Nursing management matters for registered nurses with a PhD working in clinical practice

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Running head: Working in clinical care as a RN with a PhD

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Conflict of Interest

No conflict of interest has been declared by the authors**.**

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Ethical considerations

Ethical approval was obtained from the Regional Ethical Review Board, Stockholm, Sweden (Dnr 2013/283-31/5). The study was performed in accordance with the COREQ guidelines.

Authorship

MLO and LW designed the study, in collaboration with the late Prof. E. Johansson. MLO and ÅA performed the interviews and analyzed the transcripts alongside ACE, with HF and LW as critical peers. MLO and ÅA drafted the manuscript, which ACE, HF and LW revised. Thus, all authors have participated sufficiently in the publication process to guarantee its content and take full public responsibility for the reported study, including its findings and conclusions. The final version is approved by all authors.

Abstract

Aim. To investigate what registered nurses (RNs) with a PhD working in clinical practice experience in terms of their role, function and work context.

Background. Previous studies have shown that RNs with a graduate degree contribute to better and safer care for patients. However, little is known about what further academic schooling of RNs, at PhD level, means for clinical practice.

Method. Qualitative design, with semi-structured interviews and inductive content analysis.

Results. The main areas of responsibilities for RNs with a PhD working in clinical practice were related to practice development and implementation of research results. In their work, they experienced barriers to the full use of their competence; the expectations and prerequisites of the

organization were not clearly defined, and they often lacked a mandate to create conditions for quality improvement of nursing care.

Conclusions. RNs with a PhD can contribute to evidence-based practice (EBP), clinical training as well as the development of clinical research. Their roles and responsibilities need to be clarified and for this, they need support from managers.

Implications for Nursing Management. Nurse managers should partner with RNs with a PhD to support the EBP process and help structure nursing practice in more efficient ways.

Keywords: clinical practice, content analysis, doctoral degree, nursing care, qualitative

Introduction

For more than a century, trained nurses have supported better and safer healthcare. Today, almost 20 million nurses and midwives are practicing nursing around the world (WHO, 2011) and registered nurses (RNs) are considered key to safe practice globally (Aiken *et al*., 2017). Although nurses are accountable and responsible for nursing practice, they also play a vital role in the timely detection of errors and complications; studies have shown that fewer adverse events occur at hospital units with a higher proportion of RNs (Aiken *et al*., 2017). Further, RNs' level of clinical expertise is important for patients' healthcare outcomes (Yakusheva, Lindrooth, & Weiss, 2014). Many countries offer different levels of training for RNs, from undergraduate to postgraduate levels, and the number of RNs with a doctoral degree in nursing or caring science is slowly increasing in Sweden as well as internationally (IOM, 2011, Swedish Society of Nursing, 2018). Given their academic skills, RNs with a PhD could presumably support evidence-based practice (EBP) in nursing. Today, there are few studies on RNs with a PhD working in clinical practice, including their role in providing safer and better clinical nursing practice.

Background

One of the most important responsibilities of nurse managers is to provide conditions for the nursing care organization to deliver safe nursing care of good quality. The gap between what is known to be safe and effective care and what is often delivered in healthcare practice can expose patients to serious and unnecessary risks (Grimshaw et al., 2012). To minimize such risks, it is important that the care is evidence-based; EBP is defined as the integration of best research evidence with clinical expertise and patient values (Melnyk, Gallagher-Ford, Long, & Fineout-Overholt, 2014). Enablers as well as barriers for EBP exist (Harvey and Kitson, 2016), and managers understanding of EBP as a key to reinforce quality of care and patient safety is of utmost importance (Melnyk et al, 2016).

One of the fundaments of safe nursing practice is having appropriately trained staff (Griffiths, Ball, Murrells, Jones, & Rafferty, 2016; Aiken et al., 2017). Further, with research-active clinicians available bed-side, quality of care improves (Ozdemir et al., 2015). The educational level of the nurse has been found to be significant for healthcare outcomes. For example, a positive association has been found between RNs' educational level and research use: RNs with a graduate degree (masters/PhD) use research in their clinical work to a greater extent than RNs with bachelor/diploma degrees (Squires, Estabrooks, Gustavsson, & Wallin, 2011). Overall, an increased nursing skill mix has been found to have a positive impact on reducing mortality and length of stay in hospitals (Aiken et al., 2017; Ball et al., 2018).

