ORIGINAL ARTICLE

Leadership of PhD-prepared nurses working in hospitals and its influence on career development: A qualitative study

Lisa J. C. van Dongen RN, MSc, Junior Researcher, PhD Candidate[1,2,3] [ID] |
Thóra B. Hafsteinsdóttir RN, PhD, Senior Researcher[2,4]

[1]Department of Nursing Science, Faculty of Medicine, University of Turku, Turku, Finland

[2]Nursing Science Department, Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht, The Netherlands

[3]CWZ Academy, Canisius Wilhelmina Ziekenhuis, Nijmegen, The Netherlands

[4]Nursing Science, Program in Clinical Health Sciences, University Medical Center Utrecht, Utrecht, The Netherlands

Correspondence
Lisa J. C. van Dongen, Faculty of Medicine, Department of Nursing Science, University of Turku, Joukahaisenkatu 3–5, Hoitotieteen laitos, 20014 Turun yliopisto, Turku, Finland.
Emails: lisa.j.vandongen@utu.fi; l.j.c.vandongen-5@umcutrecht.nl

Funding information
None

Abstract

Aims and objectives: To explore leadership experiences and the influence of leadership on career development of PhD-prepared nurses working in hospitals.

Background: The Doctor of Philosophy (PhD) represents the highest level of education for a career in research and scholarship. PhD-prepared nurses have an important role in advancing the nursing discipline by conducting and implementing research finding. Given the rapidly changing health care environment, there is a clear need for PhD-prepared nurses with strong leadership competences. Currently, there is a dearth of studies exploring leadership of PhD-prepared nurses working in hospitals.

Design: A descriptive qualitative study.

Method: A purposive sample with PhD-prepared nurses employed at clinical departments was used. Twelve interviews were conducted with participants from seven hospitals. Perceptions towards leadership, leadership experiences, leadership barriers and the influence of leadership on career development were discussed. Interviews were thematically analysed. Reporting followed the COREQ guidelines.

Results: Three themes addressing leadership experiences were found: (1) "Leadership is needed for career development" describes how participants took initiative and received support from colleagues and mentors; (2) "Practicing leadership behaviours" describes leadership behaviours and feelings associated with leadership and (3) "Leadership influenced by the hospital setting" describes the working environment including struggling nursing research cultures and infrastructures with limited positions, managerial support and opportunities for collaboration.

Conclusion: Although participants showed leadership to advance their careers, barriers related to working environment were found. Stakeholders should invest into opportunities to develop and utilise leadership competences and development of strong nursing research cultures and infrastructures with sustainable career frameworks and positions.

Relevance for clinical practice: There is a need for ongoing efforts to build strong leadership competences as well as nursing research cultures and infrastructures with

career pathways and suitable positions for PhD-prepared nurses within hospitals to empower them to strengthen nursing.

1 | INTRODUCTION

The Doctor of Philosophy (PhD) represents the highest level of education for a career in research and scholarship (American Association of Colleges of Nursing, 2010). PhD-prepared nurses have an important role in advancing nursing care in complex health care environments with ageing populations, a rise of chronic conditions and staff shortages (Berthelsen & Hølge-Hazelton, 2018). PhD-prepared nurses build inter- and intra-disciplinary networks to generate high-quality innovative, evidence-based knowledge and apply it meaningfully in clinical practice, education and policy development (Cashion et al., 2019; van Oostveen et al., 2017). PhD-prepared nurses have the potential to be leaders in the clinical setting by developing nursing practice, be clinical leaders and be clinical teachers for nurses and students (Dobrowolska et al., 2021).

Although many PhD-prepared nurses work in nursing faculties with roles in research and teaching, some continue to work in clinical settings (Andreassen & Christensen, 2018; Dobrowolska et al., 2021). Clinical academic careers for nurses are highly valuable as they support research on clinical relevant topics and implementation of evidence to support nursing care and clinical decision making by nurses (van Oostveen et al., 2017).

What does this paper contribute to the wider global clinical community?

- Although PhD-prepared nurses generally did not felt supported by the organisational structures within the hospitals, they remained highly motivated to use leadership to strengthen nursing care and patient outcomes.
- The hospital setting was perceived as a complex work setting since many hospitals lacked a nursing research culture and infrastructure resulting in limited suitable positions, limited managerial support and limited opportunities for collaboration. In order to move the nursing discipline forward, an ongoing effort should take place by building strong nursing research cultures and infrastructures with career pathways and positions for PhD-prepared nurses.
- Leadership development of PhD-prepared nurses within hospitals should be supported by providing access to educational programmes for leadership development, mentoring as well as developing structures for collegial support and research collaboration.

1.1 | Background

The nursing profession highly depends on PhD-prepared nurses who generate and implement research findings into clinical practice. Clinical nurses rely on this knowledge to support and validate the care for patients, families and communities (Broome & Fairman, 2018; Cheraghi et al., 2014). Also, PhD-prepared nurses also have the responsibility to prepare the next generation of nurse scientist (Broome & Fairman, 2018). The shortage of PhD-prepared nurses is a barrier for advancing the profession, nursing education and nursing care since more PhD-prepared nurses are needed to build the scientific foundation for the discipline and to expand nursing programmes for a growing number of nursing students (Bednash et al., 2014; McNelis et al., 2019).

Given the current turbulent and rapidly changing health care environment and the increased emphasise on evidence-based nursing practice, there is a clear need for PhD nurses who can lead cutting-edge research, quality improvement and teaching (Broome, 2015; Broome & Fairman, 2018). Most conceptualizations of leadership include a person who is effective in influencing and engaging others in

achieving a common goal that reflects a common vision (Cummings et al., 2018; Northouse, 2016). PhD-prepared nurses have the potential to become academic leaders as they have advocacy skills and the courage to continue to seek new innovative approaches (Broome, 2015). Various systematic reviews have shown leadership to be positively associated with improved patient, professional and organisational outcomes (Cummings et al., 2018; Wong et al., 2013). It is assumed that most PhD-prepared nurses learn basic leadership skills during doctoral education when working in research teams. However, it is unknown how many doctoral nursing students and PhD-prepared nurses have access to opportunities to develop leadership competences (McKenna, 2021). Also, for those who have access, the exposure to leadership theory and practice is inconsistent as they often work alone and have no access to situations or programmes to further develop their leadership skills (Broome, 2015; Hafsteinsdóttir et al., 2017).

Over the last decade, it has been well reported that PhD-prepared nurses often experience barriers related to career development including a lack of nursing research cultures and career frameworks

(McKenna, 2021). As a result, PhD-prepared nurses experience limited opportunities for career progression and work in challenging working environments with poor salaries, short-term contracts, high workloads, insufficient time for research, high competition for research funding, limited administrative support and limited recognition for their contributions (Al-Nawafleh et al., 2013; Bullin, 2018; Hafsteinsdóttir et al., 2017; de Lange et al., 2019; McKenna, 2021). Mentoring by experienced doctorally prepared nurses as well as support by colleagues and peers was found to support leadership and career development of doctorally prepared nurses. Mentoring supported them in their academic work, strengthened academic skills and supported them in developing an academic identity (Al-Nawafleh et al., 2013; Cullen et al., 2017; Hafsteinsdóttir et al., 2017; Nowell et al., 2017). However, to this day, only a limited number of doctorally prepared nurses has access to these resources (McKenna, 2021).

