Perceived Role of School-Based Public Health Nurses in a Publicly Funded Health Care System: A Qualitative Inquiry

by

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Abstract

Children are experiencing increasingly complex health needs that can be exacerbated by adverse events such as the COVID-19 pandemic. While school-based public health nurses are in ideal positions to help address these needs, a comprehensive literature review suggests that school nurses are spending less time in schools, lack organizational support, and have ambiguous roles within school health. This qualitative description study aimed to describe and understand how school-based public health nurses in one western Canadian jurisdiction perceive their role and how this role contributes to comprehensive school health. Semi-structured interviews were conducted with five school-based public health nurses. Qualitative content analysis was conducted through inductive coding and then summarized into themes. Role theory was used as a sensitizing concept throughout the analysis. Four interrelated themes arose from the interview data: (1) the role is centred around the in-school immunization program; (2) resource constraints result in an inconsistent role in health promotion; (3) immunization-focused interactions and limited presence result in disconnected relationships with others, and (4) role tension resulting from the role changing and narrowing over time. The study participants' perceived role made limited contributions to the objectives of the comprehensive school health model. The described relationships between the study participants and other school health stakeholders shaped the SBPHN role, often resulting in participants feeling tension and strain. This study addressed the knowledge gap on the perceived role and interactions of school-based public health nurses in a jurisdiction with a publicly funded health care system and identified a critical gap between the school-based public health nurse role and the comprehensive school health approach. Strategies are needed to support an expanded school-based public health nurse role in comprehensive school health, such as providing adequate knowledge and education on school nursing practice

and clearly defining the school-based public health nurse role to policy makers and the public. In a time when resources are limited, yet there is an ever-increasing need for health services, an expanded school-based public health nurse role may be a viable solution to improve children's health.

Key words: School nurse, public health nurse, comprehensive school health, child health

Preface

This thesis is an original work by Caitlin Zaplachinski. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, Project Name "A Qualitative Inquiry into the Perceived Role of School-Based Public Health Nurses in a Western Canadian Province", ID Pro00099427, June 8, 2020.

Chapter II of this thesis is planned to be submitted for publication in the Journal of Advanced Nursing with authors Caitlin Zaplachinski, Diane Kunyk and Shannon MacDonald. Caitlin Zaplachinski was responsible for study conception and design, data collection and analysis, interpretation of results, and drafted the manuscript. Diane Kunyk and Shannon MacDonald were co-supervisory authors, contributed to study conception and design, validation of study findings, and critical revision of the manuscript.

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Chapter I: Introduction

Introduction and Purpose

It is well recognized that supporting child health leads to positive health outcomes later in life (World Health Organization [WHO], 2020). As schools are a natural environment where children spend a considerable amount of time, they are ideal locations to implement initiatives to support long-term health and wellness for children and their communities (Canadian Nurses Association [CNA], n.d.; WHO, 1986). Many Canadian school systems utilize the comprehensive school health (CSH) model, which supports student outcomes through an integrated approach that involves four components: teaching and learning, social and physical environments, healthy school policy, and partnerships and services (Pan-Canadian Joint Consortium for School Health [JCSH], 2008).

In many jurisdictions in Canada, nurses practicing with school populations are public health nurses (PHNs) with competencies in community health, population health, and health promotion (Community Health Nurses of Canada [CHNC], 2019; Sanders et al., 2019). These school-based public health nurses (SBPHNs) are based most often out of community health centres that offer health promotion activities, consultation services, immunizations, and communicable disease outbreak surveillance to multiple school communities (Community Health Nurses' Initiatives Group School Health Committee, 2015; Seigart et al., 2013). PHN competencies and standards of practice, which apply for SBPHNs, encompass broad knowledge in nursing, social sciences, public health, primary health care, population health, health promotion and disease prevention, program planning, and community partnerships, making PHNs ideal candidates for supporting healthy schools (Canadian Public Health Association [CPHA], 2010; CHNC, 2019; Public Health Agency of Canada [PHAC], 2008). Provincial

jurisdictions also have their own legislation and health authority priorities that may impact what school nursing specifically entails.

The challenge with current school nursing practice in Canada is that SBPHNs are spending less time in the school setting, lack organizational support, and have ambiguous roles within school health (Chabot et al., 2012; Cohen, 2006; Reutter & Ford, 1996; Sanders et al., 2019; Seigart et al., 2013). The majority of existing literature on school nursing is from outside of Canada, with most studies from the United States, Australia, and Europe. Literature on school nursing in Canada is dated and heavily based in eastern Canada. Considering the role ambiguity and lack of support that SBPHNs face, there is a need for current knowledge on the role of SBPHNs in western Canada in order to understand how these nurses can work to their full scope of practice and how this practice can improve health within the school setting. This study aimed to examine how SBPHNs in one western Canadian province perceive their role and how this role contributes to comprehensive school health.

This thesis is divided into three chapters. Chapter I is an introductory chapter that provides additional background information for the study that will be presented in chapter II. It includes a general review of the literature on school nursing practice in Canada, as well as a detailed description of the study methodology. Chapter II is a presentation of the study in a manuscript format, to be submitted to a journal for publication. Chapter III is a conclusory chapter that discusses future implications and recommendations for school nursing practice, provides additional details on study strengths and limitations, and outlines knowledge translation activities.

Background

The Development of SBPHNs in Canada

School health in North America began with physicians inspecting and excluding sick children from school (Buhler-Wilkerson, 1985). School nursing in Canada arose from public health nursing and focused on principles of public health such as sanitation and physical examinations (Delhi, 1990; Sutherland, 1972). The first school nurse in Canada was appointed by the Hamilton School Board in 1907 (Sutherland, 1972). Lina Rogers, the first school nurse in the United States, came to Canada and became the first school nurse in Toronto in 1910 (Delhi, 1990; Morrison, 1921). While the initial goal of early school health initiatives was to eliminate disease, the shift to ensuring the good health of children in the schools through prevention, teaching, and social welfare warranted having nurses in a central position on the school health team (Sutherland, 1972). The development of school nursing work peaked in the 1920s, then started its decline in the 1930s during a time of fiscal constraint and promotion of the medical profession (Duncan et al., 1999). The biomedical model became prevalent in public health by the 1950s, further leading to a focus on individual lifestyle approaches to health (Falk Rafael, 1999). While the 1970s and 1980s saw recommendations for increased primary health care and health promotion, public health nursing continued to shift in focus to supporting individual health needs due to political influences and a lack of support for public health nursing programs (Falk Rafael, 1999; Mill et al., 2002; WHO, 1986). A task-based, biomedical approach to school and public health nursing in Canada exists today, as demonstrated through the high value placed on quantitatively measurable programs such as government-mandated immunizations (Austin, 2011; Chase et al., 2010; Falk-Rafael & Betker, 2012; Seigart et al., 2013).

Comprehensive School Health

Despite the continued focus on individual lifestyle approaches to health, the second half of the twentieth century saw various recommendations on supporting health promotion and other primary health care initiatives. This extended into recommendations for health and well-being in the school setting. The *Ottawa Charter for Health Promotion* (WHO, 1986) provided an underlying framework for a holistic approach to health in schools. This approach, called comprehensive school health (CSH), is an integrated way to address school health that focuses on improving educational achievement through student well-being (JCSH, 2008). The Pan-Canadian Joint Consortium for School Health supports partnerships between health and education by incorporating health into all areas of learning through their CSH model (JCSH, 2008). This approach to health promotion in Canadian schools involves parents, communities, and stakeholders in creating policies, programs, and environments that support positive behaviour change (Veugelers & Schwartz, 2010). CSH contributes to positive public health outcomes, such as the short-term improvement of educational outcomes and the long-term reduction of chronic disease, as children's health habits can be influenced by the school environment (Veugelers & Schwartz, 2010).

The CSH model has four components that work together to support an integrated approach to school health: social and physical environments, teaching and learning, healthy school policy, and partnerships and services (JCSH, 2008). Social environments include both emotional well-being and relationships developed within a greater school community, while physical environments address accessible, safe, and clean spaces that support healthy choices. Teaching and learning include incorporating health into the curriculum and offering staff professional development opportunities. Healthy school policies promote student well-being and

create a caring environment for the school community. Partnerships are between schools, families, community organizations, and various sectors that collaborate to improve health in schools, while services support student and staff well-being through both community and school-based resources.

The CSH model is relevant for SBPHN practice as it involves all stakeholders in school health and encompasses the various contributions that can be made for positive school health. It is important for SBPHNs to understand these school health approaches and collaborate with all stakeholders to ensure they can positively influence health and well-being in complex school environments.

Problem and Rationale

With the changes in roles and responsibilities of the SBPHN over time, the role description and positioning of the SBPHN has also changed. Despite the various programs, descriptions, competencies, and standards that outline the SBPHN role, the literature suggests that there may be some ambiguity as to what this role now actually entails. In a study by Reutter and Ford (1996), PHNs in Alberta reported they were spending less time in schools than they previously did due to decreased resources and discontinued services, such as nurse-led classroom teaching and mass screening programs, resulting in fewer opportunities to meet with students and teachers. Sanders et al. (2019) suggests that current SBPHN practice has a narrow focus on task-based programs rather than a broader encompassment of comprehensive school health due to political influences and a lack of organizational support for school nursing work. Research on school nurses from the United States and Europe demonstrate similar findings. While focusing on narrow programs such as government-mandated immunizations helps to achieve key public health goals, it can involve additional invisible work, such as preparation and organizational

time, that takes nurses away from other important public health and health promotion areas within the school setting (Chase et al., 2010; Seigart et al., 2013). This reflects the biomedical approach to health that persists in Canada and the underlying focus on achieving efficiency in task-based work that is seen within the public health nursing sector (Austin, 2011; Falk-Rafael & Betker, 2012).

Furthermore, previous research on the PHN role in Canada also supports the idea of role ambiguity and undervalued work. Reutter and Ford (1996) found that PHNs felt that both the public and other health professions did not understand the PHN role. Cohen (2006) also found that the increased workload of government mandated programs such as immunizations were not supplemented with an increase in staffing, and health promotion activities suffered as population-focused health promotion was seen as 'extra' work to be done once 'regular' work with individual clients was complete. Additionally, public health managers often do not have experience in public health or health promotion, and thus lack the understanding necessary in order to support the public health nursing role (Cohen, 2006). While SBPHNs theoretically have exceptionally wide scopes of practice, it is possible that organizational constraints seen in general public health nursing also impact school health programs (Falk-Rafael & Betker, 2012).

Whereas there are a number of studies addressing the school nurse role in the United States, Australia, and Europe, there is limited literature on the unique SBPHN role in Canada. Additionally, there is research focusing on the role of Canadian PHNs, however SBPHNs are a unique sub-population that face additional influences in their role. The CNA (n.d.) suggests Canada needs a national strategy for public health nursing in the school setting in order to improve community health, as PHNs can positively affect health outcomes in school populations. When nursing roles within the school are well defined, nursing services are seen to be valuable

to school populations (Chase et al., 2010). There is a need for a deeper understanding of the SBPHN role in Canada in order to support an expanded SBPHN role and demonstrate the value of SBPHN practice to society.

Author Location in Context of Inquiry

I previously worked as a SBPHN in a large municipality in western Canada. During my orientation and training period, there was a strong focus on health promotion, collaboration with schools and school authorities, and school community health assessments and planning. However, in practice, the role was heavily involved with task-based work such as reviewing individual student immunization records and offering immunizations under the publicly-funded immunization program. The resultant work was days spent sitting at a computer with limited contact with children or their schools. My position was responsible for 14 elementary and junior high schools as well as three high schools, within which I had limited contact, as the immunization program did not include high schools. Due to the heavy workload of this program, there was limited opportunity for involvement in any other programs. It was the norm to pass along school requests for health promotion and health teaching to nursing students completing their community clinical rotations, as we as SBPHNs were so overwhelmed with immunization program work. Another solution for requests for health teaching or health information was to provide wayfinding for relevant websites that schools could access on their own.

