

**MUCH TO DO ABOUT NOTHING:
THE DESERTIFICATION OF PUBLIC HEALTH NURSING PRACTICE IN
RELATIONSHIP TO WATER AND ITS IMPACT ON HEALTH**

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DEDICATION

To my husband, Pat,
for your tremendous support, patience, kindness, and love;
and to my sweet daughters, Hannah and Abigail
for your comfort, cuddles and love.

ABSTRACT

The purposes of this phenomenological hermeneutics study were to gain an understanding of the meaning nine public health nurses (PHNs) in southern Alberta attach to their experience of promoting health related to safe and secure water; and to illuminate their emergent understanding of barriers and opportunities in that regard. Semi-structured interviews were conducted, and data analysis followed van Manen's approach. Under an overarching theme, *Being in the Desert*, findings are presented through four themes: *Desertification of the Practice Context*; *Desiccation of the PHN*; *Adaptation of the PHN*; and *Reclamation of Practice*. Barriers to a role with water are central and embedded within the lived experience of PHNs; opportunities lie in the awareness that emerged through the discourse of the interviews. This discourse with PHNs must continue, so that they can begin to articulate an enhanced role in promoting health related to safe and secure water.

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TABLE OF CONTENTS

Dedication.....	ii
Abstract.....	iii
Acknowledgements.....	iv
Table of Contents.....	v
CHAPTER ONE: INTRODUCTION	1
Background Information.....	1
Statement of Problem.....	3
Purpose of Study.....	5
Research Questions.....	7
Significance of Issue.....	7
Definitions of Terms.....	8
Conclusion.....	10
CHAPTER TWO: REVIEW OF THE LITERATURE	11
The Role of the Public Health Nurse.....	11
An Evolving Definition: Health.....	11
An Evolving Discipline: Public Health.....	13
An Evolving Role: Public Health Nursing.....	14
Public Health Nursing and Environmental Health.....	17
Safe and Secure Water.....	19
Waterborne Disease Outbreaks.....	20
Agricultural Risks Related to Water.....	20
Perception of Risk.....	22
Conclusion.....	23
CHAPTER THREE: METHODOLOGY	25
Characteristics of Qualitative Research.....	25
Philosophical Stance.....	26
Constructivism.....	26
Phenomenological Hermeneutics.....	28
Theoretical Framework.....	31
Role of the Researcher.....	33
Researcher as Instrument.....	33
Personal Situatedness.....	34
Research Design.....	35
Research Setting.....	36
Co-Researcher Sample.....	37
Data Collection Procedures.....	40
Data Storage and Handling.....	43
Data Analysis Procedures.....	44
Rigour and Trustworthiness.....	48
Credibility.....	48
Transferability.....	49
Dependability.....	50

Confirmability.....	50
Ethical Considerations.....	51
Dissemination of Research Results.....	52
Conclusion.....	52
CHAPTER 4: FINDINGS.....	53
The Co-Researchers.....	53
Being in the Desert – An Absence of Water in Public Health Nursing.....	55
Desertification of the Practice Context – Surveying the Landscape....	58
Desolate and in the Middle of Nowhere.....	58
A Harsh and Inhospitable Landscape.....	64
A Dry and Depleted Land of Scarce Resources.....	68
Desiccation of the PHN – Feeling the Slow Death.....	73
Isolation – Cutoff and Incommunicado.....	73
Powerlessness – Chipped Away and Eroded.....	76
Meaninglessness – Disoriented in the Shifting Sands.....	77
Self-Estrangement – Adrift in the Desert Creep.....	80
Adaptation of the PHN – Fighting for Survival.....	82
Conserving Relationships within Isolation.....	83
Dowsing for Voice within Powerlessness.....	86
Sustaining Purpose within Meaninglessness.....	87
Preserving Authenticity within Self-Estrangement.....	89
Reclamation of Practice – Finding Hope through Awakening.....	93
Reorienting to the Internal Compass.....	93
Creating Swales to Catch Water.....	95
Conclusion.....	98
CHAPTER 5: DISCUSSION.....	99
Summary.....	99
Desertification of the Practice Context – Surveying the Landscape....	100
Desiccation of the PHN - Feeling the Slow Death.....	106
Adaptation of the PHN – Fighting for Survival.....	110
Reclamation of Practice – Finding Hope Through Awakening.....	113
Implications for Nursing Practice and Education.....	115
Strengths and Limitations of the Study.....	116
Recommendations for Further Research.....	118
Conclusion.....	119
References.....	121
Appendices.....	132
Appendix A: Interview Guide.....	132
Appendix B: Demographic Form.....	133
Appendix C: Letter of Invitation to Participate in the Study.....	135
Appendix D: Letter of Consent.....	137
Appendix E: Statement of Confidentiality – Transcriptionist.....	139