Only small numbers of PhD-prepared nurses find their career in the clinical setting (Andreassen & Christensen, 2018). A recent scoping review reported limited career opportunities for doctorally prepared nurses in clinical settings due to the lack of clinical academic career frameworks and positions (Dobrowolska et al., 2021). Also, doctorally prepared nurses in clinical settings experience difficulties with obtaining research funds, dividing time among research and other (clinical) commitments, and they experience limited opportunities for collaboration as well as limited support from managers and nurses at the bedside (Andreassen & Christensen, 2018; van Oostveen et al., 2017; Trusson et al., 2019).

Although clinical academic positions promote transfer of evidence into nursing practice, which supports quality and cost-effectiveness of nursing care (van Oostveen et al., 2017), still there is limited insight into the work experiences of PhD-prepared nurses in hospitals. Currently, there is a dearth of studies exploring leadership experiences of PhD-prepared nurses (Al-Nawafleh et al., 2013; Hafsteinsdóttir et al., 2017; de Lange et al., 2019), and there are no studies focussing on the influence of leadership on career development or the hospital setting. Therefore, the aim of this study was to explore the leadership experiences and the influence of leadership on the career development of PhD-prepared nurses working in hospitals.

2 | METHODS

2.1 | Design

A qualitative descriptive study with semi-structured interviews and thematic analysis was conducted between February and June 2018 in the Netherlands. A descriptive qualitative approach was employed as this type of design enables a comprehensive description of the PhD-prepared nurses' leadership experiences and its influence on career development without being aligned to specific methodologic roots (Polit & Beck, 2017). Thematic analysis was performed using the steps of Braun and Clarke (2006), which enabled the

development of a comprehensive understanding of the phenomena being explored. The consolidated criteria for reporting qualitative research (COREQ) checklist was used for reporting of the research findings (Appendix S1; Tong et al., 2007).

2.2 | Setting and sample

Although doctoral education has been offered to nurses in the Netherlands for the last 30 years (Florence Nightingale Instituut, n.d), the exact size of the PhD-prepared nursing workforce is unknown due to a lack of central registration (Regelink, 2017). At the time of the study, a national database included 140 doctoral dissertations of nurses (Proefschriften Verpleegkunde, n.d.). Earlier research estimated that approximately 41 PhD-prepared nurses worked at clinical departments of hospitals (Regelink, 2017). At the time of the study, no Doctor of Nursing Practice (DNP) programmes are offered in the Netherlands.

Participants were eligible for this study if they had a PhD degree in nursing (not referring to a postdoctoral position) and were employed at a clinical hospital department. Maximum variation sampling was used to recruit participants with different ages, years of experience as PhD-prepared nurse, positions and hospitals across the country (Polit & Beck, 2017).

2.3 | Data collection

Eligible participants were recruited through a database based on earlier research (Regelink, 2017). Potential participants were approached using e-mails (LD). Those who agreed to participate were asked to send their Curriculum Vitae to the researcher used to gain insight in the participants' careers and to extract demographic information. Interviews were planned at a date, time and location preferred by participants. Interviews were conducted by a female junior researcher who had no prior relationship with the participants (LD). The same interviewer carried out all interviews to ensure consistency. The interviews were conducted based on a pre-defined interview guide based on earlier studies (Al-Nawafleh et al., 2013; Hafsteinsdóttir et al., 2017; van Oostveen et al., 2017). In the interviews, leadership was defined as: "being able to see the present for what it really is, see the future for what it could be and take action to close the gap between today's reality and the preferred future" (Cummings, 2012). This definition was presented to participants and followed by the question: "How would you define leadership in your position as postdoctoral nurse?" to understand the participants' views on leadership. Then, open-ended questions were used to explore their leadership experiences (Table 1). The researcher used probes to gain in-depth insight in participants' leadership experiences by asking participants to elaborate on the topics and describe exemplary situations. The interview guide was piloted in two interviews. Since no changes were needed, these interviews were included in the analysis. The interviews, conducted in Dutch, were

TABLE 1 Interview guide

Interview questions
1. What is your definition of leadership in the role of doctorally prepared nurse?
2. Can you tell me more about your leadership experiences as doctorally prepared nurse?
3. What are your experiences with initiating change in practice as doctorally prepared nurse?
4. Do you experience barriers to leadership?
5. How would you describe your career development and what was the role of leadership in it?

audio-taped, and afterwards, memos were written to capture non-verbal and contextual information. Member checks were performed by means of sending summaries of the transcripts to participants to check interpretations made by the researchers (Noble & Smith, 2015).

2.4 | Data analysis

Data collection and analysis were performed iterative. Data saturation determined the sample size and was defined as the point when no additional codes was identified (Hennink et al., 2017). The researchers agreed that data saturation emerged after ten interviews. Two additional interviews were conducted to confirm saturation which found new experiences, but no new codes.

Steps of thematic analysis according to Braun and Clarke (2006) were followed in the analysis (Table 2). Interviews were transcribed verbatim (LD), read and reviewed by both researchers. Open coding was applied to identify meaningful paragraphs using Nvivo 11 (QRS international, n.d.) (LD). After coding the first two interviews, agreement on the coding was checked by both researchers. After coding five interviews, the development of themes started by classifying codes into (sub)themes based on their similarities (LD). Constant comparison was used to refine (sub) themes throughout the analysis. After analysing 10 interviews, the researcher (LD) drew a thematic map to construct the overall story. The researchers carefully selected quotes and established names for the themes. To avoid unintended interpretation, translation to English took place after the final themes emerged (Patton, 2015). Translations were conducted by the first researcher (LD) and checked by the second researcher (THB). Two experts provided feedback on the manuscript.

The researchers had regular meetings to discuss methodological considerations and the development of codes and (sub)themes. The background of the researchers enabled credibility of the analysis since the researcher, who collected the data, had limited experience within the research area and thereby no pre-existing assumptions towards the research topic (LD) and second researcher had thorough experience with research on leadership, doctorally prepared nurses and in qualitative research (TBH). A reflective approach was used to ensure that the findings were an accurate reflection of the participants' experiences. This meant that researchers remained aware of

TABLE 2 Steps of thematic analysis according to Braun and Clarke (2006)

Phase	Description
1. Familiarizing yourself with your data	Transcribing data, reading and re-reading the data and noting down initial ideas
2. Generating initial codes	Coding interesting features in the data across the entire data set and collating data relevant to each code
3. Searching for themes	Collating codes into potential themes and gathering all data relevant to each potential theme
4. Reviewing themes	Checking the themes in relation to the coded extracts (level 1) and the entire data set (level 2) and generating a thematic "map" of the analysis
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme and the overall story the analysis tells; generating clear definitions and names for each theme
6. Producing the report	Selection of vivid and compelling extracts, relating back of the analysis to the research question and literature and producing a scholarly report of the analysis

own experiences and positions and the potential influence on interpretation of the data (Carpenter & Suto, 2008).

2.5 | Ethical issues

The study received ethical approval from a Medical Research Ethical Board. The principles of the Declaration of Helsinki were followed (World Medical Association, 2013). Prior to the interviews, participants received written and oral information emphasising voluntary participation and the option to withdraw at any time. Written informed consent was obtained before the interviews. Extra attention was paid to the confidentiality of participants because of the small population of eligible participants. Individual characteristics were not disclosed preventing linking quotes with specific persons.

