Nursing Team Members' Perceptions of Their Own and Each Other's Roles

by

Elizabeth Kusi-Appiah

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University of Alberta

Abstract

Currently, the discourse on nursing team members' role understanding has mainly centered on the use of healthcare institutional goals and patient outcomes measures to ascertain the role contribution of the nursing team members. Although this approach can be helpful in our approach to describe the work of the nursing team members, it also limits our understanding about the meanings nursing team members assign to their own roles amidst the complexities and challenges they encounter in the day-to day enactment of their roles. This thesis aimed to provide an understanding on how registered nurses (RNs), licensed practical nurses (LPNs), and healthcare aides (HCAs) describe their role contributions in patient care and the extent to which the team members understood the roles of their teammates. In doing so, an integrative review was first conducted to explore the nursing team members' perception of their own and each other's roles. The findings of the integrative review revealed a paucity of literature on the topic. Consequently, a secondary analysis of a qualitative study exploring nursing team member's role in the care of hospitalized older adults in one geriatric and one medical unit in the West Coast of Canada was conducted. Qualitative descriptive study and conventional content analysis approach guided the analysis of 34 transcripts, field notes and participants' profile. Four themes were developed to describe the work roles of the nursing team members: *RNs' perceptions of their roles, LPNs' perceptions of their roles, HCAs' perceptions of their roles and nursing team member's perceptions of each other's roles*. The findings of the study suggested the presence of role ambiguity, confusion and tension among nursing team members. This study identifies an opportunity for nursing stakeholders to develop pragmatic strategies for improving team member's collaboration by supporting their understanding of the roles of their teammates.

Preface

This thesis is an original work of Elizabeth Kusi-Appiah. However, the study used a secondary data of a grounded theory study led by Dr. Sherry Dahlke. The original study received ethical approval from a Western Canadian university and the participating health authorities. Participants signed informed consent forms, which included consent for use of the data in future research. The health research ethics board of the University of Alberta granted approval for the current project.

The first manuscript is an integrative review led by Elizabeth Kusi-Appiah and has been published in the *Journal of Clinical nursing*; Kusi-Appiah, E., Dahlke, S., & Stahlke, S. (2018). Nursing care providers' perceptions on their role contributions in patient care: An integrative review. *Journal of Clinical Nursing, 27*(21) 3830-3845. doi: 10.1111/jocn.14534

The second manuscript which reports on the findings of the secondary analysis is under publication review by the editors and reviewers of the *International Journal of Nursing Studies*; Kusi-Appiah, E., Dahlke, S., Stahlke, S., & Hunter, K. (2018). Nursing care providers' perceptions of their own and each other's role: A secondary analysis using qualitative descriptive methods. *International Journal of Nursing Studies*.

Dedication

I dedicate this work to all nursing care providers working untiringly to progress patients towards recovery.

Acknowledgements

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Chapter One: Introduction

In her book, Nightingale writes "the elements of nursing are all but unknown" (Nightingale, 1860, p. 8). A significant unknown element of nursing that has appeared complex to describe is the work nursing team members perform (Allen, 2014; Scott, Matthews, & Kirwan, 2014). Since the turn of the 20th century, nursing has been critiqued for lacking a clear definition of nursing roles (Sellman, 2011; Scott et al., 2014; Olsson, Watterbjork, & Blomberg, 2013). A contributing factor to the lack of clarity about nursing roles is that, throughout the world, nursing care is delivered by teams with varied levels of education within a system of complex role dynamics (Aiken et al., 2017; Sharma, Hastings, Suter, & Bloom, 2016). Yet, there is paucity of research to identify the unique role contribution of each member of the nursing team.

Nursing team members in this thesis include registered nurses (RNs), licensed practical nurses (LPNs) and unlicensed healthcare aids (HCAs). While RNs and LPNs have different scopes of practice, studies reveal that the boundaries between their roles are often blurred (Basch, Kessler, & Heron, 2008; Lankshear, Rush,Weeres, & Martin, 2016). In recent decades, economic constraints have resulted in task shifting to less educated personnel (Aiken et al., 2014; Jacob, McKenna, & D'Amore, 2015; Kearin, Johnston, Leonard, & Duffield, 2007). This means that currently nursing teams have fewer RNs and more LPNs and HCAs. The evidence however equates better patient outcomes with higher numbers of RNs (Aiken et al., 2011; Blegen, Goode, Spetz, Vaughn, & Shin, 2011; Friese, Lake, Aiken, Silber, & Sochalski, 2008). Little is known about the impact of LPNs and HCAs on patient care (McGillis Hall & Harris, 2012; Hewko et al., 2015). It is also unclear how the nursing team members view and enact their roles within these teams composed of fewer RNs and more LPNs and HCAs. Moreover, RNs, HCAs and LPNs are among the frontline caregivers in healthcare, yet most patients are unable to distinguish

the differences in their roles (Kessler, Heron, Dopson, & Magee 2010; Robb, Maxwell, & Elcock, 2011). Significantly, if nursing team members are unclear about one another's roles, care delivery could be affected, and patients' confusion increased. Lankshear and colleagues (2016) explain that patients could encounter negative care experiences and healthcare systems may not use the right nursing care provider for the right care, leading to a misutilization of the nursing workforce. To this end, understanding the meanings nursing team members assign to their own and each other's roles is important as role confusion results in inefficiencies and ineffective care (Lankshear et al., 2016). This thesis explored nursing team members' perceptions of their own and each other's work as an essential step to shed light on the work of the nursing team members and improve their utilization in practice.

In an attempt to examine the distinctions between the roles of the nursing team members, and how the team members enact their roles, an integrative review was conducted to identify what the team members think of their roles (Chapter 2). The findings of the integrative review, published in the *Journal of Clinical Nursing*, revealed that RNs, LPNs and HCAs had little understanding about the roles of their colleagues. As well, all members of the nursing team had difficulties describing their own work. However, no studies concurrently examined RNs', LPNs' and HCAs' perceptions of their own or each other's roles and little was written about LPNs. These findings demonstrate the need for research examining the entire nursing team's (RNs, LPNs and HCAs) perceptions about their own and each other's roles.

Following the above findings, a qualitative descriptive study involving secondary analysis of qualitative data was conducted to explore RNs', LPNs' and HCAs' perceptions of their roles while managing care of hospitalized older people (Chapter 3). To address the current research focus, participants' data regarding their description of their roles and how they

perceived the roles of their colleagues was used. Chronologically, this thesis begins with the integrative review published in the *Journal of Clinical Nursing*, the manuscript of the qualitative descriptive study conducted followed by a conclusion chapter on the implications and limitations of this research.

Definition of Terms

Nurse – a legally protected title under the legislation relevant to a particular jurisdiction (Health Professions Act, 2000).

Registered nurses – self-regulated nurses (with a minimum of 2-4 years of university education) who deliver direct healthcare services, coordinate care and support clients in managing their own health while contributing to the healthcare system through their leadership in care delivery activities (Canadian Nurses Association, 2015).

Licensed practical nurses – self-regulated diploma-prepared nurses (1-2 years of educational preparation), who provide nursing care under the supervision of registered nurses (College of Nurses of Ontario, 2014).

Healthcare aides – unlicensed assistive personnel employed in clinical nursing settings to assist with the delivery of nursing-related duties with scope of practice usually determined by their employers (Hewko et al., 2015).

Nursing team members – a composition of registered nurses, licensed practical nurses and healthcare aides working together to provide nursing care in the healthcare system (Mackinnon, Butcher, & Bruce, 2018).

Scope of practice – professional and legal expectations of how registered and licensed practice nurses should provide nursing care as well as the extent to which they can perform their nursing roles (Canadian Nurses Association, 2015).

Role – set of expectations for the work one performs in a social system (Benne & Bennis, 1959).

Role perception – views and understanding about the characteristics of one's working roles (Lu, While, & Barriball, 2008).

Task shifting – the transfer of roles from more educated health workers to less educated health workers (Aiken et al., 2014).

Role confusion – set of expectations about one's roles that are not consistent and clearly defined (Benne & Bennis, 1959).

Fundamental aspects of care – essential elements of care that are required by every patient regardless of their clinical condition such as eating, drinking, elimination, cleanliness and dressing, mobility, activities, rest, sleep, and safety (Kitson, Conroy, Wengstrom, Profetto-McGrath, & Roberson-Malt, 2010).

Direct care – nursing care activities performed through direct interaction with patients such as feeding, bathing, grooming and toileting (Kitson & Athlin, 2013).

Basic nursing care – the provision of basic human needs such as nutrition, hydration, rest, sleep, elimination, respiration, warmth, comfort, and keeping clean and safe (Kitson, 2018).

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Chapter Two: Integrative Review of the Literature

Nursing Care Providers' Perceptions of Their Role Contributions in Patient Care [1]

Abstract

Aim: The aim of this integrative review was to explore registered nurses', licensed practical nurses', and health care aides' perceptions of their own and each other's role contributions.

Background: In response to contemporary economic and political pressures, healthcare institutions across the world have endeavored to download job duties to less educated healthcare providers. As a result, nursing care is usually delivered by a team of nursing staff that have different roles. This means that there are fewer registered nurses and more licensed practical nurses and health care aides on nursing teams, despite evidence that increased numbers of registered nurses improve patient safety and care outcomes.

Design: This study was an integrative review using Whittemore and Knafl's stages for ensuring rigour. These stages include problem identification, literature searching, data evaluation, data analysis, and presentation.

Methods: Four electronic databases were searched according to previously designed search strategies. The 14 retrieved articles were appraised using MMATs for quality. Data were extracted and analyzed thematically.

Results: The findings of the integrative review revealed that registered nurses, licensed practical nurses, and health care aides had little understanding about the roles of their fellow nursing team members and had difficulties describing their own roles. However, no studies concurrently

[1] Kusi-Appiah, E., Dahlke, S., & Stahlke, S. (2018). Nursing care providers' perceptions on their role contributions in patient care: An integrative review. *Journal of Clinical Nursing, 27*(21) 3830-3845. doi: 10.1111/jocn.14534

examined registered nurses', licensed practical nurses' and health care aides' perceptions on their own or each other's roles and little was written about licensed practical nurses.

Conclusion: More research is needed to examine the entire nursing team's perceptions about the various nursing roles.

Keywords: Task shifting, nursing skill mix, role perceptions, registered nurses, licensed practical nurse, health care aides, care safety

What this paper contributes to the wider global clinical community

- Members of the nursing team do not understand their own roles or each other's.
- Role confusion impedes teamwork and quality of care

Introduction

The goals of every healthcare organization include the provision of safe, quality, and evidenced-based care to patients. One of the documented challenges to achieving this goal is ensuring that the appropriate numbers and types of healthcare providers are present to meet patients' needs. Due to economic and political pressures, healthcare organizations worldwide have downloaded job tasks to less educated health care providers (Aiken et al., 2014; Jacob, McKenna, & D'Amore, 2015). This means that there are fewer registered nurses (RNs) and more licensed practical nurses (LPNs) and health care aides (HCAs) on nursing teams, despite evidence that increased numbers of RNs improve patient safety and care outcomes. However, it is not well understood how the nursing team members enact their roles within these changing nursing teams. As a first step in examining the distinctions among the roles of the nursing team members and the ways in which team members undertake their roles, we conducted an integrative literature review to identify role understandings among various members of the nursing team. Specifically, our research questions focused on the perceptions that RNs, LPNs, and HCAs have of their own and each other's roles. Currently, there is a lack of research on this topic but what is known suggests that there is considerable role ambiguity and inconsistent role deployment. Thus, this research has important implications for the quality and effectiveness of team collaboration and patient care delivery.

Background

Nursing care is increasingly provided by a nursing team with providers who have varying levels of education and roles (Aiken et al., 2017; Sharma, Hastings, Suter, & Bloom, 2016). Within the nursing team, in addition to RNs, LPNs and HCAs have been increasingly employed in homecare, community care and long-term facilities (Arain, Deutschlander, Rostami, & Suter,

2016; Huynh, Alderson, Nadon, & Kershaw-Rousseau, 2011; Hewko et al., 2015). This trend is likely to increase as organizations respond to cost pressures associated, in part, with an aging population and increased numbers of people with chronic diseases who require health care (McPhail, 2016; Standing & Anthony, 2008; WHO, 2015). Amidst this change, there is evidence to suggest that registered nurses (RNs) play a vital role in patient safety and patients' outcomes (Jacob et al., 2015; Lucero, Lake, & Aiken, 2010; Patrician & Brosch, 2009). Scholars have found that the time nurses spend with patients is directly related to patient care outcomes and have shown that there is decreased mortality and fewer adverse events with an increased number of RNs (Aiken et al., 2014; Duffield et al., 2011; Estabrooks, Midodzi, Cummings, Ricker, & Giovannetti, 2005; Westbrook, Duffield, Li, & Creswick, 2011). Nevertheless, owing to various pressures and perspectives within the system, it is likely that nursing teams will continue to include a combination of RNs, LPNs, and HCAs. For these nursing teams to provide effective, quality, and safe care, collaboration is necessary. A first step in collaboration would be for RNs, LPNs and HCAs to have a strong understanding of their own and each other's roles as they contribute to patient care (White et al., 2009). However, it is presently not well understood how the nursing team members regard their roles or the role of other nursing care providers (Lankshear, Rush, Weeres, & Martin, 2016).

Globally, the scope and standards for professional nursing practice are often regulated by legislation (Breakey, Corless, Meedzan, & Nicholas, 2015). In Canada, each province and territory have its own separate health professions legislation, although they are similar in content across jurisdictions. The various health professions acts outline the professional scope and standards for nursing practice (Schiller, 2014). The term "nurse" is a legally protected title under nursing practice legislation across various jurisdictions (College of Nurses of Ontario [CNO],

2014; Grant 2016; Schiller, 2014). Likewise, in most countries, nurses are legally defined as individuals who have fulfilled the requirements for licensure and are regulated by a professional association that has the mandate to safeguard the public against unethical and incompetent practice (American Nursing Association 2018; Canadian Nursing Association, [CNA], 2015, International Council of Nurses 2012; & Nursing and Midwifery Board of Australia, 2016). Despite the established legal boundaries of professional nursing, nursing teams in both developing and developed countries usually now include unregulated healthcare providers, such as HCAs who may informally refer to themselves as nurses. In developed countries like Australia, UK, United States, and Republic of China, this has resulted in the need to re-examine the role of nursing care providers (Jacob et al., 2015; Pei-Hsuan, Chick-Hsiu, Yu- Chin, 2015; Goryakin, Griffiths, & Maben, 2011).