A consequence of the dwindling direct involvement with other school health programs and initiatives was the distancing within our relationships with schools. It is frustrating to hear school community members state that they do not have school nurses. It is even more disheartening to hear SBPHNs called ‘immunization nurses’. My experience was that schools had started to rely on other sources for health and wellness promotion and education. On the rare

occasion that a school would come to me with a request for health promotion or education, I often felt caught off-guard and unprepared due to our limited experience with these requests.

Despite the reduction in the SBPHN role, children within the school setting are experiencing ever more complex health needs. For example, mental health is an ever-growing concern with this population; an estimated 10-20% of children in Canada may develop a mental health disorder, and suicide is the second leading cause of death in children (O'Brien Institute for Public Health, 2018). SBPHNs have the training, competency, and professional responsibility to work with schools to address these concerns, however their current work does not involve addressing these issues. With the evolving program changes to SBPHN work, it is important to identify what role these SBPHNs do and can play in the larger network of CSH in order to promote nursing practice and highlight the important contributions that nurses make to school health.

Purpose Statement and Research Question

The purpose of this qualitative description study was to describe and understand the role of SBPHNs within comprehensive school health in a western Canadian province. SBPHN work is defined as any work done by a PHN that pertains to school populations and communities, which includes students, parents, teachers, and school organizations. The research question is thus: how do SBPHNs in a large urban centre in one western Canadian province perceive their role in contributing to the goals and objectives of comprehensive school health?

Literature Review

The SBPHN role in Canada has changed over time, with SBPHNs spending less time within schools and more time on narrow task-based programs (Reutter and Ford, 1996; Sanders et al., 2019). Additionally, the Canadian SBPHN role is unique due to the nature of both the

publically funded provincial health and education systems. Thus, a structured literature review was conducted in order to determine the current state of knowledge on SBPHNs in Canada and to identify themes in the literature that have emerged over time. These themes were then used to identify a knowledge gap pertaining to the role of the SBPHN in Canada, which shaped the study's research question and methodology.

Search Strategy

The search strategy for this literature review was developed in partnership with a librarian and includes searches in Medline, CINAHL, and ERIC in order to identify relevant sources in health care, nursing, and education in the Canadian context. The search strategy terms used included nurse OR public health nurse OR school health nurse AND elementary school OR junior high school OR high school AND Canada OR Alberta OR British Columbia OR Saskatchewan OR Manitoba OR Ontario. No date limits were applied. Inclusion criteria were: resource in the English language, located in Canada, and containing experiences or perceptions or descriptions of nursing work with school populations.

Results

The search strategy yielded 136 total results, with 114 unique articles remaining after duplicates were removed (Appendix A). These articles were screened by abstract and title, which resulted in a remaining 66 articles. Full text screening was completed using the above inclusion criteria. Articles included in the review were studies specifically on the role of the school nurse (n=6), studies on other school health topics that included contributions of school nurses (n=8), studies on school health topics that listed implications for school nurses, and non-research articles on program descriptions that included the role of school nurses (n=19). Non-research articles were also reviewed in order to develop a broad perspective on the development of

knowledge surrounding the role of the SBPHN. The following review of the literature provides an overview of school-based public health nursing in Canada.

Studies on the Role of SBPHNs in Canada

Study Characteristics. Of the relevant articles retrieved in the literature search, six were studies on the specific role of the school nurse or SBPHN. Of these articles, the majority were published in or after 2010 (n=4) and were located in Ontario (n=2), Quebec (n=2), both Ontario and Quebec (n=1), and British Columbia (n=1). These articles contained qualitative (n=2), quantitative (n=1), and mixed-methods (n=3) methodologies. Most studies contained only nurse participants (n=4), while others contained a mixture of nurses, teachers, administrators, and parents (n=1), and one included only managers. The majority of the articles studied a proposed change in the role of the SBPHN (n=5) with only one reviewing the current role of SBPHNs. The themes identified in this existing literature include collaboration and facilitation, health promotion, and barriers to SBPHN practice such as role ambiguity and lack of organizational or public support for the role.

Collaboration and Facilitation. The majority of studies (n=5) included collaboration and facilitation as a main role for SBPHNs (Chabot et al., 2012; Mitchell, Laforet-Fliesser, & Camiletti, 1997; Mytka & Beynon, 1994; Sanders et al., 2019; Seigart, Dietsch, & Parent, 2013). In the participatory action study by Sanders et al. (2019), SBPHN were identified as facilitators for school engagement in CSH, who collaborate and build relationships between school staff, school administration, community partners, and students. The article by Seigart et al. (2013) included a series of case studies comparing school-based health care in Canada, the United States, and Australia, lists networking and making referrals as part of Canadian SBPHN work. The quantitative, cross-sectional study by Chabot et al. (2012) reported that nursing managers

identified the need for the development and management of health promotion projects by SBPHNs. Mitchell et al. (1997) describe the SBPHN use of the Healthy School Profile tool to assist them to identify areas for collaboration, establish partnerships and networks, and develop communication with all sectors of the school community. Mytka & Beynon (1994) established a model for public health nursing in schools, which was used by PHNs to promote CSH planning. Collaboration and facilitation are supportive of the partnerships and services pillar of the CSH model (JCSH, 2008). This suggests that SBPHN contribute to CSH through their collaboration and facilitation within school communities (JCSH, 2008).

Health Promotion. Health promotion as a component of the SBPHN role was identified in three of the articles (Chabot, Godin, & Gagnon, 2010; Chabot et al., 2012; Seigart et al., 2013). The article by Chabot et al. (2010) examined the determinants of elementary school nurses' intentions to assume a new role in health promotion. The nurse participants identified that a role in health promotion would allow them to feel valued in their performance. In the case studies done by Seigart et al. (2013), Canadian SBPHN duties involved promoting school health and coordinating health promotion events. Chabot et al. (2012) identified the development and management of health promotion projects and planning of health promotion interventions as part of the SBPHN role. Health promotion and health education are a part of the teaching and learning pillar of the CSH model (JCSH, 2008). This is another area where SBPHNs contribute to CSH within school communities, and further supports that SBPHNs have an active role within the CSH model (JCSH, 2008).

Role Ambiguity. Barriers to SBPHN practice are identified in the literature. Role ambiguity was a prevalent theme among the barriers that SBPHNs faced. Several articles reported that the SBPHN role is unclear, there is limited knowledge of the function of the

SBPHN, and practice is not well known by nursing authorities (Chabot et al., 2012; Sanders et al., 2019; Seigart et al. 2013). Mytka and Beynon (1994) developed a model for SBPHNs that was used to help guide practice and clarify the nursing role, however, evaluation of tool implementation identified that only 66% of SBPHNs reported using the model. Considering the implementation of CSH within Canadian schools, as well as the varying competencies and practice standards that SBPHNs follow as both nurses and public health nurses, it is understandable that there may be ambiguity within the role. SBPHNs have to try to navigate between these various standards, competencies, and models in order to shape their practice. However, there is no model or framework specific to SBPHN work. The CNA (n.d.) recognizes the need for a comprehensive strategy for school health that clearly defines the SBPHN role so that these nurses may contribute optimally to school health. If SBPHNs want others to understand and value their role, they need to work to understand and clearly define this role.

Lack of Support. Another theme identified within barriers to the SBPHN role was the lack of organizational and public support for the role. SBPHNs can be undervalued by schools, may not be prioritized by nursing authorities, and may face organizational barriers to fulfilling their optimal roles (Chabot et al., 2010; Chabot et al., 2012; Mitchell et al., 1997; Sanders et al., 2019; Seigart et al., 2013). Lack of funding due to lack of value for SBPHN was reported by Seigert et al. (2013). Chabot et al. (2012) reported that school nursing practice is not well understood nor is it prioritized by nursing authorities and management. Further, they reported that few directors of nursing listened to elementary school nurse ideas on health promotion, reflecting the low-profile position of these nurses (Chabot et al., 2012). Limited time as a barrier to SBPHN work was reported in several studies (Chabot et al., 2010; Sanders et al., 2019; Mitchell et al., 1997). This may be reflective of a lack of resources and staffing through the

organization. Time constraints, lack of funding, and lack of value for SBPHN work by both the public and the organization affect the role of the SBPHN through shaping practice around efficiently achieving organizational objectives. This is also related to role definition. The ambiguous SBPHN role allows for increased organizational influence on the role, due to no clear definition of what these nurses can and should be doing. The organization is then able to affect the practice of these nurses by implementing guidelines based on organizational needs rather than the competencies of the SBPHN. A well-defined role can help SBPHNs positively contribute to school health (CNA, n.d.).

Studies on School Health Topics Involving SBPHNs in Canada

Several articles identified in the literature search were about school health topics however had results that contained information of the role of the SBPHN and how it relates to these health topics (n=8). The majority of articles were published prior to 2010 (n=6), with only two published in 2010 or later. The studies were conducted in Ontario (n=4), Nova Scotia (n=2), Quebec (n=1), and Prince Edward Island (n=1). Seven of eight studies used quantitative methodology, with the remaining study using a descriptive qualitative methodology.

The descriptive qualitative study on human papillomavirus by Dubé et al. (2019) and the varicella immunization program implementation study by Sweet, Gallant, Morris, and Halperin (2003) described the SBPHN role in relation to immunization programs. SBPHNs conduct immunization teaching, assess immunization records, organize immunization clinics, obtain informed consent, and administer immunizations for school-aged populations (Dubé et al., 2019; Sweet et al., 2003). These studies highlight the extensive work that goes into organizing and running school-based immunization programs.

Health teaching and education delivered by SBPHN was also apparent in this literature. This education was around immunizations (Dubé et al., 2019), smoking prevention (Cameron et al., 1999), infant-feeding (Walsh, Moseley, & Jackson, 2008), and injury prevention (Hodgson, Woodward, & Feldman, 1984). These topics highlight the broad health knowledge of SBPHNs, as well as demonstrate the contributions of SBPHNs to the teaching and learning component of the CSH model (JCSH, 2008). Of interest is the observation in the smoking prevention program study by Cameron et al. (1999) that while students at high-risk schools were less likely to smoke after completing the prevention program, outcomes were similar for programs delivered by either nurses or teachers. In a study assessing junior high students' knowledge and attitudes towards AIDS, the results demonstrated that the SBPHN was not an indicated source of information for the students (Dolan, Corber, & Zacour, 1990). These findings are indicative of a poorly understood SBPHN role.

Additional duties of the SBPHN included referrals to outside organizations such as hospitals, independent service organizations, and health units (Hodgson et al., 1984); individual student assessments for both mental health and physical health concerns (Hodgson et al., 1984; Hodgson, Feldman, Corber, & Quinn, 1985; Szumilas, Kutcher, LeBlanc, & Langille, 2010); and treatment of injuries (Hodgson et al., 1984). The work of SBPHNs in referrals to outside organizations is indicative of their role in the partnerships and services component of the CSH model (JCSH, 2008). Szumilas et al. (2010) indicated that there was a full-time RN in the school-based health centre in each high school in Cape Breton, Nova Scotia, who completed assessments of each student at the start of the year as well as mental health assessments when students reported concerns. However, a key finding was that only one in six students reported seeking help for mental health concerns from the school-based health centre nurse, despite their

reported need for more mental health support (Szumilas et al., 2010). In the treatment of school injuries, Hodgson et al. (1984) found that only 7% of student injury cases were treated by the school nurse, mainly due to their limited time spent in the school. The authors also noted that PHNs had a positive influence on the initial management of injured school children. These studies demonstrate that while SBPHNs are responsible for various activities, they are underutilized in these areas.