3 | FINDINGS

Thirty-three PhD-prepared nurses were approached, and 12 agreed to participate. The eight women and four men had a median age of 54 years (range 39–61 years). At median, participants finished their PhD three years prior to the study (range 1–12 years). Participants worked in four academic and three general hospitals and were

TABLE 3 Demographic characteristics (*n* = 12)

Item	Category	Frequency
Age	30–40 years	2
	41–50 years	2
	51–60 years	6
	61–70 years	2
Gender	Male	4
	Female	8
Nationality	Dutch	11
	Other	1
Primary function[a]	Researcher	6
	Nurse specialist and researcher	5
	Manager	1
Combination of functions	Research and clinical practice	3
	Research and education	4
	Research, clinical practice and education	3
	Research and management	1
	Research, education and management	1
Type of hospital	Academic	9
	General	3
Years of experience postdoctoral nursing	0–5 years	7
	5–10 years	2
	10–15 years	3
Hours a week spend on research activities[b]	0–8 h	5
	9–16 h	0
	17–24 h	3
	25–32 h	2
	33–40 h	2
Hours a week spend on clinical practice[b]	0–8 h	0
	9–16 h	1
	17–24 h	3
	25–32 h	2
Hours a week spend on management[b]	0–8 h	1
	9–16 h	0
	17–24 h	0
	25–32 h	1
Hours a week spend on education[b]	0–8 h	5

[a]Function in which most time is spend.
[b]The frequencies do not add up to the sample size because not all participants practiced within these roles.

primarily employed as researcher (*n* = 7), clinical nurse specialist (*n* = 4) or manager (*n* = 1) and combined part-time positions in research, clinical practice, teaching and/or management. Six participants were working in clinical practice at the time of the study

(Table 3). Most interviews took place at the participants' workplace with only the participant and researcher present in the room. The mean interview length was 58 min (range 47–75 min).

Three main themes and eight subthemes derived from the data elaborating on leadership experiences. All themes start with an introduction followed by substantive subthemes. The first theme "Leadership needed for career development" focussed on experiences with career development and the role of leadership in it. This theme includes the subthemes "taking the lead" and "support of mentors, supporters and motivators." The second theme "Practicing leadership behaviours" focussed on leadership experiences in daily working practices and includes the subthemes "effective leadership characteristics" and "feelings associated with leadership." The third theme "Leadership influenced by the hospital setting" describes the hospital as work environment and includes the subthemes "struggling nursing research culture and infrastructure," "the importance of suitable positions," "the importance of managerial support" and "the importance of collaborations" (Figure 1 and Table 4).

3.1 | Leadership is needed for career development

Some participants followed linear career paths, starting with a Bachelor in Nursing followed by a Master and doctoral degree, while others made career decisions along the way. Although the variance in career paths, leadership was demonstrated by participants having a vision for their career and taking initiative to accomplish career goals. Participants did not do this alone; they searched and received support from others throughout their career.
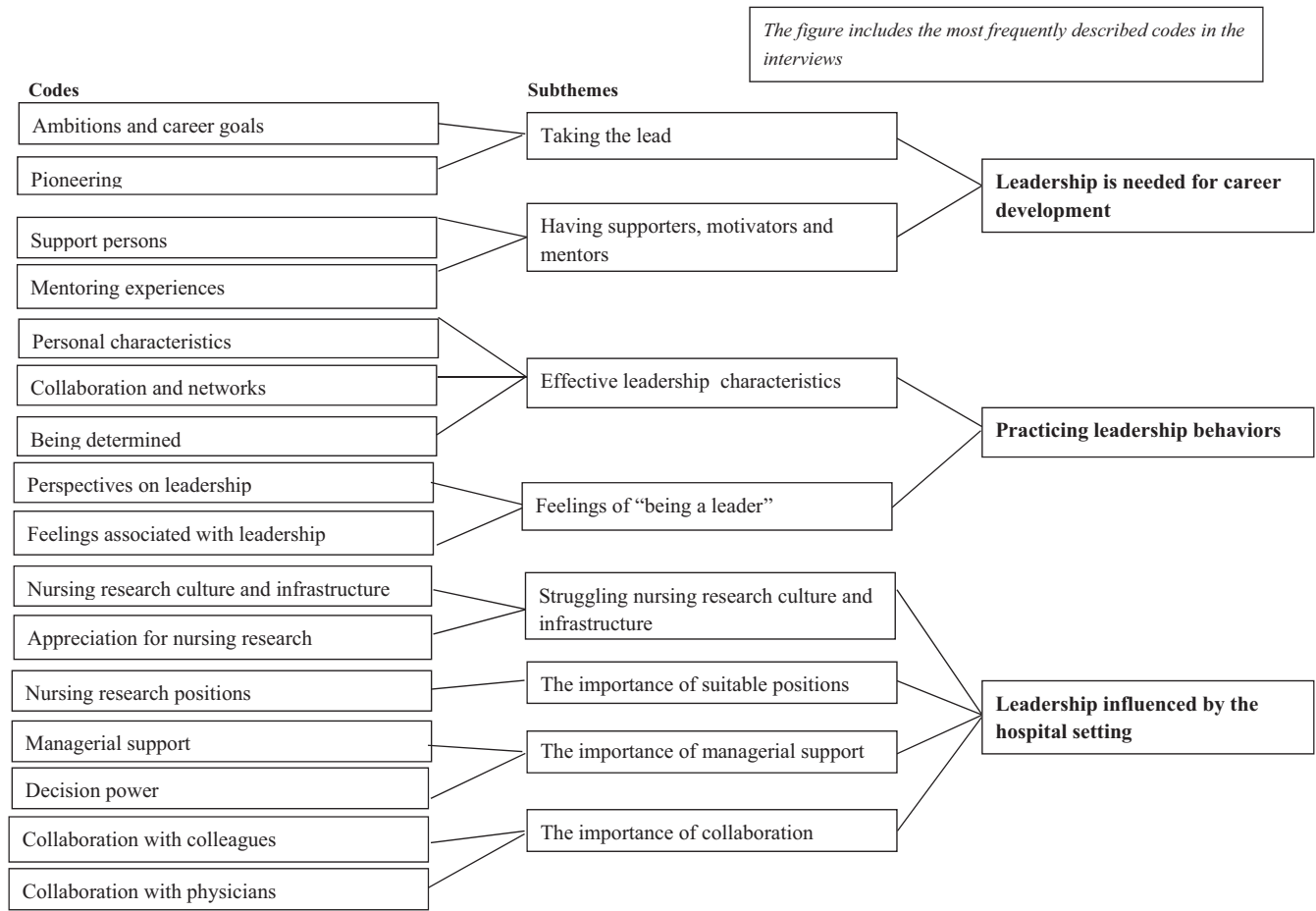
3.1.1 | Taking the lead

Career development of the participants was characterised by taking initiative and planning of their career. Participants shared the importance of showing leadership by means of developing a career vision and a plan of action. They saw their careers as an intentional process, and all felt responsible for planning and taking next steps in their career, even if these were challenging. One participant said:

> I am convinced that you have to seize opportunities to realize your ambitions. You have to jump in there. You have to show courage and accept challenges.