In this paper, we differentiate among the nursing team members in the following ways. We describe RNs as university-prepared nurses, LPNs as regulated nurses with 2 years diploma training and HCAs as unregulated care workers with varied educational preparation ranging from on-the-job training to 3 to 6 months in a certificate training program (Hewko et al., 2015). Although HCAs are the least educated members of the nursing team, they provide about 80% of direct care in the Canadian home care and long-term care settings (Lum, Sladek, Ying, & Holloway, 2010) and they are increasingly being employed in acute care settings. In the last 10 years, their roles have increased from assisting patients with activities of daily living to performing complex delegated nursing tasks such as drug administration, venipuncture and catheterization (Arain, Deutschlander, & Charland, 2017; Hewko et al., 2015). Internationally, the HCA scope of practice varies and mainly depends on their place of work (Hewko et al., 2015). However, as unregulated healthcare providers, they work under the direction or

supervision of a licensed nurse (RN or LPN) (College and Association of Registered Nurses of Alberta [CARNA], College of Licensed Practical Nurses of Alberta [CLPNA], & College of Registered Psychiatric Nurses of Alberta [CRPNA], 2010; Pei-Hsuan et al., 2015).

Although there are standards of practice and legal and professional expectations for both RNs and LPNs (Canadian Council of Practical Nurse Regulators [CCPNR], 2013; CNA, 2015), institutions have role descriptions that may differ from their scope of practice. In the case of HCAs, the absence of a legislative practice standard makes it more challenging to describe or understand their roles in patient care (Berta, Laporte, Deber, Baumann, & Gamble, 2013; Grant 2016). Thus, although all members of the nursing team have institutional role descriptions, the distinctions between their roles are often not clearly evident to care recipients, particularly since it is often the HCA who is providing much of patients' physical care and may be regarded as a nurse. Kessler, Heron, Dopson and Magee (2010) have documented the difficulties patients have in distinguishing among the roles of the nursing team members and directing their requests appropriately. If an HCA fails to understand patient care needs or does not appropriately relay patient care information to the RN or LPN responsible for the patient, patient care can be compromised.

Research about nursing team member roles is limited. For example, in the international literature, there is a body of research identifying the relationship between RN-provided care and better patient outcomes (Jacob et al., 2013). Most of this research has measured mortality rates, lengths of hospitalization, patient satisfaction, and risk of infection in relation to the number of RNs on the nursing team (Butler et al., 2011; Dubois et al., 2013; Estabrooks et al., 2005; Whitehead & Myers, 2016). However, there is a paucity of research about the LPN role (McGillis Hall & Harris, 2012) and research exploring HCAs has mainly focused on their

utilization in homecare, community care settings, and long-term care facilities, rather than on their roles specifically (Arain et al., 2017; Berta et al., 2013). A recent scoping review exploring the place of HCAs in the healthcare workforce internationally identified that their roles were unclear and virtually impossible to explain (Hewko et al., 2015), leaving questions about how they work with professional nurses (RNs and LPNs).

Despite the change in nursing role deployment and nursing staff mix, it is unclear how the various nursing team members' roles affect patient care (Dahlke & Baumbusch, 2015; McGillis Hall & Harris, 2012, 2012; Hewko et al., 2015; James, Butler-Williams, Hunt, & Cox, 2010; Walker, Clendon, & Nelson, 2015). What adds to the complexity of the problem is that different nurse staffing models have been developed to guide decisions about the appropriate nurse staffing mix. However, because the roles of the nursing team are not well understood, these nurse staffing models are used inconsistently (McGillis Hall & Harris, 2012). Hence, healthcare employers, practitioners, and policy makers require a better understanding of the roles of the nursing team members to facilitate their use of the existing nurse staffing models (Oelke et al., 2008). As a first step in understanding the roles of nursing team members, we conducted an integrative review to examine primary studies that explore RNs', LPNs' and HCAs' perceptions on their own and each other's roles.

Method

The aim of this integrative review was to explore RNs', LPNs', and HCAs' perceptions of their role contributions. An integrative review was chosen because it allows for the synthesis of studies using different research methodologies (Whittemore & Knafl, 2005). We used Whittemore and Knafl's proposed stages for ensuring rigour in integrative reviews, including

problem identification, literature searching, data evaluation, data analysis, and presentation. The questions that guided this review were:

1. What are RNs', LPNs', and HCAs' perceptions about their role contributions to patient care?
2. What are RNs', LPNs', and HCAs' perceptions about the unique role contributions of each other in patient care?

The guidance of an expert health sciences librarian was used to develop search terms for four electronic databases, CINAHL, EBSCO Medline, Ovid Medline, and Web of Science Core Collections. In addition, reference citation tracking, and Google scholar searches were done to achieve a wider coverage of the existing literature. According to the librarian, EBSCO Medline and Ovid Medline interfaces slightly yields different results. Therefore, we decided to use both and remove duplicates rather than using one and risk the chance of missing relevant articles. Each database search was conducted separately to use applicable search terms or MESH/Keyword headings. Generally, the search terms used included "registered nurs*", "nursing personnel*", "regulated nurs*", "licensed practical nurse*", "practical nurs*" "enrolled nurs*", "healthcare aide*", "unlicensed assistive personnel*", "nursing assistant*," "role perception*", "opinion*", "perspective*", "view*", "belief*", "reflection*", "responsibilit*", "scope of practice*", "value*" and "contribution*". These terms were used in combination with the Boolean operators "AND" and "OR".

Inclusion and Exclusion Criteria

Inclusion criteria were: primary research studies, published in peer-reviewed journals, exploring nursing team members' (RNs', LPNs', and LPNs') perceptions of their own and each other's' roles, written in English language, and published from 2000-2017. Exclusion criteria

included policy papers, editorial letters, non-published dissertations, non-research papers, systematic reviews, audit reviews, and studies testing the use of patient care models. At the final stage of the screening, papers that did not represent nursing team members' perceptions of their roles or other members' roles were excluded. Other studies were excluded when the HCA's scope of practice was to provide assistance to doctors, rather than working as part of the nursing team. Figure 1 presents a brief overview of the searching process using the PRISMA flow chart.

Insert Figure 1

Data Evaluation

Although Whittemore and Knafl (2005) explain that there are no strict indications for performing a quality appraisal for the selected primary studies for an integrative review, quality scores can be used as a variable for data analyses and interpretation of study significance. They advise reviewers to focus on the methodological quality, which in most cases accounts for discrepancies among study findings **(**Whittemore & Knafl, 2005). For this reason, the Mixed Method Assessment Tool (MMAT) developed by Pluye, Gagnon, Griffiths, and Johnson-Lafleur (2009) was adapted to assess the methodological quality of the included primary studies. The MMAT tool can be used for appraising qualitative, quantitative, and mixed-methods research. It was chosen due to its demonstrated reliability and flexibility for assessing quality in mixed method reviews (Pluye et al., 2011). Although the authors do not provide a cutoff point for rating the studies as low or high quality, we used the mid-score as a cut of point to grade the studies as low or high.

On the whole, the quality scores for the primary studies included in this review ranged from 50% -100% suggesting a low to high methodological quality. Specifically, nine (9) studies were of high quality with a score range of 75-100% (Dahlke & Baumbusch, 2015; Kalisch,

Weaver & Salas, 2009; Keeney, Hasson, Mckenna & Gillen, 2005; Lankshear, Rush, Weeres & Martin, 2016; McLaughlin et al., 2000; Perry, Carpenter, Challis, & Hope, 2003; Spilsbury & Meyer, 2004; Schluter, Seaton, & Chaboyer, 2011; Standing & Anthony, 2006). Five were of low quality with a scoring rate of 50% (Alcorn & Topping 2009; James et al., 2010a; James et al., 2010b; Muller, Anderson, McConnel, & Corazzini, 2012; Oelke et al., 2008). Of these, four quantitative studies were assessed as poor quality because the authors provided little information about decisions concerning the sampling techniques, the sample size was less representative of the sample population, and the participants' response rate was below 60% (Alcorn & Topping 2009; James et al., 2010a; James et al., 2010b; Muller, Anderson, McConnel, & Corazzini, 2012). Likewise, one mixed method study was rated as poor because there was no evidence of qualitative and quantitative data integration and the associated limitations were not addressed (Oelke et al., 2008). All the qualitative studies included in this review were of high quality. The key findings from these studies are shown in Table 1.

Data Extraction and Analysis

The data were analyzed using the constant comparative method. The process involved data reduction, data display, data comparison, conclusion drawing, and verification (Whittemore & Knafl, 2005). At the data reduction stage, the lead author developed categories to group the data based on the general concepts from the primary research (Whittemore & Knafl, 2005). This helped to focus on extracting information that answered the research questions from the included studies. At the data display stage, the information extracted for each study was tabulated to capture relevant information in a concise and focused manner. The types of information tabulated were the names of the authors, country, year of publication, aim of the study, setting, sample, type of study, method of data collection and analysis, the quality score and the key

findings (refer to Table 1). The findings from the primary studies were then coded inductively. This involved reading and re-reading the findings of each study and grouping similar findings into codes. At the data comparison stage, the codes were first examined for commonalities and differences. This was followed by an iterative examination of the codes to understand the patterns, and relationships between the codes for data interpretation (Whittemore & Knafl, 2005). At the data conclusion stage, themes were generated, and each primary source was reviewed to verify that the new conceptualization was congruent with primary sources. After comparing our findings with the referenced primary studies, we made revisions where necessary to ensure that the information presented in this review was reflective of the findings from the primary studies (data verification). Furthermore, we had regular discussions to cross-examine the data analysis process and the developing themes.

Findings

Data from 14 primary studies were extracted to answer the review question. They included six (6) quantitative studies, two (2) mixed method studies and six (6) qualitative studies. The qualitative research designs used included grounded theory (Dahlke & Baumbusch, 2015; Kalisch et al., 2009); critical incident technique (Schluter et al., 2011); phenomenology, (Standing &Anthony, 2006); single case embedded design, (Spilsbury & Meyer, 2004), and exploratory qualitative design (Perry et al., 2003). The two mixed method studies were exploratory in nature using surveys (Lankshear et al., 2016; Oelke et al., 2008). The quantitative studies used the following designs: descriptive cross-sectional study (McLaughlin et al., 2000), cross-sectional observational study (Mueller et al., 2012); and survey (Butler-Williams et al., Keeney et al., 2005; Alcorn & Topping, 2009). Two articles were from the same study (Butler-Williams et al., 2010a, b). The studies were conducted in four different countries; UK (n=7),

(Butler-Williams et al., 2010a, b; Keeney et al., 2005; McLaughlin et al., 2000; Perry et al., 2003; Spilsbury & Meyer, 2004; Alcorn & Topping (2009); Canada (n=3), (Dahlke & Baumbusch, 2015; Lankshear et al., 2016; Oelke et al., 2008); USA (n=3), (Kalisch et al, 2009; Mueller et al., 2012; Standing & Anthony, 2006) and Australia (n=1), (Schluter et al., 2011). The majority of the studies were carried out in hospital settings (acute care units, medical units, surgical units, maternity, and a geriatrics ward) with the remaining from home care and community settings. Data analysis revealed the following themes: nursing team members' perceptions of their role contribution; nursing team members' perceptions of their work capabilities, and nursing team members' perceptions of the impact of staffing mix on team process and patient care.

Nursing Team Members' Perceptions of Their Role Contributions

A majority of the studies reported on RNs' and HCAs' perceptions of their own and each other's roles (Butler-Williams et al., 2010ab; Keeney et al., 2009; McLaughlin 2000 et al.; Perry et al., 2003; Spilsbury & Meyer, 2004; Standing & Anthony, 2006; Alcorn & Topping, 2009). Four studies reported on RNs' and LPNs' perceptions of their own and each other's roles (Lankshear et al., 2016; Mueller et al., 2012; Oelke et al., 2008; Schluter et al., 2011). No studies purposefully explored RNs', LPNs', and HCAs' perceptions of each other's work concomitantly. Nonetheless two studies provided information about how LPNs, HCAs and RNs described the work of one another (Dahlke & Baumbusch, 2015; Kalisch et al., 2009). All the nursing team members in the included studies had difficulty describing their role. RNs perceived their role as different from other members of the team and explained that the role had changed over time. The same also was the case with other nursing team members. Four of the studies suggested that the nursing team members did not understand the roles of one another (Dahlke & Baumbusch, 2015;

Lankshear et al., 2016; Oelke et al., 2008; Standing & Anthony, 2006). On the other hand, LPNs believed they had some understanding about the RN role, but RNs had limited understanding of the LPN role (Dahlke & Baumbusch, 2015; Lankshear et al., 2016). Role ambiguity and poor understanding of the roles of the nursing team often hindered their collaboration (Oelke et al., 2008).

RNs' Perceptions of Their Own Role

Generally, RNs described their role as emotionally, physically, and mentally heavy (Dahlke & Baumbusch, 2015). Their role encompassed a broad range of direct and indirect patient care activities such as technical duties, paperwork, computer care planning, and liaison with other health care professionals. The performances of such work ensured the delivery of safe and holistic patient care. They could not identify areas of patient care outside their responsibilities (Oelke et al., 2008; Perry et al, 2003; Spilsbury & Meyer, 2004). RNs explained that their roles were multifaceted, although they noted their primary focus on safety interventions. RNs explained that their knowledge base allowed them to pick up on signs of subtle fluctuations in the conditions of patients that could later worsen or delay their recovery through their direct observation of these patients (Dahlke & Baumbusch 2015; Schluter et al., 2011).

LPNs' Perceptions of Their Role

Whilst LPNs in this review were involved in patient assessment, patient care planning and evaluation, medication administration, pain management, and assisting patients with activities of daily living, they viewed themselves as performing less than they were capable of in terms of patient care (Mueller et al., 2012; Oelke et al., 2008; Schluter et al., 2011). They identified that their role had extensively expanded over the last 10 years and not all healthcare

institutions understood the scope of work they were able to do (Lankshear et al., 2016). In other words, healthcare institutions had not updated their role descriptions to include their new scope of practice. The types of patient care activities they performed varied, depending on the healthcare institution where they worked. As a result, they perceived they were not being used to their full potential (Lankshear et al., 2016).