Practice and Policy Implementation Identifying the Role of the SBPHN in Canada

The literature search yielded many results that contained information on the role of SBPHNs through practice-based descriptions of pilot projects and program implementations, however these were not peer-reviewed research studies. Many of these summary articles were published between 1970 and 1990, and appeared in journals such as *Canadian Journal of Public Health*, *Canadian Nurse*, *Journal of School Health*, amongst others. The main themes of these articles are included in order to further contribute to the larger picture of the trajectory of the development of school nursing in Canada.

Many of these articles contained summaries of the implementation of screening programs for hearing impairments ("Profile: Kits to go", 1980), scoliosis (Abbott, 1977; Gurr, 1977), and learning problems (Cvejic, Pederzoli, & Smith, 1977). One article summarized the implementation of a computer system for electronic record keeping on an existing physical health screening program (Smiley, Allin, Best, & Martin, 1973). Other articles had summaries of new health promotion and teaching program implementation, such as tobacco prevention (Hill, Stott, Beaton, Graczyk, & Yablonski, 2013; Wake, Thomas, & Bergin, 1973), healthy eating/active living (Shaw, 2004), and AIDS teaching (Caron, 1990). Other program implementations included clinical programs in immunizations (Bernatchez et al., 1993;

Macfarlane, 1989), sexuality clinics (Rafuse, 1992), and mental health support programs (Clark & Robertson, 1981; Cvejic & Smith, 1979). The prevalence of these program implementation articles showcases the focus on and promotion of SBPHN-led initiatives of the time. Additionally, they support the SBPHN role in the teaching and learning component of the CSH model (JCSH, 2008).

International Literature on the School Nurse Role

Outside of the initial search strategy, additional literature on the role of the school nurse in countries outside of Canada was also examined to identify themes that may be transferrable to Canadian SBPHN practice. These themes include role ambiguity, lack of organizational support, and a theory-versus-practice gap.

Role Ambiguity. The literature shows that school nurse roles lack clarity with the public, administrators, and even nurses. Reuterswärd and Lagerström (2010) describe a lack of understanding of the school nurse role by administrators, teachers, parents, and government agencies in Sweden. Lightfoot and Bines (2000) describe the school nurse role ambiguity among students, staff, parents, and school nurses in the United Kingdom. Additionally, there were several areas of overlapping roles between the nurses and the teachers such as in health promotion, safeguarding health, and family support (Lightfoot & Bines, 2000). Maughan and Adams (2011) report that both parents and educators think that school nurse responsibilities entail first aid, medication administration, and staff training, and are unaware of the prevention work that school nurses do in the United States. This is problematic as societal values and institutional level decisions influence PHN work, and without understanding the role of PHN work in schools, the value of the work is lost (Dahl & Crawford, 2017).

Additionally, school nurses themselves may lack clarity of their role. Maughan and Adams (2011) found that although American school nurses believe their role is keeping children in school by keeping them healthy and assisting them to overcome health barriers, the role in daily practice is task-oriented and focuses on specific interventions such as health screening and immunizations. If school nurses do not understand their own role, this may translate to the perceptions and understanding of organizations and the public. A clear role definition is needed in order to gain visibility as a profession and further develop the role of nurses in the school setting.

Theory-Versus-Practice Gap. Su, Sendall, Fleming, and Lidstone (2014) conducted a retrospective inquiry as a secondary analysis of a phenomenography examining Australian school-based youth health nurses' experiences of a true health promotion approach based on the Ottawa Charter for Health Promotion five action areas. Although health promotion is believed to shape practice for school-based youth health nurses, these nurses were shown to have a poor understanding and lack of practical experience of health promotion as it is defined in the five action areas of the Ottawa Charter for Health Promotion (Su et al., 2014). In Reuterswärd and Lagerström's study (2010) of school nurses' perception of how they carry out health promotion in their work, the school nurses perceived a lack of use of theories within their general health promotion work, instead using the teachings of more experienced colleagues. Additionally, the school health nurses were unfamiliar with any tools used to evaluate health promotion work (Reuterswärd & Lagerström, 2010). This theory-versus-practice gap is problematic as theory, models, and frameworks can be used to guide nursing practice and contribute to consistency in role definition. Without these tools as a guide, the school nursing role may be poorly understood.

Lack of Organizational Support. Maughan and Adams (2011) found that budget constraints in the United States decrease organizational support for school nursing work, as school nurses are seen as less valuable than nurses in acute care settings who are required for urgent needs. The findings of Reuterswärd and Lagerström (2010) ratify the need for local health authorities to provide support for initiating health promotion projects and activities in order to have a stronger impact on student health.

Knowledge Gap

There is a gap in knowledge of the perceived role of SBPHNs in Canada. The majority of research on school nurses is from outside of Canada. While many studies are on school nursing in other countries, most notably the United States, it is recognized that the SBPHN role is different in Canada (Seigart et al., 2013). This makes it difficult to translate findings from international studies to the context of the Canadian SBPHN role and practice. Within Canada, there is limited research on the perceived role of the SBPHN, and limited research on this role in relation to CSH. Additionally, there is a lack of research on SBPHN in western Canada, specifically in Alberta. As health and education fall under provincial jurisdiction, it is important to examine the role of SBPHNs within specific provincial contexts.

Previous research on SBPHN in Canada tends to focus on broader, theoretical roles, while health topic research focuses on specific tasks conducted by SBPHN. By investigating the role of the SBPHN within the context of CSH, a connection can be made between the theoretical role and the practical clinical application of this role. Without this deeper understanding of the SBPHN role, school nursing work may become devalued and the role may be lost to other professions such as counsellors or teachers (Dahl & Crawford, 2017). A qualitative study of this

topic will give voice to SBPHNs and help to create an understanding of their perception and role within a larger school health context (Reuterswärd & Lagerström, 2009).

Methodology and Theoretical Framework

The following section provides an in-depth description of the methodology of the study presented in Chapter II. This includes an overview of qualitative description methodology, the use of role theory as a theoretical framework, and additional details on methods including sampling, data collection and analysis, rigor, and ethical considerations.

Qualitative Description

This study focused on the role of the SBPHN in Alberta, Canada, and how this role contributes to the overall CSH approach. Considering the limited literature on this topic, an appropriate methodology to provide a comprehensive, foundational description of this role is qualitative description as described by Sandelowski (2000). Qualitative description allows for fundamental descriptions and straight-forward answers to relevant research questions (Sandelowski, 2000). It permits for a low-interference interpretation that would see researchers readily agreeing on the observed factual descriptions (Sandelowski, 2000, p. 335). The final comprehensive summary contains the facts presented in everyday language, avoiding the use of language as an interpretive structure (Sandelowski, 2000, p. 335). Due to the limited literature on the social context of SBPHN practice in Canada, this methodology will support the development of knowledge on the role and contributions of SBPHNs as it relates to their clinical practice. Qualitative description guided data collection, analysis, and interpretation of results as they apply to the clinical practice of SBPHNs.

Theoretical Framework: Role Theory

Nursing has been influenced by societal values, structures, and policies throughout history. Brookes, Davidson, Daly, and Halcomb (2007) identify that community nurses are no exception; their role and responsibilities are influenced by government structures, professional policies, and societal values. This study was concerned with the role and contributions of SBPHNs situated within a greater social context that involves multiple individuals and groups that contribute to school health, such as students, teachers, administration, parents, and community members. Additionally, there are other influencing factors such as management, health authority policies, government policies, and professional practice guidelines and competencies. Role theory, as presented by Brookes et al. (2007), was used as a guiding theoretical framework for examining the role of SBPHNs in this study. Schuler, Aldag, and Brief (1977) suggest using role theory as a conceptual framework when examining the relationship between an individual and a larger organization. Brookes et al. (2007) identified role theory as a valuable framework for exploring and understanding the perceptions of community nurses who are situated within networks of health care organizations, community organizations, and community clients. As SBPHNs work within a large collaborative network of interdisciplinary teams, situating the nursing role within this team context is important to understand how nurses contribute to overall school health and what barriers they may face in working to their full scope of practice.

Brookes et al. (2007) present certain role constructs related to a role episode that may be used in a framework to describe community nurse perceptions of their roles. These constructs include role ambiguity, conflict, overload, identity, and insufficiency (Brookes et al., 2007, p. 151). Considering the literature review identified role ambiguity, time or resource constraints,

role conflicts, and external perspectives on the role of the SBPHN, this framework was appropriate to guide the current study in examining SBPHNs perceptions of their role in contributing to CSH.

Methods

Population and Sampling

The population studied was SBPHNs (who are registered nurses) working within a specified municipality in Alberta, Canada for a minimum of six months in either a generalist or specialist role. As purposeful sampling is a preferable method in qualitative description (Sandelowski, 2000), a purposeful sampling method was used to recruit participants with specific experiences relevant to the research question (Crooks & Davies, 1980). This method allowed the collection of rich data specific to the topic (Higginbottom, Pillay, & Boadu, 2013). The zone school health consultant in the provincial health authority was used as a gatekeeper in order to access the population of SBPHNs in this municipality. Due to the nature of organization of SBPHNs in public health units, participants were from multiple SBPHNs teams in multiple public health units. The sample size for interview participants was intended to be determined by data saturation in order to ensure the topic is fully investigated (Guest, Bunce, & Johnson, 2006). However, due to recruitment difficulties related to the redeployment of SBPHNs during the COVID-19 pandemic, the number of participants was five.

An invitation letter and study information sheet were attached to a weekly school health newsletter emailed out to SBPHNs by the school health consultant. This information sheet contained a description of the study and a consent form. The letter contained the researcher contact information for potential participants to contact for more information or to participate in the study. In order to facilitate further recruitment, I attended an online school team meeting

hosted by the school health consultant in September 2020 to speak about the research project and provide contact information to SBPHNs who may have been interested in participating. These SBPHNs were able to contact me through email or telephone if they wanted additional information or wanted to participate in the study. Snowball sampling was also used to identify potential participants who met the inclusion criteria. Recruitment took place between July and December 2020.

Once contacted by the participant, I discussed the study, answered any questions, and arranged a date and time for a telephone interview with the participant. I offered to send the information and consent forms to the interviewee in advance for them to review. I reviewed the study details and interview process at the start of the phone call and completed a verbal consent form for the participant prior to commencing the interview. If the participant chose to read the information and consent form for themselves prior to the interview, I confirmed that the participant understood the contents and assessed whether they have any questions. I then read the consent form verbatim to the participant during the phone call, filled out the appropriate information on the consent form and signed the bottom of the consent form indicating verbal telephone consent was received.

Data Collection

Semi-structured interviews were conducted with participants over the phone, due to in-person gathering restrictions related to the COVID-19 pandemic. The purpose of these interviews was to discover the nature of the nurses' experiences of their role as SBPHNs (Sandelowski, 2000). A semi-structured interview guide was developed from themes identified in the existing literature and used various types of interview questions as described by Kvale and Brinkmann (2009) (Appendix B). The interviews were between 30 and 90 minutes, tape

recorded, and transcribed verbatim. Telephone interviews took place while the participant was off work hours and not at a health authority facility. Field notes of each interview were kept in order to document researcher reflections.

Data Analysis

Interview data with participant names removed was stored in a password-protected computer with an encrypted hard drive, in order to protect participant information (Creswell, 2013). Only members of the research team (student and thesis committee) had access to this data. Consent forms identifying participant information were stored as hard-copies, and a key to link them with the interviews was stored in a locked filing cabinet. Data analysis occurred simultaneously with data collection, each shaping the other (Sandelowski, 2000). Initial analysis involved qualitative content analysis where codes arose from the interview data (Sandelowski, 2000). Notes and identified themes were noted in margins and highlighted in the interview data and field notes (Lincoln & Guba, 1985). Consultation with the supervisory team occurred early on in the coding process. After coding and thematic analysis, findings were summarized into main themes (Sandelowski, 2000).

