SARS-CoV-2 emerged required rapid changes in care procedures and protocols, which increased nurses' stress and anxiety (Lázaro-Pérez et al., 2020). Nurses had difficulty maintaining a work environment that was ethical and safe—both physically and psychologically—and facing the challenges of the pandemic (Ulrich et al., 2020).

In previous pandemics, nurses have shown professional responsibility and ensured patient care despite limited resources (McMullan et al., 2016). Nurses acted in these health disasters despite suffering alarming psychological symptoms, sacrificed their own needs and acted selflessly (Aliakbari et al., 2015). Despite feeling unprepared to respond to a given health disaster, nurses developed higher-than-expected emergency response skills and a high sense of ethical and professional commitment (Jeong & Lee, 2020).

Personal resilience and social and institutional support are protective factors against adversity and stress during health disasters (Labrague et al., 2018). In the COVID-19 pandemic, personal resilience and social support have helped nurses handle stress and have been key to nurses' mental health (Cooper et al., 2020). High levels of institutional support are protective against the stress and anxiety caused by health disasters such as emerging infectious diseases. Effective leadership among nursing managers helps institutions meet organisational challenges (Labrague et al., 2020). However, this support was often lacking at the beginning of the pandemic, as health systems were overwhelmed by the flow of patients. There is little information about how front-line nurses respond to changing circumstances, both in health disasters in general and in the case of COVID-19 in particular.

Given this scarcity, we investigated nurses' ability to develop and respond to changes in their work environment and the provision of care during the first wave of the pandemic. Our findings can be useful in planning for future pandemics or other health disasters, especially because our rapid approach allowed us to collect data while the crisis was still underway. Understanding the organisational changes that took place and how nurses responded to them can inform planning for future health disasters. The aim of this study was to identify the organisational changes faced by front-line nurses working with COVID-19 patients during the first wave and describe how they responded to these changes.

3 | METHODS

3.1 | Design

A qualitative study was carried out using Rapid Research Evaluation and Appraisal (RREAL) (Vindrola-Padros et al., 2020). The RREAL model is particularly suited to studying health emergencies because it makes possible to obtain qualitative results in a short period of time (Green & Thorogood, 2013).

3.2 | Participants and data collection

Participants were selected based on purposive sampling (Morse & Field, 1995). We used the snowball technique (Naderifar et al., 2017)

to recruit nurses from hospital and community health settings who provided care during the first wave of the pandemic in Spain, which took place from March to May 2020. The inclusion criterion was being a registered nurse caring for COVID-19 patients during the first wave in Spain. The exclusion criterion was being on leave from work during this period.

We sent email messages to nurses known to the research team explaining the study objectives, inviting them to contact us by email if they were interested in participating and asking them to forward the message to other nurses. We sent further information and the informed consent document to the potential participants who responded. After they returned the signed consent document, we scheduled an interview via Skype or Zoom. We conducted continuous analysis of the data until reaching saturation at 23 participants. At this point, we considered data collection to be complete. The socio-demographic characteristics of participating nurses are summarized in Table 1.

Three team researchers (1, 2 and 3) conducted semi-structured interviews with 23 nurses from different health care sectors from May to June 2020. We asked participants the following questions:

- In your opinion, how has the organisation of the health system changed since the start of the pandemic?
- In your experience, how have these organisational changes affected your tasks and roles and how nursing care is delivered?

The duration of the interviews was 30–45 min, and all interviews were recorded.

3.3 | Data analysis

We used Braun and Clarke's (2014) thematic analysis to identify the most frequent topics from the interviews that were relevant to the study objectives. Using the Dedoose® software package, we identified meaning units and grouped them into subthemes and themes. We identified patterns in the data and organised the themes systematically to meet our research objectives, following the steps proposed by Braun and Clarke as detailed in Table 2 (Colorafi & Evans, 2016) (see Table 2).

TABLE 1 Socio-demographic characteristics of participants

Distribution by sex		
Male	5	22%
Female	18	78%
Total	23	100%
Distribution by age		
23–29 years	8	35%
30–49 years	10	43%
50–62 years	5	22%
Distribution by type of health centre		
Hospital	15	65%
Primary care	6	26%
Intermediate care	2	9%

3.4 | Rigour

This study meets the criteria of credibility, transferability, dependability and confirmability, which ensure trustworthiness in qualitative research (Polit & Beck, 2017). We took a reflexive stance, considering that three of the researchers (1, 4 and 5) are nurses involved in providing care during the COVID-19 pandemic. (However, they had had no prior contact with the participants). The interviewers took notes on their own impressions and reactions when they interacted with participants in order to take their own positionality into account during analysis. COREQ was used as reporting guidelines in line with EQUATOR (Tong et al., 2007).

3.5 | Ethical considerations

The study was approved by the institutional review board of the host university (IRB) (File 5184) and followed the principles of the Helsinki Declaration. The participants received oral and written information explaining that their participation was voluntary and that they could withdraw from the project at any time. We anonymized the interviews by substituting names with an alphanumeric code.

4 | RESULTS

We identified three themes in participants' reports of their responses to organisational changes and the provision of care during the first wave of the pandemic: problem-solving, adaptation and learning. Each theme contains two or three subthemes (see Table 3).

4.1 | Improvisation

Nurses had to find innovative solutions to solve problems arising from the care needs of people infected or potentially infected with COVID-19. The abrupt start of the pandemic required nurses to improvise in order to protect themselves from contagion and to work in new spaces that had been devised for caring for COVID-19 patients.

4.1.1 | Improvisation in the use of protective material

The participants reported using improvisation to protect themselves, given the lack of certified protective gear. This included both making do with whatever certified equipment was available and making their own equipment out of uncertified materials.

TABLE 2 Phases of thematic analysis, following Braun and Clarke (2014)

Phases	Description	Collaborators
1	Become familiar with the data by listening to recordings, transcribing them and reading and rereading the transcripts	GTN, BA, PGE, MSM, EVS
2	Identified meaning units within transcripts and generate codes. Identify relationships among codes	GTN, BA, PGE, MSM, EVS
3	Identified relationships between subthemes	GTN, BA, PGE
4	Created groups of codes into seven subthemes. Define each subtheme	GTN, BA, PGE, MRL
5	Identify three themes comprised of seven subthemes. Name the themes. Devise a glossary of themes	GTN, BA, PGE, DM, MRL
6	Wrote the final report	GTN, BA, PGE, DM, MRL

TABLE 3 Themes and subthemes

Themes	Subthemes
1. Improvisation	a. Improvisation in the use of protective equipment b. Improvisation of spaces to care for people with COVID-19
2. Adaptation	a. Workplace mobility b. Minimizing risk while caring for people with COVID-19 c. COVID-19 care protocols
3. Learning	a. Seeking knowledge b. Sharing knowledge

> We handled organization on the fly, with the material we had at the time. So we were really improvising a bit, to tell you the truth.
>
> (P5 nurse)

> We went to buy plastic to make masks because we didn't know if we were going to have any; the surgical ones didn't work. We didn't know at first how things were going to go.
>
> (P1 nurse)

> Well, how can there not be gowns available? I need it to be waterproof, because I have to be next to him. And the gentleman has no mask, and I have to wash and feed him. That's when we started with garbage bags, like in many places. We made our own… we felt protected.
>
> (P25 nurse)

4.1.2 | Improvisation of spaces to care for people with COVID-19

Some participants reported that they improvised the internal organisation of care services to face the problem of a lack of directives from management.

> We organized the floor ourselves without help, since they didn't give us any guidelines on how to act, etc.
>
> (P12 nurse)

> In the ICU they had covered the door with plastic sheeting and set up a table with the necessary material, although for PPEs you had to go to the supervisor and ask her for them.
>
> (P16 nurse)

Nursing care was improvised in various facilities, some of them new, reorganised according to the characteristics of the virus and the paths of contagion. These organisational changes caused a sense of chaos and disorganisation.

> We've had to learn where everything was, the layout of the space. We were lost because it wasn't only a new facility that we didn't know but also the facility was upside down, since the space had to be organized differently to treat the virus. It was really hard for me to find equipment and things, and that made the work more difficult and caused frustration.
>
> (P27 nurse)

As these examples show, participants used improvisation to address the organisational challenges presented by the pandemic.

4.2 | Adaptation

Because this health emergency created unprecedented pressure on health services, participants had to adapt their work practices in unexpected ways. Participants reported having to adapt quickly to new departments, risks and care protocols.

4.2.1 | Workplace mobility

Numerous nurses around Spain were forced to move between hospital departments, between primary care centres and between regular hospitals and field hospitals. This mobility caused uncertainty among participants, because the changes were unpredictable.

> Every day at 7 pm they told us what work we'd do the next day. We didn't know if we'd being doing respiratory care, wound care, house calls… Each day was different. We've been like this for 3 months.
>
> (P29 nurse)

The constant movement of nurses to different facilities and to departments that served COVID-19 patients exclusively meant that they had to adapt quickly.

> We have been adapting very quickly to a way of doing things and to equipment that weren't our standard ones. I think we're doing a good job.
>
> (P19 nurse)

4.2.2 | Minimizing risk while caring for people sick with or potentially sick with COVID-19

The characteristics of COVID-19 conditioned planning care to minimize the risk of contagion. Nurses had to adapt to the shortage of PPEs. Contact with patients who were infected or potentially infected with COVID-19 had to be minimized to reduce the risk of infection. They had to adapt the frequency with which they conducted interventions and organised themselves so as to carry out as many as possible in a single visit to the patient.

> Maybe you had to be there [with the patient] for two hours because if it was a new admission maybe it took you two hours. And then later, only on a few occasions, when we had to bathe the patient, we made it coincide, for example, with the medication or the change of position or with everything we had to do with that patient. But of course if there's an emergency, of course you have to go back in. You have to get dressed again and go in.
>
> (P1 nurse)

Another of the adaptive changes explained by nurses refers to the support provided to relatives of people sick with COVID-19.

> Above all, we weren't able to provide support to family members until after a month or so. From when the pandemic started, a month and a half almost or something like that. Because there wasn't protection equipment. Each person that you took in to see a family member, you have to give them a gown, a suit that they have to put on, masks.
>
> (P5 nurse)

4.2.3 | COVID-19 care protocols

New information continually emerged about the transmission and treatment of SARS-CoV-2. Participants reported difficulty in adapting so frequently to new protocols.

> We've had about 12 protocol changes, and I understand it, since we have to adapt. But of course before we could adapt to one, it was already changed to another one.
>
> (P16 nurse)

The existence of different protocols at different facilities caused a complex adaptation process as a consequence of the confusion, insecurity and lack of trust related to their reliability and applicability.