HCAs' Perceptions of Their Role

HCAs had difficulties thinking of areas of nursing work that were exclusively their responsibility (Perry et al., 2003). They reported their main role as providing assistance to regulated nurses, that is, RNs and LPNs (Butler-Williams et al., 2010). HCAs understood their role contribution to be based on three main care activities: bedside activities, housekeeping, and clerical duties (Perry et al., 2003; Spilsbury & Meyer, 2004). They saw their work as comprised of tasks that could be delayed without risk to patient safety (Dahlke & Baumbusch, 2015).

Perceptions of One Another's Roles

RNs, LPNs, and HCAs had little understanding about one another's roles (Lankshear et al., 2016; Perry et al., 2003). LPNs and HCAs perceived the RN's role to be a broad role comprised of several responsibilities (Perry et al, 2003; Dahlke & Baumbusch, 2015). RNs viewed the HCA role as performing non-professional nursing tasks, thus providing RNs more time for professional nursing activities (McLaughlin et al., 2000). Although RNs described HCAs as being capable of performing basic assigned tasks (McLaughlin et al., 2000), they disagreed that the HCA role is a cost-cutting exercise (Oelke et al., 2008).

RNs had varied views on whether HCAs were effective in communicating pertinent patient information (McLaughlin et al., 2000; Spilsbury & Meyer, 2004; Perry et al., 2003). On one hand, RNs described the HCAs as "the eyes and ears" of the ward (Spilsbury & Meyer,

2004) and thus good patient care communicators transmitting patient care information back and forth. In contrast, RNs in other studies did not believe that HCAs adequately reported patient information because they did not have the necessary training to recognize and report changes in patient condition, understand proper patient care, or adequately apprehend the overall patient care plan (Perry et al., 2003; McLaughlin et al., 2000).

Only one study reported RNs' perceptions about the LPN's role. RNs in this study viewed LPNs as being an equally contributing member in clinical decision-making (Lankshear et al., 2016). Unfortunately, the authors did not provide explanations for this perception.

Nursing Team Members' Perceptions of the Staffing Mix

Data from the majority of the studies suggested that, in most healthcare institutions, the nurse staffing mix was perceived as not fitting with care recipients' needs nor reflective of the capacity of the different members of the nursing team (Butler-Williams et al., 2010; Keeney et al., 2005; Kalisch et al., 2009; Mclaughlin et al., 2000; Oelke et al., 2008; Perry et al., 2003; Schluter et al., 2011). For example, HCAs articulated their roles as involving simple tasks and providing assistance under supervision, yet they were assigned complex tasks, worked without supervision, and used unfamiliar technological care devices (Butler-Williams et al., 2010). Some HCAs were tasked with using technological devices such as the Early Warning Score (EWS) to monitor vital signs but because they did not understand this complex care device, they misinterpreted the tool (Butler-Williams et al., 2010). Moreover, some healthcare institutions assigned HCAs to critically ill patients and as result, HCAs became anxious when caring for these patients (Butler-Williams et al., 2010).

In one study, LPNs were sometimes asked to perform the work of RNs (Mueller et al., 2012). In these types of situations, LPNs felt unprepared to perform tasks normally associated

with the RN scope of practice and worried about working outside their scope of practice (Mueller et al., 2012). LPNs reported that reduced numbers of RNs made it difficult for them to stay within their scope of practice without leaving some patient needs unmet (Dahlke & Baumbusch, 2015; Mueller et al., 2012; Oelke et al., 2008). Similarly, RNs suggested that replacing an RN with an LPN increased the RNs' workload and interfered with their ability to work to their full scope (Oelke et al., 2008) because RNs had to take on activities that were outside the scope of the LPN (Dahlke & Baumbusch, 2015). This meant that RNs' work included their assigned patients, in addition to aspects of LPNs' work when it fell outside of their actual scope of practice. This increased workload limited RNs' time in meeting the needs of their patients (theirs and the LPNs') (Dahlke & Baumbusch, 2015; Lankshear et al., 2016).

Nursing team members in many studies reported that the staffing mix influenced both patient care and team processes (Butler-Williams et al., 2010; Dahlke & Baumbusch, 2015; Lankshear et al., 2016; McLaughlin et al., 2000; Mueller et al., 2012; Oelke et al., 2008). RNs, LPNs, and HCAs all reported a sense of responsibility in meeting patient needs and showed mutual concern, reverence, and trust in each other's roles (Butler-Williams et al., 2010a, b, Dahlke & Baumbusch, 2015; Kalisch et al., 2009; Keeney et al., 2005; Lankshear et al., 2016; McLaughlin et al., 2000; Oelke et al., 2008; Perry et al., 2003; Spilsbury & Meyer, 2004; Standing & Anthony, 2006; Alcorn &Topping, 2009). One study reported that the nursing team worked collaboratively with one another to provide patient care (Dahlke & Baumbusch, 2015). However, another study reported that when the workload was perceived to be unbearable, team members focused on their own workload and deprioritized working collaboratively to meet patients' needs (Kalisch et al., 2009). Time pressures interfered with RNs' supervision of the work of HCAs, despite their legal and professional responsibilities for the care HCAs provided

(Kalisch et al., 2009). In two studies, HCAs felt overburdened and interpreted delegation by RNs as either laziness or a consequence of their focus on more important aspects of patient care (Spilsbury & Meyer, 2004; Standing & Anthony, 2006).

Several studies identified that when the staffing mix was perceived to be inadequate, the RN role was the most affected (Dahlke & Baumbusch, 2015; Kalisch et al., 2009; Standing & Anthony, 2006; Alcorn & Toppings, 2009). Standing & Anthony (2006) reported instances when the RNs' delegation to HCAs created extra work for RNs when the HCAs either failed to report abnormal vital signs and weights, falsified vital signs, did not perform care assignments at the appointed times, or communicated improperly with patients. In another study, HCAs left patient care tasks for the RNs to complete regardless of the RNs' workload (Dahlke & Baumbusch, 2015). This could explain why some RNs preferred doing everything by themselves rather than delegating to HCAs (Kalisch et al., 2009). Alcorn & Toppings (2009) reported RNs' recommendations that HCAs receive adequate preparation and be accountable for their care through registration with a regulatory body. Moreover, Dahlke and Baumbusch (2015) identified that when nurse staffing was comprised of more LPNs and fewer RNs, both LPNs and RNs experienced conflict about who should perform what task.

In summary, the nursing team members had difficulties describing their roles and distinguishing between the roles of each other. Nonetheless, all the nursing team members identified the RN's role as most responsible. RNs believed that their roles were directly linked to the provision of a safe and holistic patient care. HCAs viewed their roles as comprised of basic tasks related to bedside activities, housekeeping, and clerical duties. LPNs' unique role contributions were not stated in the included studies. Ultimately, staffing issues within

organizations hindered the nursing team's collaboration, reduced the team members' ability to practice to a full scope, and negatively affect patient care.

Discussion

This integrative review provides insights into the challenges nursing team members have in identifying their roles and how they differ or are the same as their team members. Moreover, these challenges are heightened due to organizational restructuring, which has changed the composition and work of the nursing team. A significant finding is that, although RNs, LPNs and HCAs work interdependently, they did not know what each other's roles entailed. Our findings add to the nursing team literature by revealing that nursing teams composed of various roles have difficulties in understanding one another's roles (Brault et al., 2014; Hewko et al., 2015; Lankshear, Rush, Weeres, & Martin, 2016). Some of this role confusion could be explained by the overlap in the LPNs and RNs roles, also evident in practice legislation. For instance, in the Alberta Health Professions Act (Health Professions Act, 2000), descriptions of the RNs and LPNs roles reveals significant overlap in their roles. Consistent with other research findings, RNs in this review could not entirely explain what their roles were (McGillis Hall & O'Brien Pallas, 2000; Perry et al., 2003). Olsson, Watterbjork and Blomberg (2013) have suggested that RNs occupy many different roles and the nursing profession lacks leadership in defining nursing roles. Additionally, the literature has broadly identified other factors that could affect the healthcare team members' understanding of their co-workers' roles. These include one's personal knowledge about team members' scopes of practice; willingness to know about the roles of co-workers, and the amount of inter-professional education received (MacDonald et al., 2017). These factors could also have influenced the nursing team member's understanding of each other's roles as represented within the studies of this review. Future research that examines

these factors and how nursing team members understand one another's roles would provide greater insights into the dynamics of nursing teams. Research that investigates and delineates the actual work of each occupational role is also needed so that role definitions reflect reality rather than ideals about professional status and practice.

This study also identifies the barriers of nursing team members in understanding one another's roles and enhances understanding about how collaboration could be improved. For example, the staff mix was perceived as inappropriate, and LPNs' and HCAs' institutional role descriptions differed from their scope of practice or work capabilities. Specifically, the LPNs in this study had experienced expansion of their scope of practice that was not actualized because health systems had not yet updated their roles to include this expanded scope of practice. If nursing team members had greater understanding of one another's roles and were working to their full scope of practice, it follows that collaboration and patient care would improve. An accurate understanding of each nursing team member's role would enhance managers in utilizing nurse staffing tools (McGillis Hall & Harris, 2012). The data from this study also suggest that there is paucity of literature concerning nursing team member's perception about each other's roles. Similar to McGillis Hall and Harris' (2012) findings, we found very little research about LPNs' perceptions about nursing team roles. Therefore, we do not know much about what LPNs think of their own roles, the roles of the other nursing staff, or what HCAs think about LPNs. It would be important to include LPNs' perceptions in future research.

Implications for Nursing and Future Research

Given that the nursing team members' understanding about one another's roles have an impact on their collaboration and optimal performance (White et al., 2009), nursing educators need to recognize that nurses work in teams and therefore require a fundamental understanding

of the roles of their teammates. As well, managers in the various healthcare institutions need to clarify role descriptions in their institutions as a means of helping nursing team members understand one another's role. These recommendations would be a step forward in enhancing team collaborations and more effective patient care. Equally important, researchers need to examine how nursing team members are navigating the complex terrain of collaboratively caring for people and yet not knowing what the roles of their team members are. Particularly, such research must ensure that the perceptions of all members of the nursing team are well represented (RNs, LPNs, and HCAs). On a more philosophical note, there is an ongoing need to define the nature of nursing knowledge and its applications. This is fundamental to enacting roles in practice. We recommend further research to address this deficit since a clear definition of the relationship between nursing knowledge, practice competencies and individuals' role contributions could support the development of policies related to nurse staffing, recruitment and retention. The findings of our review also suggest that educating nursing team members on each other's role could be a strategy to improve patient safety. It is difficult to make recommendations for the development of nursing staffing models without further research as this study shows a lack of clarity regarding the individual role contribution of nursing team members.

Limitations

This integrative review was limited to studies published in English. Therefore, it is possible that we could have missed some relevant findings published in other languages. Nonetheless, by following Whittemore and Knafl's systematic approach for conducting an integrative review, we provided thick descriptions on the topic and ensured a transparent research process. Another limitation is that our review only included studies published from 2000-2017. A significant number of studies regarding the nursing skill mix were conducted in

the 1980s. Excluding these studies may have shaped the direction of the searching phase of this review. However, practice and skill mix has changed within the last two decades suggesting that, the relevance of studies prior to 2000 may not have been applicable for this review.

Conclusion

The nursing team members' roles are presented in the literature as a complex issue to understand. The complexities can be linked to the paucity of literature on nursing team members' perception of their own and each other's roles and the inconsistencies between their institutional job descriptions and scope of practice. Nonetheless, understanding the meanings nursing team members assign to their own and each other's roles is important as role confusion results in inefficiencies and ineffective care. A clearer understanding of the roles of each member of the nursing team would enhance effective utilization of the nursing workforce and enhance patients' care experiences. The studies included in this review highlighted the difficulties that the nursing team members had in describing their own roles and showed that team members had a limited understanding about the roles of one another. In line with what other scholars have found, our studies confirmed the limited literature on this topic. The roles of LPNs in particular, have not been well studied. To fill the current gap in the literature, we recommended further studies to explore the role perceptions of the nursing team members whilst ensuring that each member of the team is well represented.