Both the CSH model and role theory were considered during the interpretation and discussion stage. Role theory was used as a sensitizing concept to provide guidance and reference when analyzing and interpreting the data (Blumer, 1954; Brookes et al., 2007). Due to the nature of SBPHNs working within a large, interdisciplinary network, it is important to understand how the SBPHN role fits within a complex network of various school health actors.

Rigour

The study fulfilled the rigour assessment criteria outlined by Lincoln and Guba (1985). Triangulation by reviewing existing practice documents and policies, as well as negative case

analysis, was used to ensure credibility. Field notes and reflexive journaling during interviews and data analysis were used to ensure transferability. Confirmability and dependability are shown through the study audit trail, accurate record keeping, and reflexive journaling.

Ethical Considerations

Measures were taken to ensure that participant rights were protected in this study. Ethical approval was obtained from the Health Research Ethics Board at the supervising institution of the University of Alberta. Additionally, operational approval was obtained from the health authority for participant recruitment.

Bias identification occurred during reflexive journaling. I introduced myself as a registered nurse to potential participants, however, I also identified that my purpose was to learn from the participants. I avoided disclosing personal information, and instead attempted to redirect any participant questions back to the participant. This prevented my personal experiences from influencing participant answers (Creswell, 2013, p. 175). Information letters with full disclosure of the study were provided to senior managers in public health, the school health coordinator, and the potential participants. All participants were given the opportunity to give fully informed and voluntary consent, with the ability to withdraw consent at any time. Informed consent included guarantee of confidentiality and privacy, as interviews were labeled with numbers and no names were included in the findings. Participants had the opportunity to review the findings if they requested, however no participants had this request.

Conclusion

In conclusion, I identified that there was a need for research in the area of the role of SBPHNs and their contributions to CSH in Canada. This study adds a qualitative perspective to this topic area and acts as research to identify how SBPHN perceive they are positioned within a

larger community focused on CSH. Qualitative description was used to explore this topic in order to gain a deeper understanding of the perceived role of SBPHNs and give voice to this specialized nursing population. These findings will be used to highlight the positive contributions that SBPHNs make to CSH, which in turn may inform both government and health authority policies surrounding school health. In a time when resources are limited and there is an ever-increasing need for services, SBPHNs may be a viable solution to help improve children's health.

Chapter II: Manuscript as prepared for submission to Journal of Advanced Nursing

The Perceived Role of School-Based Public Health Nurses in a Publicly Funded Health Care System

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ABSTRACT

Aims

To describe and understand how school-based public health nurses in a publicly funded jurisdiction perceive their role and how this role contributes to comprehensive school health.

Design

Qualitative description.

Methods

Semi-structured interviews were conducted with five school-based public health nurses between September and November 2020. Qualitative content analysis was conducted through inductive coding and then summarized into themes. Role theory was used as a sensitizing concept throughout the analysis.

Results

Four interrelated themes arose from the data: the role is centred around the in-school immunization program, resource constraints result in an inconsistent role in health promotion, immunization-focused interactions and limited presence result in disconnected relationships with others, and there is tension resulting from the role changing and narrowing over time. The participants' perceived role made limited contributions to the objectives of the comprehensive school health model. The described relationships between the study participants and other school health stakeholders shaped the SBPHN role.

Conclusion

The findings of this study indicate that the school-based public health nurse role is primarily to implement the school-based immunization program, restricting their relationships with school communities and leaving limited time for other contributions to comprehensive school health.

This study addressed the knowledge gap on describing the role and interactions of school-based public health nurses in a jurisdiction with a publicly funded health care system and identified a critical gap between the school-based public health nurse role and the comprehensive school health approach.

Impact

In a time when resources are limited yet there is an ever-increasing need for health services, an expanded school-based public health nurse role may be a viable solution to help improve children's health. These nurses are in key positions to address child health needs, however strategies are needed to support their expanded role in comprehensive school health.

Key words: School nurse, public health nurse, comprehensive school health, child health

INTRODUCTION

Schools are ideal locations for implementing health and wellness initiatives for children and their communities (World Health Organization [WHO], 1986). Globally, nurses have played a role in improving school health for over a century (Vessey & McGowan, 2006). School nurse roles may vary between countries due to health system structures and funding models; Canadian registered nurses (RNs) working with school populations are often school-based public health nurses (SBPHNs) employed by a publicly funded health authority, serving multiple schools (Seigert et al., 2013). According to competencies and practice standards, SBPHNs apply principals of population health and health promotion to offer education, consultation services, immunizations and communicable disease surveillance to school communities (Community Health Nurses' Initiatives Group School Health Committee, 2015).

Despite a wide scope of practice standards, the SBPHN role in Canada offers limited health promotion for schools as it has become narrowly focused on facilitating the in-school immunization program (Seigart et al., 2013). Concurrently, school children are experiencing more complex health needs. For example, in Canada, an estimated 10-20% of children may develop a mental health disorder (O'Brien Institute for Public Health, 2018) and suicide is among the leading causes of death in individuals aged 10-24 (Statistics Canada, 2020). Similar rates of adolescent suicide and mental health conditions are also seen globally (WHO, 2019), indicating a need for additional support for children's health worldwide. Adverse experiences from the impacts of the COVID-19 pandemic are anticipated to have additional long term effects on children's health (O'Brien Institute for Public Health [OIPH], 2020). There is a need to better understand the SBPHN role and how it can contribute to positive child and school health

outcomes. This qualitative study aimed to examine how SBPHNs in one western Canadian province perceive their role and how this role contributes to school health.

BACKGROUND

Comprehensive school health (CSH) is a Canadian model that supports student outcomes through an integrated approach using four components: teaching and learning, social and physical environments, healthy school policy, and partnerships and services (Pan-Canadian Joint Consortium for School Health [JCSH], 2008). CSH is relevant for SBPHN practice as it encompasses contributions by multiple stakeholders for positive school health outcomes. Role theory is a valuable framework for understanding perceptions of community nurses situated within networks of organizations and communities (Brookes et al., 2007). Role constructs such as ambiguity, conflict, overload, identity, and insufficiency can be applicable in considering how nurses perceive and enact their roles (Brookes et al., 2007; Hardy & Conway, 1988).

The Canadian SBPHN role involves collaboration and facilitation with school communities, including networking and making referrals (Seigart et al., 2013), building relationships and facilitating school engagement in CSH (Sanders et al., 2019), and developing communications and partnerships with school communities (Mitchell et al., 1997). Health promotion is also a component of the role, including promoting school health, coordinating health promotion events, and developing and managing health promotion projects (Chabot et al., 2012; Seigart et al., 2013). It is important for SBPHNs to understand school health approaches and collaborate with stakeholders to positively influence health and well-being in complex school environments.

Despite applicable nursing competencies and standards, literature suggests that the SBPHN role may be ambiguous. Several studies report that the SBPHN role is unclear, there is

limited knowledge of the function of the SBPHN, and SBPHN practices are not well known by nursing authorities or the public (Chabot et al., 2012; Sanders et al., 2019; Seigart et al. 2013). Reuterswärd and Lagerström (2010) identified administrators, teachers, parents, and government agencies in Sweden lacked understanding of the school nurse role. Lightfoot and Bines (2000) described school nurse role ambiguity among students, staff, parents, and school nurses in the United Kingdom. Maughan and Adams (2011) found that parents and educators in the United States think that school nurses provide first aid, medication administration, and staff training, while remaining unaware of prevention work. Societal values and institutional decisions influence nursing work; without understanding the SPBHN role in schools, the value of the work is unrecognized (Dahl & Crawford, 2017). This is reflected by SBPHNs often lacking organizational support for their role, shown through management not prioritizing school nursing practice (Chabot et al., 2012). This may result in decreased resources (Reutter & Ford, 1996), decreased funding (Seigart et al., 2013), and time constraints (Chabot et al., 2010; Sanders et al., 2019; Mitchell et al., 1997). Sanders et al. (2019) suggests that SBPHN practice is now focused on task-based programs rather than broadly encompassing school health due to political influences and a lack of organizational support for school nursing work. Although focusing on narrow government-funded immunization programs contributing to key public health goals, it takes away from other important school health work (Chase et al., 2010).

Canadian SBPHNs are spending less time in schools, lack organizational support for their role, and experience role ambiguity (Chabot et al. 2012; Cohen, 2006; Reutter & Ford, 1996; Sanders et al., 2019; Seigart et al., 2013). The majority of literature on school nursing is from the United States, Australia, and Europe. Canadian school nursing literature is dated and predominantly based in eastern Canada. Current research on the role of SBPHNs in western

Canada is needed to understand how the role contributes to school health and provides value to society.

THE STUDY

Aim

The aim of this qualitative description study was to describe and understand how SBPHNs in a western Canadian province perceive their role, and how this role contributes to CSH. In this study, SBPHN work was defined as any work done by a PHN with school populations and communities, including students, parents, teachers, and school organizations.

Design

Qualitative description as described by Sandelowski (2000) was used to provide a comprehensive description of the SBPHN role. Due to limited literature on the social context of SBPHN practice in Canada, this methodology supports knowledge development of the SBPHN role and contributions. Qualitative description guided data collection, analysis, and interpretation of results.

Sample/Participants

The population studied was SBPHNs working within a large urban centre in one province in Western Canada for a minimum of six months in a generalist or specialist role. Purposeful sampling was used to recruit participants with relevant experiences to collect rich, topic-specific data (Higginbottom et al., 2013; Sandelowski, 2000). The consultant for the school health program in the health authority served as a gatekeeper to access the SBPHNs in this municipality. Due to the nature of organization of SBPHNs in public health units, participants were from multiple SBPHNs teams across numerous public health units.

An invitation letter, study information sheet, and consent form were attached to a weekly newsletter emailed to SBPHNs by the school health program consultant. The letter contained contact information for potential participants to request more information or to participate in the study. One member of the research team (CZ) attended a virtual meeting for SBPHNs in the municipality in September 2020 to describe the research project and recruit participants. Snowball sampling was also used to identify potential participants who met the inclusion criteria. Recruitment occurred between July and December 2020.

Data Collection

Semi-structured telephone interviews were conducted with participants to discover the nature of the nurses' experiences of their role as SBPHNs (Sandelowski, 2000). A semi-structured interview guide with questions as described by Kvale and Brinkmann (2009) was developed from themes observed in existing literature. Interviews were between 30 and 90 minutes, recorded with consent, and transcribed verbatim. Interview notes were kept to document reflections.

Ethical Considerations

Ethical approval was obtained from the Health Research Ethics Board at the University of Alberta and operational approval was obtained from the health authority. Bias identification occurred during reflexive journaling. The participants were informed the researcher had experience in a SBPHN role. The research did not disclose personal information, and participants' questions were directed back to the participant to prevent the researcher's personal experiences from influencing the responses (Creswell, 2013, p. 175). Information letters disclosing the study were provided to senior health authority managers, the school consultant, and potential participants. All participants were given the opportunity to give fully informed and

voluntary consent, with the ability to withdraw consent at any time. Informed consent included guarantee of confidentiality and privacy. Participants had the opportunity to review the findings if requested, however no participants made this request.

Data Analysis

Initial analysis involved qualitative content analysis by one author (CZ) in which codes arose from the interview data (Sandelowski, 2000). Notes and identified themes were documented in comments and highlighted in the interview data and field notes, (Lincoln & Guba, 1985). Consultation with the other members of the research team occurred early in the coding process. After coding and thematic analysis, findings were analyzed and summarized into themes (Sandelowski, 2000). The interview data was compared to the CSH model. Role theory was used as a sensitizing concept to guide and facilitate understanding of participants' role perceptions and interactions identifiedd in the data (Blumer, 1954; Brookes et al., 2007).