> Sometimes the indications are even contradictory: there are areas where it's very defined, and others not at all… That creates confusion, since in the end you don't know what you have to do. For example, the versions of my home facility and the facility where I've been working until now are contradictory. I think we need a little more organization to come to an agreement among all of us.
>
> (P29 nurse)

As seen in the above examples, changing circumstances meant that nurses had to be ready to adapt their ways of working.

4.3 | Learning

Faced with a lack of knowledge about clinical practice, diagnostic procedures, care pathways, the use of PPE and measures to reduce the risk of contagion, participants reported that they acted proactively to find answers to their questions. They acquired this professional knowledge outside of conventional training, which was generally not available due to the crisis.

4.3.1 | Seeking knowledge

Although some health centres attempted to train professionals, several participants reported that they had to learn on their own.

> When they take me out of my department overnight and tell me, 'Starting tomorrow your department is closed; you're going to the COVID floor," they don't tell me what will happen, what won't happen, how I should work, how I should protect myself. I start on

> my own to look at how it's transmitted, where I have to be more careful. Whether it's by medium-sized droplets, by contact… But [I did this] on my own.
>
> (P3 nurse)

Participants agreed that the lack of time for formal, institutional training led them quickly to seek knowledge on their own, an activity that had not been typical.

> I think training is difficult because it's something that no one knows. COVID is very new. At the beginning of February it was a normal flu that all of us had to get. And in the end, it turns out that it's much stronger. So, I think that everyone is lacking training and we have to learn on the fly and learn from our mistakes.
>
> (P24 nurse)

4.3.2 | Sharing knowledge

Participants shared new knowledge about COVID-19 with their colleagues through professional groups.

> I downloaded a lot of things, and the articles I read them as they were published. I would go on the internet, contact some anesthetists and say, "All the documentation you have, send it to me… so that I can read and know a little about the course of the disease," because it's also a pathology that you do not know about.
>
> (P3 nurse)

They often shared this knowledge through social media.

> At first in a group we sent each other protocols that we found, actions that must be taken when the case becomes complicated. Even the basic things that no one explained: how to put a patient in prone position, instead of the venti- a basic mask, wearing a Monaghan [type of PPE] because it reduces the risk that you will infect others.
>
> (P10 nurse)

As we have shown, learning was a key way that participants responded to organisational changes during the pandemic.

5 | DISCUSSION

We identified three themes in participants' descriptions of how they responded to organisational changes during the first wave of the COVID-19 pandemic in Spain: (a) improvisation, (b) adaptation and (c) learning. Our analysis contributes to our understanding of the capacity of front-line nurses to develop professionally during health crises (Xue et al., 2020) and especially during the first wave of COVID-19, with implications for nursing management.

5.1 | Improvisation

During the first wave of COVID-19, one of the main problems nurses faced was the lack of PPEs. Participants had to maximize the available equipment and, as a result, had to limit their contact with patients, resulting in the feeling that they were offering poorer quality care, as also seen in Rushton and Grady (2020). Other studies have shown that working without the proper protection causes nurses to feel fear (Liu et al., 2020), stress (Mo et al., 2020) and a lack of safety (Yin & Zeng, 2020). To compensate for the lack of PPEs, participants used improvised equipment to protect themselves. In the face of risk, participants found solutions on their own—without institutional support—so that they could keep working.

The urgent need for new spaces to care for people sick with COVID-19, the lack of clear guidelines from management and the lack of ICU and critical care beds meant that participants had to solve organisational problems through innovative strategies and improvisation. Labrague and De los Santos (2020) have shown that when these changes are accompanied by good institutional support, they cause less anxiety in nurses. Other researchers have shown that effective communication can prevent conflicts caused by discrepant protocols (Karam et al., 2018). Our analysis indicates that in the absence of clear guidelines and institutional support, nurses solved problems quickly to provide care for people infected with or potentially infected with COVID-19, making do with the resources that were available.

5.2 | Adaptation

Emergency care nurses in China at the onset of the pandemic reported that attitudes such as motivation and enthusiasm helped them adapt to being moved across departments, facilities and even regions to care for people with COVID-19 (Hou, Zhang, et al., 2020; Hou, Zhou, et al., 2020; Lam et al., 2019). Our participants reported being able to adapt quickly to new work environments, overcoming the uncertainty caused by being in a different department or facility or with different colleagues or on a different schedule.

The scarcity of PPEs at the beginning of the pandemic was generalized around the world and health facilities established priorities according to the risk of exposure (Hou, Zhang, et al., 2020; Hou, Zhou, et al., 2020). This lack of PPEs and its effect on patient care has been identified in previous epidemics (Lam et al., 2019). Our participants had to adapt to new protocols for using PPEs. Scarcity caused them to plan their interventions with patients according to the availability of PPEs. This had an impact on nursing interventions, because contact with patients who were infected or potentially infected with COVID-19 had to be minimized to reduce

the risk of infection. Participants reported that this necessity gave them the sense that the quality of care was lower. Previous research shows the high degree of commitment and responsibility of nurses during natural disasters (Aliakbari et al., 2015) and in epidemics such as influenza (Lam & Hung, 2013) and Ebola (Pincha Baduge et al., 2017). Participants' ability to adapt to organisational changes, despite risk to their own health and lack of adequate institutional support, points to their commitment to providing patient care.

In previous epidemics, emergency room nurses positively evaluated the protocols and clinical guidelines that were updated as information about the pathogen became available. The confusion caused by the lack of knowledge about the pathogen was also identified as an adverse factor at the beginning of a pandemic (Lam et al., 2019). According to Xue et al. (2020) in natural disasters, the lack of clear protocols and clinical guidelines for the everyday work of professionals affects their capacity to make decisions and prioritize care. Our results show that this finding also applies to the COVID-19 pandemic.

5.3 | Learning

When health centres could not provide training to nurses, participants learned about the virus on their own. Reinforcing strategies for individual learning is key, but systemic training could be more useful in these situations (Kackin et al., 2020; Yin & Zeng, 2020). Research shows that in previous epidemics such as Ebola, emergency service professionals reported that they had sufficient preparation to offer care to infected people (Pincha Baduge et al., 2017). In Spain, during the first wave of COVID-19, there were insufficient data about SARS-CoV-2 and its transmission pathways. The pace of formal training could not keep up with changing information about the virus. As a result, our participants shared with other professionals the information they acquired. This support and cooperation among co-workers have also emerged in other studies of COVID-19 (Hou, Zhang, et al., 2020; Hou, Zhou, et al., 2020; Sun et al., 2020). Our results reveal the capacity of nursing teams to learn on their own, given the unavailability of formal training. We have shown that social networking is an additional way that nurses share information with colleagues both within and outside of nursing and locally and internationally. Our analysis reveals nurses' ability to develop professionally during health disasters.

6 | LIMITATIONS AND FUTURE DIRECTIONS

Our qualitative design means that our results cannot be generalized beyond the study population. To achieve generalizable results, a next step would be to design a mixed-method study that would allow us to examine the statistical significance of our findings. A comparative angle is also necessary to determine whether nurses outside Spain had similar experiences. We should also note that the stress and trauma experienced by some participants could have influenced their responses.

7 | CONCLUSIONS

Our rapid approach made it possible to capture fleeting information about how facilities were organised and how nurses worked during the first wave of the COVID-19 pandemic. Understanding nurses' ability to respond to organisational changes during the first wave of the COVID-19 pandemic can be useful for redesigning work sites and organisations and implementing the changes needed to ultimately improve staff health and patient outcomes. Participants reported developing self-management strategies to find solutions to the organisational changes they faced during the first wave: problem-solving, adaptation and learning. These results fill a gap in the literature about how nurses deal in their daily practice with organisational changes during a health disaster.

8 | IMPLICATIONS FOR NURSING MANAGEMENT

Nursing supervisors and administrators can use these findings to improve organisational management policies in health disasters, including subsequent waves of the COVID-19 pandemic. Understanding nurses' ability to respond to organisational changes during the first wave of the COVID-19 pandemic can be useful for motivating and encouraging nursing teams. Obviously, the most important thing health centres can do is plan adequately based on the experience of nurses during this health disaster to ensure that protective gear, spaces, communication and training are adequate.

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CONFLICT OF INTEREST

We have no conflict of interest.

AUTHOR CONTRIBUTIONS

All the authors have participated in the conception and design of the work. GTN, BA, PGE, MSM, EVS, DM and MRL have made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content; and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. GTN, BA, PGE and MRL been involved in drafting the manuscript. GTN,

BA, PGE, MSM, EVS, DM and MRL revising it critically for important intellectual content.

ETHICAL APPROVAL

The study was approved by the Institutional Review Board of the Universitat Autónoma de Barcelona (File 5184).

DATA AVAILABILITY STATEMENT

Author elects to not share data.

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ORIGINAL ARTICLE

WILEY

Components of the Magnet® model provide structure for the future vision of nurse managers' work: A qualitative perspective of nurse managers

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Abstract

Aim: To describe nurse managers' views of their work in the future.

Background: Ongoing reformation of health care organisations includes profound changes to nurse managers' work practices.

Method: A qualitative approach was applied to elicit views of nurse managers (n = 133) from eight Finnish specialized medical care hospitals through one open-ended question about their future work in November 2019. The acquired data were subjected to inductive thematic content analysis.

Results: Four themes were identified in the nurse managers' responses, indicating that they anticipated: 1) a shift from hierarchical leadership to shared governance, 2) an increasing focus on proactive and systematic work, 3) development of evidence-based practices and 4) improvement in the attractiveness and effectiveness of the organisation.

Conclusions: Nurse managers envisage their future work will follow the transformational leadership model. Shared governance and multidisciplinary team leading, with a stronger focus on proactive strategic planning will extend their power to influence decision-making. Administrative supporting systems will free more time from their daily routine work for interactions with staff.

Implications for Nursing Management: Clarification of the managers' job description along with administrative support systems is anticipated to strengthen leadership, facilitate management, enhance decision-making and increase the attractiveness and effectiveness of both health care organisations and nurse managers' work.

KEYWORDS

future, leadership, management, nurse managers, thematic analysis

1 | BACKGROUND

Traditionally, management focuses on the creation of order and stability, whereas leadership is about adaptation and constructive change (Northouse, 2016). In health care organisations, nurse managers are department leaders. Their leadership capabilities influence nursing care and outcomes, for example patient safety, patient and staff satisfaction, and daily operations (Lawson, 2020).