Albeit academic progress, nursing research is a relatively young scientific discipline in many countries, including Sweden (Alghamdi & Urden, 2015; Sun & Larson, 2015). Approximately 40 years ago, the first Swedish RN defended a PhD thesis (Rinell Hermansson, 2010) and today, of approximately 140 000 RNs in Sweden, there are about 1700 with a PhD, i.e. roughly 1% of the RNs (Swedish Society of Nursing, 2018). The same proportion applies in the US (Nickitas & Feeg, 2011).

As in many countries, Swedish RNs with a PhD tend to work in an academic setting, focusing on research and/or education. Yet, having attained enhanced skills in critical thinking, collecting and evaluating evidence, and summarizing the literature, these RNs presumably have expertise that substantiates EBP in clinical nursing. Some international studies have found that RNs with a PhD incorporate practice development and implementation of research findings in clinical settings (Wilkes & Mohan, 2008; Staffileno et al., 2013; Andreassen and Christensen, 2018), although further knowledge is needed regarding the function of RNs with a PhD working in clinical practice.

Aim

The aim of this study was to investigate what RNs with a PhD working in clinical practice experience in terms of their role, function and work context.

Methods

Design

We applied a qualitative design (Polit & Beck, 2016), conducting semi-structured interviews with RNs with a PhD, analysed with inductive content analysis (Elo & Kyngäs, 2008).

Sample/participants

Among the seven university hospitals across Sweden, we identified three with a likelihood that RNs with a PhD would be employed in what was regarded as a clinical position; i.e., the RNs should be fully or partly employed at the hospital as RNs, clinical nurse specialists or nurse managers. Due to a lack of national records as to RNs with an academic degree, we used snowball sampling (Polit & Beck, 2016). Initially, we contacted nurse managers at the three university hospitals, inquiring whether they knew of RNs with a PhD in the organization, and their contact details. Next, the identified RNs were asked if they knew of other RNs with a PhD in the hospital. All

RNs were contacted individually by the first author who provided written and verbal information about the study, including that they could withdraw from the study at any time. Written informed consent was obtained from all participants. The participants were assured confidentiality regarding their participation, guaranteed through interview transcript coding and the representation of findings at group-level.

Data collection

Data were collected in late 2013 by individual interviews based on a semi-structured interview guide developed for this study, presented in table 1, adopting a narrative style. Before data collection, the interview guide was tested, leading to only a few minor changes.

The interviews took place in a private room in each hospital. The participants were encouraged to speak freely, and the interviews began with an open question "Please tell me about your work." When needed, probes and follow-up questions were used (Table 1). The interviews were audio-taped and ranged in duration from 20 to 80 minutes (in total 9 hours). Preliminary appraisals were performed throughout the data collection, with further interviews added until data-saturation was achieved (Elo et al., 2014) i.e., when experiences shared by additional participants merely confirmed the previous data. The interviews were transcribed verbatim by a professional secretary and checked against the audio-tape recordings for accuracy.

Data analysis

The transcribed interviews were subjected to qualitative content analysis (Elo & Kyngäs, 2008). Initially, the transcribed interviews were read several times by the first author to get a sense of the whole and to become familiar with the content of the interviews. Subsequently, a structured analysis was conducted, where meaning units (i.e., words, sentences, parts of sentences and/or paragraphs conveying a distinct and coherent content) were identified, and coded. The meaning

units and codes were then formed into subcategories and later categories. Lastly, the findings were abstracted into a theme, providing a comprehensive understanding of the RNs experience.

To become familiar with the data, the first, the second and the last authors read all transcripts; this allowed for a common understanding of the entire dataset. This was followed by the structured analysis engaging at least two of the authors, including forming data at subcategory, category and theme levels. Further, the subcategories, categories and themes were discussed by all authors until consensus on the best understanding was reached. To support transparency of the analysis, quotes from the interviews are provided, including the code of each interview cited.

Results

All 13 study participants were women, 39 to 63 years of age. Their experience as RNs ranged from 17 to 38 years, and the number of years since they completed their PhD ranged from 1 to 15 years. The analysis formed 19 subcategories, abstracted in four categories: striving to develop nursing care, with or without support; being present in clinical nursing care as an intentional strategy; contributing to the development of evidence-based nursing (EBN), and; supporting and enabling nursing education and competence development. All subcategories, categories and the concluding theme, representing the comprehensive understanding, are presented below. An overview of the construct (i.e., subcategories, categories and the concluding theme/comprehensive understanding) is provided in Table 2.