Rigour

The study fulfilled the rigour assessment criteria outlined by Lincoln and Guba (1985). Credibility was ensured through negative case analysis and triangulation by reviewing existing practice documents and policies. Transferability was achieved through field notes and reflexive journaling. Confirmability and dependability were demonstrated through the study audit trail, accurate record keeping, and reflexive journaling.

FINDINGS

The participants ranged between 40 and 59 years of age and all identified as female. Experience in the SBPHN role ranged from five to 13 years (Table 1). Two participants worked exclusively as SBPHNs, two were generalist PHNs with time allocated to working as SBPHNs, and one had a school nursing educator role. The number of schools each nurse was responsible

for was unclear, as each nurse had difficulty recalling the number of elementary (age 5-12) or junior high (age 13-15) schools in their case load. The nurses who worked exclusively as SBPHNs estimated being assigned 13-15 schools per nurse, excluding high schools (age 16-18), which they generally did not serve. One generalist estimated serving seven schools, while the other was not specifically assigned any schools.

Four interrelated themes emerged from the participants' descriptions of their SBPHN roles: (1) The SBPHN role is centred around the in-school immunization program; (2) It has inconsistent involvement in health promotion due to resource and capacity constraints due to the demands of the in-school immunization program; (3) Immunization-focused interactions and limited visibility result in disconnected relationships with other school health stakeholders; and (4) As the role has changed and narrowed in scope over time, SBPHNs are experiencing further role tension. In the following section, comments from participants are included as examples to support common themes. Pseudonyms[1] are used for all participants and any obvious identifiers have been altered or removed without impacting the meaning of data.

Centred Around Providing In-School Immunizations

The participants identified that their roles were heavily based on the demands of the in-school immunization program. This program offers hepatitis B and human papillomavirus immunizations for students in grade six, as well as diphtheria-tetanus-pertussis boosters and meningococcal immunization for students in grade nine. Additionally, the program has a program for students in grades one through nine in which each student's immunization history is reviewed to ensure completeness and offer additional immunizations if needed.

[1] The names chosen for pseudonyms are based on historical nurses who made contributions to public health and school nurse practice: Amy Hughes, Lina Rogers, Florence Nightingale, Lillian Wald, and Elizabeth Breeze.

The participants identified that the immunization program has become central to their role as SBPHNs. Amy described the in-school immunization program as “a big part of our role as a school nurse” and “the most intensive part of our jobs.” She identified that her practice is guided by the health authority’s school nursing and immunization program manuals, which are predominantly focused on the immunization program. Elizabeth expressed concern that new SBPHNs come into the role with expectations of working in an all-encompassing way but “when the reality sets in that immunization is such a big part of their work, they kind of lose sight of that piece.” She shared a story about a new SBPHN struggling to see other areas of the role besides the predominant immunization program, stating “it’s really hard to help, to get them to understand something that they have never actually experienced.”

Three participants stated the in-school immunization program takes up 90% of their time. Each participant highlighted the many tasks and complexities of the program, including: reviewing student registration lists from each school, assessing immunization status, determining immunization eligibility, making information packages and putting them in envelopes, distributing and collecting consent forms for the student to be immunized in the school, contacting parents who have not returned consent forms, scheduling and preparing for immunization days in the school, facilitating the immunization day, and inviting absent students to the public health clinic to be immunized. Lillian stated “planning for immunization rounds is the biggest and most challenging, in terms of getting everything organized and prepared.” The large workload and time constraints of the immunization program have influenced the SBPHN role to centre on immunization.

The participants felt that time spent on the in-school immunization program was taken from other school health activities. Amy shared that “immunization, all the pieces involved with

that, tends to take up the majority of our work and as the years have gone on, there seems to be less and less room for anything else." Lillian felt that the workload of the immunization program was taking away from her ability to work more within CSH, "because 90% of our time is spent doing the immunization program… it takes away from any other learning or activities that I could be doing to help work more within that comprehensive school health framework." Florence thought other school health activities were "just sort of a side thing."

The participants identified the high priority of the in-school immunization program. Amy talked about the pressure of assessing each student's immunization status and the need to "work efficiently and get our students immunized because that is an extremely important way of keeping students healthy physically." Multiple participants brought up the influence of government policy on prioritizing the in-school immunization program. Lillian spoke of the "general government strategy of wanting to increase the immunization rates" and how immunizations have "become the focus of the whole entire program". Lina identified immunizing students as the primary target of the role and Elizabeth pointed out "immunization is what gets pushed to get done." In their experience, prioritizing the immunization program has shaped the overall SBPHN role.

The in-school immunization program formed the basis of many relationships that the participants had with school staff, students and parents. Lina identified that the majority of her communications with schools were with office staff to collect student information and set up immunization dates. Amy pointed out their work is focused on age groups receiving in-school immunizations, thereby limiting their contact with other classes. She shared that at the beginning of the year, "I ask them every year how many of you, by show of hands, know that you had a school nurse and every year there are not that many hands that go up. A lot of children do not

know unless they have older siblings [who received in-school immunizations].” Lillian pointed out “the only work one-on-one with students is just to do the immunizations and do the immunization presentations. I deal with parents mostly over the phone or emails, and its 99% related to immunization.” Lina talked about being thrilled when school children recognize her in the community and tell her “you made a difference and you made me less fearful of getting my needles.” The majority of experiences that SBPHNs had with students was in the context of the school-based immunization program, ultimately shaping their role in their relationships.

Some participants described how the immunization program was the purpose of their presence in a school. During the COVID-19 pandemic, when schools shifted to at-home learning and in-school immunization programs were suspended, many SBPHNs were redeployed to COVID-19 swabbing and assessment centres. Lillian felt it “made sense” to redeploy SBPHNs, as the in-school immunization program was paused. Amy described how SBPHNs were the “backbone of the COVID frontlines” because they “did not have a program” and that incoming calls from the school communities were “not enough to keep [us] busy because we are so immunization-focused.” Although all the participants felt the in-school immunization program was taking them away from other school health activities, once the in-school immunization program was suspended, it was as if their role was no longer needed.

During the interviews, it was common for participants to share their experiences as SBPHNs in the larger context of the immunization program. For example, Florence uses mindfulness to guide her practice and interactions with students while they receive immunizations. When talking about her relationships with school staff, Amy identified struggling with arranging adequate physical space for providing immunizations. When considering how the COVID-19 pandemic would affect their role, Amy was concerned about

time constraints for providing in-school immunizations. Elizabeth shared her experience mentoring a new nurse who "three years later, realized that building relationships with her school and being visible and being out at the school… made a huge difference in her [immunization] consent [form] return." The relationship with the school was built as a 'means to an end' focused on the immunization program rather than an end in itself. Elizabeth stated "there's now this culture that has been created. This culture that we are about immunization. And that is it."

These nurses perceived their role to be centred around the in-school immunization program. This program is seen as a priority, consumes substantial time and resources, and has ultimately shifted the SBPHN role away from comprehensive school health.

Inconsistent Involvement in Health Promotion

Although the immunization program consumes the majority of their time, all participating SBPHNs identified that their role encompassed other elements of health that they try to address in their role, such as health promotion. They spoke of being resources, supports, information sources, educators, capacity builders, liaisons, and way finders for the school community, covering a wide range of health topics. Amy described the role as "all-encompassing", where she had to be "prepared for anything." Lillian described CSH as "really big" and thought it was important that she remained "up to date on all the new health related information and initiatives." Florence thought that the SBPHNs covered "a lot of health topics", including sexuality, drugs, sleep, anxiety, and vaping. This wide range of roles and topics was a factor in the inconsistent approach to school health promotion.

All of the participants identified CSH when discussing practice models, however they had differing thoughts about the model and what guided their practice. Elizabeth shared that "obviously the CSH model" was used by SBPHNs and that SBPHN practice evaluations were

based on the model. Amy said “we work within a model like the CSH model where we don’t even realize we’re doing it.” Lina identified that although the health authority “promotes” CSH, “schools have their own models that they are following so they are not necessarily reaching out to us specifically to the CSH model.” Although Lillian felt that CSH was an appropriate model, she thought “it just looks good on paper” and had “a hard time putting into words what that actually means” for her practice. Florence only remembered learning about a framework with “four pillars” during her SBPHN orientation. Although CSH may provide a basis for the SBPHN role, there appears to be a disconnect between what the model entails and the ability of SBPHNs to use the model, resulting in an inconsistent approach to health promotion activities.

Many health activities were done in response to a need identified by the school or an individual, rather than as a proactive approach to school health. Lillian spoke of “being the go-to person for any health-related questions or concerns that schools have.” Amy said, “we are not typically targeting questions or anything, but just in conversation with kids, sometimes different health topics do come up that we can address.” Amy felt her role “encompasses such a large area of different topics”, stating “we can’t be there to teach everything or answer every question or go to every school and be there all the time to go over this stuff… so I think that being that resource for information and helping capacity build and provide our school with information that they can use themselves is super important.”

The participants spoke about referring schools and students to others for help. Elizabeth identified SBPHNs as “health brokers”, stating “we can’t provide the resources, but we can connect you with somebody who might be able to.” Amy thought the SBPHN role was “not to be the experts in all of these subjects, but to provide the resources and the materials and the links to people.” All the participants identified the importance of mental health for their schools

however, often it was only addressed if it was brought up and mostly involved referring students to others. According to Florence, if a student showed signs of self-harm, the SBPHN would have a conversation with them and ensure the student was connected with someone. Lillian spoke of directing students with mental health concerns to self-refer to mental health programs.

The participants responded to requests for information from schools. Elizabeth met with principals at the start of the year to review available resources "if the need ever arose." Elizabeth and Lina taught sexual health presentations when teachers "weren't comfortable presenting that information." However, the participants wanted to be more involved with health promotion. Amy felt that doing "a little bit" of health promotion was not enough. Lina expressed a desire to provide more population health and health promotion activities, recognizing that providing information is "different than providing and facilitating the health promotion activity." Lillian said, "I wish I had more of that health promotion role…when you think of a school nurse, I feel like that is what it should be."

Every participant identified time as a barrier against implementing additional non-immunization activities with their schools. Florence stated she "doesn't have the capacity for [teaching]" because her position does not allow for enough time to support activities outside of the immunization program. Lillian identified "we have so many students to provide immunizations for that we do not have time to do almost any of the other health promotion activities." Amy shared that they "do not have time… and if we do, it is done very quickly." She provided the example of being with a student for "5-8 minutes doing an immunization," using the time as "an opportunity to discuss any mental health issues or… give you a clue that maybe you need to do some follow up with the student." Amy also brought up how time constraints impact her knowledge of health topics, stating, "there's never enough time in a school year for

me to really become comfortable with any one topic," leading her to feel compelled to "defer to the experts" when addressing health concerns. However, Lina shared that she was able to participate in more education and facilitation activities than the other SBPHNs, which she attributed to "having a lot more time capacity." She recognized that she "wouldn't have the ability or the capacity to participate in this type of education or facilitation with the students" if she worked in a more densely populated urban area. Time pressures faced by the participants impacted their involvement in health promotion activities.

Lack of organizational support was also identified as a barrier. Lillian was concerned about the health authority's lack of resources on different health topics, sharing "I feel like itis getting more and more challenging to be that resource, because the resources that I need to share are not available or not even created." This led to her concerns about credibility with schools, stating "I think it makes me seem less credible when I do not have the correct information." Lina thought that due to the health authority prioritizing the in-school immunization program, health promotion activities may not always happen or may never happen again. Elizabeth identified funding as an issue, saying, "government is a huge barrier… we do not have the resources to do what we want to do." Organizational factors such as limited resources, funding constraints and differing priorities all affect the SBPHN role in health promotion, perhaps permanently impacting the role.

Disconnected Relationships with Others

The participants described their relationships with other groups they work with, including school staff, teachers, principals, students, parents, other SBPHN coworkers, school nurse educators, managers, and interdisciplinary providers. However, the SBPHNs often worked

isolated from these groups rather than integrated into an overall school health approach, resulting in the SBPHN role becoming siloed.