Nurse managers' work has been directed more by reactive thinking than by proactive and strategic planning (Bjerregård Madsen et al., 2016). It has also been described as overloaded, fragmented and focused on fire-fighting rather than managing and controlling the environment (Adriaenssens, Hamelink and Bogaert, 2017). Strategic planning and decision-making skills are essential for today's nurse managers (Nelson-Brantley et al., 2018), as the work they are facing is complex, dynamic and uncertain (Giddens & Thompson, 2018). Moreover, nurse managers have broad responsibilities (Nelson-Brantley *et al*., 2018), but often lack decision-making power. The literature shows that factors such as participation in strategic planning and access to organisational resources, data and other information enhance nurse managers' sense of work control and their retention (Omery et al., 2019).

Implementation of a shared governance culture involves staff nurses in decision-making in clinical settings. It encourages staff to express their issues and concerns regarding professional practice, service quality and competency in practice (Moreno et al., 2018). It has been shown to improve work environments and empowerment, nurses' job satisfaction and nursing staff retention (Kyytsönen et al., 2020). Moreover, in modern organisations authentic partnerships are established between nurse leaders and medical leaders, who share responsibilities in unit- and organisational-level decision-making (Thude et al., 2017). It is time to step away from traditional hierarchies and embrace shared and professional governance, and assign decision-making to those with relevant expertise (Adriaenssens, Hamelink and Bogaert, 2017).

Nurse managers consider support from their supervisors and staff nurses important, together with coaching, mentoring and support networks (Adriaenssens, Hamelink and Bogaert, 2017). They need also administrative support services. For example, investment in human resource management, recruitment and reports (financial and system) reportedly enable nurse managers to allocate more time to clinical leadership by reducing overall workloads. This also reportedly enhances financial efficiency, human resource processes, capacity for strategic leadership and job satisfaction of both nurse managers and staff nurses (Simpson et al., 2017; El Haddad et al., 2019). There is clear consensus that future nurse managers will have supportive relationships and high visibility (Omery et al., 2019), make greater use of data and evidence to support decisions and practice and focus strongly on the quality and safety of care (Nelson-Brantley et al., 2019).

Modern leadership styles, such as transformational and authentic leadership styles, are associated with significantly improved outcomes for the nursing workforce and their work environments. They have positive effects on organisational culture and patient outcomes. These include improvements in nurse managers' job satisfaction, staff satisfaction with structural empowerment, work engagement and trust in the manager (Cummings et al., 2018). Nurse managers also have an essential role in supporting their staff's professional development and inspiring them to embrace evidence-based practice improvement (Cummings et al., 2018). One example of modern attractive organisation is well-known Magnet® hospital model, in which characteristics are transformational leadership, structural empowerment, exemplary professional practice, new knowledge, innovations, improvement and empirical quality results (ANCC, 2020). To respond to today's challenges in the complex health care environment, nurse managers' work needs to be transformative.

Nurse managers' current leadership styles and roles have received substantial attention, but very few studies have addressed future leadership, especially nurse managers' views. Therefore, this study was conducted to ascertain nurse managers' views of their future work.

1.1 | The aim of the study

The aim of the study was to describe nurse managers' views of their work in the future.

2 | METHODS

2.1 | Data collection

The Finnish health care sector includes specialized medical care, primary health care and private sector hospitals (Ministry of Social Affairs & Health, 2020). In this study, data were collected by questionnaire from nurse managers ($N = 756$) working in eight specialized medical care hospitals (five university hospitals and three central hospitals, with 390 to 2069 beds, employing between 1,285 and 10,170 nursing staff) in Finland in November 2019. Here, we report responses to one open-ended question, part of the Nurse Manager Work Content Questionnaire (NMWCQ) (Nurmeksela et al., 2019), which invited the participants to describe their views regarding nurse managers' work in the future. The electronic questionnaire was sent to nurse managers through a contact person at each hospital, 207 nurse managers responded to the survey, and of those 133 responded to the open-ended question.

2.2 | Data analysis

The responses of nurse managers who answered to the open-ended question were subjected to inductive thematic content analysis (Vaismoradi et al., 2013) as follows. First, the text was pasted into a Word file, resulting in 28 pages of narrative text; then, descriptive accounts were carefully read to obtain an overall impression of the data. In the second round, the text was coded and marked in colours according to the subject areas. The coded subject areas were assigned to tabulated categories in efforts to acquire understanding of both manifest and latent meaning; then, final themes were formulated (Figure 1).

2.3 | Rigour

Strenuous efforts were made throughout the study to meet criteria for three categories of rigour: credibility, transferability, dependability and confirmability (Cypress, 2017). All responders were voluntary participants and had personal experience of the focal field (nurse management). They were deemed to be highly suitable informants. They answered the question in an authentic atmosphere of the context, which avoids possible bias associated with presence of a researcher. It is not known whether responders answered alone, but unlikely that anyone influenced them. All comments in responses to the open-ended question were extracted and carefully recorded before formulating themes and views of the participants (Vaismoradi et al., 2013). Efforts were made to ensure that the thematic analysis process was transparent (Table S1, Figure 1). In addition, representative quotations are included in the text to enhance credibility. The data were initially analysed by one author, which may weaken the confirmability, but all the authors discussed the results. New insights were recorded, which provide indications of the findings' quality and ability to increase understanding of focal phenomena (Vaismoradi et al., 2013), but ultimately this is for readers rather than the authors to judge.

2.4 | Ethical considerations

Approval was obtained for the study from the Ethics Committee of the University of Eastern Finland (Decision Date: 07.02.2017, No: 6/2017) before starting the data collection process. Each hospital also provided permission for the study. An introductory letter providing information about the study was sent to each respondent together with a link to the questionnaire. In addition, the respondents were asked to sign an electronic consent form. Participation in the study and answering the questions was voluntary and anonymous (TENK, 2019). The electronic survey did not collect responders' name, email addresses or other personnel information. The European Union's General Data Protection Regulation was followed throughout the study (European Commission, 2016).

3 | RESULTS

3.1 | Demographics of the nurse managers

The 133 nurse managers had an average age of 51 years (range 30–64 years), most (92%) were female, and their average total work experience was 26 years, including 9 years, on average, as a nurse manager (range 0.5–35 years). On average, 43 nurses reported to them (range: 10 to 180).

3.2 | Nurse managers' work in the future

Four themes were identified in the nurse managers' responses, indicating that they anticipated: 1) a shift from hierarchical leadership to shared governance, 2) an increasing focus on proactive and systematic work, 3) development of evidence-based practices and 4) improvement in the attractiveness and effectiveness of the organisation (Figure 2).

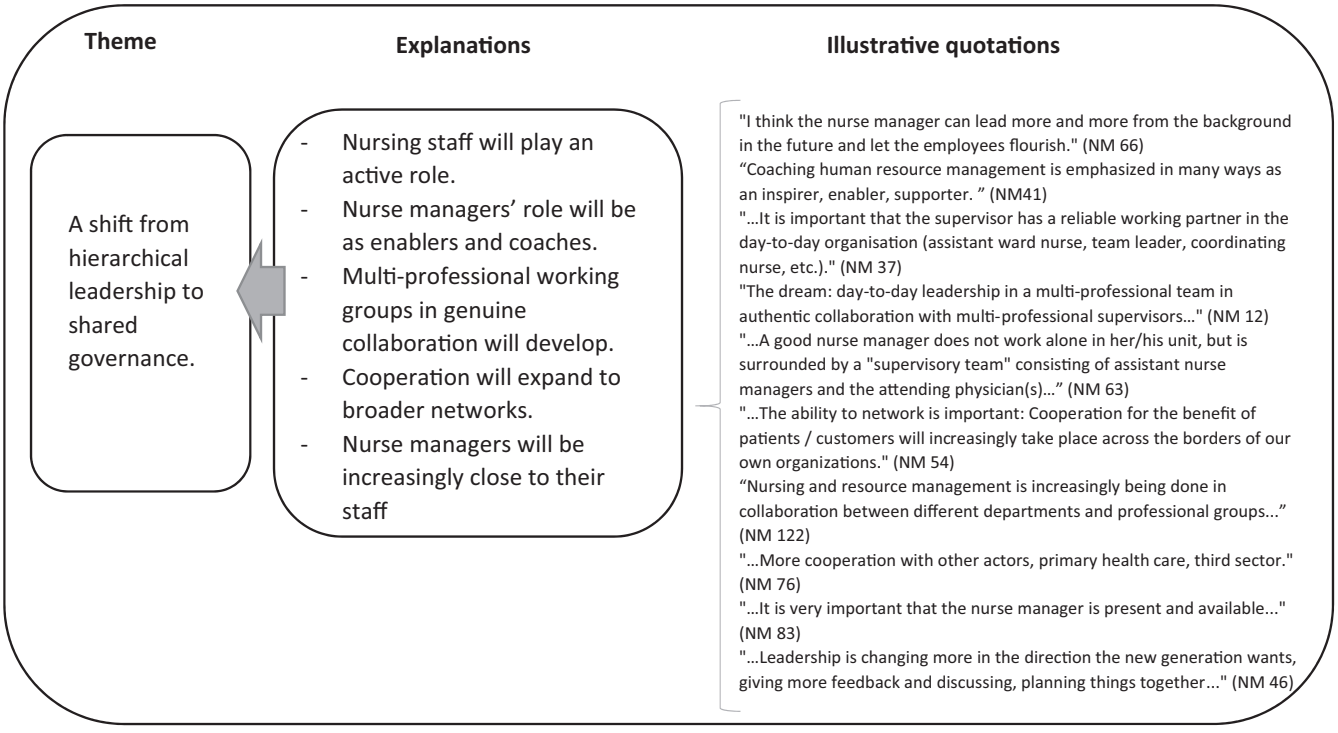

FIGURE 1 Example of the analytical process

3.2.1 | A shift from hierarchical leadership to shared governance

Nurse managers expected their work to be substantially affected by a shift towards shared governance, leading to sharing of work and responsibilities in several ways, including sharing of routine management duties with nurse management colleagues. This would allow them to focus more on leadership. They also expressed expectations that nursing development activities will be shared more with staff nurses and clinical nurse specialists and that nursing staff will participate actively in making decisions about their personal work and education plans.

> I think the nurse manager will be able to lead more and more from the background in the future and let the employees flourish.(NM 66)

They also expected nurse managers' roles to include more enablement, provision of support and inspiration, coaching, mentoring and guiding staff development. They expected nurse managers to act as coordinators of multidisciplinary teams with medical leaders, in which all members accept unit-level responsibility. One nurse manager expressed this as follows, '*The dream: day-to-day leadership in a multi-professional team in authentic collaboration with multi-professional supervisors…*' (NM 12).