Striving to develop nursing care, with or without support

Being an RN with a PhD working in clinical practice meant contributing with knowledge of importance for clinical nursing care, for a scientific systematic approach in clinical nursing care, and for securing a patient centred perspective. The RNs themselves considered that their presence as clinically active RNs with a PhD added value, in terms of their specific competence in nursing science,

to fellow nurses, other health professionals, and managers. The RNs conveyed that many managers and co-workers considered their competence an asset, and collaboration with other nurses was easier because they were part of clinical nursing care.

> ... they know that I can work with them under the same conditions, they know I'm one of them. Therefore, they appreciate what I can contribute [with]. It's nothing odd ... in the context where I serve, I'm welcome and requested ... (102)

Some experienced a lack of support from first-line managers and/or upper management, which hindered their performance and further development. Some of the RNs said their role and tasks after completing their PhD were unclear, and their clinical assignments were often the same as those of colleagues without a PhD. A main reason suggested was that managers did not fully understand their competence, and thus it was not taken advantage of.

> … it feels like they do not value if you have a PhD-exam, because they do not know what it means or how the knowledge should be used. (106)

Being present in clinical nursing care as an intentional strategy

Being part of everyday nursing practice was perceived advantageous by the RNs. Bedside nursing and making the patient perspective a priority was considered vital.

> ...I mean, where is higher competence needed more than among the most seriously ill patients? (107)

The RNs with a PhD also considered it important to resume a hands-on approach in clinical practice; this helped them maintain their professional skills. In addition, it served them in terms of issues for further research and development. Furthermore, being part of everyday practice emphasised their authority on nursing issues.

> …I work as a clinician part-time. And then the idea is, of course, that I will help out, but also that I'll be able to identify issues that we need to improve or develop … (110)

The RNs suggested differences in the way they now provided nursing care for the patients compared with before they had a PhD; they now cared for their patients in a more systematic manner and were more prone to follow EBP guidelines.

> … it has influenced my way of working clinically in the way that … you dig deep into particular issues when doing research. … I don't think I would reflect in the way that I do if I had not conducted research in this area and detected a limitation [in the way we care for the patients]. (101)

Contributing to development of evidence-based nursing

The RNs with a PhD working in clinical practice shared a strong motivation to lead the development of EBN and to contribute to their colleagues' professional and academic growth:

> … they consult me and I help them search for papers. I show them how to read and interpret the results; they appreciate it very much and we discuss how to proceed in practice. (103)

Typical tasks that these RNs undertook were: development of guidelines for clinical practice; introducing new procedures and discarding outdated methods; leading and participating in healthcare development projects; sustaining methodological knowledge, and; providing a sense of critical thinking regarding how the nursing care is provided. The RNs found this part of their work meaningful, and it contributed to a sense of fulfilment, seeing the results of their efforts improving nursing practice.

> ...they have learned that one must be systematic, measure and monitor [certain aspects]. And then you sense that you have made an impact on clinical care, where it really matters. (102)

Most of the RNs found it difficult to proceed with their own research. There was often a lack of time and time set aside exclusively for research was scarce. The RNs were sometimes challenged by other health professionals and nurses, who questioned their role and value in clinical practice, or their academic competence.

> Then there are some who are more provoked by my PhD than others. And ask things like 'Do you really perform better when inserting peripheral intravenous catheters because of a PhD?' And of course, I'm not better at that, but … but, it's immensely offensive. (103)

Supporting and enabling nursing education and competence development

One task assigned to the RNs with a PhD was teaching and clinical training of nursing students. The bedside teaching role was well established. As a result of being involved in clinical practice, the RNs were able to convey current clinical knowledge to the students, help provide clinical topics appropriate for diploma theses, and involve the students in ongoing nursing care development projects.

> To have a dual role adds a lot. At the University, I identify what we need to improve and develop [in practice], and when at the hospital, I learn what clinical questions there are, so that we can study them [the clinical issues] in master's programs and such. (108)

As RNs with a PhD, their participation in RN training was perceived to help increase the students' understanding of the importance of scientific knowledge for good and safe nursing care.