Chapter I - Introduction

Background Information

Access to potable water is a human right and is essential for health (World Health Organization, 2003). Life depends on a healthy and sustainable water supply for the environment, flourishing communities, and economic wellbeing (Government of Alberta, 2010). It follows that the environment, the communities within which people live, and economic wellbeing are important determinants of health. In fact, the Ottawa Charter for Health Promotion (WHO, 1986) proffers a stable ecosystem and sustainable resources as essential preconditions for optimal health, equal among other prerequisites such as peace, shelter, education, food, and income. The Public Health Agency of Canada (2010) echoes this notion with a similar list of health determinants that includes the physical environment as a key influence on health.

Health issues related to water quality are often considered within a global context (WHO, 2003); however water quality is a health risk for many individuals, families, and communities within Canada, and several boil water orders are put into effect every year (Charrois, 2010; Pike-MacDonald, Best, Twomey, Bennett, & Blakely, 2007). National data collection for waterborne disease outbreaks in Canada began in 1974 (Hrudey & Hrudey, 2007). By the year 2001, there were 288 reported outbreaks in this country (Schuster, Ellis, Charron, Aramini, & Marshall, 2005).

Concentrated animal feeding operations are a major source of pollution to ground and surface water (Acharya, Grant Kalischuk, Klein, & Bjornlund, 2007; Burkholder, et al., 2007; Grant Kalischuk, Acharya, Klein, & Bjornlund, 2009; Greger & Koneswaran, 2010; Jiang & Somers, 2009; McElroy, 2010; Miller, Handerek, & Beasley et al., 2004;

Miller, Olson, & Chanasyk et al., 2006; Olson, Miller, Rodevang, & Yanke, 2005), as is industry, which poses a significant risk through point source and non-point source contamination (Caldwell, 2001).

Access to a secure water supply is also threatened by water scarcity in many parts of Canada, the result of overcommitted water resources and environmental degradation (Bjornlund, 2010). Alberta contains a mere 2.2% of Canada's fresh water supply. Southern Alberta, which contains only 20% of that stock, accounts for 80% of the total demand for water in the province (Government of Alberta, 2010). This high level of water consumption is attributed mainly to the agricultural sector for irrigation and concentrated animal feeding operations, but also to the fracturing process for coal bed methane extraction. Excessive demand for water places stress on watersheds and can result in economic losses in agricultural industries and degradation of the aquatic ecosystem, both factors that influence the health of Albertans (Government of Alberta, 2008).

Safe and secure water is a public health issue receiving much attention at global, national, and provincial levels. There are prominent initiatives directed at alleviating water stress and preventing further degradation of water supplies. The United Nations Millennium Goals (2000) provide a framework for action to reduce world poverty, and include a goal to reduce in half, by the year 2015, the proportion of people across the globe without reliable access to potable water and basic sanitation. Canada is among the international partners advocating for and supporting the targets of this goal.

The Government of Alberta (2008) has responded to the threat to water in Alberta through its “Water for Life” initiative, framed on the notion that life is dependent upon on a healthy and sustainable water supply for the environment, flourishing communities, and economic wellbeing. The strategy names three objectives to achieve by 2015: (1) safe and secure drinking water; (2) healthy aquatic ecosystems; and (3) reliable and quality supplies of water for a sustainable economy. From a nursing perspective, these objectives reflect implications for human health, including basic wellbeing; the physical environment as a condition for health; and the overall economy which, combined with socio-economic status, represents the most influential determinant of health (Public Health Agency of Canada, 2010). In the southern Alberta context of intense livestock production and associated water quality problems resulting in increasingly frequent boil water alerts; and with the recognition that most water ways in southern Alberta suffer from some level of environmental degradation as a result of current levels of water extraction (Bjornlund, 2010), safe and secure water is an issue with significant potential health implications, and is therefore an issue that PHNs ought to be addressing with their communities.