They anticipated cooperation at multiple levels, with more authentic multidisciplinary cooperation than in traditional regimes, and collaboration extending to patients and their families. In their view, nursing and resource management will involve collaboration between different departments and professional groups. Nurse managers envisaged an expansion of networking from mainly inter-organisational links within traditional silos to encompass various organisations. As one respondent wrote, '*…More cooperation with other actors, primary health care, third sector.*' (NM 76). In addition, they expected international networking to grow.

The respondents stated that employees need visible leadership and support from their supervisors. They expected promotion of a healthy work environment and well-being to continue being a central element of nurse managers' work, due to increasing difficulties in personnel recruitment and retention. For example, they envisaged increasing needs to: discuss and provide occupational health care, help nursing staff to cope with challenges at work and tailor employees' work tasks. They also clearly recognized variations in needs of staff nurses of different generations and corresponding changes in the leadership required. Similarly, they recognized that managers from different generations have varying skill in providing feedback to staff, having discussions with them, and planning together.

> …Leadership is changing more in the direction the new generation wants, giving more feedback and discussing, planning things together…(NM 46)

3.2.2 | An increasing focus on proactive and systematic work

Nurse managers described their current work as being mostly unplanned and reactive. In the future, they expect the work of nurse managers to include forward-looking, systematic, and proactive planning. As one of managers indicated, '*…Looking to the future and planning for the future… Less 'fire-fighting'.*' (NM 106). This means that with proactive strategic planning future scenarios are being taken into account. In future-looking thinking, real-time decisions are made and always considered their impact to future. This will require nurse managers' involvement in strategic planning at least at operational level in their units.

They shared a vision that their contributions will broaden, but this will require major changes in organisational culture and work processes. A recurring theme was a need to meet with those in positions of responsibility and power so that nurse managers have

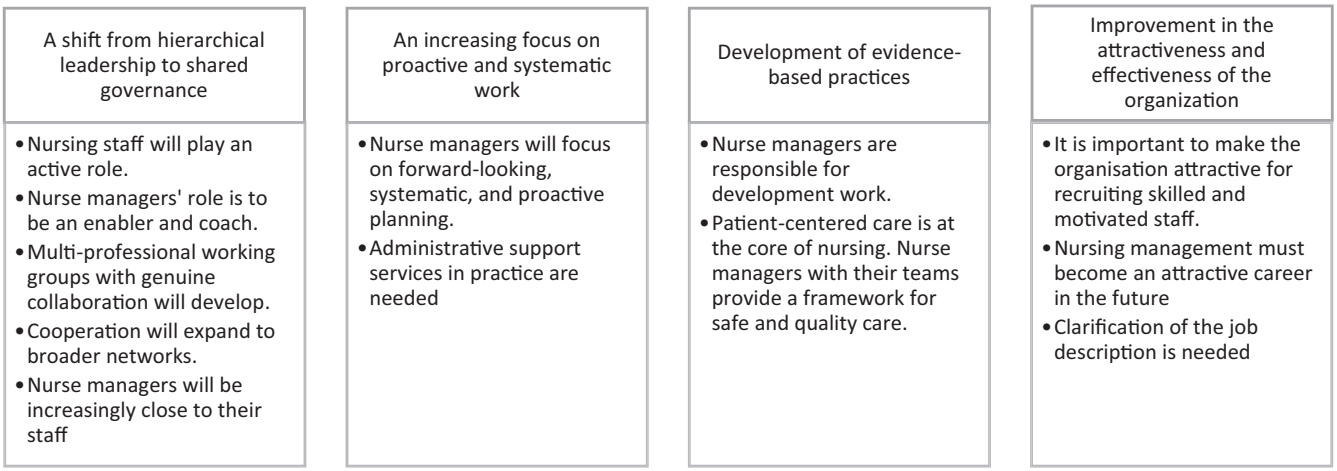

FIGURE 2 Themes regarding future nurse managers' work identified in the participants' responses

opportunities to influence decision-making strategies. They believed this would improve outcomes, and they were also willing to share responsibility for financial planning and performance evaluation/ outcomes. They believed this would help to ensure that decisions were based on current, rather than historical, information and help efforts to meet units' strategic goals.

> …Nurse managers are allowed to be active as specialists in their field, who are listened to and whose opinions have a meaning/ impact…(NM 12)

Desired changes include the human resources department taking responsibility for activities such as personnel recruitment and allocation, thereby ensuring that nursing units' real-time staffing needs are competently met. They also expected technology to increasingly support their daily work and routine administrative tasks, including more real-time automated programs that assist daily work shift planning, automatically taking into account competences and staff sizing. For example, one nurse manager expressed *'hope to move from action-based shift planning to fully automatic (technology), possibly autonomous automatic planning…'* (NM 133).

> …Utilizing technology in day-to-day routine administrative tasks is the future…(NM 63).

3.2.3 | Development of evidence-based practices

Nurse managers regarded themselves as being in charge of their units' clinical work. They expected nurse managers' work content in the future to continue to focus on quality of nursing care, practical application of quality criteria and (increasingly) implementation of evidence-based activities. Recognizing that those closest to the patient have the best insights into care delivery, they saw the professional nurses as the best individuals to design nursing care and the managers' role being to enable their efforts. However, they also identified a need for more prioritization, allocation and scheduling of clinical development work using evidence-based practices, together with consideration of employees' competences and abilities.

> The work of a nurse manager is changing and focusing more on the quality of nursing care, the practical application of quality criteria, and the implementation of evidence-based activities… (NM 124)

They clearly recognized an increasingly strong focus on patient-centred care in nursing and stated that they take care of patients through their provision of support for staff nurses and a framework for safe and quality care. One manager expressed the view that, '*Patient-centred operations remain central. Nurse managers help to ensure high-quality and safe care…*'(NM 56). They also noted intense demands for an excellent customer service culture involving carefully listening to patients' voices.

3.2.4 | Improvement in the attractiveness and effectiveness of the organisation

Concern about a growing shortage of competent nursing staff was apparent in the nurse managers' responses, and competition for skilled personnel was described as a current reality. They expected various changes in practices to help efforts to increase their organisations' attractiveness. The focus will be on human resource management, which includes greater consideration of employees' work well-being and creation of a healthy work environment. In addition, nurse managers saw that recruitment and staff retention must be a critical focus, beginning with supporting the students in the nursing units. They also expected strong attention to recruitment of foreign nurses, with consequent changes in orientation requirements. The previously noted generational changes must also be addressed, recognizing a need to consider all nurses' preferences, that different approaches can be applied in their work and that ultimately the quality of care is (and will remain) a crucial factor in perceptions of organisations' attractiveness.

> High-quality care, good management and structures also aid the recruitment of skilled and motivated employees to the unit… (NM 56)

Nurse managers currently face numerous challenges, and analysis of their responses revealed numerous developmental targets for their work, which they currently regard as too fragmented, uncontrollable and lacking a clear job description. They also felt a lack of appreciation of their expertise. Thus, they expressed needs for: clarification of the job description and education requirements with consistent onboarding and mentoring: a clear division of labour with the leadership partner and/or team; and recognition that they are highly educated management professionals who warrant more respect. A nurse manager expressed the following concern, *'…The nurse manager is not valued in the organization and the position is not sufficiently respected.'* (NM 23).

> …the educational base for nurse managers should be a master's degree that can ensure comprehensive nursing leadership. (NM 117)

4 | DISCUSSION

Novelty in this study is that it looks the future-oriented view for nursing leadership and management research and at larger scale in nursing science. Very few previous nursing studies had used future research views (Isobe et al., 2020). In this study, we

aimed to look future at viewpoints of nurse managers' work. One very clear findings is that Finnish nurse managers expect a shift towards shared governance in health care organisations. Several studies have shown that shared governance increases staff's work engagement and empowerment (Olender et al., 2020), improves clinical outcomes (Moreno et al., 2018), enhances patient care, harmonizes nursing practices and enables informed decision-making (Kanninen et al., 2019). Shared governance is still rarely implemented in Finnish hospitals, but some preliminary results are promising (Kanninen et al., 2019). Our results indicate that nurse managers want changes to the traditional leadership culture, and regard the new generation of nurses as ready for such change too. However, enthusiastic personnel and nurse managers' support are needed to assist their organisations' strategic planning (Kanninen et al., 2019; Olender et al., 2020). Needs for cooperation and networking were also noted in the responses, including extension of links beyond managers' own organisation. In order to promote patient-centred care, perceptions of customer-oriented service organisation, and achieve the best possible outcomes in treatments and interventions, there are clear needs to come out of silos and share knowledge, good practices and resources through effective networking.

The findings indicate that nurse managers desire more opportunities for involvement in strategic work to allow proactive planning and are ready to assume more responsibility to be core participants and powerful influencers in decision-making. This is interesting because the traditional nurse managers' role has been to implement their organisation's strategy in daily practice. It seems that nurse managers are worried of how to fulfil it. To ensure sufficient staff could be one reason why nurse managers want to involve in strategic planning and decision-making at least in the operational level of their units. Multidisciplinary collaboration in leadership is crucial, in accordance with the recognition of needs for collective efforts of the whole organisation. Vila (2016) showed that physicians benefit from working in Magnet® organisations with nurses, especially nurse leaders, because nurses are vigilant about communication, cooperation and consideration. Appropriate balances of power, personal relations and decision processes are important for efficient shared leadership by nursing and medical staff (Thude et al., 2017). In our study, nurse managers clearly expressed hope for genuine equality in power and responsibility, and respect for their professional competence.

Nurse managers also described various challenges in their current work environment, including (among others) fragmented and uncontrolled workloads, and lack of a clear job description, similarly, than previous findings (Bjerregård Madsen et al., 2016; Adriaenssens, Hamelink and Bogaert, 2017; Siirala et al., 2019). They expressed high expectations of administrative support services to ease their workload, and hopes for more real-time information to assist daily tasks, as also previously reported (Peltonen et al., 2018). Equally, the IOM (2011) and Ortiz (2020) recommend improvements in data collection and information infrastructure to enhance workforce planning and policymaking, because nurse managers use varying information systems in their daily work today, but accessing information is too slow. Even though the technology is highly advanced, it is not the donation that are needed in health care today. An example of the functional tool would be: a shared computer application within hospital displaying number of beds, hospitalized patients, available staff and their competencies and including quality indicators. All this in real time to allocate resources would be the future tool for nurse managers' daily work. Furthermore, nurse managers need to be involved in its creation.

Nurse managers described a key element of their role as being in charge of the development of their units' nursing care, through enabling professional nurses (as the best clinicians) to develop evidence-based practices. Organisational culture and structural models of evidence-based practice implementation are important (Melnyk et al., 2017), but not enough. Based on our results, nurse managers want to utilize more nurses' excellence and professionalism in development of evidence-based practices, but nurses need encouragement and enablement to participate. Another important anticipated nurse managers' task is to support and implement evidence-based practice. This differs from previous Finnish study, where nurse leaders were not competence with evidence-based practice (Lunden et al., 2019).