> (Participant 9)

Some participants described facing challenges related to being the first PhD-prepared nurse at the department or even the hospital. This made them feel like they were pioneering and had to find out everything by themselves. This was experienced as waste of time by some as this did not contribute to their ambitions. One participant explained the higher meaning:

The figure includes the most frequently described codes in the interviews

Codes   **Subthemes**

| Ambitions and career goals |
| Pioneering |

Taking the lead

Leadership is needed for career development

| Support persons |
| Mentoring experiences |

Having supporters, motivators and mentors

| Personal characteristics |
| Collaboration and networks |
| Being determined |

Effective leadership characteristics

Practicing leadership behaviors

| Perspectives on leadership |
| Feelings associated with leadership |

Feelings of "being a leader"

| Nursing research culture and infrastructure |
| Appreciation for nursing research |

Struggling nursing research culture and infrastructure

| Nursing research positions |

The importance of suitable positions

Leadership influenced by the hospital setting

| Managerial support |
| Decision power |

The importance of managerial support

| Collaboration with colleagues |
| Collaboration with physicians |

The importance of collaboration

FIGURE 1 Coding tree. This figure includes a simplified version of the coding three including the most frequently described codes in the interviews

When you are pioneering, you are spending much time on arranging things, not only for yourself but also for others.

(Participant 4)

For some, pioneering only occurred at the beginning of their career, whereas others have this feeling to this day. For those who needed to pioneer, it did not stop them from chasing their ambitions.

3.1.2 | Support of mentors, supporters and motivators

The participants acknowledged the importance of mentoring and having support from others while building their careers. This gave them confidence to progress in their careers, for example, by applying for higher positions. Support often came from professors or managers with a medical background working at the department. Professors were seen as motivators and valuable discussion partners because of their expert knowledge and scientific background. Managers were described as motivators and facilitators. One participant said:

I received much support from my former manager, a physician. He was very supportive of nursing. He strengthened my career development and positioning. I noticed: when you put people in their strength, they reach their full potential and this is what happened in my case.

(Participant 7)

Despite many participants having someone to provide career guidance, some participants felt less supported regarding their leadership development described as becoming a more experienced and senior professional. Some missed having a more senior colleague as role model. Although some were mentored by a more senior researcher and experienced this as beneficial, others described being in need of mentoring. One participant said:

I missed a mentor, someone with the same background, someone you can discuss with. I still miss that and I'm looking for that. Currently I'm pioneering alone.

(Participant 7)

TABLE 4 Themes, subthemes and quotes

Theme	Subtheme	Quote	Participant
Leadership is needed for career development	Taking the lead	"I am convinced that you have to seize opportunities to realize your ambitions. You have to jump in there. You have to show courage and accept challenges."	8
		"When you are pioneering you are spending a much time on arranging things, not only for yourself but also for others."	4
	Support of mentors, supporters and motivators	"I received much support from my former manager, a physician. He was very supportive of nursing. He strengthened my development and positioning. I noticed: when you put people in their strength, they reach their full potential and this is what happened in my case."	7
		"I missed a mentor, someone with the same background, someone you can discuss with. I still miss that and I'm looking for that. Currently I'm pioneering alone."	7
Practicing leadership behaviours	Effective leadership characteristics	"For me leadership is about taking the lead. It is important to have a vision and being able to realize changes in collaboration with others"	12
		As nurse or even as doctorally prepared nurse you have to fight, if you want to achieve anything you have to fight, work hard and keep going. This is also the case when you to do research	2
	Feelings of "being a leader"	"When you are asked to submit a research proposal an expert for a closed call and mine gets granted, then you probably can say that you are an important leader within your specialism."	3
		"I do not have a leadership role, because I am not the manager who is responsible for making decisions, however I do give my opinion, but I am not the one making decisions"	9
		"In my current function I work quite solo. I am collaborating mostly with physicians, so I do not feel like a leader in nursing."	1
Leadership influenced by the hospital	Struggling nursing research culture and infrastructure	"They[the managers] said: you cannot spend your time on research, you are hired to conduct patient care. You are not a researcher. They don't want me to do research."	1
	The need for suitable positions	"If you do not watch out, you will be swallowed by patient care, you have to come up for yourself and detach yourself from patient care otherwise you will be interrupted constantly. Sometimes I hide myself outside the department."	10
		"We [the manager and participant] shared our ideas on a suitable position and the manager explained his vision. He valued the contribution of doctorally prepared nurses and me as a person. Therefore he really supported the development of my position" (participant 4).	4
	The need for managerial support	"The manager decides how I spend my time. A colleague on a different department gets a much more time for research. There is no organization-wide policy."	6
		"Improving nursing care is difficult to express in money, but this [finances] is what makes the managers enthusiastic."	3
		"Many managers do not understand the importance of nursing research as they have no academic background. So, for them it is difficult to stimulate nursing research, because they lack knowledge and are not familiar with it."	2
	The need for collaborations	"Within our department the physicians conduct large clinical studies. I think there are easy ways to include nursing components where we could collaborate. What would be more beautiful? However, at the moment it is strictly separated."	8
		"You are not one of them anymore. I did not become nurse scientist because I did not want to be a nurse anymore. I have different interests. You grow apart, you do not have same frame of reference anymore."	5

3.2 | Practicing leadership behaviours

Participants shared how they used leadership competences in their daily work. Some described this in a detailed way, while others had more abstract ideas. In general, participants described leadership frequently as leading research activities and quality improvement initiatives to strengthen nursing care in collaboration with the nursing discipline and within multidisciplinary settings.

3.2.1 | Effective leadership characteristics

The participants described various characteristics important to leadership in their daily work like having expert knowledge, passion for nursing and courage to stand out. Important personal characteristics were being enthusiastic, communicative, persevering, motivating, decisive and visionary. One participant said:

> For me leadership is about taking the lead. It is important to have a vision and being able to realize changes in collaboration with others.
>
> (Participant 12)

Being sensitive for the organisation was found to be important, which was defined as having insight in organisational processes, influence within the organisation and insight in health care systems. The participants also agreed that self-determination was important as it was not evident to have the opportunity to conduct research. One participants stated:

> As nurse or even as doctorally prepared nurse you have to fight, if you want to achieve anything you have to fight, work hard and keep going. This is also the case when you to do research.
>
> *(Participant 2)*

3.2.2 | Feelings of "being a leader"

The participants recognised own leadership behaviours, which they described in a modest way. Participants described feeling like a leader based on their experiences with being experts in specific areas of nursing or having national or international collaborations. One participant described this like:

> When you are asked as an expert to submit a research proposal for a closed call and mine gets granted, then you probably can say that you are an important leader within your specialism.
>
> (Participant 3)

Others, however, did not feel like leaders in nursing or nursing science, but they described feeling more like leaders within their specialism or at their department. Some participants associated leadership with hierarchal management positions. One participant explained:

> I do not have a leadership role, because I am not the manager who is responsible for making decisions, however I do give my opinion, but I am not the one making decisions.
>
> (Participant 9)

Others stated that they did not feel like leaders because for them leadership is associated with having followers. One participant explained this:

> In my current function I work quite solo. I am collaborating mostly with physicians, so I do not feel like a leader in nursing.
>
> *(Participant 1)*

3.3 | Leadership influenced by the hospital setting

The hospital environment influenced the participants' leadership and career development. Some felt it was hard to use their competences and advance their careers, while others experienced the hospital as supporting and facilitating.