Statement of Problem

Public Health Nurses (PHNs) promote health through action on the determinants of health (Community Health Nurses of Canada, 2011); it follows that PHNs have a role in promoting health related to safe and secure water. In fact, there is much support for PHNs to have a role in this area. The environment is one of the four pillars of the metaparadigm of nursing (Fawcett, 1984) and it is recognized as an essential component

of the foundation that supports human health (Savage & Kub, 2009). PHNs are called to take action on environmental issues, including water, as indicated in position statements of the International Council of Nurses (2004, 2006) and the Canadian Nursing Association (2003, 2007, 2008) that bring attention to environmental health issues. In addition, the Canadian Community Health Nursing Standards of Practice (Community Health Nurses of Canada, 2011), and the Public Health Nursing Discipline Specific Competencies (Community Health Nurses of Canada, 2009) encourage nursing activity in this area.

Public health nurses have a broad understanding and holistic view of health, and “because of their scientific education and communication skills, [PHNs]...are uniquely qualified to comprehend and interpret environmental issues as they relate to health for their clients...” (Pangman & Pangman, 2010, p. 355). In fact, PHNs form relationships and interact with individuals and communities to a greater extent than any other health profession (Butterfield, 2002), and represent the “single largest group of professionals in the public health workforce,” (Meagher-Stewart, Edwards, Aston, & Young, 2009, p. 553); therefore PHNs are well positioned and situated to address water related health concerns.

Yet, public health nurses have been conspicuously absent from the discussion on such issues. Despite the prominence of water as a public health concern, and in spite of the apparent charge of PHNs to take an active role in addressing water related health issues, the literature suggests that promoting environmental health is, in fact, an

underdeveloped role of PHNs (Carnegie & Kiger, 2010; Hill, Butterfield, & Kuntz, 2010).

The limited nursing research that focuses on environmental health, and specifically on water, is reflective of its very findings: that the environmental health role of public health nurses is not well understood and needs to be studied further. The extent to which PHNs engage in promoting health related to safe and secure water is unknown. Moreover, it is questionable whether or not PHNs are prepared and equipped to do so. Although it would seem that PHNs have much to contribute, the literature is too sparse to provide assurance of this.

Practice issues are best understood by practitioners themselves (Fjelland & Gjengedal, 1994). It follows that the unique nature and context of public health nursing positions public health nurses as the best source to gain an understanding of their role in promoting health related to safe and secure water. This study is important for PHNs, so that they may begin to articulate their environmental health role and enact it for the optimal health of individuals, families, communities, and populations.

Purpose of Study

The purposes of this phenomenological hermeneutics study were to gain an understanding of the meaning public health nurses in southern Alberta attach to their experience with promoting health related to safe and secure water; and to illuminate their emergent understanding of barriers and opportunities in that regard. This entailed an exploration of the lived experience of PHNs and how they are encountering water issues within their practice; their understanding of water related health issues in southern

Alberta, their understanding of their role in promoting health related to safe and secure water, and the context of their lived experience in order to enrich understanding of the meaning behind their experiences. Another purpose of this study was to mobilize nursing discourse on this important topic, of which nursing's voice has been notably absent.

Phenomenological hermeneutics seeks to illuminate multiple levels of understanding of phenomenon. This type of design is a good fit to answer the research questions of this study because little is known about the role of public health nurses in promoting health related to safe and secure water (Wood & Ross-Kerr, 2011). There is an abundance of literature on epidemiological and microbiological aspects of water quality related to physical human health, but nothing of relevance to this study in regards to the contributions that PHNs make to promote the health of individuals, families, and communities living in areas at risk for water stress. In fact, as evident in the literature review, there is very limited research at all related to PHNs and general environmental health, and even less related specifically to water. The few nursing articles that do mention water quality (Carnegie & Kiger, 2010; Chaudry, 2008; Dixon, Hendrickson, Ercolano, Quackenbush, & Dixon, 2009; Hill et al., 2010; Meagher-Stewart, et al., 2009; Pike-MacDonald et al., 2007; Savage & Kub, 2009) offer theoretical prescriptions for how nurses could be involved on a very broad practice level. No studies have been done that capture the experiences and perspectives of PHNs, themselves, in regards to their role in promoting health related to safe and secure water. This study endeavors to bring understanding to the meaning PHNs in southern Alberta attach to this role.