Two other important needs that nurse managers identified were to increase their organisations' attractiveness and both the attractiveness of, and respect for, nursing management as a career. The results indicate that more attention is required not only to recruitment processes but also to provision of healthy work conditions, promotion of the staff's well-being and provision of opportunities to influence their own work. Karlsson et al. (2019) found that nurses enjoy the variety in nursing, but they want to control their work and that their intention to stay depends on the work environment and prospects for renewal. Unit-level factors that are reportedly related, inversely, intention to leave include flexible schedules, and nurse managers' availability, visibility and accessibility (Omery et al., 2019). Nurse managers have an essential role in the future. They inspire and empower nurses to exert influence, and advance their voices heard (Boerger et al., 2020).

Nurse managers mentioned several factors that could assist efforts to address the second concern—making nursing management roles attractive and respected. These included the following: a shared governance model, shared decision-making power and responsibilities with multidisciplinary leaders, administrative support services, and clarification of nurse managers' educational requirements and job description. They regarded themselves as highly educated professionals, with substantial leadership skills, but encountered a lack of respect for their expertise. This is consistent with previous findings that nurse managers and other first-line supervisors require multidimensional competences (Gunawan et al., 2019), with relevant academic education, professional training and support (Giddens & Thompson, 2018). Accordingly, nurse managers consistently envisaged a basic requirement for all managers to have a relevant master's degree in the future.

In summary, despite all the threats, nurse managers' views of their future work were encouraging, and they identified numerous initiatives which added value to their work. We found many similarities, such as shared governance, structural empowerment, interdisciplinary collaboration and continuing improvement, with the Magnet® model structure and with the components of transformational leadership style in their descriptions (ANCC, 2020). In Finland, there is increasing interest in the Magnet® model in health care. Interestingly, results of this study indicate that dissemination of the Magnet® hospital ideology has influenced nurse managers' thinking. Similar principles, policies and values to those of the Magnet® model are being extensively adopted in Finnish hospitals' strategies, as well as in nursing strategies and policies generally.

4.1 | Limitations

This study has several limitations. First, the open-ended question was asked in the context of an extensive survey and was the last in the questionnaire. The answers were rather short and may have been cursory. However, 133 nurse managers answered the question, providing 28 pages of text in total, and inductive thematic saturation was attained, based on numbers of identified codes (Saunders et al., 2018). Another limitation was that one author (AN) was responsible for the main analysis, and all authors discussed the themes. Peer review of intercoder reliability is not always possible, and researchers' assessments and coding of a fragment of a text may differ. Thus, a reliability audit may not provide definitive indications of objectivity (Vaismoradi et al., 2013). In this study, all investigators reviewed the categorization and reached consensus on the final results of the data analysis.

5 | CONCLUSION

Results of this study reveal Finnish nurse managers' views of the future work and ways in which they want it to develop. They are willing to engage in transformational leadership, and shared governance, and expect responsibilities to be shared with staff nurses and other professionals. According to the respondents, administrative systems supporting their daily routine work will allow more time for staff interactions, their future work will focus on proactive strategic planning, and they will have more power to influence strategic and operational decision-making. They also believe that clarification of their job description will improve the quality and preparation of leadership and increase the attractiveness of the nurse manager's work. This will also enhance the attractiveness of their organisations. They envisage nurse managers being highly educated nursing management and leadership professionals in the future, who manage their units with the help of advanced technological administrative support, and lead their staff with a shared governance culture and multiprofessional team. In summary, Finnish nurse managers anticipate that features of attractive hospitals in the future will be similar to those of key Magnet® model characteristics. Suggestions for future research include exploration of the types of technology (applications, other software and platforms) needed to facilitate nurse managers' future work and what they need to change about how their work is done. Another is to create a model of nurse managers' future work.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Clarification of the managers' job description along with administrative support systems is anticipated to strengthen leadership, facilitate management, enhance decision-making and increase the attractiveness and effectiveness of both health care organisations and nurse managers' work.

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CONFLICT OF INTEREST

None.

AUTHORS' CONTRIBUTIONS

AN, JK and TK designed the study. AN collected the data and conducted the initial coding and preliminary categorization of the text. All the authors discussed the results. AN and TK had the major responsibility for the text, together with JZ. JK also contributed to the text in the manuscript. All authors contributed to writing of the paper.

ETHICAL APPROVAL

The Committee of Research Ethics of University of Eastern Finland (Decision Date: 07.02.2017, No: 6/2017).

DATA AVAILABILITY STATEMENT

The data that supports the findings of this study are available in the supplementary material of this article

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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ORIGINAL ARTICLE

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The effectiveness of the Ethics Quarter intervention on the ethical activity profile of nurse managers: A randomized controlled trial

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Abstract

Aim: To test the effectiveness of a new ethics educational e-learning intervention, Ethics Quarter, in supporting nurse managers' ethical activity profile.

Background: Health care organisations need evidence-based ethics interventions to support nurse managers' ethical activity profile.

Methods: A parallel-group, individually randomized controlled trial was conducted in 2020. Finnish nurse managers nationwide [members of the Union of Health and Social Care Professionals in Finland (Tehy) trade union] were randomly allocated to intervention ($n = 169$) or control group ($n = 172$). The intervention group participated in the Ethics Quarter comprising twelve 15-min evidence-based educational 'quarters' spread over 6 weeks. The control group had standard organisational ethics structures. The primary and secondary outcomes were ethical activity profile and ethics knowledge, respectively. The Consolidated Standards of Reporting Trials (CONSORT) statement for study design and reporting was adopted.

Results: Ethical activity profile showed statistically significant differences in mean changes between the groups from baseline to 10 weeks: all five dimensions were statistically significantly higher in the intervention group compared with the control group ($p = <.0001$).

Conclusion: The Ethics Quarter was effective in increasing nurse managers' ethical activity profile.

Implications for Nursing Management: Applying this ethics educational e-learning intervention would benefit nursing management education and health care organisations.

Trial Registration: clinicaltrials.gov: NCT04234503.

KEYWORDS
education, distance, ethics, internet-based intervention, nurse administrators, nursing

1 | INTRODUCTION

Nurse managers are responsible for the realization of the health care value base and for performing various ethical activities. In this study, these ethical activities, based on previous literature, have been theoretically outlined, and using deductive reasoning, summarized into a new construct defined as the ethical activity profile of nurse managers consisting of five dimensions: (1) developing one's own ethics knowledge, (2) influencing ethical issues, (3) conducting or implementing ethics research, (4) identifying and (5) solving ethical problems (Laukkanen, Leino-Kilpi, & Suhonen, 2016; Laukkanen, Suhonen, & Leino-Kilpi, 2016, Data S1). All dimensions of the profile require different kinds of ethical activities from nurse managers, are equally important, and can be summarized. To have a high ethical activity profile, nurse managers have to perform activities from all dimensions.

Nurse managers themselves have found ethical activities to be central in their work (Kantanen et al., 2017; Makaroff et al., 2014), albeit challenging, and they would like more guidance on how to perform ethical activities (Devik et al., 2020; Schick-Makaroff & Storch, 2019). It is also known that nurse managers lack support on ethics issues from their superiors and organisations (Makaroff et al., 2014), even though the need for ethics support is evident in all health care (Tallis et al., 2015) and organisations play an important role in strengthening nurse managers' ethical sensitivity and decision-making (Roshanzadeh et al., 2020). To support nurse managers to have a high ethical activity profile, there is a globally recognized, urgent need to create and test ethics interventions for the use of health care organisations (Aitamaa et al., 2021; Barkhordari-Sharifabad et al., 2018a; Devik et al., 2020; Markey et al., 2020; Poikkeus et al., 2020; Roshanzadeh et al., 2020). However, it is not known what kind of ethics intervention would be effective in supporting the ethical activity profile of nurse managers.

2 | BACKGROUND

In the current era, ethical activities of nurse managers receive increasing international attention in health care administration (Keselman & Saxe-Braithwaite, 2020; Markey et al., 2020). Nurse managers' ethical activities seem to have a positive impact on health care personnel in terms of higher work engagement (Zappalà & Toscano, 2020) and job satisfaction (Barkhordari-Sharifabad et al., 2018b; Zappalà & Toscano, 2020). Ethical activities of nurse managers also have positive impacts on patient outcomes, bringing higher patient satisfaction (Barkhordari-Sharifabad et al., 2018b; Wong et al., 2013) and quality of care (Barkhordari-Sharifabad et al., 2018b; Shirey, 2005; Zaghini et al., 2020). Ethical activities of managers also benefit organisational performance in terms of overall organisational success (Shirey, 2005). However, based on earlier studies, the ethical activity profile of nurse managers is partly low. Only a limited number of managers develop their own ethics knowledge (Aitamaa et al., 2021: Laukkanen, Leino-Kilpi, & Suhonen, 2016), influence ethical issues or conduct or implement ethics research (Laukkanen, Leino-Kilpi, & Suhonen, 2016). Nevertheless, nurse managers identify many work-related ethical problems (Aitamaa et al., 2021) and engage in a variety of activities to solve these problems (Aitamaa et al., 2019; Laukkanen, Suhonen, & Leino-Kilpi, 2016). Thus, we can assume nurse managers to be sensitive to ethics issues, and offering them support should strengthen their ethical activity profiles in the future.

There are few earlier ethics intervention studies (Stolt et al., 2018) searching for ways to support nurse managers in the field of health care and nursing ethics (Eide et al., 2016; Storch et al., 2013), and almost nothing involving online courses or e-learning. Recently, however, there have been some promising results concerning the possibilities of these interventions, also involving ethics (Edmonson, 2015; Eide et al., 2016; Jeon et al., 2018). In this study, we aim to strengthen the ethics intervention area. A new ethics educational e-learning intervention, the Ethics Quarter, developed by researchers for research purposes at the University of Turku to support the ethical activity profile of nurse managers, was tested for the first time in this study in clinical environment using a randomized controlled trial. The detailed research questions and hypothesis of this study were as follows: Is the Ethics Quarter effective in increasing (1) the development of nurse managers' own ethics knowledge, (2) nurse managers' influence on ethical issues, (3) the conduct or implementation of ethics research by nurse managers, (4) the identification of ethical problems by nurse managers and (5) nurse managers' ability to solve ethical problems. It is hypothesized that participating in the Ethics Quarter intervention supports nurse managers' ethical activity profile (in all five dimensions) compared with control group.