3.3.1 | Struggling nursing research culture and infrastructure

The participants described hospitals generally lacking strong nursing research culture and infrastructure for nursing research. They described the hospitals as being medically orientated. One clinical nurse specialist described:

> They [the managers] said: you cannot spend your time on research, you are hired to conduct patient care. You are not a researcher. They don't want me to do research.
>
> (Participant 1)

The lack of a strong nursing research culture in the organisational culture of hospitals was reflected by limited research infrastructures and career opportunities for nurses. Others described that nursing research cultures were improving as the importance of nursing science was increasingly being recognised. They described that considerable progress was being made with more nurses being appointed as professors, increased attention towards career pathways for nurse

researchers, implementation of joint clinical academic positions and more grant opportunities for nursing research.

3.3.2 | The need for suitable positions

The participants stated that there were limited suitable positions. Many participants developed positions in collaboration with their manager. One participant explained this:

> We [the manager and participant] shared our ideas on a suitable position and the manager explained his vision. He valued the contribution of doctorally prepared nurses and me as a person. Therefore he really supported the development of my position.
>
> *(Participant 4)*

Integrated joint clinical academic positions were valuable to participants as they enabled combining research activities and quality improvement projects with roles in clinical practice or teaching. Combing these roles was highly valued but experienced as challenging due to the priority on patient care. One clinical nurse specialist explained this:

> If you do not watch out, you will be swallowed by patient care, you have to come up for yourself and detach yourself from patient care sometimes otherwise you will be interrupted constantly. Sometimes I hide myself outside the department.
>
> *(Participant 10)*

3.3.3 | The need for managerial support

Some participants described having positive experiences with their managers as they co-created positions and secured access to resources. Participants described that their ability to conduct research was highly dependent of their manager. One participant said:

> The manager decides how I spend my time. A colleague on a different department gets much more time for research. There is no organization-wide policy.
>
> *(Participant 6)*

Some other experienced insufficient managerial support and described managers' having different priorities. One participant explained:

> Improving nursing care is difficult to express in money, but this [finances] is what makes managers enthusiastic.
>
> *(Participant 3)*

These participants felt more tolerated than appreciated. Some participants explained that managers had limited knowledge about research or the importance of evidence-based practice. One participant said:

> Many managers do not understand the importance of nursing research as they have no academic background. So, for them it is difficult to stimulate nursing research, because they lack knowledge and are not familiar with it.
>
> *(Participant 2)*

3.3.4 | The need for collaborations

Some participants described missing collaborations with other researchers and felt isolated. This was especially the case with participants working in general hospitals, where only a small number of (or even no) PhD-prepared nurses worked. They emphasised the importance of collaborations with other nurse researchers at University Medical Centers or universities.

Although some participants had research collaborations with physicians, many felt like they had to compete with them for resources. Clinical nurse specialists described more collaboration with physicians, while some participants with other backgrounds emphasised the need for more interdisciplinary research collaborations. One participant explained:

> Within our department the physicians conduct large clinical studies. I think there are easy ways to include nursing components where we could collaborate. What would be more beautiful? However, at the moment it is strictly separated.
>
> *(Participant 8)*

Collaboration with other nurses working on the ward was described as highly valuable, and these nurses often volunteered to contribute to their research. Some participants, however, described a distance between them and the nurses on the ward. One participant explained:

> You are not one of them [the nurses] anymore. I did not become nurse scientist because I did not want to be a nurse anymore. I have different interests. You grow apart, you do not have same frame of reference anymore.
>
> *(Participant 5)*

4 | DISCUSSION AND RECOMMENDATIONS

This is the first study exploring leadership experiences and the influence of leadership on career development of PhD-prepared nurses
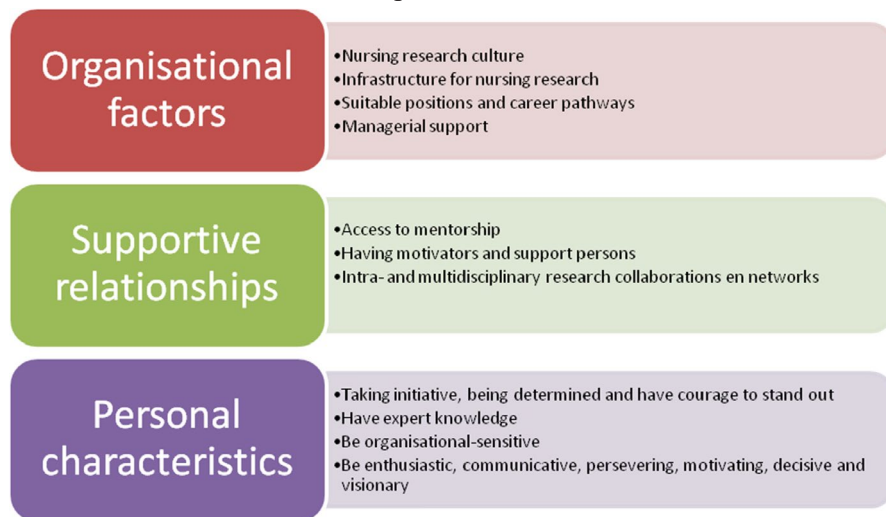
FIGURE 2 Leadership of postdoctoral nurses: organisational factors, supportive relationships and personal characteristics. This figure provides an overview of factors influencing the leadership experiences and career development of doctorally prepared nurses

working in hospital settings. The PhD-prepared nurses worked at clinical hospital departments and had positions in research, quality improvement, education and/or management. Data analysis revealed three main themes: (1) Leadership needed for career development; (2) Practicing leadership behaviours and (3) Leadership influenced by the hospital setting. The PhD-prepared nurses showed leadership as they took initiative to advance their careers by developing a career plan and making intentional decisions to take steps in their careers. All participants highly valued the support and mentorship provided by others. Although the participants practised leadership behaviours in their working practices, not all participants felt like leaders due to various reasons. Our findings also demonstrate that leadership experiences of PhD-prepared nurses working were influenced by personal characteristics and behaviours of PhD-prepared nurses, like taking initiative and leadership behaviours and supportive relationships with colleagues and managers. Leadership experiences were also influenced by organisational factors, like the nursing research culture and infrastructure, availability of suitable positions, availability of managerial support and the opportunities for collaboration (Figure 2).

In the theme "Leadership needed for career development," participants described taking intentional steps in their careers. This is in line with the study of de Lange et al. (2019) who also acknowledged that PhD-prepared nurses showed leadership by making serious and conscious considerations towards their careers. In both studies, leadership experiences were linked to challenges related to the work environment including high workload and the search for balance between various commitments for those who are worked at the bedside (de Lange et al., 2019). Although the participants were able to advance their careers, the working environment was often experienced as complex and difficult. This is in line with the scoping review of Dobrowolska et al. (2021) who described that hospitals can be considered as complex organisations for doctorally prepared nurses to work in. This is especially due to the lack of clarity around the functions, roles and responsibilities. The participants in our study described struggling nursing research cultures

and infrastructures within hospitals with limited numbers of suitable positions, insufficient managerial support and limited (multidisciplinary) collaborations. Dobrowolska et al. (2021) reported similar challenges for doctorally prepared nurses, including difficulties with obtaining research funding, the division of time between research and clinical commitments, lack of recognition for their work and lack of collaboration with other doctorally prepared nurses. Although our findings are in line with findings from earlier studies, our study adds important and innovative knowledge. Earlier studies did not specifically focus on leadership experiences (Dobrowolska et al., 2021; van Oostveen et al., 2017), did not merely include doctorally prepared nurses (van Oostveen et al., 2017) and/or did not primarily focus on clinical settings (de Lange et al., 2019; McKenna, 2021). Our study provides new knowledge in areas including leadership experiences of PhD-prepared nurses and the hospital as working environment for PhD-prepared nurses.