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Appendix

Figure 1: PRISMA Flow Chart: RNs', LPNs' and HCAs' Personal and Collegial Perceptions

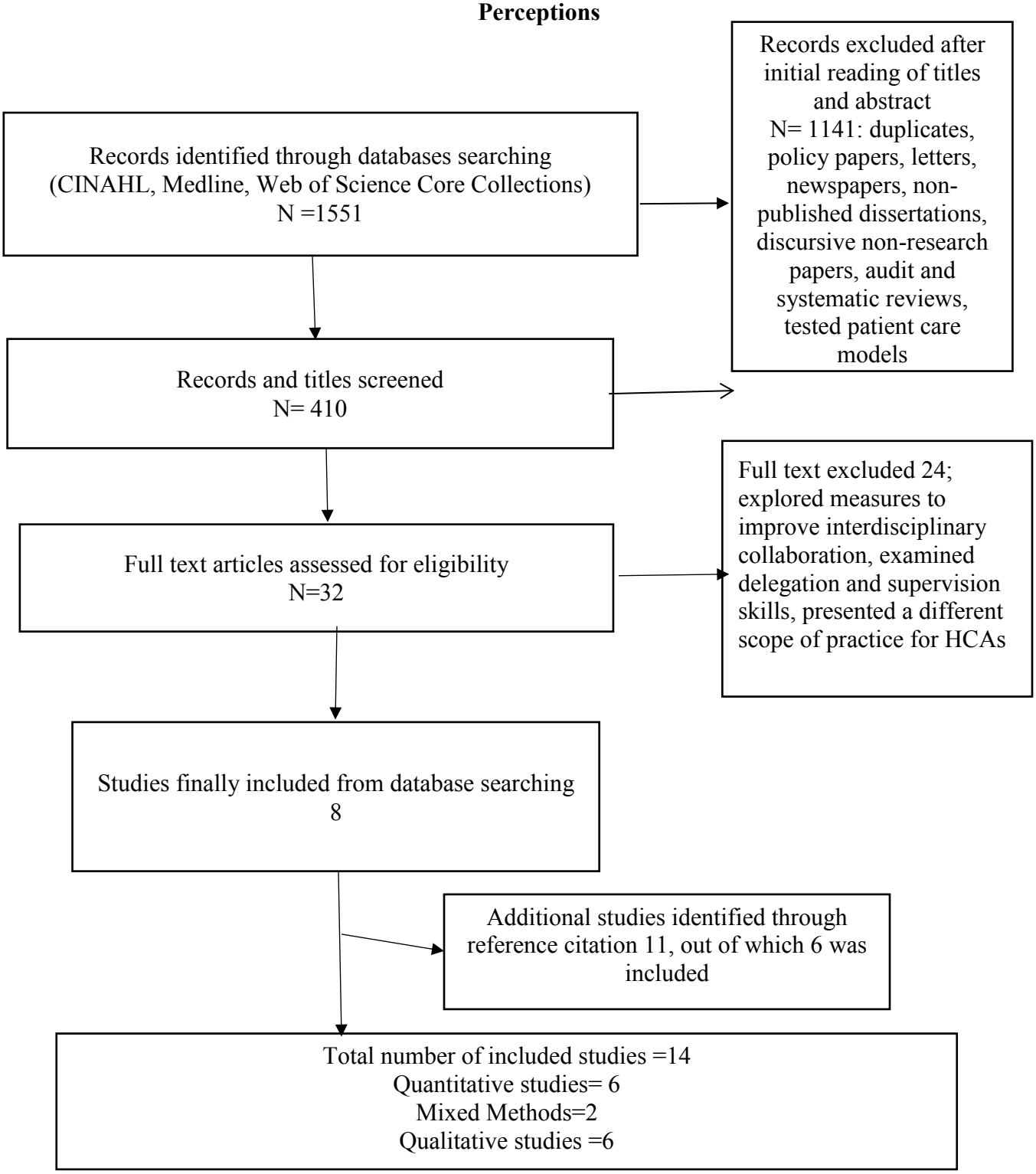

Figure 2: Mixed Method Appraisal Tool (Pluye et al., 2011)

Responses Yes No Can't tell Comments

Screening questions
(for all types)

 Are there clear qualitative and quantitative research questions (or objectives*), or a clear mixed methods question (or objective*)?

 Do the collected data allow address the research question (objective)? E.g., consider whether the follow-up period is long enough for the outcome to occur (for longitudinal studies or study components).

Further appraisal may be not feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.

1. Qualitative 1.1. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question (objective)?
1.2. Is the process for analyzing qualitative data relevant to address the research question (objective)?
1.3. Is appropriate consideration given to how findings relate to the context, e.g., the setting, in which the data were collected?
1.4. Is appropriate consideration given to how findings relate to researchers' influence, e.g., through their interactions with participants?

2. Quantitative descriptive
4.1. Is the sampling strategy relevant to address the quantitative research question (quantitative aspect of the mixed methods question)?
4.2. Is the sample representative of the population understudy?
4.3. Are measurements appropriate (clear origin, or validity known, or standard instrument)?
4.4. Is there an acceptable response rate (60% or above)?

3. Mixed methods 5.1. Is the mixed methods research design relevant to address the qualitative and quantitative research questions (or objectives), or the qualitative and quantitative aspects of the mixed methods question (or objective)?
5.2. Is the integration of qualitative and quantitative data (or results*) relevant to address the research question (objective)?
5.3. Is appropriate consideration given to the limitations associated with this integration, e.g., the divergence of qualitative and quantitative data (or results*) in a triangulation design?

Criteria for the qualitative component (1.1 to 1.4), and appropriate criteria for the quantitative component (2.1 to 2.4, or 3.1 to 3.4, or 4.1 to 4.4), must be also applied.

*These two items are not considered as double-barreled items since in mixed methods research, (1) there may be research questions (quantitative research) or research objectives (qualitative research), and (2) data

Table 1: Integrative Review Matrix

Authors Year Publication Country	**Aim, Setting and Sample**	**Method, Data Collection and Analysis**	**Quality Score**	**Key Findings**
Butler-Williams et al., (2010). United Kingdom	To examine the contributions of the HCA as the recognizer, responder and recorder within the general ward setting. -Convenience samples of HCAs from two district general hospitals within the South West of England were used. Sample size= 131	A postal survey of HCAs was piloted and conducted. Open and closed ended questions were used. -An information sheet and survey were distributed by hand through ward managers. -Descriptive statistics and thematic analysis of open-ended questions	MMAT score=50% Low quality	-HCAs undertook majority of the patient observations and afforded importance to vital signs and early warning scoring systems in the assessment process. 54% acknowledged that the use of touch was important in the assessment process. -Within the ward environment, 42% felt they were distracted by other patients needs and 45% indicated staffing levels were not adequate to support this process. -A range of clinical observations was routinely performed by the HCAs within this study; however, they were not always clear what observations were needed to be undertaken and how often. -A track and trigger system such as the Early Warning Score (EWS) was used by 83% of respondents. Despite this apparent high use of the scoring system there appeared to be a misinterpretation of this tool.
Butler-Williams et al., 2010 United Kingdom	To examine the feelings, support, and feedback available to HCAs when caring for acutely ill ward patients.	This paper presents an additional information from the study conducted above. -The study method, techniques for data	MMAT score=50% Low quality	The majority of respondents (97%) indicated they felt confident in knowing when to call for help should a patient become unwell and felt calm regarding subsequent care required (88%). Only 8% described feeling a lack of control when caring for these unwell patients. 34% felt anxious when caring for critically ill patients.

	-Two urban district general hospitals in the South West of England were utilized for this study. Sample size= 131	collection and analysis are the same as stated above.		-Concerns regarding the lack of attention to other patients whilst their time was spent with the acutely ill patient (30%) was highlighted. -One respondent identified their role in providing support to other healthcare professionals in their team
Dahlke & Baumbusch, (2015) Canada	-To offer an explanation for how registered nurses are providing care to hospitalized older adults in nursing teams comprised of a variety of roles and educational levels. -Two hospital units in western Canada were used. One unit was a medical unit in a community hospital and the other was a geriatric specialty unit in a tertiary hospital. -Participants were recruited through	-A qualitative study. -The researchers performed a thematic analysis of data that were collected in a previous grounded theory study. -Data collection entailed 375 hours of participant observation, interviews and perceptions and review of selected documents.	MMAT score=100% High quality	The Skill mix used in this study comprised of a reduced number of RNs and an increased number of LPNs and HCAs. As a result, LPNs and RNs experienced frustrations as they did not understand the difference between their roles and this created tension in their care delivery activities. -RNs explained that skill mix influences the quality of care they could provide; they preferred to work with more RNs. This was because RNs pick up on the slightest changes in patients' condition. -LPNs reported an understanding that RNs had a big workload, and this made it more challenging to ask for assistance when a task was out of their scope of practice. -There were differing perceptions about the contributions HCAs could and were making to the nursing team; it was agreed that their primary responsibility were physical tasks. -The HCAs viewed their work as tasks that did not need to be completed until the end of their shift. This was often in conflict with RNs who aimed to get these tasks done before noon. -There were other tensions associated with some HCAs who, thought their job was to provide baths and then go and hide or HCAs, who left some of their jobs for RNs regardless of the RNs' workload.

	purposeful, snowball and theoretical sampling. -Sample size comprised of 18 RNs, 3 LPNs and 3 HCAs.			-During weekends and night shifts RNs assumed the role of charge nurse in addition to their patient assignment.
Kalisch et al., (2009). USA	-To examine what the nursing team work look like. -Conducted in 5 patient care units in 1 acute care hospital-3 maternity units, 1 medical-surgical unit, and 1 intensive care unit. -A total of 116 RNs, 7 LPNs, 28 HCAs, and 19-unit secretaries were interviewed	A qualitative study. -Focus groups comprised of 8-10 participants and lasted 60 to 90 minutes -Data were analyzed, using the NVivo QSR software. - The grounded conceptual framework approach guided the formation of themes.	MMAT score=75% High quality	-HCAs described their keys roles to be checking vital signs, performing baths, and assisting patients with ambulation. -RNs were reluctant to do what they considered "aide work. "And often referred to the work of the HCAs as not "their work "even though the RN is legally and professionally responsible for their nursing care. - RNs pointed out that HCAs did not understand the extent of their documentation responsibilities. - RNs expressed a high degree of mistrust about the work of HCAs and vice versa.
Keeney et al., (2005) United Kingdom	- To explore how nurses, midwives, and patients' perception. - Data were collected in a large regional hospital in	-Quantitative survey methodology was employed. - Self-administered questionnaires (made up of open and closed ended questions) and	MMAT score= 75% High quality	24 staff respondents (96%) felt that HCAs provided valuable assistance to staff by taking over non-professional tasks and this allowed them as nurses and midwives more time for direct contact with women. - There were varied views on whether the HCAs' role reduced the quality of care or not. However, the majority of

	The Republic of Ireland. -The staff sample consisted of all nursing and midwifery Staff working on the days of data collection in the maternity and theatre units (n=25). Patient sample size=6	semi- structured Interviews were used. SPSS, and content analysis were used for closed and open-ended questions respectively.		the staffs believed that professional staffs offered holistic care in contrast to the task-oriented care given by HCAs. -11 respondents believed that supervision of HCAs did not increased their workload. 4 were unsure and 8 viewed that as an additional work.
Lankshear et al., (2016). Canada	To determine factors contributing to LPNs' role confusion and the impact on the nursing intra-professional team collaboration. Sample was drawn from Ontario RNs and LPNs (n = 1101)	-A mixed-methods approach was used, including an online survey, for 11 months. -Targeted stakeholder groups were recruited for a survey through social media strategies such as Facebook and Twitter and snowball sampling via personal and professional networks, membership listing, and e-mail	MMAT score=75% High quality	-Only 46% (LPNs) and 48% (RNs) believed that the LPN's role was clear. There were variations in responses to items regarding the degree to which LPNs and RNs are knowledgeable about the role and scope of practice in each other's role. -Generally, there was a higher agreement that LPNs are knowledgeable about the RN role and scope, with agreement ranging from 65% to 76%, but there was much lower agreement regarding RNs' knowledge about the LPN's role (23%-37%). -LPNs were viewed as being an equally contributing member in clinical decision making. -Both LPNs and RNs seemed to show mutual consideration, respect, and trust in each other's' role. However, there was evidence of disharmony when the quantitative findings were compared to the quality findings.

		forwarding. Ten focus groups were held with leaders of the nursing teams. The focus group participants (n = 47). -Statistical analysis was conducted using SPSS for demographic data. - Qualitative data from the online questionnaire and focus groups were analyzed using conventional content analysis.		- RNs and LPNs reported that organizational practices such job restructuring had negative impact on teamwork and often limited the LPNs' ability to work to a full scope. -Participants believed that the LPNs scope of practice had broaden, however such transitions have not yet been successful. - LPNs and RNs remarked that the model of nursing care delivery used influenced their scope of practice
McLaughlin et al., (2000) United Kingdom	-To explore the Perceptions of RNs working with HCAs -Convenience sampling from RNs working with HCAs in three acute care hospitals in England and Wales.	-Descriptive cross-sectional study design. -Used an investigator developed Survey instrument containing 24 questions. -One-way ANOVA was used to test perception of the degree of the RN role	MMAT score = 75% Low quality	The majority of the RNs indicated minimal changes in their role when working with HCAs. Negative comments related to the extra time needed for the RNs to delegate and supervise HCAs. -Observations indicated that staffing levels were not adjusted to reflect the fact that HCAs could not perform assessments, skilled procedures and medication administration and this added to the RN's workload. -73% of RNs indicated satisfaction with HCAs' ability to communicate pertinent patient information. 39% of RNs believed that HCAs provided more time for professional nursing activities. - Some respondents indicated that HCAs were capable of performing basic assigned tasks; however, they did not have

	-171 RN responded the survey	when working with HCAs. - Content analysis was performed on responses to open-ended questions.		the necessary training to recognize or report changes in patient condition. -Several RNs noted that HCAs lacked the understanding and ability to interpret pertinent details involved in providing proper patient care. In addition, HCAs did not recognize the complexity or adequately understand the overall patient care plan.
Mueller et al., (2012) USA	To examine LPNs' roles and responsibilities as well as barriers to and facilitators for working within their scope of practice. -Surveyed licensed practical nurses (LPNs) employed in nursing homes in Minnesota (MN) and North Carolina (NC). -A simple random sampling was used to draw 409 LPNs from each state	-The study used a cross- sectional, observational descriptive survey -Closed-ended questions were mailed to participants, followed by a reminder postcard and finally a replacement survey for those who did not respond to the initial mailing. -Univariate descriptive statistics were used to summarize survey responses of all items. Bivariate statistics including t-tests and chi-square were used	MMAT score=50% Low quality	LPNs reported that sometimes they were asked to perform nursing activities they felt unprepared to perform and sometimes worried that they might be practicing outside their scope. 71% reported that RNs and LPNs did the same things in their facilities. -The most common barrier that made staying within their scope of practice difficult were the unavailability of RNs to help with the direct patient care and the time RNs spent on administrative work. The most common facilitator was having RNs spend time on the nursing units.

		to compare responses between states.		
Oelke et al., (2008). Canada	To examine the perceptions of LPNs, RNs and psychiatric nurses on their scope and to identify perceived barriers and facilitators in optimizing their roles. -Sample size comprised of 167 acute care nurses (RNs, LPNs, psychiatric nurses and nurse managers) in three western Canadian health regions	A mixed-methods design. Qualitative method used to obtain an in-depth understanding of nurses and other stakeholder's perceptions of scope. Quantitative data were collected for participants' demographics, workload and job satisfaction measures. However only qualitative data are reported in this paper -Face-to face interviews were used, and thematic analysis done.	MMAT score=50% Low quality	-Nurses in all three occupational groups had difficulty describing their scope of practice. - Perceptions of inappropriate staff mix (e.g., replacing an RN with an LPN), were perceived to increase workloads and to interfere with the RN's ability to work to full scope. -LPNs commented that the expansion of their scope of practice over the last 10 years sometimes contributed to their inability to provide the care they felt was needed. -LPNs mentioned that they were responsible for activities such as bedside care, assessments, patient care, ADLs, assessment for pain control and IVs.
Perry et al., (2003) United Kingdom	-To understand the main differences between the roles and functions of RNs and HCAs working in nursing homes.	-This study formed part of a larger quantitative project however, the current study used a qualitative method to better understand the perceptions of both	MMAT score=75% High quality	The RNs remarked that their role entailed multiple functions (administrator, manager, supervisor, nurse, and carer) during a single shift. -All RNs could not identify areas of care that were outside their domain of responsibility. -Most HCAs had difficulty thinking of areas that were solely their responsibility