3 | METHODS

3.1 | Design

The study design involved a parallel-group, individually randomized controlled trial with two arms: intervention group (for the Ethics Quarter) and control group (with a standard organisational ethics structure, meaning that the participants' organisation may have had clinical ethics committees such as ethical advisory committees and other working groups discussing ethical issues, excluding research ethics committees), with baseline (=M0, before intervention), post intervention (=M1, after the intervention, Week 6) and follow-up (M = 2, 4 weeks after the intervention) measurements.

Based on a statistical power analysis, it was estimated that a sample size of 87 nurse managers per group ($n = 174$ in total) would be needed to provide the study with 80% power at a significance level of 0.05 (two-tailed, SD 0.7). Managers were randomly allocated to intervention or control group after baseline measurement, with the support of a randomization table drawn up by a statistician. Randomization was performed using random permuted blocks, with a block size of 8, using the SAS System for Windows (Version 9.4). The results of the randomization were imported into the Research Electronic Data Capture (REDCap) software platform (Harris et al., 2019) where randomization for each subject was executed by a researcher. Major imbalances between the groups were prevented in the design stage by using stratified randomization (Lamb & Altman, 2015). Two nurse manager background factors, participating in continuing ethics education and having standard organisational ethics structure (Aitamaa, 2020; Sietsema & Spradley, 1987), were known to correlate with one dimension of the ethical activity profile (identifying ethical problems). Thus, to achieve equal representativeness, participants were stratified into intervention and control groups according to these background factors measured at the baseline.

The inclusion criteria for the participants were that they should (1) be working as nurse managers and (2) have sufficient command of the Finnish language.

The study was registered on the ClinicalTrials.gov website with the identifier: NCT04234503. The Consolidated Standards of Reporting Trials (CONSORT) statement for study design and reporting was adopted (Schulz et al., 2010).

3.2 | Recruitment of the participants

Participants were recruited, with permission from the Union of Health and Social Care Professionals in Finland (Tehy) (https://www.tehy.fi/en), from January to September 2020 in Finland. The Tehy trade union is a national professional interest group for registered nurses, nurse managers and advanced consultants/specialists in the social and health care sector. The recruitment was stopped when there were $n = 341$ participants as the sample size was estimated to be large enough, also considering possible drop-outs. Finally, 211 participants completed the study: 97 participants in the intervention and 114 in the control group (Figure 1). The loss of follow-up in the intervention group was 42.6% ($n = 72$). However, the nurse managers who signed in ($n = 119$) had very strong commitment to the Ethics Quarter, and 80.7% ($n = 96$) completed the intervention. The sample loss in the control group was 33.7% ($n = 58$).

3.3 | Intervention and control groups

The intervention group participants had support provided by their possible standard organisational ethics structures. Furthermore, they participated in the Ethics Quarter intervention consisting of 12 educational quarters in a virtual learning environment. The 'quarters' were evidence-based text slides, including real-life role model experiences on each presented issue. Using role models may be one way to explicitly bring learning about ethical leadership to a wider group of managers in the organisation (Brown & Treviño, 2006). In the intervention, the participants completed two educational quarters (2×15 min), exploring one dimension of the ethical activity profile per week. The structure of the overall intervention was based on the five dimensions of nurse managers' ethical activity profile, also including orientation and summary quarters. After each presented dimension, the participants made self-reflection and development plans (Data S2). The control group did not participate in the Ethics Quarter. They had support provided only by their possible standard organisational ethics structures.

3.4 | Data collection

Nurse managers received the Tehy trade union management information letter with an ad of the study including a short description of the study intervention and a web-link to the website: https://etiikanvartti.fi/?tutkimus. The website contained complete information about the study, and if a manager wanted to take part in the study, s/he gave informed consent, and all filled in all the study measurements. The data were collected and managed using the REDCap tools hosted at the University of Turku (Harris et al., 2019). After randomization, information about the study group and user rights concerning the Ethics Quarter virtual learning environment for the intervention group participants were e-mailed via REDCap.

3.5 | Outcome measures

The primary outcome was nurse managers' ethical activity profile level assessed in two ways:

- The ethical activity profile level was assessed using the Ethical Activity-Instrument (EAI) (developed by LL, RS & HL-K, 2019). Higher scores indicate a higher self-assessed ethical activity profile level.
- Dimensions 1–3 of the ethical activity profile level were assessed using the Developing, Influencing and Implementing Ethics Instrument (DIIEI, developed by LL, RS & HL-K, 2019), dimension 4 was assessed using the Ethical Sensitivity Scale Questionnaire (ESSQ, Tirri & Nokelainen, 2011) and dimension 5 using the Nurses' Moral Courage Scale (NMCS, Numminen et al., 2019). All the instruments were 5-point Likert scales (1 = *totally disagree*; 5 = *totally agree*/1 = *Does not describe me at all*; 5 = *Describes me very well*), with higher scores indicating higher self-assessed ethical activity level.

The secondary outcome was the level of ethics knowledge assessed with the Nursing Management Ethics Knowledge-Test (NMEKT, developed by LL, RS & HL-K, 2019). Higher scores indicate higher level of ethics knowledge. Furthermore, background factors

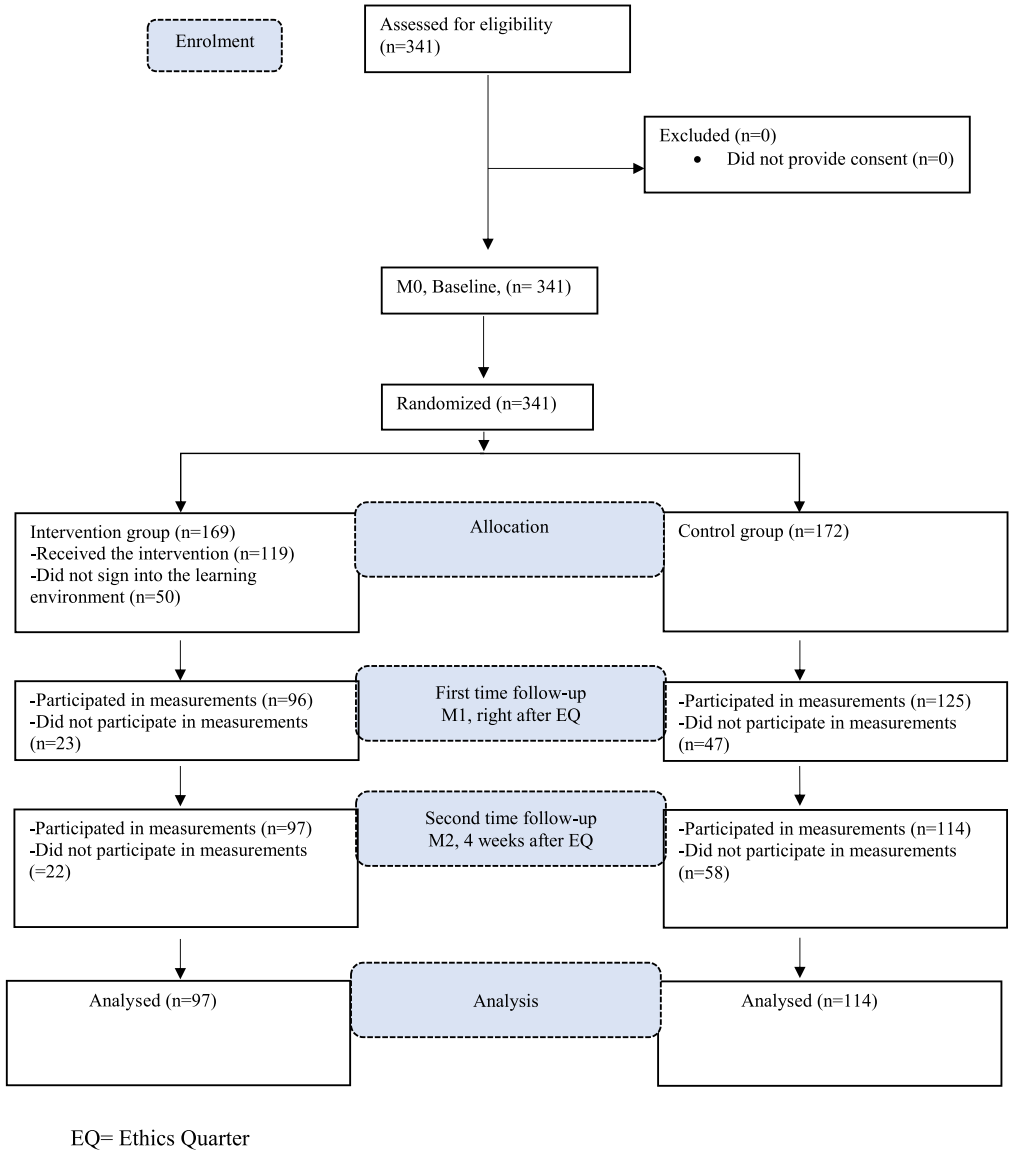

FIGURE 1 Nurse manager participant CONSORT flowchart through the study. EQ, Ethics Quarter

were inquired. The outcomes and psychometric properties of the instruments are reported in Table 1.

3.6 | Data analysis

The data analysis was performed using SAS software, Version 9.4 of the SAS System for Windows (SAS Institute Inc., Cary, NC, USA). A significance level of .05 (two-tailed) was used. Categorical variables were summarized with counts and percentages, whereas continuous variables were summarized with the median and range.

The analysis followed the intention-to-treat principle (as randomized). The baseline demographic characteristics were compared between the intervention group and control group using a chi-square test or Fisher's exact test (if needed) for categorical variables and the Mann–Whitney *U* test for continuous variables if normality assumption was not met.

The total ethical activity profile and dimensions were analysed using a linear mixed model where time was handled as within factor and group as between factor in the statistical model. Additionally, the group-by-time interaction was included in the model to examine whether the mean change over time was different between the intervention groups. A computed symmetry covariance structure was used for repeated measures. The data included some missing values, but they were assumed to be completely random. Model-based means as well as 95% confidence intervals (CI) are shown.

3.7 | Ethical considerations

Responsible Conduct of Research [ALL European Academies (ALLEA), 2017] was followed in all study phases. The study protocol was approved by the Ethics Committee of the University of Turku (Decision number 4/20) and by the (Tehy) trade union 1/2020.