Most participants identified that they had good relationships with their schools. Lina described having developed "phenomenal rapport, understanding and respect" with her schools, feeling "so privileged to be working in the community that [she] grew up in." Lillian felt that others, especially school staff, were supportive of her role, stating "I feel like we work very well as a group together." Amy was able to "develop some pretty good relationships" with her schools. However, the participants gave examples of barriers and gaps in their relationship with their school communities. Lina identified personality clashes with school office staff creating difficulties for SBPHNs to get into a school. As Florence's role was mostly working with students in the in-school immunization program, she described the nature of her relationships as "quick transactions," stating, "for me, there is no relationship."

Members of the school community may not understand the SBPHN role. For example, Lillian described how one of the multidisciplinary programs that provided services to students with special needs had recently been shut down, and schools reached out to Lillian as a SBPHN to provide these services. Lillian said, "they think that because I'm the nurse, I should be able to do this, and it's technically not within our scope of practice as a school nurse." This lack of understanding of the SBPHN role reflects a disconnection between the school community and the SBPHN. Amy shared a story about hearing about a student suicide through a telephone conversation with another parent, instead of receiving notification from the school. She shared "it's frustrating as a school nurse, because you know, we are expected to be this support, this resource for our school community, and itis really hard when you do not know what is going on in your school community." She then mused that "maybe it is not that important that we know

about it." This communication divide highlighted the separateness of the SBPHN from the school.

Many of the participants spoke about the importance of visibility in their schools, yet identified their role was lacking in in-person interactions. Amy shared, "a good chunk of what I do as a school nurse has nothing to do with being around the parents, the children, the school staff. It is being in an office in front of a computer." She raised concerns about how the COVID-19 pandemic would further affect visibility in schools due to visitor restrictions and students not recognizing SBPHNs with masks. Lillian said she "physically spends a lot of time going into schools at the beginning half of the year to set that relationship with the schools," yet ends up doing the majority of communication with teaching staff through email. She estimated spending "maybe one to two days if that, in each school for the whole year," stating "staff do not know us, schools do not know us, students do not know that they have a school nurse that works in their school, because we are just not visible and we are not present in the schools." This physical divide contributed to school communities not knowing they had a SPBHN. Participants desired more in-person interactions. Amy wanted to "get to know people and make more of a difference in their lives." Elizabeth also wished "we could be in the schools doing this work with the students or with the teachers and the principals and staff, every day."

The SBPHNs identified that they sporadically worked with other groups by referring students or staff to other health care staff such as speech language pathologists, occupational therapists or physical therapists, or using dieticians as information resources. Amy described having good relationships with different groups, "because everybody… has the same goal, the same focus, which is to help provide service or resources or whatever information to parents and staff and kids so that they can be healthy and well." She spoke about how these groups support

each other in CSH but stated “we are not literally working side by side with these people… and our contact with them is a little bit more sporadic.” Lillian “[does not] work too much with other disciplines,” but worked with them more in the past. She speculated that this was due to program restructuring within the province, including the discontinuation of some services for school populations. Lina was the only participant who identified working with community groups to deliver school-based health promotion activities such as injury prevention days or sexual health in-services.

All participants identified supportive relationships with other SBPHNs they worked with. Amy shared, “the one thing I find with school nursing is that you’re never left high and dry and alone to figure out where to find the answers for things. There’s always other people who you can ask.” Elizabeth identified that school nurse educators also supported SBPHNs by getting the nurses to “think bigger picture,” and work within the CSH model. However, this often caused relationship tension due to the demands of the in-school immunization program workload felt by the SPBHNs. Some relationships had an underlying expectation that SBPHNs supported each other often only within the in-school immunization program. For example, Florence’s relationship with her colleagues was based on supporting them with the immunization program. Elizabeth pointed out some SBPHNs feel pressure from other SBPHNs when they are spending time building relationships at their schools instead of helping with a colleagues’ immunization workload. These relationships among SBPHNs reflect the systemic priority placed on the in-school immunization program.

The nurses also spoke of their relationships with managers. Lina felt that she had “incredible managers who do provide a lot of support” and are “supportive of those opportunities when schools reach out.” This positive relationship between Lina and her manager may have

contributed to her ability to facilitate and participate in more health promotion activities with her schools. Elizabeth also brought up the relationship with managers, stating that managers are "there to support [school nursing] but need to be engaged." Managers who are not actively engaged and involved with their SBPHNs may not be able to provide adequate support for the nurse to work outside of their silo.

While the participants all identified positive working relationships in their role, they did not have deep or meaningful relationships due to capacity strains and lack of visibility, which led to a lack of understanding of the SBPHN role. These relationships were influenced by the siloed position of the SBPHN, but also further perpetuated the siloed nature of the SBPHN.

Role Tension Resulting from the Scope Changing and Narrowing Over Time

All participants identified that the SBPHN role has changed to include less health promotion to become more centred around in-school immunizations. Lillian, Amy, Lina and Elizabeth spoke very fondly of their previous work related to health promotion activities and reminisced about their past role. Lillian stated, "we used to do so much more health promotion and just so much more in schools." Amy shared her experiences of doing tobacco presentations, sexual health teaching, and attending health fairs. Lina talked about her previous work in facilitating injury prevention, as well as a previous program on sexual health. Elizabeth identified that doing health teaching in schools has "dwindled over the years," stating that previous health promotion teaching kits, such as those made for tobacco or teaching nutrition, are "sitting at the health centre collecting dust."

Various factors may have influenced how and why the SBPHN role has changed over time, including the workload of the immunization program, program priorities, program changes, staffing capacities, and overlapping roles. However, these factors are related through the capacity

pressures put on SBPHNs. All participants brought up how the in-school immunization program affected workload demands. Florence talked about how the SBPHN role has changed as the in-school immunization program has expanded. Amy shared that "all of the pieces involved with [the immunization program] tend to take up the majority of our work, and as the years have gone on, there seems to be less and less room for anything else." Lina mentioned that "due to the primary target" of their program, the "reality of working in COVID" and their "current staffing capacities", health promotion activities "may not always happen or may never happen again." Some participants identified how day-to-day changes in the in-school immunization program affected their workload. According to Elizabeth, "the biggest, most intensive piece [of the role] is keeping up to program changes." Lillian spoke of trying to adapt her practice to "ever-changing things", but that "there are just too many changes and too many things to try to follow and keep up with," Florence wished that the work would "remain a little bit more stable."

Limited capacities of the individual SBPHNs as well as the school nursing program often meant that SBPHN had to prioritize certain programs, ultimately reducing their role over time. Lina shared how PHNs in her office had previously implemented a sexual health education program to schools in their area, where the PHNs worked with schools, community partners and student facilitators to organize an event that taught concepts of healthy relationships and sexual education. Over time, a community group partner took over organizing the program as "the capacity for public health nurses changed and our role changed." SBPHN capacity constraints pulled them away from this program, causing further change to the SPBHN role.

Elizabeth brought up that the SBPHN role in addressing broader school health needs has not changed, but rather, "the capacity for nurses … has lessened even more." However, if SBPHNs do not have capacity to address broader school health needs, this can change their

overall role. For example, Elizabeth spoke of the value of having past experience when working within a CSH approach. As the capacity of the SBPHN decreases and they shift their focus away from a CSH approach, SBPHNs are no longer gaining experience in working within CSH. This is demonstrated in Elizabeth's statement, "new nurses come into the program and this is what they know. They are fine with it, because they do not really understand what it could be. And what it should be." Three of the nurses brought up feelings of loss and grief related to no longer working in as much of a comprehensive school health role. Amy said, "the disappointing part for me is that I feel like we lost that true comprehensive school health view" and that "the little bit of health promotion we get to do every year is just not enough for me." Lillian shared "I love educating. I love teaching. I enjoy that whole part. And I feel like I miss that." Elizabeth spoke of the experiences of teams "who used to work with schools very much in that comprehensive school health framework" and how those teams "have really felt that loss of not being able to work in that manner anymore… so they are resentful."

Most participants wished to change their role back to what it used to be, based on their experiences. Lina wanted to resume her role in the injury prevention program, which had been taken away due to program restructuring. Lillian wanted to "get back to that [school-based presence] a little bit more" with education and teaching. Amy stated, "I would love to get back when I first started… and I actually got to schedule time at my schools." Elizabeth spoke of how some experienced nurses just "want their old job back." However, Florence was not sure what she would change, stating "I don't have enough experience to know." Elizabeth proposed that SBPHNs no longer do the immunization program at all, instead leaving the program for Licensed Practical Nurses (LPNs) to run. This would provide SBPHNs more opportunities to work with schools, do assessments, plan supportive approaches to schools, and better support teachers.

Recognizing the increasing role of LPNs in the prioritized school-based immunization program, Elizabeth worried about LPNs replacing RNs if the school nursing program remains focused on just the immunization program. Elizabeth stated, "we need to go broader than that… RNs in the program need to be working to their full scope." Participants' knowledge and experience in the SBPHN role affected their perceptions of what the role could be.

DISCUSSION

This qualitative description study examined the SBPHN role and how it contributes to a CSH approach. Although the participants identified their roles were supposed to encompass elements of health promotion and CSH, their reality was a role that has become centred around the in-school immunization program. They describe providing inconsistent health promotion, due to capacity constraints, only in response to an expressed need. Changing priorities and increasing immunization program demands have created distance between SBPHNs and school communities. Some of the nurses in this study experiencing this role change have feelings of loss and frustration, whereas those newer to the role had a narrower perception of the role.

The SBPHN Role and CSH

The four pillars in CSH link health and education to improve student outcomes through the four pillars of social and physical environments, teaching and learning, health school policy, and partnerships and services (JCSH, 2008). In this study, the participants' perception of the SBPHN role was examined using the CSH model. No participants identified involvement with developing healthy school policy, however this may be an area where the SBPHN role could expand. For example, SBPHNs in a study by Sanders et al. (2019) engaged schools in CSH, linking school health programs and policies.

The participants in the current study did not identify supporting physical environments and had a limited role in supporting social environments. Although all participants identified mental health as a priority topic, some participants identified only briefly addressing student mental health concerns while immunizing students. Szumilas et al. (2010) also identified underutilization of nurses' involvement with student mental health. When emergency measures were implemented during the COVID-19 pandemic and the in-school immunization program was paused, the participants in this study felt as though their role was no longer needed. However, school-aged children in Canada were already experiencing high rates of mental health conditions (OIPH, 2018), and the increased stress from social isolation during the COVID-19 pandemic resulted in significant impacts to mental health for this group (Cost et al., 2021). Pryjmachuk et al. (2011) found that SBPHNs who actively engage in supporting mental health understand the value and importance of this work. If SBPHNs expanded their role in supporting physical and social environments, they may be able to address these additional needs of school children.

The participants reported providing less health teaching due to capacity constraints and program priorities, resulting in inconsistent presentations on immunizations, allergies, sexual health, and injury prevention. This impacted their visibility in schools, creating further distance in their relationships with school communities. Reutter and Ford (1996) also identified PHNs spending less time in schools due to the discontinuation of nurse-led classroom teaching. Other studies have reported SBPHN roles in health promotion and education, such as coordinating health promotion projects and events (Chabot et al., 2012; Seigart et al., 2013). However, Westwood and Mullan (2009) found that the low visibility of school nurses negatively impacted their ability to contribute significantly to sexual health education. This suggests the importance

of meaningful relationships with school communities for SBPHNs to have an impactful role in teaching and learning.