	- Conducted in four nursing homes in England. -A purposive sample of 9 RNs and 12 CAs was used	HCAs and RNs roles from the perspective of the participants themselves -Data were collected through semi-structured interviews lasting 30-90minutes - Participants were to describe their role in the nursing home both independently and in relation to the other's role. -Discussions were tape-recorded and transcribed by the interviewer -Content analysis was used		-The only area of care that HCAs could claim as their own was escorting residents to appointments and hospitals because an RN must be present on the unit at all times. -RNs explained that, although they felt the HCAs were competent and knew the residents well, they lacked the training and skills to pick up on subtle changes in the condition of residents. -The HCAs recognized their limitations in patient care and acknowledged that RNs made major contributions in patient care and this was due to their years of training and level of knowledge.
Schluter et al., (2011). Australia	To understand how medical and surgical nurses from two Australian hospitals conceive their scope of practice in response to the available grade and skill mix of nurses	A constructivist methodology, using the critical incident technique (CIT) was used. -Semi-structured audio taped face-to-face individual interviews were conducted over three months during 2007.	MMAT score=100% High quality	Both LPNs and RNs strove for close patient proximity because they perceived it improved continuity of patient care, their ability to understand patients' needs and the provision of holistic care. -The utilization of HCAs in direct patient care was seen to limit close nurse–patient proximity and result in limited rapport building and communication with patients. This also placed pressure on RNs and LPNs who felt they were unable to provide total patient care. -One of the core nursing roles that emerged from participants' comments was safeguarding patients, which

	-The settings for this study were two large teaching hospitals in Queensland -16 registered nurses (RNs) and 4 enrolled nurses (LPNs) were used.	The average duration of interviews was 1 h. -Inductive thematic analysis was done		was perceived to both improve patient safety and reduce the likelihood of adverse events. RNs described their roles as a safety intervention against multifaceted incidents such as medication errors, falls, aspirations, failure to rescue, failure to pick up signs in observations that would later worsen patients' conditions. -RNs recognized patient assessment as an essential duty which should be performed by licensed nurses as HCAs may not recognize the subtleties of abnormal patient observations.
Spilsbury & Meyer, (2004) United Kingdom	-To describe the work of HCAs working in a hospital setting -An adult general care in an acute hospital setting in the UK was used. -Purposive sampling was used to recruit 33 and 69 RNs respectively	-A qualitative study using a single case embedded design. -Data collection occurred in 3 stages, stage 1- face –face interviews with 33 HCAs. Stage 2- participant observation of 10 HCAs in practice. Stage 3-focus groups with RNS of different grades Clinical Lead Nurses (n=22); Charge Nurses (n=14); E Grade Nurses (n =19) and D Grade Nurses (n=14) Demographic and biographic data were	MMAT score=75% High quality	-HCAs' job descriptions were based on three key areas– direct care, housekeeping and clerical duties. - RN's role included bedside and other care related activities, such as, technical duties, paperwork, computer care planning, liaison with other health care professionals (hospital and community) and discharge planning. - HCAs placed a high value on the delivery of bedside care and suggested that RNs might be relinquishing their traditional perspective on what constitutes important care for patients. -HCAs perceived that their engagement in several direct patient care activities resulted in the formation of a closer and a trusting relationship with patients. - HCAs involvement in bedside activities enables them to gather a variety of information about their patients. In confirmation, some RNs saw HCAs as "the eyes and ears" of the ward. -RNs in this study restricted HCAs' involvement in certain perceived higher-level tasks. However, when RNs faced an increased workload or inadequate staffing some aspect of RN role were shifted to HCAs

		managed and analyzed using SPSS. Qualitative interview transcripts and participant observation field notes were analyzed using NVIVO		
Standing & Anthony (2006) USA	-To examine what delegation means to nurses working with HCAs -A convenience sample of acute care nurses was recruited from a large, metropolitan teaching hospital using purposive and snowball sampling techniques.	-Qualitative study using a phenomenological approach. -Data collection involved in-depth interviews lasting 45-1.30minutes. The data was audiotape recorded, transcribed verbatim, and reviewed for consistency between the tapes and transcripts. Colaizzi's steps for data analysis was used.	MMAT score=75% High quality	-Many nurses commented that HCAs did not understand the RNs role and consequently did not understand the purpose of delegation. In some cases, their delegation was interpreted as laziness. -RNs had negative experiences from delegating roles to HCAs. The HCAs did not report abnormal vital signs, weights, and so forth; fabricated vital signs; did not perform tasks at the appointed times; or communicated improperly with patients. RNs generally acknowledged that they were ultimately accountable for these tasks and were very concerned about potential patient harm in these situations. For some nurses, delegation made their work harder and so preferred doing everything all by themselves. -On the positive side, RNS commented that delegating tasks to HCAs allowed them more time to use nursing skills, spend time with patients, and do patient teaching, monitor patient changes, review charts, and, in general, "focus on more important things.
Topping, (2009) United Kingdom	-To elicit the views of registered nurses (RNs), working in the	A quantitative survey using a 24-item questionnaire and a six-point Likert scale	MMAT score=50 Low quality	-More than 90% of RN participants agreed that the roles of RNs and HCAs differed and recognized that RNs remained accountable when delegating.

	surgical directorate of an acute National Health Service trust, concerning the responsibilities of RNs to HCAs. -A convenience sample of 219 RNs were used	design was administered. -The data were analyzed using SPSS version 15.0 to compute descriptive statistics and cross-tabulated statistics		-Most of the RN participants believed that the development of the HCAs roles should be supported because it improves patient care. 42% of all participants and 32% of RNs disagreed with the statement that the development of HCAs is a cost-cutting exercise. -A majority (61%,) indicated that they supported HCAs becoming registered with a regulatory body and 71% participants and 59% of RNs agreed that, if adequately prepared, HCAs should be accountable for the care they provide.

Nursing Team Members' Perceptions of their Own and Each Other's Roles: A Secondary Analysis Using Qualitative Descriptive Methods

Abstract

Background: The perceptions nursing team members have about their own and each other's roles have implications for how they construct their contributions to patient care, work relationships and social status within the healthcare organizational hierarchy. Contemporary studies have indicated that there is a paucity of literature on how the nursing team members perceive their roles and those of their colleagues. Nonetheless, understanding these perceptions could help improve their utilization in practice.

Aim: To examine Registered Nurses' (RNs), Licensed Practical Nurses' (LPNs) and Health Care Aides' (HCAs) perceptions of their own and each other's roles.

Design: Secondary analysis of qualitative data using qualitative descriptive methods was used to provide a rich description of nursing team members' perceptions of their own and each other's roles within the nursing team.

Methods: Transcripts of interviews, field notes, and participant profiles from the original study's data set were analyzed using conventional content analysis (CCA). An analytic coding framework was developed and refined throughout the analysis to develop themes that describe the nursing team members' perceptions.

Results: The team members described their roles based on the tasks and skills performed in the process of their care delivery. RNs were responsible for the leadership aspect of patient care but felt loss from their inability to provide direct care. LPNs and HCAs were involved in direct care, which they viewed to be the most important aspect of nursing roles. All the nursing team

members reported satisfaction from providing direct care. Scope of practice changes contributed to role confusion and tension among the team members.

Conclusion: This study identifies opportunities for strengthening nursing team members' work relationships and collaboration by highlighting the challenges RNs, LPNs and HCAs have in understanding each other's roles. Nursing leaders can enhance nursing team functioning by clarifying roles and educating team members about each other's roles. More research is needed to understand the changing roles of the nursing team members.

Keywords: Nursing roles, skill mix changes, role confusion, contribution and understanding.

Introduction

In the past few decades, mounting fiscal pressures have raised concerns about the effective utilization of the nursing workforce and have consequently led to changes in the nursing skill-mix with task-shifting to less educated care providers. It is not well understood how nursing team members perceive their roles, their teammates' roles or their individual contributions to patient care delivery. A study that examined nursing practice with hospitalized older adults suggested that nursing team members differ in their perceptions about their practice within the nursing team (Dahlke, Phinney, Hall, Rodney, & Baumbusch, 2015). This study is a secondary analysis of that data to explore the team members' perceptions of their own and each other's roles as they worked together in the changed skill-mix.

Background

Globally, health care institutions have increased their use of less educated care providers as a way of managing their fiscal resources (Huynh, Alderson, Nadon, & Kershaw-Rousseau, 2011; Salmond & Echevarria, 2017). In nursing, this translates to increasing numbers of licensed practical nurses (LPNs) and health care aides (HCAs) and reduced numbers of registered nurses (RNs) (Aiken et al., 2014; Petrova, Vail, Bosley, & Dale, 2010; MacKinnon, Butcher, & Bruce, 2018). Understanding how nursing team members are navigating these changes in nursing teams is essential in deploying the nursing workforce. Scholars exploring the impact of the changed nursing skill-mix on patients' satisfaction, quality care, safety, mortality, morbidity and healthcare cost savings suggest that skill-mix changes have direct impact on institutional efficiency and patient outcomes (Aiken et al., 2014; Butler et al., 2011; Duffield et al., 2011; Dubois et al., 2013; Estabrooks, Midodzi, Cummings, Ricker, & Giovannetti, 2011; Whitehead & Myers, 2005; Westbrook, Duffield, Li, & Creswick, 2011). Although there is evidence that

patient outcomes improve with increased numbers of RNs (Aiken et al., 2014), it does not provide information about nursing team members' perspectives on their impact in patient care (Dubois et al., 2013). An integrative review of the literature exploring nursing team members' perspectives of their and their team members' roles revealed a lack of understanding about how nursing team members are navigating their team roles (Kusi-Appiah, Dahlke, & Stahlke, 2018).

On the other hand, the increased use of HCAs and LPNs, coupled with LPNs' expanded scope of practice, has the potential to create confusion among nursing team members' work, their relationships with each other, and their social status within the organizational hierarchy (Bennett, 2003; Eagar, Cowin, Gregory, and Firtko, 2010; Rheaume, 2003; Huynh et al., 2011). Eagar et al. (2010) found that lack of clarity about nursing team members' roles negatively impacted patient outcomes and nursing providers' job satisfaction. Although legislatively defined scopes of practice outline the roles of LPNs and RNs in practice in most jurisdictions, such definitions do not include HCAs who do not have legal scope of practice and yet are increasingly employed in care delivery (Hewko et al., 2015). In Canada, entry to practice for RNs is a degree, LPNs have a two-year diploma and HCAs have three to six months of training (Hewko et al., 2015)

The authors of a United Kingdom (UK) study exploring nurses' perceptions of the benefits and challenges of the HCA role reported that nurses are anxious about the impact HCA roles have on their own roles and their professional identity (Petrova, Vail, Bosley, & Dale, 2010), raising questions about nurses' understanding about the place of HCAs in the nursing team. Additionally, scholars who have examined the work of nursing team members highlight that the LPN role remains understudied (McGillis Hall & Harris, 2012; Rheaume, 2003). In the Canadian context, LPNs are a distinctive group of healthcare professionals with roles that are not well-articulated (Rheaume, 2003). Some scholars suggest that LPNs are trained for more task-

oriented patient care and as a result are unable to deliver a broader scope of nursing care (Cook, Dover, Dickson & Engh, 2010; Corazzini, Anderson, Mueller, Thorpe, & McConnell, 2013). However, new studies report that LPNs' scope of practice has expanded to include some aspects of the traditional RN role (Donnelly & Domm, 2014; Mackinnon et al., 2018; Jones, Toles, Knafl, & Beeber, 2018; Rheaume, 2003). Donnelly & Domm (2014) concluded that, due to changes in legislation, LPNs, who once worked under the supervision of the RN, no longer do so. Thus, it is not well understood how these scope of practice changes are enacted in practice settings. Understanding how nursing team members view and enact their roles can provide opportunities to enhance their teamwork and contributions in care, and improve patient satisfaction (Bauer & Bodenheimer, 2017). The aim of this study was therefore to explore nursing team members' perceptions of their own and each other's roles.

Methods

This study used qualitative descriptive methods to conduct secondary analysis of existing qualitative data. Qualitative description research lies within the naturalistic approach and seeks to provide a rich description of participants' world with the goal of gaining emic knowledge to inform practice (Sandelowski, 2000). Secondary data analysis was employed to maximize the use of the original data set (Cheng & Phillips, 2014; Long-Sutehall, Sque, & Addington-Hall, 2012). The original grounded theory study examined nursing practice with hospitalized older people (Dahlke et al., 2015). The data were collected in 2010 and 2011 and included 34 semi-structured interviews, and 375 hours of participant observation on two different hospital units, one geriatric unit (Site 1) and one medical unit (Site 2) located in Western Canada. In their discussions about how care was enacted, participants discussed some of the facilitators and challenges associated with working in nursing teams consisting of RNs, LPNs and HCAs. Thus,

this data was appropriate to answer the research questions of this study, which were: How do RNs, HCAs and LPNs describe their own roles in patient care? To what extent do RNs, HCAs and LPNs understand the roles of each other?

Data Analysis

Congruent with qualitative description, the original interview transcripts, field notes, and participant profiles were analyzed using conventional content analysis (CCA) (Hsieh & Shannon, 2005). CCA is the analysis strategy of choice within qualitative description to obtain and interpret participants' perspectives, by staying close to the data and avoiding preconceived categories (Bengtsson, 2016; Sandelowski, 2000). Data analysis began with reading and re-reading transcripts thoughtfully (Hsieh & Shannon, 2005) to gain an intimate knowledge of the data (Bengtsson, 2016). Data excerpts that described nursing team members' perceptions about their roles were highlighted and key words and phrases in the participants' own words were noted, which formed the initial codes (Elo & Kyngas, 2008; Graneheim & Lundman, 2004).