TABLE 1 Outcomes and psychometric properties of instruments

Study outcomes	Measurements	Number of items and scores	Psychometric properties	
			Cronbach's alpha	Validities
Primary outcomes				
The ethical activity profile level	Ethical Activity-Instrument (EAI, LL, RS & HL-K 2019), a visual analogue scale measuring all five dimensions of ethical activity	5 items (score: 0–100), ↑ scores ↑ ethical activity profile	$\alpha = 0.86$	S-CVI clarity 0.92. S-CVI relevance 1.
The ethical activity profile level dimensions 1–3	Developing, Influencing and Implementing Ethics Instrument (DIIEI, LL, RS & HL-K, 2019), a 5-point Likert-scale (1 = *never*; 5 = *very much*)	12 items (4 developing knowledge, 4 influencing ethics issues and 4 implementing ethics research), ↑ scores ↑ ethical activity	$\alpha = 0.88$	S-CVI clarity 0.94. S-CVI relevance 0.99.
The ethical activity profile level dimension 4, ethical sensitivity	Ethical Sensitivity Scale Questionnaire (ESSQ, Tirri & Nokelainen, 2011), a 5-point Likert-scale (1 = *totally disagree*; 5 = *totally agree*)	16 items, ↑ scores ↑ ethical sensitivity	$\alpha = 0.85$	The ESSQ is used earlier with teachers and students, but operates on a general level and can be used in all contexts (Kuusisto et al., 2012).
The ethical activity profile level dimension 5, moral courage	Nurses' Moral Courage Scale (NMCS, ©Numminen et al., 2019), a 5-point Likert-scale (1 = *Does not describe me at all*; 5 = *Describes me very well*)	21 items, ↑ scores ↑ moral courage	$\alpha = 0.93$	The NMCS has been validated with nurses. Nine items were further developed for this study to accurately measure the moral courage of nurse managers. S-CVI clarity 0.98. S-CVI relevance 0.98.
Secondary outcome				
Ethics knowledge level	Nursing Management Ethics Knowledge-Test (NMEKT, LL, RS & HL-K, 2019), a self-reporting instrument to test nurse managers' knowledge of the terms and principles of ethics	10 items, [yes/no, correct responses score 1 point and incorrect responses 0 (zero), summative score range 0–10], ↑ scores ↑ ethics knowledge		S-CVI clarity 0.93. S-CVI relevance 0.99.

The nurse managers received written information about the purpose and practical implementation of the study. The participating nurse managers gave their informed consent.

4 | RESULTS

4.1 | Demographic characteristics of the sample

A total of $n = 341$ participants were included in the study, of whom $n = 169$ were randomly allocated to the intervention group and $n = 172$ to the control group (Figure 1). There were no statistically significant differences (all $p > .005$) in the demographic characteristics between the groups (Table 2).

4.2 | Ethical activity profile

The ethical activity profile showed statistically significant differences in the mean changes between the groups from baseline to 10 weeks. The overall ethical activity profile showed an improvement of 8.12 (95% CI = 6.17–10.06, $p < .001$) measured with the EAI, for dimensions 1–3, there was an improvement of 0.30 (95% CI = 0.22–0.37, $p < .001$) measured with the DIIEI; for dimension 4, an improvement of 0.18 (95% CI = 0.12–0.24, $p < .001$) measured with the ESSQ; and for dimension 5, an improvement of 0.18 (95% CI = 0.11–0.23, $p < .001$) measured with the NMCS in the intervention group, whereas the control group showed no statistically significant changes. The results are shown in Table 3 and Figure 2.

TABLE 2 The demographic characteristics of the nurse managers at the baseline ($N = 335–341$)

Variables	Total, $N = 335–341$ *n* (%)	IG, $N = 142–144$ *n* (%)	CG, $N = 145–147$ *n* (%)	*p* value
Age				.731
Years, median (range)	50 (26–64)	50 (28–64)	49 (26–64)	
<40	63 (18.5)	32 (18.9)	31 (18.1)	
40–49	104 (30.6)	49 (29.0)	55 (32.1)	
50–59	146 (43.0)	72 (42.6)	74 (43.3)	
≥60	27 (7.9)	16 (9.5)	11 (6.4)	
Gender				.593
Female	324 (95.9)	158 (95.2)	166 (96.5)	
Male	14 (4.1)	8 (4.8)	6 (3.5)	
Highest education				.139
Registered nurse's (or corresponding) degree	152 (44.5)	80 (47.3)	72 (41.9)	
Master's degree (university of applied sciences)	99 (29.0)	53 (31.4)	46 (26.7)	
Master's degree (university)	72 (21.1)	27 (16.0)	45 (26.2)	
Licentiate degree/doctoral degree (university)	1 (0.3)	1 (0.6)	0 (0)	
Other	17 (5.0)	8 (4.7)	9 (5.2)	
Employment sector				.791
Public	246 (72.2)	124 (73.4)	122 (70.9)	
Private	90 (26.3)	43 (25.4)	47 (27.3)	
Trust	5 (1.5)	2 (1.2)	3 (1.8)	
Position in organisation				.961
Unit-level management	245 (84.5)	120 (83.9)	125 (85.0)	
Middle management	37 (12.7)	19 (13.3)	18 (12.3)	
Strategic management	8 (2.7)	4 (2.8)	4 (2.7)	
Length of work experience				1.000
Years, median (range)	8 (0–37)	8 (0–37)	8 (0–32)	
<5	105 (31.0)	53 (31.4)	52 (30.6)	
5–10	109 (32.1)	54 (31.9)	55 (32.3)	
>10	1125 (36.9)	62 (36.7)	63 (37.1)	
Number of subordinates				.376
Number, median (range)	26 (0–5000)	28 (0–5000)	25 (0–400)	
<21	120 (35.8)	56 (33.1)	64 (38.6)	
21–50	161 (48.1)	84 (49.7)	77 (46.4)	
51–100	38 (11.3)	18 (10.7)	20 (12.0)	
>100	16 (4.8)	11 (6.5)	5 (3.0)	
Participation in continuing ethical education				.775
Yes	59 (17.3)	28 (16.6)	31 (18.0)	
No	282 (82.7)	141 (83.4)	141 (82)	
Participation in an ethics working group/committee				.853
Yes	32 (9.4)	15 (8.9)	17 (9.9)	
No	307 (90.6)	153 (91.1)	154 (90.1)	
Having an official ethics-related post				.389
Yes	23 (6.8)	9 (5.4)	14 (8.1)	
No	317 (93.2)	159 (94.6)	158 (91.9)	
Participating in an ethics research project				.248

(Continues)

TABLE 2 (Continued)

Variables	Total, $N = 335–341$ *n* (%)	IG, $N = 142–144$ *n* (%)	CG, $N = 145–147$ *n* (%)	*p* value
Yes	3 (1.0)	0 (0)	3 (1.0)	
No	286 (98.9)	142 (49.1)	144 (49.8)	
Participating in an ethics development project				1.000
Yes	10 (3.0)	5 (3.0)	5 (2.9)	
No	328 (97.0)	163 (97.0)	165 (97.1)	
Having an ethics organisational structure				1.000
Yes	91 (26.7)	45 (26.6)	46 (26.7)	
No	250 (73.3)	124 (73.4)	126 (73.3)	

Note: *p* values are calculated between the total IG and CC. Categorical variables tested with Fisher's exact test, continuous with Mann–Whitney *U* test.
Abbreviations: CG, control group; IG, intervention group; SD, standard deviation.

4.3 | Ethics knowledge

The level of ethics knowledge was already high in both groups at baseline. The intervention group baseline mean score according to the NMEKT was 9.30, (95% CI = 9.20–9.41), and the control group baseline mean was 9.34 (95% CI = 9.24–9.44).

5 | DISCUSSION

The Ethics Quarter educational e-learning intervention succeeded in strengthening the participating nurse managers' ethical activity profile in all its dimensions. The 6-week Ethics Quarter was statistically significantly effective in increasing the participating nurse managers' ethical activity profile in terms of developing their own ethics knowledge, influencing ethical issues, conducting or implementing ethics research, and identifying and solving ethical problems. At the beginning of the study, the intervention and control group did not differ in terms of background (Table 2), but both right after the intervention and at the follow-up measurement, the intervention group had a statistically significantly higher ethical activity profile. The increase was valid for all five dimensions of the activity profile.

Our findings show that the Ethics Quarter is an effective intervention for supporting nurse managers in their ethical activities. Even though clinical ethics support (such as clinical ethics committees) has become widespread in Europe (Magelssen et al., 2016) and it is known that clinical ethics committees can establish a supportive network and provide ethical leadership (Ong et al., 2020), it seems that clinical ethics support is not enough for nurse managers regarding their more challenging ethical activities. Moreover, managers have indicated that health care organisations provide suboptimal levels of support (Poikkeus et al., 2020). Additionally, in this study, the organisational ethics structures available to the participants (referring to different kinds of clinical ethics committees) were weak. Most of the participants reported that there were no organisational ethics structures (73%). Thus, organisations globally would benefit from taking the Ethics Quarter into use as an ethics structure for nurse managers: it offers systematic, evidence-based education, as well as guidance on how to carry out ethical activities, and it increases the level of ethics knowledge. Even though the participants scored well in this study on the knowledge level already before the implementation of the intervention and the NMEKT was not able to show increased ethics knowledge in either group, the participants evaluated their ethics knowledge to be increased in the feasibility evaluation of the study. The participants were asked whether the Ethics Quarter learning intervention increased their ethics knowledge, and their views were measured using a 5-point Likert-scale (1 = *totally disagree*; 5 = *totally agree*). They rated the intervention highly, awarding a score of 4.59 (Laukkanen et al., 2021, unpublished results) in answer to this question.

The effectiveness of the Ethics Quarter might result from several advantages. It provided new continuing educational possibilities to the participants. Participation was easy as the participants only needed access to the Internet. The time needed was moderate, and participation was free of charge, and there were no costs for the organisation (despite the nurse managers' participation time). This intervention was tailored for research and clinical support purposes, not for business purposes. The Ethics Quarter consisted of only 12 quarters, each lasting only 15 min. Additionally, the e-learning education was felt to be feasible and usable (Laukkanen et al., 2021, unpublished results) according to the participants. The contents of the Ethics Quarter were evidence-based and written in everyday language using real-life case examples with engaging stories (Brown & Treviño, 2006) in every dimension to highlight the ethical activities of nurse managers. Self-reflection and development plans might also provide participants with an easy opportunity to link their everyday experience to the new ethical theory they have just studied. A multimethod intervention allowing combining theory and practice (Cannaerts et al., 2014) seemed to be an effective way of learning for the participants. To develop the learning outcomes of Ethics Quarter even further, interactivity and feedback could be a promising amendment (Cook et al., 2010).