> … after one of the courses I held, one of the students came up to me and said: 'Now I finally understand how research is related to the profession'. (101)

The RNs described it as a vital task to contribute to their colleagues' development of knowledge and skills; they were often asked questions by other nurses. They themselves considered it important to be available for questions and to assist in matters that related to their expertise. However, variations in the other nurses' competence, both academically and clinically, were considered a challenge in the work with competence development.

> ... some are newly graduated specialist nurses and they have both a baccalaureate and a master's degree. Others have worked for 20 years and have no academic education at all … But, you must meet every nurse on her or his level. (106)

Supporting the development of their colleagues' competence was considered a major commitment and included a range of tasks from introduction of colleagues fresh from nursing training to the supervision of PhD students. The RNs also wanted to inspire other RNs to proceed to postgraduate studies.

> ... some [RNs] have completed a master's degree, some of the RNs have started doing research ... it might not have happened if it hadn't been for someone in my position being here. (107)

The RNs who split their time between the hospital and a university found that this led to respect from colleagues both at the university and in the hospital. It also provided opportunities to influence important issues both in education and clinical nursing. These RNs depicted themselves as bridging between the university and the clinical context and contributing to linking theory and practice.

Comprehensive understanding

The theme formed by the analysis was phrased as "Having the competence and desire to improve clinical nursing, but facing barriers", and the full analysis further indicated that RNs with a PhD working in clinical care shared a desire to improve patient care. This ambition was also a key to both acquiring a PhD and to continue their clinical work, i.e., to provide care with expertise acquired

through their research programme. However, they also considered it difficult to maintain their clinical skills; maintaining clinical competence required careful measures. Some of the participants doubted the value of their clinical work, considering themselves less clinically proficient. In their everyday clinical practice, they perceived barriers to the full use of their competence, primarily by vague expectations and conditions; RNs with a PhD working in clinical care had an ambition to improve nursing care but lacked mandate and support from their managers to establish conditions for quality improvement and EBP.

Discussion

Healthcare today faces challenges, with an increasing need for advanced care and limited resources. Rather, high-quality nursing care is essential to meet the demands of a complex and cost-effective healthcare, along with sound management. Thus, nurse managers are key stakeholders. In 2010, The Institute of Medicine (IOM) recommended that nurses should be allowed to "practice to the full extent of their education and training" (IOM, 2011, p. 4) and that "nurses should achieve higher levels of education and training" with one of the goals to double the number of RNs with a doctoral degree by 2020 (IOM, 2011, p. 13). In the US, an increase of both research (PhD) and practice-focused (DNP) doctoral programmes in nursing is noted, although not undisputed: e.g., the differentiation between research and EBP is debated (Dracup, Cronenwett, Meleis, & Benner 2005) (Meleis and Dracup, 2005), as well as the necessity of a scientific foundation for nursing evidence (Florczak, Poradzisz, and Kostovich, 2014). A solution suggested is partnerships between RNs with DNPs and PhDs, to both generate and implement evidence in nursing care (Florczak *et al*., 2014). Although few nurses with a PhD work in clinical care, there is a growing interest in different routes to fuse clinical and academic work (van Oostveen et al., 2017; Smith et al., 2018).

The main areas of responsibilities described by the RNs with a PhD were related to practice development and implementation of research findings. This is consistent with other studies (McNett, 2006; Sterling & McNally, 1999; Wilkes & Mohan, 2008; Andreassen and Christensen, 2018). A

significant factor for successful implementation of EBP is facilitators who have sufficient knowledge of the EBP process (Dogherty, Harrison, Graham, Vandyk, & Keeping-Burke, 2013; Staffileno et al., 2013). The RNs in our study described that they felt they had much to contribute in this task. Yet, the RNs described that management support was often lacking, both from their immediate superior but also from the upper level management. The reason for this was perceived to be lack of knowledge, rather than reluctance. The RNs perceived that many nurse managers did not have knowledge of what competence they as RNs with a PhD had, and what they could contribute to in terms of improving nursing care. This is also described by nurse managers (van Oostveen, Goedhart, Francke, & Vermeulen, 2017). Rather, nurse leaders have been found to not value postgraduate degrees as contributing to improvements in nursing practice and clinical outcomes (Wilkes & Mohan, 2008; van Oostveen et al., 2017). Similar difficulties in terms of limited employment opportunities for RNs with a PhD to work in clinical practice have been reported (Wilkes & Mohan, 2008; van Oostveen et al., 2017).