Once the first few transcripts were coded, an analytic coding framework was developed, in which codes developed from the first few transcripts were applied to subsequent transcripts, to manage and organize data from the remaining transcripts (Gale, Heath, Cameron, Rashid, & Redwood, 2013). New codes from subsequent transcripts were added to refine the coding framework. The authors met often to discuss the coding framework and grouped similar codes together to develop categories and themes (Elos & Kyngas, 2008; Gale et al., 2013).

Rigour was ensured by attending to the credibility, transferability, dependability and confirmability of findings (Lincoln & Guba, 1985). Data from the two different hospital settings were analyzed separately to compare perceptions across the settings and assess the transferability of the findings (Lincoln & Guba, 1985). Credibility was ensured by using the various data

sources from the original study (interviews, field notes, and document analysis) to support ideas about the context of the interview (Lincoln & Guba, 1985). The authors frequent discussions about analysis aided in validating findings for confirmability (Lincoln & Guba, 1985). A final comparison of the transcripts with the findings ensured dependability of the findings (Lincoln & Guba, 1985).

The original study received ethical approval from a Western Canadian university and the participating health authorities. Participants signed informed consent forms, which included consent for use of the data in future research. The health research ethics board of the University of Alberta granted approval for the current project.

Findings

Four major themes were developed to reflect participants' perceptions of their roles and what impacted their understanding of each other's roles. They are 1) RNs' perceptions of their own role; 2) LPNs' perception of their own roles; 3) HCAs' perception of their own roles; 4) nursing team members' perceptions of each other's roles.

RNs' Perceptions of Their Own Roles

RNs' perceptions of their own roles in patient care are described by four categories: patient assessment, high quality and safe care, personal and emotional care, and coordinating the delivery of care. Most RNs spoke about *patient assessment* as "the first and most important thing" in their professional role (RN13, field notes, Site 2). RN1 (Site 1) believed that their role was to look at the big picture "by looking at the history, to see what [they] can do to normalize a patient's life while they are in the hospital." RNs were to gain a holistic perspective of their patient by "looking around that patient, the environment, [and] the family" (RN6, Site 1) and to "understand that patient by diagnosis…medical and physical background" (RN13, Site 2). In all

patient assessments, RNs applied observational, analytical, and problem-solving skills to validate the accuracy of information gathered about patients. RN8, (Site 1) called attention to the complexity of their assessment: "It's not so cut and dried. You need to spend more time to find out what the issue is. When you have one issue like that it unravels a whole bunch of other issues that have to be dealt with." RNs explained that a sound knowledge of health and illness is needed to conduct a thorough assessment.

RNs viewed providing patients with *high quality and safe care* as a critical aspect of their role. In both sites, RNs described themselves as safety interventionists "to anticipate deterioration before it happens" (RN17, Site 1) and reduce risks. RNs dealt with both disease-related risk and healthcare risk. Disease-related risks were associated with patients' medical conditions and general health status and required careful monitoring of patients to identify and address early signs of health deterioration and complications. Healthcare risk on the other hand, was the harmful effects of prescribed medications and clinical errors. RN1 (Site 1) explained: "a lot of what we do, we either give meds or we are supposed to observe for side effects." The prevention of clinical errors was also achieved by examining the appropriateness of orders.

Among themselves, RNs sought second opinions about how to approach patient care and checked for possible errors through regular reviews of patients' charts to identify clinical errors. "Part of nurses' usual work was checking to see if the orders were written properly, or if pharmacy has sent the medications, or if the lab work has been drawn or if the physiotherapists were mobilizing patients as ordered" (RN2, Site 1).

RNs used the terms "quality care" and "patient safety" interchangeably as one of their top priorities. "Doing safe care is part of our [role]. Our mission is how we can provide high quality of care for them in their life" (RN 3, Site 1). The focus on high quality/safety led RNs to

get their work done quickly to save time for emergencies or unexpected patient care demands. "You have to plan ahead or think ahead of time. Like, you don't know what will happen… if the patients get sick, you can take all your attention with them" (RN2, Site 1).

RNs explained that providing *personal and emotional care* was the most rewarding aspect of their role. RN15 (Site 2) elaborated on the importance of physical care, pointing out that by "trying to do something that's not just medication, like the one on one, the personal care, are very rewarding. RN 1 (Site 1) accentuated "by walking them, feeding them, toileting them, you're doing the other things of nursing care that are important." However, the nurses wanted to be recognized as offering more than what is often seen as fundamental care. Most RNs were motivated to provide this care because "they [patient] appreciates [it] and that makes a big difference for them, whether it's having a shower or washing their hair" (RN1, Site1).

Although RNs believed personal and emotional care was important, they had to prioritize complex role demands such as patient care assessment, medication, and other medical tasks over fundamental care. RN9 (Site 1) elaborated: "You may spend half your day dealing with things that don't even have to do with hands-on with your patient." Consequently, some RNs believed that they were overlooking the fundamentals of their practice when they couldn't attend to personal and emotional care. "The nurses don't have time to set the patient up or feed the patient. We are forgetting the basics like washing and positioning and feeding" (RN13, Site 2).

RNs identified that their role was to "orchestrate everything [about patient care]" (RN1, Site 1). This process included developing an action plan, *coordinating the delivery of care* and solving issues that arose in the care of patients on the entire unit. RN6 (Site 1) took pride in making sure the unit was running smoothly: "I never leave the unit with any issues or problems that they [LPNs and HCAs] couldn't take care of." Not all RNs gained satisfaction from

coordinating care and found having responsibility for the unit as challenging. RN1 (Site 1) clarified: "It's part of the job but if it becomes so much that, you spend so much time doing that you can't see your patient is worrisome to me." Most RNs regretted having to spend more time in patient care coordination and less time doing hands-on patient care.

LPNs' Perceptions of Their Roles

LPNs' described their roles as: doing clerical tasks, working with RNs, and providing direct care. LPNs described "*doing clerical tasks* [as] a usual thing and it's just such a waste of time" (LPN1, Site 1) because it was "taking away time on the hands on with the patients" (LPN3, Site 2). They would prefer "just being able to talk to [patients]" (LPN1, Site 1). Spending much time on clerical duties, rather than direct patient care led to frustration and dissatisfaction in their practice. One LPN explained: "You don't feel like you've gotten anything done because you're just doing all that clerical stuff that is frustrating. You don't feel satisfied and you go home wondering…you're just thinking of what stuff you haven't done for your patients."

In *working with RNs,* LPNs collaborated with RNs when there were activities outside of their scope. As one clarified: "Even though I work independently because I do practice in full scope…. sometimes there are some things to be done by the RNs, so I have to ask them to do it for me" (LPN2, Site 2). LPNs suggested that they had greater responsibility for their patients than RNs, even if the RN had to step in with these patients and complete activities with them. This was evident by LPNs picking up on their patients' needs and reminding RNs to attend to the tasks that were outside of their scope of practice. One LPN clarified: "I will be more responsible than them (RNs) for my patients. They have their own patients and they have something additional going to deal with…so I can remind them" (LPN2, Site 2).

LPNs saw their role as *providing direct care* to patients. It was "important [for LPNs] to actually do the washes after the medication, in order to see the whole patient" (LPN3, Site 2). This included "how [patients] move, how they're feeling, [doing] assessment and talking to them" (LPN3, Site 2). They exercised judgement by "weighing the probability of getting things wrong" and "using your common sense" (LPN2, Site 2) in patient care. LPNs also had to prioritize the health challenges of patients by identifying "who needs more time, who needs less time" (LPN2, Site 2), to divide their time and spend more time with patients with greater need. Notably, "spending more time with the patients [helped LPNs to] get a lot of information from patients" (LPN3, Site 2) to individualize patient care.

An important part of providing direct care was an intentional caring philosophy of "do unto others what you want others to do unto you [and] treating patients as a human being who is in need of help" (LPN3, Site 2). The LPNs also facilitated patient comfort by assisting with patients' "activities of daily living" (LPN3, Site 2) and making them "feel fresh, nice, and normal [just] as they will do for themselves if they were not sick" (LPN3, Site 2).

A focus on relationships also shaped the way LPNs provided direct care to patients. One LPN explained the mutuality of relationship-focused care: "I get that helping relationship going… [so] they know that you're there for [them and] there is somebody they can count on" (LPN3, Site 2). Patients learned to rely on LPNs as trusted care providers who focused on achieving their goals for care. LPNs also identified an essential role "to keep patients safe" (LPN1, Site 1). Keeping patients safe meant performing activities such as frequent checks for signs of pressure sores and turning patients for comfort. LPN3 (Site 2) clarified that "you check every two hours at least or turn them, make sure they are fine, are comfortable."

HCAs' Perceptions of Their Roles

HCAs' perceptions of their roles are described in the following categories: emotional and physical care, responding to patients' immediate care needs, and liaising with nurses. HCAs largely identified their roles as providing *emotional and physical* care. Fundamental aspects of care were addressed by keeping patients "washed, cleaned, dried, powdered, and dressed up" to preserve their dignity (HCA3, Site 1). Providing emotional and physical care was viewed as their scope of practice. As one HCA explained, "my responsibility is to motivate people, mobilize people…because it's good for them and its part of my job…you get a person up, get their hair combed and make them look human" (HCA3, Site 1). Like RNs, HCAs described emotional and physical care as a rewarding aspect of their work. HCA2 (Site 1) clarified that "when you're dealing with the feeling…then doing your job is really rewarding because then you really understand why you are doing what you're doing."

HCAs' role also involved *responding to patients' immediate care needs* by answering call bells to identify patient needs and invite nurses into the situation when needed. HCA2 (Site 1) argued that patients "have the right to call a million times…they are paying me. I'm going to go and say, what can I do for you?" By answering patients' call bells, HCAs perceived that they were supporting nurses by giving them time to focus on complex care needs. HCAs attended to the fundamental aspects of nursing care such as repositioning patients, taking patients out for a walk, and changing patients' briefs, and soiled linens. Answering patient call bells enabled HCAs "to maintain the line of communication between patients and nurses" (HCA3, Site 1). HCA2 (Site 1) explained: "If I'm not making the bridge, I will end up with a very anxious patient, the anxiety will worsen the disease, patient will call more, and we will end up with a very chaotic place." To this end, HCAs perceived that providing prompt responses to patients'

call bells was a way of managing the care environment. HCAs viewed their role as managing all the call bells and basic care needs of the entire unit, while RNs viewed their job of managing the entire unit in more complex ways.

HCAs believed in *liaising with nurses* because their job was "to assist nurses within [their] scope," (HCA3, Site 1). They described themselves as the hands and feet of nurses and believed the delivery of nursing care required a team-based approach because "the more hands, the easier" (HCA2, Site 1). Many shared the view that the nursing team had a common objective "to make people better" (HCA3, Site 1). Consequently, the HCAs expressed readiness to receive delegation from nurses. The nurses were "not to be afraid to delegate, or request" HCA3 (Site 1), as delegation was necessary and part of their shared team values of caring for patients. HCA2 (Site 1) highlighted that "some nurses don't ask for help…even if they don't ask, we want to go and help." Because delegation was important to the HCAs, they saw the need to perform their duties faster and be ready for delegated tasks from nurses.

HCAs also made "frequents rounds to check on the patients to make sure they are safe" (HCA1, field notes, Site 1) and took notice of broken beds and faulty equipment and reported these issues to RNs. HCA3 (Site 1) argued that "the care aide knows more about the patient than anyone else" because they spent more time with patients than did other nursing team members. They were better positioned to notice things about patients, bring them to the attention of the nurse, and "really make sure that something is done" (HCA2, Site 1).

Nursing Team Members' Perceptions of Each Other's Roles

RNs' perceptions of LPNs' roles are described with the subthemes: tensions related to scope of practice; and creating more work for RNs. Negotiating relationships with RNs and documenting care are subthemes that represent LPNs' perceptions of RNs' roles. Extra hands for

patient care and eyes and ears of nurses denote RNs' and LPNs' perceptions of HCAs' roles. HCAs' perceptions of RNs' and LPNs' roles are described with the subthemes: leaders of the nursing team and misunderstanding HCAs' role.

RNs' perceptions of LPNs. The LPN scope of practice changes shaped RNs' understandings about the LPN role. The changes also contributed to tensions between RNs and LPNs. There were *tensions related to scope of practice* because most RNs lacked clarity about the LPN scope of practice and "did not have time to sit down and understand the differences in their scope of practice" (RN12, Site 2). RN12 explained that "the skill mix is really complicated...constantly we're bombarded with 'okay, LPNs can do this now', …and a lot of times we're not sure and so sometimes this creates conflict between us." There was also confusion about patient care assignments. RNs reported instances where LPNs approached them and said, "my patient should be an RN patient because she's on airborne [isolation precaution], she has IV [intravenous] medications" (RN7, Site 1). This led the RN to ask if airborne precautions were within the LPN scope of practice. In either case, RNs had to "turn around, shuffle patients, or take the patients that made LPNs uncomfortable" (RN4, Site 1). This meant "giving LPNs the less acute and more stable patients in the RNs' patient care assignment and attending to LPNs' patient" (RN7, Site 1). RNs' conceptions of what LPNs could do in patient care differed from what they saw in practice. For instance, RN7 (Site 1) believed LPNs "might have to admit stable patients from the emergency," although LPNs were hesitant about doing so.

RNs were disappointed when LPNs were hesitant about providing care that was within their capabilities, leading RNs not "to argue with them but rather just do it" themselves (RN12, Site 2). These types of situations led RNs to perceive LPNs as unsupportive. Most RNs wished "there would be no LPNs" (RN9, Site 1) but rather "more RNs in practice instead of LPNs"

(RN7, Site 1). This was because "there is a huge difference especially when patients become really sick…you can see where the education comes" (RN4, Site 1). The underlying assumption was that LPNs could not care for seriously ill patients. Another RN clarified: "We have to do a lot of their work, which takes away from us, from doing what we have to be doing ourselves" (RN7, Site 1).

All RNs in this study explained that LPNs were *creating more work for RNs* even though they had been promised they would "do something for RNs" (RN1, Site 1), making RNs' work easier by helping with patient care. Yet, RN7 (Site 1) remarked that "introducing LPNs into the system to work at the RN level didn't do much for the RN. It added to workload. Having LPNs in our midst does not help us." This was because "LPNs solicit assistance with medication, hanging IVs, antibiotics, starting saline, inserting access, and peripheral access IVs" (RN3, Site 1). RN7 pointed out that "LPNs can't give blood. If they have a patient who has to get blood, automatically it becomes your patient" (Site 1). This patient would be added to the already complex patient assignment of the RN. These challenges explain why most RNs described working with LPNs as "difficult and harder" (RN1, Site 1).