Research Questions

The research questions that guided this study were:

- (1) What meaning do public health nurses in southern Alberta attach to their lived experience of promoting health related to safe and secure water for individuals, families, and communities?
- (2) What is their emergent understanding of barriers and opportunities to an enhanced role in this regard?

These research questions were best answered through constructing an understanding of the experiential meaning of promoting health related to safe and secure water among public health nurses in southern Alberta.

Significance of Issue

It seems there may be a gap between the rhetoric and reality of a role for public health nurses in promoting health related to safe and secure water, and the voice of PHNs has been largely absent on the topic. If PHNs are not actively involved in an environmental health role, then existing barriers and opportunities need to be explored. Mobilizing nursing discourse on this topic and bringing issues to light may lead to new understandings and deeper levels of awareness of the opportunities and barriers to an enhanced role for PHNs in this regard. The time is ripe for PHNs to delineate their role in this critical issue in order to capitalize on supports that are already in place, as well as to begin the work of removing barriers. Implications include potential for change within the nursing profession and, ultimately, improved health outcomes for individuals, families, communities, populations, and the aquatic ecosystem itself.

Definitions of Terms

To clarify the research questions and key terms used within the context of this study, the following terms are defined: “public health nurse;” “health promotion;” and “safe and secure water.”

Public Health Nurse

To fully understand how public health nurses can promote health related to safe and secure water, it is important to place their role into context and clearly define their scope of practice. There is variation in the titles applied to community health nurses in Canada, and while PHNs are classified as community health nurses by virtue of their work in and with communities, an inconsistency in nomenclature can create difficulty with interchange among nurses (Underwood et al., 2009). It follows that this poses even greater confusion for other disciplines that may collaborate with public health nursing in addressing water issues. To facilitate clarity and promote optimal multidisciplinary discussion, nurses in this research study are referred to as public health nurses, and are defined by their focus on population health and their role in health promotion, protection, and disease prevention as delineated by the Community Health Nurses of Canada (2011) and the recently published Public Health Nursing Discipline Specific Competencies (Community Health Nurses of Canada, 2009).

The Canadian Public Health Association (2010) defines the public health nurse as baccalaureate prepared and who, in the course of practice:

combines knowledge from public health science, primary health care (including the determinants of health), nursing science, and the social sciences; focuses on promotion, protecting, and preserving the health of populations; links the health and illness experiences of individuals, families, and communities to population

health promotion practice; recognizes that a community's health is closely linked to the health of its members and is often reflected first in individual and family health experiences; recognizes that healthy communities and systems that support health contribute to opportunities for health for individuals, families, groups, and populations; and practices in increasingly diverse settings, such as community health centres, schools, street clinics, youth centres, and nursing outposts, and with diverse partners, to meet the health needs of specific populations. (p. 8)

Health Promotion

The Ottawa Charter for Health Promotion (1986), defines health promotion as “the process of enabling people to increase control over, and to improve their health” (World Health Organization, 1986, para 3). It looks beyond a focus on individual behaviour towards action on creating conditions that support optimal health and wellbeing through five key strategies: (1) building healthy public policy; (2) creating supportive environments for health; (3) strengthening community action for health; (4) developing personal skills, and (5) re-orienting health services.

Safe and Secure Water

There is rising international support for the United Nations to adopt “universal water security” as one of the Sustainable Development Goals, global objectives set to succeed the UN’s Millennium Development Goals that were targeted to be achieved by 2015. The currently proposed definition is:

the capacity of a population to safeguard sustainable access to adequate quantities of and acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability. (United Nations, 2013, para 5)

Conclusion

Water is a high profile public health issue that is being addressed at global, national, and provincial levels. The Government of Alberta (2008) supports the UN Millennium goals through its “Water for Life” strategy that includes objectives of relevance to public health nursing. PHNs are presumably charged with promoting health related to water, and are uniquely qualified and situated to do so. However, the question remains whether what is heralded in theory is happening in practice. This chapter provided an overview of the background context of this issue; the problem, purposes, research questions, and significance of this study; and definitions to clarify key terms used in this report. The following chapter presents a review of relevant literature.