The in-school immunization program required significant collaboration, demonstrating how the participants partnered with schools. The participants were additionally involved in partnerships and services as health brokers referring students, staff and parents to other programs and resources. Seigart et al. (2013) also identified networking and making referrals as part of the role. However, Sanders et al. (2019) described a collaborative SPBHN role with stakeholders, where SBPHNs built relationships between groups. This differs from the perceived role of the participants in this study, who only identified involvement in the referrals process in response to an expressed need. This approach demonstrates limited involvement in the partnerships and services pillar of CSH. Overall, the perceived SBPHN role was not guided by the CSH model and does not appear to contribute greatly to overall CSH. The role has been encompassed within a culture of immunization, where the demands of the prioritized in-school immunization program leave little time for other CSH work.

Describing the SBPHN Role using a Role Theory Framework

Brookes et al. (2007) proposed using role theory as a valuable framework to understand community nurse role perceptions. This includes elements of symbolic interactionism, focusing on social connections and the creation of role constructs (Hardy & Conway, 1988). Describing the SBPHN role using role theory with a visual representation can facilitate an understanding of how the perceptions and interactions of the study participants shape the SBPHN role (Figure 2). The continuous cycle of role expectations and responses may cause SBPHNs to experience role ambiguity, conflict and overload, leading to role stress and strain, as demonstrated in the tension described by experienced SBPHNs. Using a role theory framework to understand role

perceptions can assist in predicting role stress and enable the development of preventative strategies against role strain (Hughes, 2001). The visual in Figure 2 can be used to identify key areas to assist SBPHNs in clearly defining their role and ultimately better meet the needs of school communities.

Organizational Influences

SBPHNs in this jurisdiction are employed with the provincial health authority and based out of community health centres. The provincial public health act, amended in 2016, allowed school enrollment records to be shared with the health authority to assess immunization records and prevent vaccine-preventable disease outbreaks in schools (*Public Health Amendment Act*, 2016). This expanded the in-school immunization program to include reviewing immunization records for all students in grades one through nine, increasing the SBPHN workload.

All study participants described the extensive demands of the immunization program. Dubé et al. (2019) and Sweet et al. (2003) also described the large workload of in-school immunization programs, including teaching, assessing records, organizing clinics, obtaining informed consent, and administering immunizations. Increasing demands in one area can take resources from other areas, such as health promotion initiatives. Multiple school nursing studies have identified time constraints as a barrier to SBPHN work (Chabot et al., 2010; Sanders et al., 2019; Mitchell et al., 1997). Time constraints on competing demands can result in SBPHNs experiencing role overload (Hardy & Conway, 1988).

Organizational values and priorities can be reflected in funding decisions and engagement with SBPHNs. The study participants identified funding constraints and limited organizational support for their work. Seigert et al. (2013) also reported funding constraints for SBPHN work due to the organization undervaluing this work. Funding constraints can influence SBPHN

physical presence in schools, impacting stakeholder relationships. Reutter and Ford (1996) found decreased resources and discontinued SBPHN services impacted nurse opportunities to meet with school members. In our study, only one participant identified that their manager was actively engaged in health promotion work, which positively impacted the SBPHN role in CSH. Managerial support could be a protective factor in SBPHN involvement with CSH. Overall, the organization's expectations can shape the SBPHN role around achieving prioritized objectives. This can lead to role conflict (Hardy & Conway, 1988), where SBPHNs experience competing demands of the in-school immunization program and CSH involvement.

SBPHN Influences

SBPHNs' knowledge and experience can affect their role. While all participants spoke about the CSH model, there were differing perspectives on CSH use and relevance. Knowledge that incorporates theory, competencies, and practice standards could influence SBPHNs ability to engage in CSH with their schools. For example, participants with a better understanding of CSH felt they could work with a CSH approach despite organizational barriers. Sanders et al. (2019) found that SBPHNs engaged with schools using a CSH approach, however reported difficulties if they lacked understanding or knowledge of CSH. Mytka and Beynon (1994) established a model for SBPHNs in the Canadian province of Ontario to promote CSH planning, with 66% of the nurses reporting utilizing the model to guide their practice and identifying the model as relevant and user-friendly. Adequate support and education could assist SBPHNs with utilizing the CSH model (Sanders et al., 2019).

Several general competencies and practice standards that exist for public health and public health nursing can be applied to the SBPHN role (Table 2). The study participants did not identify these documents, suggesting they are not utilized in practice. Reuterswärd and

Lagerström (2010) found that school nurses often based their practice on colleagues' experience instead of theory. As Canada lacks a national approach to school nursing, SBPHNs navigate through different competencies and practice standards, which may lead to role ambiguity.

SBPHNs' experience can also influence the role. Su et al. (2014) identified that Australian school nurses had a poor understanding of, and lacked practical experience in, health promotion. Our study participants identified that experienced SBPHNs continued to try to engage in CSH, while newer SPBHNs with limited experience did not understand how CSH applied to their role. If SBPHNs lack experience with CSH and are unable to draw from theories or models, they may be unable to engage in CSH activities with their school communities.

School Community Responses

The study participants identified positive relationships with school stakeholders, however they spent limited time in schools and their interactions focused on the in-school immunization program. This resulted in parents, students, and staff often not understanding other components of the SBPHN role, which is also demonstrated in the literature (Lightfoot & Bines, 2000; Reuterswärd & Lagerström, 2010). The in-school immunization program formed the basis of these relationships, influencing their perception of SBPHN roles. This may influence school communities to only expect SBPHN involvement in immunizations.

Implications for Future Research

Further research on the SBPHN role in contributing to school health is needed. Future research could include an expanded study sample from other jurisdictions to widen the scope of the inquiry and determine transferability. Additionally, research on organization and school community perceptions of the SBPHN role is needed in order to further understand how these relationships can affect the SBPHN role.

Limitations

The sample size was small (n=5) due to recruitment difficulties during the COVID-19 pandemic. During the study period, a large number of SBPHNs were unavailable due to redeployment to assist with demands in testing facilities, assessment centres, and contact tracing. Additionally, all participants in this study were SBPHNs. Recognizing that roles are shaped through interactions with others, it would be valuable to examine how others perceive the SBPHN role. Future studies may involve additional SBPHNs, teachers, administrators, parents, students, or community members to capture a broad range of perspectives.

CONCLUSION

The findings of this study demonstrate that the SBPHN role is centred around the immunization program, with capacity constraints resulting in inconsistent health promotion, limited visibility resulting in disconnected relationships with schools, and the narrowing scope resulting in role tension. The participants' perceived role made limited contributions to the objectives of CSH. Key factors influence the SBPHN role, such as organizational expectations, SBPHN knowledge, and school stakeholder perceptions of the SBPHN role. Child health needs are becoming more complex, and the impacts of the COVID-19 pandemic may further exacerbate these needs. SBPHNs are in key positions to address child health needs, however action is needed to support a broader SBPHN role. A clearly defined SBPHN role can allow for nurses to provide meaningful contributions to school health.

ANONYMISED CONFLICT OF INTEREST STATEMENT

No conflict of interest has been declared by the authors.

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Table 1

Participant Demographics[2]

Name	Role	Location	Years of Experience
Amy	SBPHN (exclusive)	City	8
Lina	SBPHN (generalist)	Rural	13
Florence	SBPHN (generalist)	City	5
Lillian	SBPHN (exclusive)	City	13
Elizabeth	SBPHN Educator	City	11

[2] The names chosen for pseudonyms are based on historical nurses who made contributions to public health and school nurse practice: Amy Hughes, Lina Rogers, Florence Nightingale, Lillian Wald, and Elizabeth Breeze.

Figure 1

Coding Tree

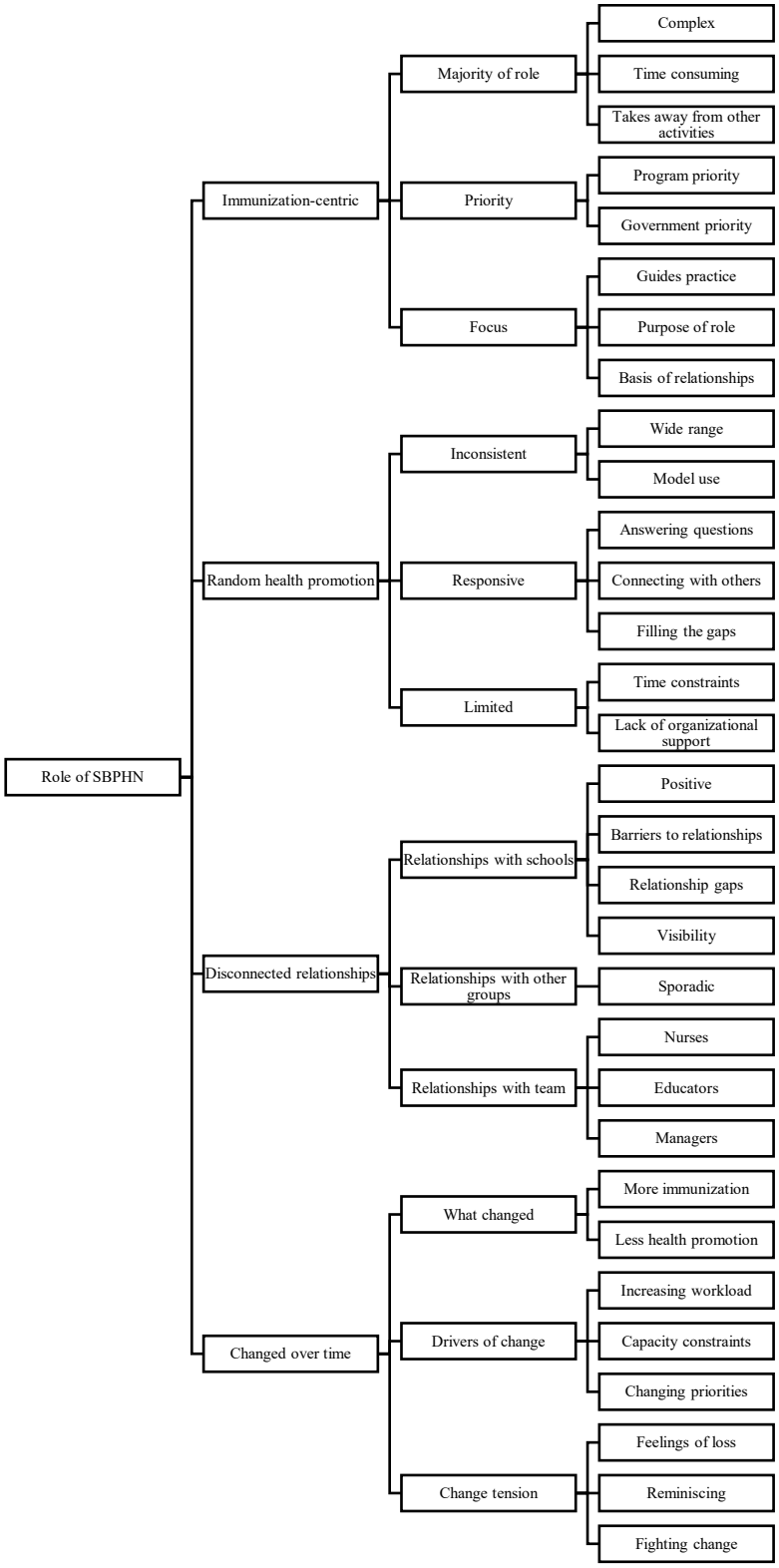

Figure 2

Visual Representation of SBPHN Role Perceptions and Interactions Using a Role Theory Framework (adapted from Brookes et al., 2007)