RNs also reported that LPNs could not reciprocate help to RNs. Thus, the time RNs invested in managing LPNs' patients were evaluated in the context of both LPNs' willingness and ability to reciprocate patient care of the RNs. As one RN explained "if a young RN goes to the older RNs, [saying] 'Can you help me?' usually there is a trade-off…[Yet] when you have to go do stuff for the LPN, she can't do anything for you" (RN7, Site 1). One RN gave an example: "The LPN just walks away and says, 'Hey, I'm an LPN. I can't do this'" (RN12, Site 2). LPNs sometimes used their scope of practice to delineate boundaries of what they would and would not do, regardless of whether the task asked of them fit within their scope.

LPNs' perception of RNs' role. All LPNs described *negotiating with RNs* as "important because LPNs can't do some things like RNs" (LPN3, Site 2). LPNs expressed a deep sense of uneasiness when asking RNs to do things outside of the LPN scope of practice because they recognized that RNs "had their own stuff'…. and [the LPN] was giving them extra things to do" (LPN3, Site 2). Besides, RNs appeared busy and "reluctant to spend five minutes to explain things to the LPN" (LPN2, Site 2). However, one LPN suggested that when they did collaborate with the RNs "it was automatic [that they] will gain support from RNs" (LPN3, Site 2).

LPNs described asking and receiving help from RNs as "almost like a favour" (LPN3, Site 2). The best way to maintain their working relationship with RNs was "you scratch my back, I scratch your back" (LPN3, Site 2). To show how the LPN would reciprocate, they used language such as "you do my IV, I do your patient" (LPN3, Site 2). On the other hand, one LPN pointed out that when RNs performed tasks outside the scope of the LPN, "the RNs were doing their job not doing it for the LPNs" (LPN2, Site 2). Despite this fact, LPNs believed that maintaining working relationships with RNs through negotiation facilitated RNs in performing tasks outside of the LPNs' scope of practice.

Although LPNs preferred hands-on care to *documenting patient care*, they identified RNs' work with "charting and writing orders about patient care" (LPN2, Site 2). One LPN remarked that RNs were sometimes "very reluctant" (LPN2, Site 2) to assist LPNs with care due to the amount of paperwork that the RNs had to do. Although there was limited data pertaining to the details of the RNs' role in patient care documentation, the LPNs viewed it as important to RNs' role.

RNs' and LPNs' perceptions of HCAs. The findings related to the HCA role illustrate how RNs and LPNs saw HCAs as contributing *extra hands for patient care* and acting as the

eyes and ears of nurses. Both RNs and LPNs viewed the HCA role as "extra hands to assist patients with the activities of daily living" (LPN3, Site 2). The nurses described HCAs as a "fill-in for nurses to take patients for a walk" (LPN1, Site 1), "wash patients" (RN12, Site 2), "feed patients" (RN3, Site 1), and "turn and change patients" (RN9, Site 1), all of which reduced the nurses' workload, contributed to patients' overall personal care and allowed "nurses to focus on more complex tasks" (RN10, Site 2). Because the HCA role made nurses' "work lighter" (RN10, Site 2), most nurses wished to have more HCAs in practice. Both RNs and LPNs explained that the HCA role provided more "hands on deck" (RN15, Site 2), because HCAs were "just to do care" (LPN3, Site 2). They were unencumbered by activities that the nurses had to do in addition to fundamental care.

As *the eyes and ears of nurses*, nurses believed that HCAs "spent more time with patients" than other nursing care providers did (RN1, Site 1). As a result, they were often the first to notice and inform nurses about changes in patient condition such as "incontinence, skin changes, pain, or aspiration risk" (RN1, Site 1). One RN explained that when HCAs toilet patients "they smell the odour, see the color and the quantity of the urine" (RN7, Site 1). The HCAs' observations were then communicated "to nurses who couldn't see and smell what the urine looked like" (RN7, Site 1). The HCAs' observations served as a starting point in RNs' "assessment of patients from head to toe" (RN1, Site 1).

Although the RNs appreciated having HCAs on their units, they believed their own job was easier when they were able to do direct, hands-on patient care to make their own observations. RNs perceived that HCAs were limited in their interpretation and understanding of the observations they made about patients. As a result, they felt the responsibility to further examine and understand HCAs' observations and act appropriately.

HCAs' perceptions of nurses. HCAs perceived RNs as "*leading the nursing team"* (HCA3, Site 1) in the provision of patient care. As leaders, RNs "orchestrated the delivery of nursing care" (HCA1, Site 1) and the movement of patients into and out of the ward. If a patient was "booked for an x-ray, ultrasound or MRI, it was the duty of the RNs to ensure patients were taken out for the test, brought back to ward and put back to bed" (HCA3, Site 1). HCAs believed that the leadership aspect of the RN role was time-consuming and their role was busy and complex. Because RNs were busy, they did not take time to explain patients' care needs to HCAs, leaving HCAs to listen to RNs' conversations and "be attentive to everything that was happening" (HCA2, Site 1). HCAs believed the RN did not have time to delegate care responsibilities properly. As well, HCAs were careful not "to upset RNs" (HCA2, Site 1) or increase the pressure they were under by asking too many questions about patient care.

Misunderstanding HCAs' roles illuminate HCAs' concerns that both RNs and LPNs did "not know exactly what HCAs' role was about" (HCA2, Site 1). They received multiple requests from nurses because of an "assumption that HCAs were not busy" (HCA2, Site 1). "One nurse will ask HCAs to do something now, another nurse will say, 'HCA, I need your help now" (HCA2, Site 1). No one will ask "'what are you doing?' before they ask for help" (HCA2, Site 1). Nonetheless, HCAs saw every aspect of their role as important, including sitting with patients. As HCA2, (Site 1) put it, "I may not be perspiring, not be moving about, but listening to patients concerns. Just sitting and listening enables patients to release what they want to say and heal."

Discussion

The understanding this study offers about how nursing team members perceive their roles and those of their teammates contributes to the emerging body of literature that explains how

nursing team members work together. An important finding that supports the work of previous scholars was that RNs' roles had shifted from being a direct caregiver to leading other members of the nursing team in care delivery (Corazzini et al., 2010; Donnelly & Domm, 2014; Norrish & Rundall, 2001; Mackinnon et al., 2018). Nursing care is traditionally understood as the provision of hands-on care to address the physical, emotional, and comfort needs of patients (Jackson, White, Besner, & Norris, 2014; Pajnkihar, Štiglic, & Vrbnjak, 2017). Terms such as direct care, fundamental aspects of care and basic nursing care are used inconsistently to denote the provision of physical, emotional and comfort care needs to patients (Kitson, Conroy, Wengstrom, Profetto-McGrath, & Roberson-Malt, 2010; Kitson, 2018). The use of the term basic to denote these fundamental care activities may lead nurses and employers to view them as activities they can delegate to unregulated care providers, such as HCAs.

Previous studies exploring RNs' perceptions of roles other than direct care suggested that supervisory and administrative care roles are less rewarding (Norrish & Rundall, 2001; Mackinnon et al., 2018; Salmond, 1997). In a study from the United States, the RNs suggested that their roles had become invisible to patients due to their inability to provide direct care (Norrish & Rundall, 2001). In Canada, RNs sampled for a Nova Scotia Government review (2013) on RNs' and LPNs' roles felt pulled away from patient care into roles for which they were not prepared, leading to perceptions that their roles had become diluted, diminished, and unimportant.

In line with these studies, most RNs in our study expressed a sense of alienation, and dissatisfaction from not providing direct care. While it is not clear if the RNs were unhappy with indirect nursing care activities associated with their leadership responsibilities, it raises questions about whether RNs feel prepared for their leadership responsibilities. Correspondingly,

MacKinnon et al. (2018) reported RNs' need for leadership, supervisory, and team building skills. Corazzini et al. (2010) also found that RNs grapple with how to organize care across licensed and unlicensed nursing staff, creating potential role strain and dissatisfaction. Salmond (1997) suggested that RNs might be noticing a disconnection between their supervisory roles and the rewards received when good nursing care is provided. None of these studies could, however, explain RNs' reactions to their extended roles. Future research to investigate factors influencing RNs' role transition and understanding of their leadership care responsibilities would provide greater insight into supporting RNs' role advancement.

Another important finding was that members of each group identified direct care as a satisfactory and rewarding aspect of their roles. Similarly, in the Nova Scotia review (2013), most nurses identified emotional and physical care as their reason for being nurses and suggested they gained confidence, security, and job satisfaction from meeting these needs. Nelson and Gordon (2006) suggest that nurses describe themselves in ways that are in keeping with traditional prevailing beliefs and values of the society. It is possible that nursing team members aligned themselves with traditional caring ideals such as love, compassion and altruism (Dahlke & Stahlke, 2017) and hence perceived direct care as the medium to portray these virtues. The LPNs and HCAs who provided the majority of direct care claimed ownership over direct care and described it as the most important aspect of nursing work, excluding RNs from this work. On the other hand, LPNs' and HCAs' conceptions of direct nursing care as the most important aspect of nursing care indirectly under-valued other aspects of nursing work undertaken by RNs.

Like other studies, LPNs and HCAs are frontline caregivers in our study (Corazzini et al., 2010; Donnelly & Domm, 2014; Lankshear, Rush, Weeres, & Martin, 2016; Hewko et al., 2015; MacKinnon et al., 2018; Oelke et al., 2008). The team members' strong feelings about care

activities in our study corroborates earlier findings that nursing team members define their roles based on tasks and skills (Dahlke & Stahlke, 2017; Donnelly & Domm, 2014; Nelson & Gordon, 2006). A possible explanation for this may be that nurses "don't have the language to express the foundational values, perspectives and nursing theory which drives their nursing practice" (Donnelly & Domm, 2014, p. 76). Nonetheless, a fulsome description of nursing practice is needed if the public is to understand nursing differently from being a set of psychomotor skills (Donnelly & Domm, 2014). Future research that explores the team members' understanding of the cognitive demands of their roles might provide further clarification on how the team members enact them.

In terms of team members' perceptions of each other, nurses had mixed feelings about HCAs. Although HCAs enabled nurses to attend to the more technical aspects of nursing care, the nurses felt this was something they should be doing. This finding ties in with previous studies where RNs described HCAs as extra hands for care (Kalisch, Weaver & Salas, 2009; Norrish & Rundall; McLaughlin et al., 2000; Spilsbury & Meyer, 2004; Perry, Carpenter, Challis, & Hope, 2003), but also doubted HCAs' abilities to understand and communicate patients' needs adequately (Perry et al., 2003; McLaughlin et al., 2000). The evidence from this study supports the idea that RNs are concerned that their delegation to HCAs might have negative consequences for their work (Petrova et al., 2010). Standing and Anthony (2008) confirmed that RNs' delegation to HCAs created extra work for RNs as the HCAs failed to report abnormal vital signs and weights, falsified vital signs, did not perform care assignments at the appointed times, and communicated improperly with patients. Dahlke and Baumbusch (2015) also noted cases where HCAs left patient care tasks for the RNs to complete regardless of the RNs' workload. This could explain why RNs had mixed feeling about HCAs.

A critical finding in this study was that RNs and LPNs were unable to distinguish between their actual and perceived role expectations for each other. HCAs likewise perceived nurses did not understand their roles. Consistent with other studies, the lack of role clarity created role tension, weakened their work relationships, and incited conflicts (Bennett, 2003; Corazzini et al., 2010; Donnelly & Domm, 2014; Dahlke & Baumbusch, 2015; Eagar et al., 2010; Rheaume, 2003; Huynh et al., 2011). Corazzini et al. (2010) found that the lack of clarity between RNs and LPNs functional roles served as a barrier to RNs' effective delegation to LPNs. Dahlke and Baumbusch (2015) identified that LPNs and RNs often experienced conflict about who should perform what task due to their lack of clarity about each other's roles. Changes in nursing legislation that defines scope of practice are not well implemented and communicated to nursing team members, which could explain the lack of clarity (Donnelly & Domm, 2014). Besides, the scope of practice regulations for RNs and LPNs have many similarities and this contributes to confusion between LPNs' and RNs' roles (Donnelly & Domm, 2014). It is also possible that nursing team members did not have workplace support to understand the distinctions between their roles. Donnelly and Domm (2014) noted that RNs were not keen to know about the distinctions between their own and the LPNs' roles because employers were concerned with them getting the work done rather than questioning who was responsible for what. Some of this role confusion could also be explained by the fact that nursing team members are yet to take proactive steps to understand each other roles (Salmond, 1997).

Implications for Clinical Practice and Nursing Scholarship

The findings from this study revealed the diversity in how RNs, LPNs and HCAs interpret their roles and their team members' in the social system in which they work together. The incongruities in the expectations team members had about their own roles and that perceived

by their colleagues have implications for practice, leadership, education, and research. Since the team members' collaboration in care delivery have direct impact on the quality of care patients receive (Jacob, Mckenna & D'Amore, 2015) nursing practice settings will need to further explore and address the misconceived expectations team members have about each other's roles and improve their collaboration. One way to do this, is to encourage critical reflection and dialogue about the roles of the nursing team members in all clinical settings in which RNs, LPNs and HCAs work together for care delivery. This could inspire the team members' genuine curiosity to examine their pre-conceived ideas and rectify their misconceived expectations about each other's roles (Salmond, 1997).

Nurse managers could facilitate dialogue and critical reflection through the creation of safe and supportive environment that welcomes team members' introspective understanding about each other's roles without the fear of being judged. Nurse managers would need to have a better understanding about the professional and institutional expectations of the individual roles of the nursing team members to be able to provide clarity and support team members' learning about one another's roles. Legislative bodies and nurse educators in care institutions can also help RNs, LPNs and HCAs learn the distinctions in their roles by conducting workshops to review scope of practice legislation and institutional role descriptions (Donnelly & Domm, 2014; Walker, Olson, & Tytler, 2013). Likewise, nursing curricula for all levels of education could include scope of practice distinctions to help the nursing workforce graduate with an understanding about each other's roles.