Based on our findings, the question arises how well PhD nurses are prepared to lead research and quality improvement in the complex hospital setting as the traditional PhD focussing on the development of research competences without reference to a specific working context. Also, there is limited attention for the development of leadership competences. Therefore, the question can be raised whether PhD-prepared nurses are well-trained to utilise leadership competences in clinical settings. In line with this, recently, it has been debated that traditional research-orientated doctoral education may have a (too) narrow focus since it primarily focuses on the development of research competences and, therefore, may not sufficiently prepare PhD-prepared nurses to become autonomous scientists and effective leaders, well equipped to work in the complex clinical setting (McKenna, 2021; Morris et al., 2021). Currently, PhD-prepared nurses find their career in a broad range of fields including the clinical setting (Broome & Fairman, 2018). It, however, seems that current PhD programmes provide limited training opportunities for nurses to develop the wide range of skills and competencies needed for them to develop successful careers in the wide range of setting where they may work. It is important for doctoral nursing

students and PhD-prepared nurses to develop strong leadership competences early in their careers (Broome, 2015; Hafsteinsdóttir et al., 2017). The development of leadership competences should be a part of doctoral education, and PhD-prepared nurses should have access to further leadership development opportunities throughout their careers as this will supported them in establishing advanced and sustainable careers where they can practice to the full extent of their competences.

The theme "Practicing leadership behaviours" describes how doctorally prepared nurses frame leadership in their working practices by formulating leadership behaviours. Consistent with our study, Halcomb et al. (2016) found that most PhD students and PhD-prepared nurses had clear ideas about leadership and were aware of its importance. They however, found that participants lacked confidence and autonomy which affected their ability to identify their leadership strengths or to see themselves as leaders (Halcomb et al., 2016). Although not all participants in our study identified themselves as leaders and levels of confidence varied, all described practicing important leadership behaviours. Limited autonomy was recognised by some as they were dependent on their managers to make changes in clinical practice. This might be challenging for participants since managers have different priorities (van Oostveen et al., 2017). Managers were often found dealing with operational care delivery challenges and, therefore, were unwilling or unable to facilitate nursing researchers (Trusson et al., 2019). However, to support evidence-based practice and quality improvement, it is vital that nurse managers recognise the important contributions of doctorally prepared nurses (Dobrowolska et al., 2021).

Leadership is often referred to as the art of guiding, directing, motivating and inspiring a group or organisation towards the achievement of common goals. It includes the management of people information, and resources and it requires commitment, communication, creativity and credibility (Marshall, 2011). Transformational leadership includes identification of the needed changes, creating of a vision to guide the change through inspiration and executing the change with the commitment of others. Transformational leaders often are visionary, charismatic and inspiring (Marshall, 2011). Systematic reviews have provided robust evidence that relational oriented leadership style, including transformational leadership, is linked to improved patient, workforce and organisation outcomes when compared to task-focussed leadership styles (Cummings et al., 2018; Wong et al., 2013). The fundamentals of transformational leadership can be recognised in the leadership behaviours identified by the participants. They characterised leadership by means of having expert knowledge, passion for nursing, being self-determined and having the courage to stand out as well as important personal characteristics like being enthusiastic, communicative, persevering, motivating, decisive, visionary and being sensitive for the organisation. These findings are also consistent with leadership behaviours identified in earlier studies focussing on academic nurses as they identified leadership behaviours like the ability to communicate effectively, take

risks and solve complex problems while being thoughtful, courageous, inspirational, visionary, confident and assertive (Delgado & Mitchell, 2016; Halcomb et al., 2016). It is interesting to note that although the participants used different wording, there is strong alignment between leadership behaviours described by participants in our study and leadership behaviours identified in earlier studies. Although no studies have been conducted on leadership styles and outcomes of leadership of PhD-prepared nurses, the authors expect that leadership by PhD-prepared nurses contributes improved patient, workforce and organisational outcomes as these academic leaders have the potential to advance nursing care and the nursing discipline by responding to challenges within the complex health care environment (Broome, 2015).

The third theme "Leadership influenced by the hospital setting" describes varying experiences with the hospital working environment as some described the research culture and infrastructure for nursing research as adequate, while most described limited nursing research cultures and infrastructures. This is consistent with earlier research that acknowledged that nursing has not moved along to a profession with a strong research culture in many organisations due to a lack of academic tradition (van Oostveen et al., 2017; Trusson et al., 2019). This lack of academic tradition might be caused by the strong focus on direct patient care (Berthelsen & Hølge-Hazelton, 2018). It is understandable that the needs of clinical practice are considered important, but such short-term thinking demonstrates lack of knowledge on the importance of research for evidence-based practice to improve patient and health care outcomes. This also shows a short-sighted view as this prevents nurses from using their leadership competences to evaluate and improve current nursing care. It also shows a lack of appreciation for the potential long-term benefits of research and the important contribution PhD-prepared nurses make to clinical practice (Broome & Fairman, 2018).

In the Netherlands, nurses are trained at the vocational, bachelor, Master and/or doctoral level. Hence, although most hospitals have established positions for nurses with a Master of Advanced Nursing Practice, only few hospitals have developed positions and career pathways for nurses with academic degrees like Master in Nursing Science or the PhD degree. Integrated joint clinical academic positions, where PhD-prepared nurses integrate the work in research and clinical practice, have only been successfully established in a few Dutch hospitals. Until recently, only few nurses were involved at board or strategic levels of hospitals or health care facilities. Today more PhD-prepared nurses are moving into advanced positions within hospitals. However, limited career opportunities for nurses who pursue advanced (joint) positions within the hospital setting remain.

At this moment, there is no shared responsibility by governmental bodies, hospital boards and the PhD-prepared nursing workforce for strengthening leadership and career opportunities within hospitals (de Lange et al., 2019; McKenna, 2021). There still is a lack of clear models for career progression for academic nurses in clinical practice as well as joint positions with integration of

research, education and practice (Avery et al., 2021; Dobrowolska et al., 2021; Henshall et al., 2021). To realise this, it is imperative to define clinical entry criteria, models for career progression and develop bridges between the faculty and clinical settings (Baltruks & Callaghan, 2018). Also, careful investments should be made to support PhD-prepared nurses by means of orientation into the academic work by developing supportive networks (Bryant et al., 2015; Rice et al., 2020), access to mentoring (Cullen et al., 2017; Hafsteinsdóttir et al., 2017; Nowell et al., 2017) and leadership and professional development programmes (Bryant et al., 2015; Rice et al., 2020; van Dongen et al., 2021). Although opportunities like these are more common in North America, some initiatives are taking place in European countries, like the Dutch Leadership Mentoring in Nursing Research Programme (Hafsteinsdóttir et al., 2020; van Dongen et al., 2021) and the European NurseLead programme, which acknowledge and take seriously the need to educate both doctoral nursing students and PhD-prepared nurses in the wider range of competences to build sustainable careers in various areas of health care, education and academe (Hafsteinsdóttir et al., 2017).