Chapter II - Review of the Literature

An interdisciplinary approach was used to review the literature, and a variety of sources and databases were accessed, including CINAHL, MEDLINE, ProQuest Nursing & Allied Health Source, Academic Search Complete, Science Direct, EBM Reviews (Cochrane Database of Systematic Reviews), Environment Complete, and Google Scholar.

This chapter presents a review of literature that explores the environmental health role of public health nurses with respect to safe and secure water. To illustrate the contribution that public health nurses could make in promoting health related to safe and secure water, it is necessary to first delineate and historically situate the role of PHNs.

The Role of the Public Health Nurse

An Evolving Definition of Health

Health is one of four pillars of the metaparadigm of nursing (Fawcett, 1984) and is deeply embedded within the practice of public health nurses. It is their understanding of health that frames and informs their nursing practice. The definition of health has evolved over time. Originally based on a biomedical model, health was originally defined as the absence of disease or illness (Naidoo & Wills, 2005). The World Health Organization (1948) prompted a change in thinking with the declaration in 1948 that health “is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (p. 100). This was significant because it spawned a holistic view of health that incorporated multiple dimensions, including mental, social,

and spiritual wellness. Health also came to be viewed as a resource for everyday living (McMurray, 2007; Pender, Mudaugh, & Parsons, 2011).

The release of the Lalonde Report in 1974 expanded the focus of health to include behavioural aspects that influence health. Health was now viewed as being within people's control and equally attainable by all. In the 1990's, the definition of health expanded further to incorporate the determinants of health beyond the control of human behaviour (Naidoo & Wills, 2005). The Public Health Agency of Canada (2010) describes the determinants of health as: income and social status; social support networks; education; employment and working conditions; physical environment; biology and genetics; personal health practices and coping skills; healthy child development; health and social services; gender; culture; and social environment. This is not the only model that exists; for example, Raphael (2009) has delineated 12 overlapping and alternative social determinants of health, a perspective that excludes physical factors, but includes food security and housing. In this thesis, I have adopted the most comprehensive view. The framework for those factors that influence and determine health is referred to as the "determinants of health" within this study.

With the focus on the determinants of health, health was now understood to be a product of socioenvironmental factors (Naidoo & Wills, 2005). Of significance to this was the recognition that health is not equally attainable by all, and that people and communities have varying levels of capacity to influence their health. This translated into an understanding that a generic or universal definition of health does not exist:

individuals and communities hold their own definitions of health based on the varying social and environmental contexts within which they live.

Currently, a socioecological view of health is becoming increasingly prominent (McMurray, 2007). From this perspective, health is understood to be inclusive of systems within which people live, and influenced by reciprocal relationships and interactions between individuals and their environment. It recognizes that individual health cannot be separated from the health of the community, and also links human health to the health of the ecosystem (Pender, et al., 2011; Rodgers, 2005).

An Evolving Discipline: Public Health

As the definition of health has evolved through time, so too has the discipline of Public Health. During the biomedical era, Public Health was defined by a public health medicine approach that was founded on biomedicine, epidemiology, and health economics (Naidoo & Wills, 2005). The main focus was on prevention of disease through monitoring and managing outbreaks, surveillance, and regulation (McMurray, 2007; Naidoo & Wills, 2005).

From there, Public Health underwent a continuous evolution from downstream and midstream thinking to upstream thinking, starting with the 1978 Declaration of Alma Ata that proclaimed monitoring and surveillance to be insufficient for creating healthier societies. This notion was reinforced at the first World Health Organization (WHO) Conference on Health Promotion in 1986, where it was recognized that health is influenced by both lifestyle and living conditions (McMurray, 2007). From this emerged a focus on developing policies to protect and promote health. Public Health began to

draw from the disciplines of sociology, social policy, education, and psychology and adopted a health promotion approach (Naidoo & Wills, 2005). Following suit with the changing definition of health, Public Health turned its focus to the determinants of health as key factors that influence health, and began to address health inequities related to social and environmental factors.