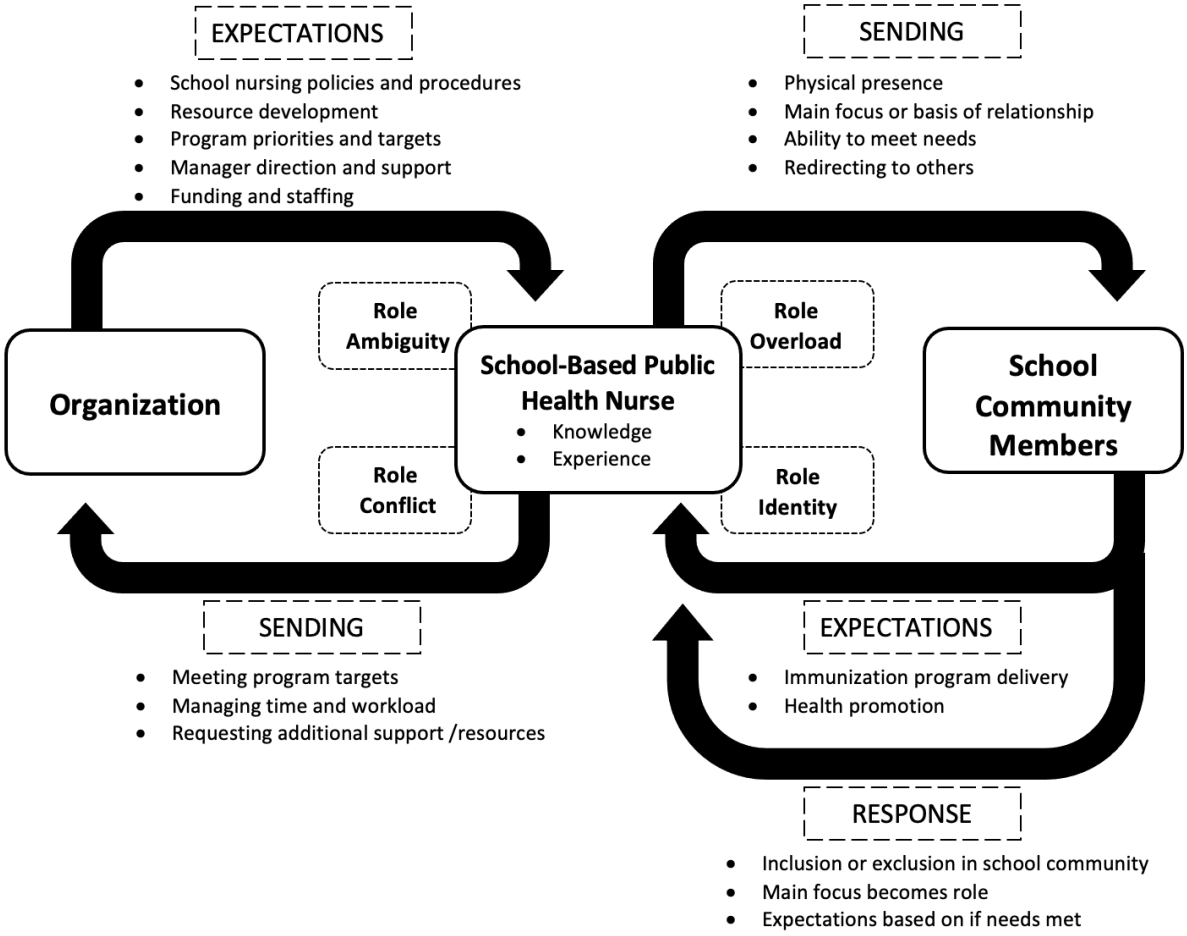

Table 2

Theories applicable to the SBPHN role

Document	Audience/Description	Areas
***Comprehensive School Health* (JCSH, 2008)**	• Multi-disciplinary, involvement in school communities • Four pillars to support and address school health in a holistic way	• Social and physical environment • Teaching and learning • Healthy school policy • Partnerships and services
***Core Competencies for Public Health in Canada* (PHAC, 2008)**	• Practitioners working in public health • 36 core competencies organized into seven categories	• Public health sciences • Assessment and analysis • Policy and program planning, implementation and evaluation • Partnerships, collaboration and advocacy, • Diversity and inclusiveness • Communication • Leadership
***Public Health Community Health Nursing Practice in Canada* (CPHA, 2010)**	• Describes roles and activities of public health/community health nurses • Six roles	• Health Promotion • Disease and Injury Prevention • Health Protection • Health Surveillance • Population Health Assessment • Emergency Preparedness and Response
***Canadian Community Health Nursing Professional Practice Model & Standards of Practice* (CHNC, 2019)**	• Community health nursing practice model with four components: client, community health nurse, community organizations and system • Eight standards of practice for community health nursing	• Health Promotion • Prevention and health protection • Health maintenance, restoration and palliation • Professional relationships • Capacity building • Health equity • Evidence informed practice • Professional responsibility and accountability

Chapter III: Discussion

The final chapter of this thesis discusses implications and recommendations for school nursing practice, study strengths and limitations, knowledge translation activities, and an overall conclusion.

Implications and Recommendations

Children's health issues are becoming more complex and require additional support (OIPH, 2018). SBPHNs are in a key position to fill this gap and support school health as they have knowledge in nursing, public health, population health, health promotion and disease prevention, and community partnerships. However, the SBPHN role is at a tipping point of becoming completely engulfed by a task-based immunization program. Urgent action is needed in order to support enhancing the SBPHN role in comprehensive school health before the role is unrecognized.

First, the SBPHN role needs to be clearly defined for both nurses and others. The CNA (n.d.) has recognized this need, namely for the SBPHN role to be clearly defined in order for nurses to provide meaningful contributions to school health. There is also a need for provincial and national nursing associations to collaborate on a theoretical framework that defines the SBPHN role, as well as a need for these associations to advocate for this defined role. Sanders et al. (2019) suggests that advanced nursing practice in public health is important for building and evaluating nursing programs that meet modern needs. This can help SBPHNs better understand their own role, which can then be more clearly articulated with organizations and school communities through relationships and interactions.

Second, SBPHNs need to be supported with adequate knowledge and education for their role. Nursing education should continue to promote incorporating theory into practice to allow students to understand and develop public health nursing competencies, in order to foster

knowledge in population health, community development, leadership, and policy (Sanders et al., 2019). Nurses who are new to the SBPHN role can be better supported through a residency program based on core competencies and practice standards, similar to the PHN program described by Larsen et al. (2018). These action items can trigger change for the SBPHN role, so they can work towards a truly collaborative, holistic relationship with schools and enhance the health of all members of the school community.

Study Strengths and Limitations

Strengths

In this study, I addressed the knowledge gap about the SBPHN role in western Canada by examining the perceived role of SBPHNs in a large urban setting in a western Canadian province. The data I collected from participants was rich and reflected their perceptions of what their role has become. I used the CSH model as a way to indicate how SBPHNs were involved in overall school health and identified any gaps where SBPHNs could be further involved. I also used role theory as a theoretical framework for the development of a visual representation of how the perceived SBPHN role is shaped through relationships with others, including role constructs that lead to role strain. This visual representation identified key areas that can be changed to help SBPHNs better meet the needs of school communities.

Limitations

This study contains some limitations. First, the sample size was small (n=5) due to recruitment difficulties during the COVID-19 pandemic. The pandemic saw unprecedented demands for trained health care workers in a variety of areas such as screening clinics, assessment centres, contact tracing, and COVID-19 immunization clinics, to name only a few. During the study period, a large number of SBPHNs in this particular jurisdiction were

redeployed to assist with these high demands and were unavailable for participation in the study. However, this study may be considered a preliminary study, with future qualitative studies building on to include more SBPHN participants in a larger geographic area to confirm findings.

The second limitation is that all participants were SBPHNs. Due to the nature of the SBPHN role in working within large intersectoral networks, as well as recognizing through role theory that a role is shaped through multiple perspectives and realities of various actors in these networks, it would be valuable to assess how others define the role of the SBPHN in contributions to CSH. Future studies could incorporate participants that are teachers, administrators, parents, students, or community members, in order to capture a broader range of perspectives on the SBPHN role.

The third limitation is transferability of study findings to other jurisdictions. As health care falls under provincial jurisdiction in Canada, the findings from this study may not translate to other provinces. However, CSH is an approach used for school settings across Canada (JCSH, 2008; Veugelers & Schwartz, 2010). Using CSH as a framework for data analysis provides a way to compare the SBPHN role across Canada in future studies. This study can be seen as an introductory study to the topic of SBPHN roles in the Canadian context and may be followed with additional studies in other jurisdictions in order to confirm or deny transferability.

Knowledge Translation Activities

This study identifies the need for a clear role definition, education, and advocacy in order for SBPHNs to fully participate in CSH, which can be addressed through knowledge translation activities. We will employ various strategies for knowledge translation to target influential areas of the study participants' perceived SBPHN role and promote SBPHN practice. Areas include advancing nursing knowledge, advocating for policy change, and targeting public perception.

Advancing Nursing Knowledge

Academia

We plan to disseminate study findings by submitting the manuscript in Chapter II to a peer-reviewed journal. Potential journals include Journal of Advanced Nursing, Journal of International Nursing Studies, or Public Health Nursing. Additionally, we plan to apply for an oral or a poster presentation at national and/or international conference(s), such as the Canadian Public Health Association Conference in 2022.

SBPHNs

We plan to offer to present the study findings at an online meeting for SBPHNs in the provincial health authority. This presentation could include an overview of the study findings, a chance for attendees to ask questions, and an opportunity for participants to brainstorm additional ideas for how they may expand their practice within the CSH model.

Nursing Education

SBPHNs who better understand their role can more clearly articulate it through interactions with organizations and school communities. Part of understanding their role and developing their knowledge can come from nursing education programs. Nursing education should continue to promote incorporating theory into practice to allow students to understand and develop public health nursing competencies, in order to foster knowledge in population health, community development, leadership, and policy (Sanders et al., 2019).

Advocating for Policy Change

Nursing Associations

Nursing associations can advocate for provincial and national policy change. The CNA supports the development of a comprehensive health strategy in schools across Canada with a

clearly defined role for public health nurses (CNA, n.d). I previously attended a CNA policy workshop in January 2020, where I led discussions about school nursing in Canada. The Community Health Nurses of Canada, an associate member of the CNA consisting of community health nurses and interest groups, hosts an annual conference with the goal of advancing community health nursing in Canada. We plan to apply to present study findings at the CHNC 2022 conference. Another knowledge translation activity may also include submitting a commentary on school nursing in Canada to the *Canadian Nurse* journal.

Policymakers

Due to the health authority's role expectations affecting the SBPHN role, it is pertinent to ensure policymakers are aware of study findings. This may include offering to present study findings to policymakers both with the health authority and with the provincial government. There may also be opportunities to present study findings to other school health stakeholders, such as school boards or superintendents.

Targeting Public Perception

Finally, knowledge translation and dissemination to the public is important for the role response that helps shape the SBPHN role. The COVID-19 pandemic brought nurses and other healthcare workers to the frontlines of the response and shed additional light on the importance of their roles. As the pandemic comes to an end, it is more important than ever to clearly communicate how nurses play an important role in all areas of health, including SBPHNs supporting health in school communities. The #IKnowANurse social media campaign is one way the CNA is trying to promote the many roles of nurses. Highlighting the role of SBPHNs on social media can help influence the public's perception of what SBPHN is and how SBPHNs can better support healthy school communities.

Conclusion

In this thesis, I determined that the perceived SBPHN role in the province is centred around the immunization program, where capacity constraints result in inconsistent health promotion, limited visibility results in disconnected relationships with schools, and the narrowing scope results in role tension. I also highlighted how the positioning of the SBPHN in relation to others can shape the role, including how organizational priorities and pressures influence the role, while school stakeholders' perceptions of the SBPHN role due to the limited interactions with SBPHNs can reinforce the role. Nurses have an important role in supporting healthy school communities however, they need to be supported in enacting this role. There is a need for a clear role definition, education and advocacy in order for SBPHN to fully participate in CSH. Health and education sectors can be better integrated to facilitate and support more meaningful relationships between SBPHNs and their school communities. Further research is needed with additional SBPHNs and other members of the school community to understand how others perceive the SBPHN role.

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