To strengthen the vital role of PhD-prepared nurses in the clinical setting, further research should focus on what competences are needed to build suitable careers. Also, increased attention should be paid to the development of leadership competences in doctoral programmes, in addition to research competences, so that doctoral students have the opportunity to strengthen their leadership competences early in their careers and become well prepared to lead research and quality improvement in clinical environments (Broome, 2015; McKenna, 2021). Leadership development of PhD-prepared nurses should be supported within hospitals by means of providing access to mentoring and (collegial) support structures as well as facilitating opportunities for (research) collaboration (Hafsteinsdóttir et al., 2017). Career development should be supported by establishing career frameworks with (joint) positions in the clinical setting, support nursing research cultures by implementation policies that facilitate research activities and thereby creating a stimulating work environment for PhD-prepared nurses, in which they can make a difference for patients (Avery et al., 2021; Henshall et al., 2021).

4.1 | Limitations

Despite the small sample size, data saturation was reached. Results of this study should, however, be generalised carefully since this study includes PhD-prepared nurses from seven Dutch hospitals. Also, although we expect the findings to be relevant for PhD-prepared nurses globally, it is important to be aware of differences in career opportunities, doctoral education, leadership development opportunities and working environment globally. Therefore, we emphasise the importance of conducting more international research on leadership and career development of PhD-prepared nurses with robust designs and larger samples of participants.

5 | CONCLUSION

The PhD-prepared nurses acknowledge the importance of demonstrating leadership while building their careers and contributing to nursing care by conducting research and leading quality improvement projects. The working environment had a strong influence on the leadership and careers of PhD-prepared nurses as participants reported challenges related to limited career opportunities and struggling nursing research culture and infrastructure reflected limited managerial support, limited availability of positions and insufficient collaborations within the hospital setting. In order to support PhD-prepared nurses within hospitals, an ongoing movement is needed to establish sustainable nursing research cultures and infrastructures with career frameworks and opportunities to develop leadership competences.

6 | RELEVANCE FOR CLINICAL PRACTICE

Earlier research demonstrated that doctorally prepared nurses have the ability to improve nursing care (Beeber et al., 2019; Trusson et al., 2019; Udlis & Mancuso, 2015). In order to advance nursing care and the nursing discipline, they need strong leadership competences. Strong leadership competences would enable PhD-prepared nurses to be better equipped to use their expert knowledge in research, education, evidence-based practice and quality improvement and thereby strengthen nursing care and the nursing discipline. Hospitals should facilitate leadership development of PhD-prepared nurses by providing access to educational programmes for leadership development, mentoring as well as developing structures for collegial support and research collaboration. The development of leadership competences of individuals alone is not sufficient to improve the position of PhD-prepared nurses. In order to develop strong and sustainable careers, organisational structures and policies to support career development should be in place. Hospitals should implement advanced career frameworks with integrated joint positions in research, quality improvement, administration and access to educational programmes for PhD-prepared nurses as well as policies facilitating research activities.

CONFLICT OF INTERESTS
The authors declare that there is no conflict of interest that could be perceived as prejudicing the impartiality of the research reported.

AUTHOR CONTRIBUTIONS
THB and LD designed the study. LD conducted the interviews, data analyse and drafted the final report. TBH supervised the process of data collection and analysis and provided support and

feedback during all study phases. Both authors have contributed to the manuscript. Also, both authors read and approved the final manuscript.

DATA AVAILABILITY STATEMENT

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

ORCID

Lisa J. C. van Dongen https://orcid.org/0000-0001-7207-324X

REFERENCES

Al-Nawafleh, A., Zeilani, R. S., & Evans, C. (2013). After the doctorate: a qualitative study investigating nursing research career development in Jordan. *Nursing & Health Sciences*, 15(4), 423–429. https://doi.org/10.1111/nhs.12035

American Association of Colleges of Nursing (2010). *The Research-Focused Doctoral Program in Nursing. Pathways to Excellence*. American Association of Colleges of Nursing. https://www.aacnnursing.org/Portals/42/Publications/PhDPosition.pdf

Andreassen, P., & Christensen, M. K. (2018). "We're at a watershed": The positioning of PhD nurses in clinical practice. *Journal of Advanced Nursing*, 74(8), 1908–1918. https://doi.org/10.1111/jan.13581

Avery, M., Westwood, G., & Richardson, A. (2021). Enablers and barriers to progressing a clinical academic career in nursing, midwifery and allied health professions: A cross-sectional survey. *Journal of Clinical Nursing*, https://doi.org/10.1111/jocn.15673. Online ahead of print.

Baltruks, D., & Callaghan, P. (2018). *Nursing, midwifery and allied health clinical academic research careers in the UK*. Council of Deans of Health. https://councilofdeans.org.uk/wp-content/uploads/2018/08/Nursing-midwifery-and-allied-health-clinical-academic-research-careers-in-the-UK.pdf

Bednash, G., Breslin, E. T., Kirschling, J. M., & Rosseter, R. J. (2014). PhD or DNP: Planning for doctoral nursing education. *Nursing Science Quarterly*, 27(4), 296–301. https://doi.org/10.1177/0894318414546415

Beeber, A. S., Palmer, C., Waldrop, J., Lynn, M. R., & Jones, C. B. (2019). The role of Doctor of Nursing Practice-prepared nurses in practice settings. *Nursing Outlook*, 67(4), 354–364. https://doi.org/10.1016/j.outlook.2019.02.006

Berthelsen, C. B., & Hølge-Hazelton, B. (2018). Caught between a rock and a hard place: An intrinsic single case study of nurse researchers' experiences of the presence of a nursing research culture in clinical practice. *Journal of Clinical Nursing*, 27(7–8), 1572–1580. https://doi.org/10.1111/jocn.14209

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Broome, M. E. (2015). Leadership in science. *Nursing Science Quarterly*, 28(2), 164–166. https://doi.org/10.1177/0894318415571610

Broome, M. E., & Fairman, J. (2018). Changing the conversation about doctoral education in nursing. *Nursing Outlook*, 66(3), 217–218. https://doi.org/10.1016/j.outlook.2018.04.011

Bryant, A. L., Aizer Brody, A., Perez, A., Shillam, C., Edelman, L. S., Bond, S. M., Foster, V., & Siegel, E. O. (2015). Development and implementation of a peer mentoring program for early career gerontological faculty. *Journal of Nursing Scholarship*, 47(3), 258–266. https://doi.org/10.1111/jnu.12135

Bullin, C. (2018). To what extent has doctoral (PhD) education supported academic nurse educators in their teaching roles: An integrative review. *BMC Nursing*, 17:6. https://doi.org/10.1186/s12912-018-0273-3

Carpenter, C. M., & Suto, M. (2008). *Qualitative research doe occupational and physical therapists: a practical guide*. Wiley.