Currently, Public Health is embracing a socioecological approach to health promotion that considers individual, family, group, community, and political systems and the overall impact of their interaction on health. With this, there is renewed focus on the environment and integration of the ecosystem into population health efforts (Pender, et al., 2011; Rodgers, 2005).

An Evolving Role: Public Health Nursing Practice

Concurrently with the evolving definition of health, and its corresponding influence on the discipline of Public Health, were shifts in public health nursing practice. Over time, public health nurses moved away from a biomedical orientation and became increasingly involved in promoting healthy lifestyles through health education efforts targeted at effecting behaviour change, and they began working with individuals and communities to take action on the determinants of health. With this, the client was recognized as having valuable knowledge and was invited to participate in the nursing process. Efforts were focused on building capacity through collaboration and partnerships with their clients. Now, with the socioecological approach to health promotion, the beneficial aspects of past approaches have been embraced and expanded upon to incorporate system level efforts. This approach has provided an opportunity to include

the physical environment as a target of nursing care and promotes an ecological focus in health care (Pender, et al., 2011; Rodgers, 2005).

Public health nurses in Canada are guided by the Canadian Community Health Nursing Standards of Practice (Community Health Nurses of Canada, 2011) that translate the core beliefs and values of community health nurses (caring; the principles of primary health care; multiple ways of knowing; individual and community partnership; and empowerment) into the following standards: (1) Health Promotion; (2) Prevention and Health Protection; (3) Health Maintenance, Restoration and Palliation; (4) Professional Relationships; (5) Capacity Building; (6) Access and Equity; and (7) Professional Responsibility and Accountability.

Promoting health includes health education, but the thrust of health promotion lies in acting upon the determinants of health to support individuals and communities in taking action to improve their health (Community Health Nurses of Canada, 2008; Green & Tones, 2010; Pender et al., 2011). This approach to health promotion evolved simultaneously with the evolution of the definition of health and corresponding change in focus of Public Health to one that includes a multisectoral approach and multidisciplinary collaboration to creating supportive environments (Pender, et al., 2011). The Ottawa Charter for Health Promotion (1986) called for the need to promote health at a global level and identified fundamental conditions and resources required to achieve community health: peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice, and equity (McMurray, 2007). This supported the use of a socioecological

approach to building healthy public policy and creating supportive environments for health, including a safe and secure water supply.

Central to the role of public health nurses is health promotion (Community Health Nurses of Canada, 2011; Manitoba Health, 1998), which involves collaborating with individuals, families, and communities for the purpose of “enabling people to increase control over, and to improve their health,” (Community Health Nurses of Canada, 2011, p. 10), and ultimately for improving and facilitating sustainance of health for whole populations. Health promotion extends beyond increasing the knowledge of individuals so that they can change their behavior; it involves collaborating with clients to identify their assets and needs; to identify root causes of illness, disease, and health inequities; to consider the socio-political context and issues that underlie client health status; and to facilitate and implement planned change by identifying levels of intervention, determinants of health on which to take action, and appropriate strategies to effectively create supportive environments conducive to health (Community Health Nurses of Canada, 2011).

However, the findings of a recent Canadian study that explored issues faced by community health nurses in Canada (Schofield et al., 2011) suggest that there are barriers to enacting a full role in health promotion, including a reduced scope of practice for community health nurses; a general lack of understanding about their role and what they can contribute toward health promotion; and their replacement by other health professions in that role.

Public Health Nursing and Environmental Health

The environment is a determinant of health (Eyles, 1999; Public Health Agency of Canada, 2010; Stanhope, Lancaster, Jessup-Falcioni, & Viverais-Dresler, 2008), and it represents one of the five pillars of the metaparadigm of *community* health nursing (CHNC, 2011). In fact, public health nursing is deeply rooted in environmental health with early attention to the affect of environment on health by Florence Nightingale (Nightingale, 1969).