The findings of this study comply with previous studies, (Barkhordari-Sharifabad et al., 2018a; Devik et al., 2020;

TABLE 3 Main outcomes, improvements in ethical activity profile and dimensions in IG and CG with different instruments

	Intervention group			Control group			Change in outcomes		
Scale and dimension	Baseline, M0, mean, 95% CI, $n = 156–169$	After intervention, M1, mean, 95% CI, $n = 96$	Follow-up, 10 weeks after intervention, M2, mean, 95% CI, $n = 95–97$	Baseline, M0, mean, 95% CI, $n = 157–172$	After intervention, M1, mean, 95% CI, $n = 116–125$	Follow-up, 10 weeks after intervention, M2, mean, 95% CI, $n = 106–114$	Group by time interaction, p	Baseline-after intervention M1, p	Baseline-follow-up 10 weeks after intervention, M2, p
Ethical activity profile level, Ethical Activity-Instrument (EAI)	64.53 62.59–66.47	71.34 69.07–73.61	72.65 70.39–74.91	66.99 65.05–68.93	67.85 65.76–69.95	67.59 65.45–69.73	<.001	<.001	<.001
Developing one's own ethics knowledge, dimension 1	60.79 58.30–63.28	70.31 67.30–73.32	71.36 68.37–74.35	63.84 61.35–66.34	62.83 60.09–65.58	63.79 60.96–66.61	<.001	<.001	<.001
Influencing ethical issues, dimension 2	67.29 64.90–69.67	73.70 70.85–76.55	75.82 72.99–78.66	68.50 66.12–70.88	69.17 66.58–71.76	67.65 64.98–70.32	<.001	.002	<.0001
Conducting or implementing ethics research, dimension 3	52.80 50.01–55.59	59.45 56.05–62.85	60.87 57.47–64.27	56.70 53.86–59.54	58.84 55.76–61.91	57.70 54.50–60.89	.0082	.005	.003
Identifying ethical problems, dimension 4	74.82 72.71–76.93	79.16 76.57–81.75	80.16 77.62–82.75	75.47 73.36–77.57	77.17 74.83–79.50	76.38 73.98–78.79	.038	.130	.012
Solving ethical problems, dimension 5	67.42 65.08–69.75	75.20 72.38–78.01	76.31 73.52–79.10	68.97 66.64–71.30	71.29 68.72–73.85	71.95 69.33–74.57	.001	.003	.001
The ethical activity profile dimensions									
Developing Influencing and Implementing Ethics instrument (DIIEI), dimensions 1–3	3.60 3.52–3.68	3.80 3.71–3.89	3.90 3.80–3.99	3.75 3.67–3.83	3.77 3.69–3.86	3.80 3.71–3.89	<.001	.001	<.001
Ethical Sensitivity Scale Questionnaire (ESSQ), dimension 4	4.17 4.11–4.22	4.29 4.22–4.35	4.35 4.28–4.41	4.17 4.11–4.23	4.14 4.08–4.20	4.19 4.13–4.26	<.001	.003	.001
Nurses' Moral Courage Scale (NMCS), dimension 5	4.36 4.30–4.43	4.50 4.43–4.58	4.54 4.47–4.61	4.40 4.34–4.47	4.39 4.32–4.46	4.46 4.39–4.53	.001	.003	.004

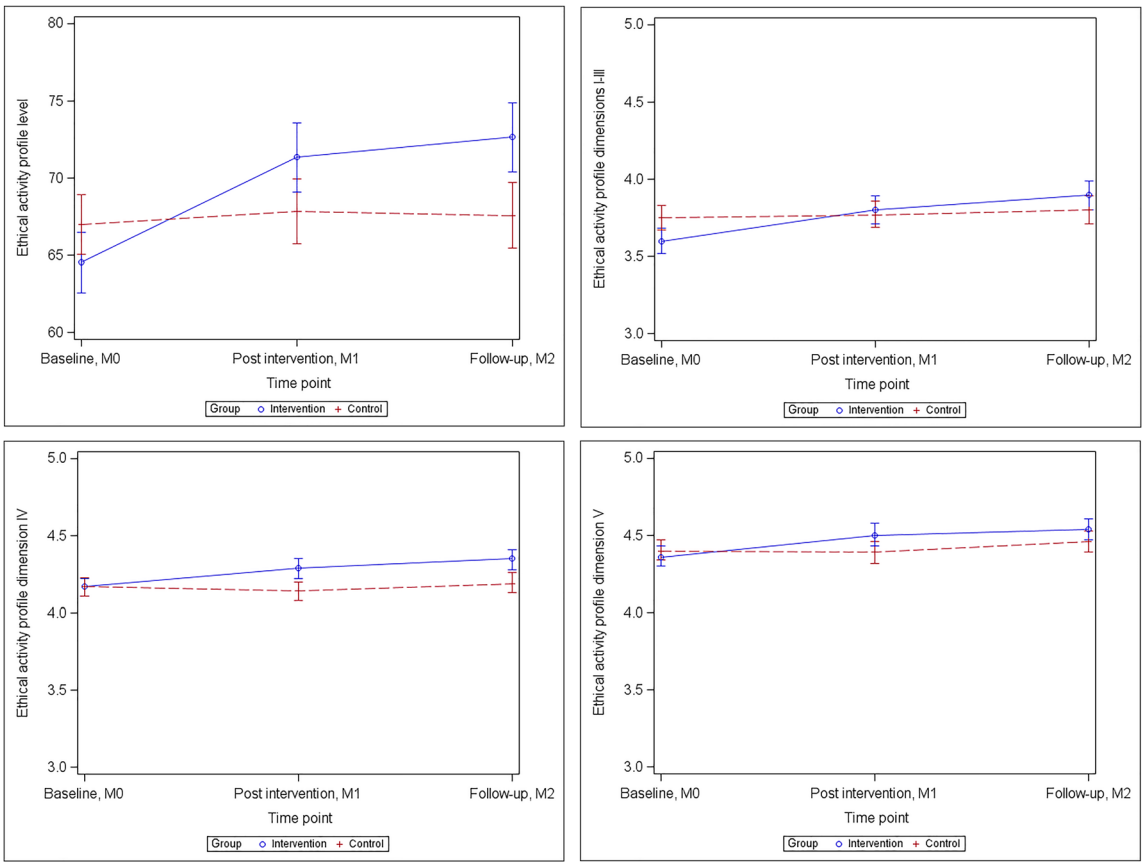

FIGURE 2 Model-based means and 95% confidence intervals (CI) at the baseline, after intervention and at the follow-up

Markey et al., 2020; Poikkeus et al., 2020; Roshanzadeh et al., 2020) and indicate the need for ethics education for nurse managers. Surprisingly, nearly half of the participants (44.6%) in this study had only a registered nurse (or corresponding) degree, in other words, a baccalaureate (bachelor) degree. American Organisation of Nurse Executive (AONE) (2010) suggests that nurse managers should have at least a bachelor's or master's degree. However, earlier studies have concluded that a bachelor's degree is not sufficient for the role of a nurse manager (Shirey et al., 2010) and at least some management training is needed (McCallin & Frankson, 2010; Ramseur et al., 2018). In this study, the participants also had a low level of continuing education in ethics. Only 17% had participated in continuing ethics education, even though 69% had five or more years of work experience. This finding is even lower than in earlier study results; Aitamaa et al. (2021) found that 28% of managers, and Laukkanen, Leino-Kilpi, and Suhonen (2016) found that 48% of nurse managers had participated in continuing ethics education. Based on these background factors, the respondents' development of their own ethics knowledge seemed to be alarmingly low. Nurse managers should develop their ethics competence throughout their careers (Stievano et al., 2012) to be ethically skilled (Eide et al., 2016; Stievano et al., 2012) and to have the most up-to-date knowledge (Ravaghi et al., 2020).

In this study, most of the participants were working in unit-level management, where of all the management levels, nurse managers seem to encounter the most ethical problems (Aitamaa et al., 2021). In unit-level management, managers are responsible for running a unit and have the most direct contacts with patients. Thus, unit-level managers might have more patient-related ethical problems to solve than other management levels (Aitamaa et al., 2016), and acknowledging this, it is essential to support unit-level management. Nevertheless, it must be noticed that the expectations of ethical activities seem to increase with authority and responsibility; for example, the higher one is in the hierarchy, the higher the expected use of moral courage to do the right thing in the organisation (Edmonson, 2015). Thus, it is important to ensure that senior managers in middle and strategic level management are also educated to exhibit high levels of ethical behavior (Schaubroeck et al., 2012). Thus, directing the Ethics Quarter towards upper management and chief nursing first would help to disseminate the effects of the intervention to wider levels within the organisation.

5.1 | Limitations

There is a lack of validated instruments for the measurement of abstract ethics issues in the nursing management context. Thus, we had to develop three new instruments and used only two validated ones. Operationalizing the ethics concept was demanding, and expert

panel expertise was used to strengthen the development. However, the content validity (S-CVI) and furthermore, internal consistency (Cronbach's alpha) of these new instruments were estimated to be good (Table 1). To ensure the construct validity and reliability of the instruments, the data were collected from a large and appropriately representative sample of the target population. However, the instruments used were mostly self-evaluation instruments, and the participants might have wanted to demonstrate a higher ethical activity profile than they actually have. Thus, the study aimed to avoid any possible social desirability response bias by using anonymous participation, as well as mostly forced choice items and computer administration (Randall & Fernandes, 1991). The generalizability of the results for the nurse manager population is reasonable, although it is possible that the data included managers who were already interested in ethics issues while less interested managers did not participate. Furthermore, the COVID-19 pandemic may have increased the need for ethical activities of nurse managers during data collection, and it may also have disrupted existing organisational ethics structures. For unknown reason, 50 participants received the password to the learning area, but never signed in. The COVID-19 pandemic may have had a negative effect on nurse managers' ability to participate. However, those who signed in had a high level of commitment. Participation caused reasonable burden. Future research may consider evaluating the effect of adapting the Ethics Quarter intervention to all management levels in one organisation to get an idea of how a high ethical activity profile could be spread to all management levels in one organisation. In any case, wider implementations and constant development of the intervention are necessary to strengthen this intervention even further.

6 | CONCLUSION

This randomized controlled trial demonstrated that a 6-week e-learning educational ethics intervention, the Ethics Quarter, proved to be effective in supporting nurse managers' ethical activity profile and its related dimensions. However, further cumulative evidence is needed.

6.1 | Implications for nursing management

Nurse managers at all management levels in educational and health care organisations are encouraged to apply the Ethics Quarter intervention to support their ethical activity profile. Ethics Quarter can be used as organisational ethics structure and continuing ethics education possibility for nurse managers.

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CONFLICT OF INTEREST

None declared.

ETHICS STATEMENT

The Ethics Committee of the University of Turku (Decision number 4/20) and the Tehy trade union 1/2020.

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DATA AVAILABILITY STATEMENT

Due to the sensitive nature of the questions asked in this study, survey respondents were assured raw data would remain confidential and would not be shared, hence, data are not available as it is confidential.

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SUPPORTING INFORMATION

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