As far as skill mix and effective workforce utilization is concerned, the link between nursing team members' perceptions of their roles and their effective utilization in practice is ambiguous. The limited descriptions team members provided about their own roles highlight the

need for a greater understanding of the roles of the nursing team members to improve their working conditions and utilization in the healthcare industry (Gordon & Nelson, 2006; Donnelly & Domm, 2014). More research is needed to provide recommendations that would enable their deployment into care positions where their knowledge, skill and ability in care delivery is fully utilized (College of Licensed Practical Nurses of Alberta, [CLPNA], 2013).

Additionally, our study pointed to RN workload as a factor in how they were able to lead the nursing team. It is not clear if RNs' workload contributed to their leadership challenges or if their leadership challenges contributed to their workload. More research is needed in exploring RNs' transitions into their leadership roles. Equally important, RNs' perceptions that LPNs increased their workload rather than making their work easier and LPNs' and HCAs' perceptions that their delivery of direct care was the most important aspect of nursing work suggests an inherent power dynamic in team members' perceptions of their roles. Nursing educators, theorists, and nursing leaders could support the nursing workforce to address the practical issues in defining nursing team roles and contribute to resolving the power dynamics inherent in role confusion.

Limitations

Nursing team members examined in this study were from medical and geriatric units in Western Canada. Team members may enact their roles differently in other countries and on other care units, due to legal and organizational differences. The number of LPNs and HCAs in this study were also fewer than RNs. Our study, therefore, might not adequately represent the nature of LPNs' and HCAs' roles. However, thick descriptions were provided to help readers understand LPNs and HCAs perceptions of their roles. Future studies could ensure adequate representation of LPNs and HCAs to further develop these findings. In addition, the data for this

study were collected in 2010. It is possible that the team members' roles and role understandings might have changes in ways that were not captured in our study. With the secondary use of data, we could not probe participants' responses for more in-depth information. We therefore recommend primary studies be done on this topic to advance the knowledge shared from this research.

Conclusion

Understanding nursing team members' roles is essential in their effective deployment. Since LPNs and RNs share substantial amount of patient workload, the importance of identifying the perceptions they have about their own and each other's' work roles cannot be overemphasized in terms of their collaboration and work satisfaction. Our study confirmed that role confusion negatively impacts team members' relationships and job satisfaction. Lack of role clarity resulting in scope of practice tensions and difficult power dynamics between RNs and LPNs highlight an urgent need for workplace support that enables team members to learn about each other's roles. Nursing executives might benefit from further exploring these assumptions and investigating how team members could better serve each other in their roles. As LPNs and HCAs provided most direct care needs of patients, it will be economically rational to investigate into the cost benefit of transferring direct care roles from RNs to LPNs and HCAs. Future research and managerial decision making would need to consider the team members' readiness to adapt to the changing demands of their roles. More research is also needed to validate the speculations made in this research and as well advance the knowledge generated from this research.

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Appendix

Table 1: Demographic Profile of Participants

Participants	Age	Time on unit	Years of experience
LPN1, Site 1	39	1 ½ years	8
RN1, Site 1	31	9 months	3
HCA1, Site 1	?	2 years	?
LPN2, Site 1	43	2 years	2 ½
RN2, Site 1	40	2 -3 years	8
RN3, Site 1	46	5 years	12
RN6, Site 1	37	1 ½ years	18
HCA2, Site 1	49	8 years	20
RN4, Site 1	30	1 $^{1/2}$years	1 1/2
RN7, Site 1	54	6 years	35
RN5, Site 1	40	8 years	17
RN15, Site 2	55	10 years	?
RN8, Site 1	53	11 years casual on this unit	11
RN9, Site 1	29	4 years	4
RN10, Site 2	36	7 years	6
RN11, Site 2	35	300 hours as ESN and now 150 hours as RN	6
LPN3, Site 2	26	2 years (casual)	2
RN 16, Site 1	51	?	?
HCA3, Site 1	58	2 years	2
RN12, Site 2	25	3 years	3
RN13, Site 2	38	5 years	13
RN14, Site 2	41	6 years	9
RN17, Site 1	44	2 years	20
RN18, Site 1	43	11 years	18

Table 1: Summary of Themes and Categories

Themes	Categories
1) RNs' perceptions of their own role	Patient assessment High quality and safe care Personal and emotional care Coordinating the delivery of care
2) LPNs' perceptions of their own role	Doing clerical tasks Working with RNs Providing direct care
3) HCAs' perceptions of their own role	Emotional and physical care Responding to patients' immediate care needs Liaising with nurses
4) Nursing team members' perceptions of each other's roles	RNs' perceptions of LPNs Tensions related to scope of practice Creating more work for RNs LPNs' perception of RNs' role Negotiating relationships with RNs Documenting patient care RNs' and LPNs' perceptions of HCAs Extra hands for patient care Eyes and ears of nurses HCAs' perceptions of RNs' and LPNs' roles Leaders of the nursing team Misunderstanding HCAs' role

Chapter 4: Implications, Limitations, and Conclusions

From the integrative review and qualitative descriptive study conducted to explore nursing team members' perceptions of their own and each other's roles, it was found that HCAs and LPNs delivered most aspects of direct nursing care while RNs led the nursing team in the delivery of care. The team members had less understanding about each other's work and role confusion negatively impacted their relationships and job satisfaction. Scope of practice changes resulted in tension among RNs and LPNs and contributed to the confusion they had about each other's roles. This chapter will outline the implications of the findings and the significance of the study for nursing and future knowledge development.

Implications

This study has important implications that could inform practice, nursing leadership, education and research**.**

Supporting Nursing Teams in Role Shifting

The shifting of direct care roles from RNs to less educated nursing care providers may reflect trends in the nursing workforce utilization. However, this raises questions on the current state and nature of nursing practice. On one hand, the evidence of role shifting might count as an advancement in nursing practice as RNs move from their traditional roles to occupy leadership roles and LPN and HCA roles expand to deliver most direct care. On the other hand, it is likely that these changes are consequences of hospital restructuring causing role ambiguity in how the nursing team members see their work and that of their teammates (Jacob, McKenna, & D'Amore, 2015). In this regard, the team members seemed to be coping with the ambiguity they have about each other's roles in the absence of organizational support to understand the changing aspects of their roles. However, healthcare organizations have a key responsibility to support nursing team

members in understanding each other's roles. Additionally, healthcare organizations will have to ensure that nursing care delivery is not based on political ideologies that place economic imperatives ahead of the quality of care delivered by nursing team members (Auerbach & Staiger, 2014; Lankshear, Weers, & Martin, 2016; Jacob et al., 2015).

In any case, nursing legislative bodies, policy makers, educators, stakeholders and nursing team members might benefit from instituting measures to facilitate changes in the roles of the nursing team members. To begin with, LPNs and HCAs who now provide most aspects of direct care with less educational preparation than RNs will need workplace support to adapt to the changing demands of their roles (MacKinnon et al., 2018; Walker, Olson, & Tytler, 2013). Thus, LPNs and HCAs will need to sharpen their observational and problem-solving skills to attend to patients' care needs from a holistic perspective. Gaining a sound theoretical knowledge of care and seeing the holistic picture of patient care needs might also facilitate LPNs' and HCAs' collaboration with RNs to improve patient outcomes (Graan, Williams, & Koen, 2016; Mackinnon et al., 2018). In-service training and professional development sessions can be conducted for LPNs and HCAs to improve their skills and competencies in providing direct care. Creating a safe environment that inspires the team members to learn about each other roles might also address their experiences of role ambiguity (Jacob et al., 2015; College of Registered Nurses of Nova Scotia [CRNNS] & College of Licensed Practical Nurses of Nova Scotia [CLPNNS], 2017). Additionally, the educational curriculum of LPNs and HCAs might need to be examined and updated to improve their competencies in providing direct care in the complex healthcare environment. In this regard, the delineation of HCA competencies and scope of practice would be required to standardize their educational programs (Hewko et al., 2015).

Equally important, as RNs become busier with the coordination and leadership aspects of care, LPNs might have more responsibilities supervising the work of HCAs in performing restricted activities (College and Association of Registered Nurses of Alberta [CARNA], College of Registered Psychiatric Nurses of Alberta [CRPNA], & College of Licensed Practical Nurses of Alberta [CLPNA], 2010). Therefore, strengthening the supervisory skills and knowledge of LPNs through in-service training, workshops, and mentorship will also be critical (Stone et al., 2008).

RNs' Role Advancement and Support

Given that RNs led the nursing team in addition to coordinating the care rendered by other members of the healthcare team, their ability to prioritize demands, multi-task and make time for supervision of LPNs and HCAs is essential to patient care outcomes (Siegel, Young, Mitchell, & Shannon, 2008). Therefore, it is imperative for RNs to have good leadership skills to inspire team members and work collaboratively to achieve the goals of care. Although having leadership and collaboration skills currently forms part of RNs' practice standards (College and Association of Registered Nurses of Alberta [CARNA], 2013), problems such as the lack of conflict resolution skills, fear of confrontations, unassertiveness, and fear of being judged have been identified as the main challenges weakening RNs' ability to lead the nursing team (Siegel et al., 2008). Barter, McLaughlin, and Thomas (1997) found that when RNs function as team leaders without adequate organizational support, they experience higher levels of stress and dissatisfaction. Therefore, RNs would benefit from training and support on how to lead the nursing team (Siegel et al., 2008). Siegel and colleagues reported that managers assume that RNs are competent and have the skills to independently lead the team (Siegel et al., 2008). Nonetheless, there are variations in managers' expectations of how RNs should lead the team

and their job descriptions include general statements on their leadership responsibilities (Siegel et al., 2008).

This study identified the need to support RNs in leading the nursing team as a shared responsibility of nursing employers, registered nurses, nursing regulatory bodies, professional organizations, and post-secondary educational institutions (CARNA, 2013). For example, the existing entry-to-practice competencies for RNs (CARNA, 2013; CRNNS, 2017) could shed more light on the leadership styles and processes RNs might follow to lead the nursing team in the complex organizational environments in which they work. Employers would also need to recognize that the leadership competencies RNs develop through their training is contingent upon the experiences acquired in their clinical practice environments. Therefore, their leadership abilities in any care setting will grow best through mentoring and support to adapt to changes within their roles (CARNA, 2013; Siegel et al., 2008). In the workplace, employers and managers could provide opportunities through seminars and workshops to support RNs in their leadership roles (Saccomano & Pinto-Zipp, 2011; CRNNS, 2017).

In the context of this study, some RNs appeared resistant about moving from direct care into leadership roles. While it is not clear whether these RNs felt forced out of roles they performed to keep patients safe into organizationally imposed role changes they were not prepared for, round table discussions with RNs at the organizational level might help to identify their challenges and how they can be supported. In particular, the conditions under which RNs' leadership roles are organized and operationalized must also be addressed. For instance, LPNs and HCAs will need to understand the leadership demands of RNs' current role to prevent stereotyping RNs for their inability to provide direct care. RNs could also improve their leadership skills by inviting LPNs' and HCAs' feedback on their leadership styles and as well

participate in educational opportunities outside the clinical settings to facilitate the growth of their leadership skills (CRNNS, 2017). Nursing educators teaching leadership in nursing schools could highlight some of these complexities associated with RNs leading the nursing team in order to provide the true clinical picture to their students and prepare students for practice.

Role Ambiguity and Confusion

Role ambiguity and confusion among nursing team members may demonstrate that the existing changes made to team roles were implemented without team members' input. If so, this could be a continual source of conflict and disharmony among nursing team members if not addressed (White et al., 2009). In the long run, patients and other members of the healthcare team will continue to have difficulty understanding the unique role of the nursing team members (Lankshear et al., 2016). Therefore, it is advised that any changes made to RNs' or LPNs' scope of practice be implemented with the collaboration of nursing team members, legislative bodies and employers. Implementing role changes with the collaboration of nursing team members could help team members stay updated with advancements in each other's roles and gain better understanding of the roles of their colleagues. Providing inter-professional educational sessions might also help team members learn about each other's roles (Barter, McLaughhin, & Thomas, 1997). Employers and managers could also modify their job orientation programs to include descriptions for the individual roles of the nursing team members and help LPNs, RNs and HCAs understand each other's roles.

Limitations

Since this study set out to understand nursing team members' perceptions of their roles and each other's, it did not examine the roles of the team members in relation to the type of nurse staffing model used in the two care units. It is unclear whether the staffing model used in each unit had any influence on team members' perceptions and descriptions of their roles. Future research could explore how nursing team members working under different staffing models might differ in their role descriptions and help gain a deeper understanding about nursing roles. In the same vein, the study identifies that there have been changes to nursing team roles, however with the use of secondary data, it was not possible to explore participants' readiness and means of adaptation to the changing aspects of their roles. Therefore, further research is needed to understand how the team members are adapting to their expanding roles.

Additionally, findings from this study are based on nursing team members' perceptions of their roles. While the team members' perceptions are valid on their own, examining these perceptions in relation to their legal scope of practice or institutional role description could have added to the picture and illuminated and corroborated their perceptions. Nonetheless, the insights gained from the team members are important as there is no one better to ask about their role definition than these nursing team members who are living with this role and trying to function within significant ambiguity and confusion.

Significance and Contributions of the Study

This study addresses significant gaps in understandings about the roles of nursing team members, specifically how nursing team members articulate their roles, their colleagues' roles, and the factors impacting their role understanding in the complex healthcare environment. The study also helps to identify the challenges team members have in describing their own and each other's roles. This research demonstrates that there is an opportunity for legislative bodies, policy makers, nursing leaders, educators, researchers, and employers to identify pragmatic strategies for improving team members' understandings of the roles of their colleagues and enhance their collaboration in practice. The current study briefly discussed some of the pragmatic strategies that might be useful. However, research is needed to explore the benefit of these and other strategies in improving nursing team members' understandings about each other's roles.

In the context of this study, the evidence on role-shifting begs questions about whether this counts as an advancement in nursing practice or whether it is simply a consequence of hospital work restructuring, with which nurses must now cope. Nursing scholars and executives will need further exploration to accurately locate the place of the current evidence with regard to the professional growth of nursing practice. Team members' roles had been expanded in this study. Consequently, as team members are occupying new roles, there is a demand for professional and workplace support for nurses to acquire the needed skill and competencies for practice.

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