Cashion, A. K., Dickson, V. V., & Gough, L. L. (2019). The value and importance of PhD Nurse Scientists. *Journal of Nursing Scholarship*, 51(6), 611–613. https://doi.org/10.1111/jnu.12525

Cheraghi, M. A., Jasper, M., & Vaismoradi, M. (2014). Clinical nurses' perceptions and expectations of the role of doctorally-prepared nurses: A qualitative study in Iran. *Nurse Education in Practice*, 14(1), 18–23. https://doi.org/10.1016/j.nepr.2013.06.007

Cullen, D., Shieh, C., McLennon, S. M., Pike, C., Hartman, T., & Shah, H. (2017). Mentoring nontenured track nursing faculty: A systematic review. *Nurse Educator*, 42(6), 290–294. https://doi.org/10.1097/NNE.0000000000000394

Cummings, G. (2012). Editorial: Your leadership style–how are you working to achieve a preferred future? *Journal of Clinical Nursing*, 21(23–24), 3325–3327. https://doi.org/10.1111/j.1365-2702.2012.04290.x

Cummings, G. G., Tate, K., Lee, S., Wong, C. A., Paananen, T., Micaroni, S. P. M., & Chatterjee, G. E. (2018). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies*, 85, 19–60. https://doi.org/10.1016/j.ijnurstu.2018.04.016

de Lange, W., Kars, M. C., Poslawsky, I. E., Schuurmans, M. J., & Hafsteinsdóttir, T. B. (2019). Postdoctoral Nurses' experiences with leadership and career development: A qualitative study. *Journal of Nursing Scholarship*, 51(6), 689–698. https://doi.org/10.1111/jnu.12519

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

Dobrowolska, B., Chruściel, P., Markiewicz, R., & Palese, A. (2021). The role of doctoral-educated nurses in the clinical setting: Findings from a scoping review. *Journal of Clinical Nursing*, 30(19-20), 2808–2821. https://doi.org/10.1111/jocn.15810

Florence Nightingale Instituut (n.d.). Canon. Florance Nightingale Institute. https://www.fni.nl/canon

Hafsteinsdóttir, T. B., Schoonhoven, L., Hamers, J., & Schuurmans, M. J. (2020). The leadership mentoring in nursing research program for postdoctoral nurses: A development paper. *Journal of Nursing Scholarship*, 52(4), 435–445. https://doi.org/10.1111/jnu.12565

Hafsteinsdóttir, T. B., van der Zwaag, A. M., & Schuurmans, M. J. (2017). Leadership mentoring in nursing research, career development and scholarly productivity: A systematic review. *International Journal of Nursing Studies*, 75(6), 21–34. https://doi.org/10.1016/j.ijnurstu.2017.07.004

Halcomb, E., Jackson, D., Daly, J., Gray, J., Salamonson, Y., Andrew, S., & Peters, K. (2016). Insights on leadership from early career nurse academics: Findings from a mixed methods study. *Journal of Nursing Management*, 24(2), 155–163. https://doi.org/10.1111/jonm.12317

Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017). Code saturation versus meaning saturation. *Qualitative Health Research*, 27(4), 591–608. https://doi.org/10.1177/1049732316665344

Henshall, C., Kozlowska, O., Walthall, H., Heinen, A., Smith, R., & Carding, P. (2021). Interventions and strategies aimed at clinical academic pathway development for nurses in the United Kingdom: A systematised review of the literature. *Journal of Clinical Nursing*, 30(11–12), 1502–1518. https://doi.org/10.1111/jocn.15657

Marshall, S. E. (2011). *Transformational leadership in Nursing*. Springer Publishing Company.

McKenna, H. (2021). Postdoctoral nurse researchers: The ups and downs of their roles, functions and careers. *International Journal of Nursing Studies*, 118, 103885. https://doi.org/10.1016/j.ijnurstu.2021.103885

McNelis, A. M., Dreifuerst, K. T., & Schwindt, R. (2019). Doctoral education and preparation for nursing faculty roles. *Nurse Education*, *44*(4), 202–206. https://doi.org/10.1097/NNE.0000000000000597

Morris, N. S., Wassef, M. E., Sullivan-Bolyai, S., Bova, C., & Kane, A. T. (2021). Making explicit the development of PhD-prepared nurses to steward the discipline. *Nursing Outlook*, *69*(1), 50–56. https://doi.org/10.1016/j.outlook.2020.08.002

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence Based Nursing*, *18*(2), 34–35. https://doi.org/10.1136/eb-2015-102054

Northouse, P. G. (2016). *Leadership: Theory and practice.* 7th ed. SAGE Publications.

Nowell, L., Norris, J. M., Mrklas, K., & White, D. E. (2017). Mixed methods systematic review exploring mentorship outcomes in nursing academia. *Journal of Advanced Nursing*, *73*(3), 527–544. https://doi.org/10.1111/jan.13152

Patton, M. (2015). *Qualitative research & evaluation methods: Integrating theory and practice.* SAGE Publications Inc.

Polit, D. F., & Beck, C. T. (2017). *Nursing Research. Generating and assessing evidence for nursing practice.* 10th ed. Wolters Kluwer.

Proefschriften Verpleegkunde. (n.d.). Proefschriften verpleegkunde. Proefschriften Verpleegkunde. https://www.proefschriftenverpleegkunde.nl/

QRS international. (n.d.). *NVivo qualitative data analysis software.* QSR International. https://www.qsrinternational.com/nvivo/home

Regelink, A. H. M. (2017). *Leadership practices, faculty stress and job satisfaction of Dutch post-doctoral nurses: a national survey.* [Master thesis, Utrecht University]. Utrecht Universitary Respository. https://dspace.library.uu.nl/handle/1874/334890

Rice, M., Davis, S. L., Soistmann, H. C., Johnson, A. H., Gray, L., Turner-Henson, A., & Lynch, T. (2020). Challenges and strategies of early career nurse scientists when the traditional postdoctoral fellowship is not an option. *Journal of Professional Nursing*, *36*(6), 462–468. https://doi.org/10.1016/j.profnurs.2020.03.006

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal of Qualitative Healthcare*, *19*(6), 349–357. https://doi.org/10.1093/intqhc/mzm042

Trusson, D., Rowley, E., & Bramley, L. (2019). A mixed-methods study of challenges and benefits of clinical academic careers for nurses, midwives and allied health professionals. *British Medical Journal Open*, *7*(10), e030595. https://doi.org/10.1136/bmjopen-2019-030595

Udlis, K. A., & Mancuso, J. M. (2015). Perceptions of the role of the doctor of nursing practice-prepared nurse: Clarity or confusion. *Journal of Professional Nursing*, *31*(4), 274–283. https://doi.org/10.1016/j.profnurs.2015.01.004

van Dongen, L., Cardiff, S., Kluijtmans, M., Schoonhoven, L., Hamers, J. P. H., Schuurmans, M. J., & Hafsteinsdóttir, T. B. (2021). Developing leadership in postdoctoral nurses: A longitudinal mixed-methods study. *Nursing Outlook*, *69*(4), 550–564. https://doi.org/10.1016/j.outlook.2021.01.014

van Oostveen, C. J., Goedhart, N., Francke, A. L., & Vermeulen, H. (2017). Combining clinical practice and academic work in nursing: A qualitative study about perceived importance, facilitators, and barriers regarding clinical academic careers for nurses in university hospitals. *Journal of Clinical Nursing*, *26*(23), 4973–4984. https://doi.org/10.1111/jocn.13996

Wong, C. A., Cummings, G. G., & Ducharme, L. (2013). The relationship between nursing leadership and patient outcomes: A systematic review update. *Journal of Nursing Management*, *21*(5), 709–724. https://doi.org/10.1111/jonm.12116

World Medical Association. (2013). *WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects – WMA – The World Medical Association.* World Medical Association. https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.