In Sweden and many other countries, there is a limited history of RNs with a PhD working in clinical care. Though, initiatives are underway to strengthen such opportunities (INDEN, 2018; IAPD, 2018), immersing the possibilities to progress clinical research. Although further nursing studies are needed, most of the RNs found it difficult to proceed with clinical research, mainly because of a lack of time. A similar finding is described by McNett (2006) who found RNs with a PhD having limited capacity to bridge the research/practice gap because they were not employed in research positions but to deliver patient care.

Advanced nursing practice, as defined by the American Association of Colleges of Nursing (AACN) (2006), includes the direct care of individual patients, management of care for individuals and administration of nursing care. The PhD degree represents the highest degree conferred within an academic standard for all disciplines, including nursing. Graduates are expected to conduct independent research to extend knowledge. In addition to the academic role, they are also

expected to serve in leadership roles within the discipline and act as role models and mentors (American Association of Colleges of Nursing, 2006). Nursing as a profession requires both practice experts and nurse scientists to expand the scientific basis for patient care (Kitson et al, 2013). With appropriate management support, there could be better opportunities to join the two roles.

Limitations

To recruit RNs with a PhD working in clinical care in Sweden, sampling by snowball technique was used. While the procedure instigates a potential for recruitment bias (Polit & Beck, 2016), we reduced the risk by recruiting from several hospitals, and attained what was considered an authentic range in terms of age and experience of working as an RN with a PhD in clinical care among the study participants. Further, validity of findings was strengthened through all authors being involved in the analysis of interview data (Elo & Kyngäs, 2008).

Conclusions

RNs are accountable not only for performing nursing care, by safe procedures with high quality, but also for continuous improvement of nursing care. RNs with a PhD have extensive skills and competence acquired by means of doctoral programmes; with such RNs in clinical practice there are great potentials to promote and sustain EBP. With the position of RNs with a PhD working in clinical care scarcely studied, further investigations are warranted, recognizing to what extent, when, and how such competence fortifies EBP, thus optimizing quality and safety in nursing care.

Implications for Nursing Management

Managers could benefit from partnering with RNs with a PhD, both in promoting EBP in nursing care and to support the nursing staff's professional development. Depending on the clinical context, the position and assignments for RNs with a PhD could be profiled in different ways. To authorise the necessary development of nursing practice, there is a need for clearly defined

clinical positions for RNs with a PhD where their competence is taken full advantage of and sufficient time is assigned, including time for teaching and research.

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

- Managers are key to ensure that the competence and skills of RNs with a PhD is safeguarded to promote EBP.
- An increased number of combined employment opportunities between academia and clinical healthcare for RNs with a PhD can bridge theory and practice, for the benefit of nurses, students and managers.
- RNs with a PhD can be important clinical players, enhancing the quality of clinical nursing research, clinical education as well as EBP.

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Table 1. Interview guide.

Questions	**Primary question**: Please tell me about your job… **Subsequent questions**: As a nurse with a PhD, what's your contribution to the care provided? How do others perceive you, as a nurse with a PhD? Please tell me about your choice to work in …[referring to the respondent's current healthcare context] **Concluding question**: Is there anything in particular you want to pass on re. your role or work?
Probes (applied as appropriate)	Please tell me more about [refereeing to something the informant said] … Can you please elaborate on…? Can you please describe…? Please explain to me what you mean…

Table 2. Subcategories, categories, and theme

Subcategories	Categories	Theme
Taking a stand for one's position as a nurse with a PhD Being a PhD beneficial for one's leadership Being a role model as a researcher Being acknowledged by other team members Lacking leadership support Being able to use one's competence is not evident	Striving to develop nursing care, with or without support	Having the competence and desire to improve clinical nursing, but facing barriers
Participating in bedside nursing increases one's clinical expertise Participating in bedside nursing emphasizes one's trustworthiness for team members Working bedside is personally satisfying Maintaining ones' clinical competence is challenging	Being present in clinical nursing care as an intentional strategy	
Facilitating quality improvement Aspiring to improve care Integrating research into practice Having opportunity to influence improvement Facing resistance from other health professionals	Contributing to development of evidence-based nursing	
Enriching clinical nursing education Having combined employment offers the opportunity to merge theory and practice Facilitating competence development Bridging clinical practice and academia	Supporting and enabling nursing education and competence development	