The World Health Organization (1993) defines environmental health as “those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social, and psychosocial factors in the environment,” and refers to it as “the theory and practice of assessing, correcting, controlling, and preventing those factors in the environment that can potentially affect adversely the health of present and future generations.” While there is much support in theory for public health nurses to have a role in environmental health (Chalupka, 2005; Fraser, 2004; McMurray, 2007; Pender, et al., 2011; Stanhope, et al., 2008), and some literature that proposes frameworks, models, and principles that could lend support to PHNs in the enactment of this role (Barnes et al., 2010; Butterfield, 2002; Chaudry, 2008; Parker, Baldwin, Israel, & Salinas, 2004), it is acknowledged that the environment has traditionally been neglected in consideration of its interaction with person, health, and nursing within nursing theory, and that the person-environment relationship is not well understood (Butterfield, 2002; Huynh & Alderson, 2009). Moreover, environmental health nursing is

speculated to be an underdeveloped role in public health nursing (Carnegie & Kiger, 2010; Hill, Butterfield, & Kuntz, 2010).

In a recent American study, public health nurses were interviewed in regards to barriers and facilitators to a more explicit role in promoting general environmental health (Hill, Butterfield, & Kuntz, 2010). It concluded that a majority of PHNs lack formal education and competency in environmental health. Moreover, PHNs cited lack of time, resources, and interest of the client as barriers to engaging in environmental health promotion. Of perhaps greater significance, it was found that PHNs are not considered primary resources to access when encountering environmental health issues. Therefore, the PHNs in this study engaged very little in environmental health promotion.

It is generally agreed upon that there is a lack of knowledge and clear models to support public health nurses in an environmental health role (Carnegie & Kiger, 2010). In fact, position statements of the International Council of Nurses (2004, 2006) and the Canadian Nurses Association (2003, 2007, 2008), as well as the Canadian Community Health Nursing Standards of Practice (Community Health Nurses of Canada, 2011) and the Canadian Public Health Nursing Discipline Specific Competencies (Community Health Nurses of Canada, 2009) only provide support for PHNs to have a role in environmental health issues; none of them provide explicit guidance on the implementation of an environmental health role for PHNs.

Several authors discuss the need to strengthen nursing education through the infusion of environmental health principles into nursing curriculum (Gerber & McGuire, 1999; Jonckheer & DeBrouwer, 2009; Kirk, 2002; Ortner, 2004). Some authors have

used case studies to illustrate how environmental health can be incorporated into nursing education programs (Backus, Hewitt, & Chalupka, 2006; Hewitt, Candek, & Engel, 2006); however, these were few and specifically focussed on contexts not relevant to public health nursing in southern Alberta.

Additional strategies to expand the environmental health role of public health nurses have included the development of specific taxonomies related to environmental health that could assist PHNs in articulating their role and linking environmental exposures to health outcomes (Green, Polk, & Slade, 2003; Polk, 2007), but these have not had a significant impact or been formally adopted in the ten years since they were proposed. Furthermore, they are of an American context. In Canada, PHNs have access to the Public Health Nursing Discipline Specific Competencies (Community Health Nurses of Canada, 2009), and while these are not exclusive of environmental health competencies, they are also not explicit in them.

Safe and Secure Water

Although water quality is a global health issue (Charrois, 2010; Hrudey & Hrudey, 2007), for the purpose of this literature review, the issue will be addressed from a Canadian perspective. Three to four million people in Canada, which translates to 13% of the population, rely on private water supplies predominantly sourced from ground water (Charrois, 2010). While there are Canadian guidelines that set standards and mandate policies related to water quality, these are directed at public water suppliers. Owners of private water supplies are legally responsible for the quality and maintenance of their own systems in this country (Charrois, 2010; Jones et al., 2006).

Waterborne Disease Outbreaks

There is much literature on waterborne outbreaks in developed countries; however, it is mainly comprised of retrospective analyses of specific disease outbreaks (Ali, 2004; Salvadori, et al., 2009); compilations of literature capturing recurring themes and major factors that have contributed to waterborne disease outbreaks (Hrudey & Hrudey, 2007; Rizak & Hrudey, 2008); and prospective papers on protection of ground water and management of microbial risks, water wells, and watersheds (Davies & Mazumder, 2003; Krewski et al., 2004; Simpson, 2004; Twarakavi & Kaluarachi, 2006). These documents provide valuable information related to statistics, distribution of outbreaks, types of pathogens, as well as risk and protective factors. They also identify a need for greater knowledge, improved communication, and more collaboration to protect populations from waterborne illness (Acharya, et al., 2007; Burkholder et al., 2007; Grant Kalischuk, et al., 2009; Greger & Koneswaran, 2010; Jiang & Somers, 2009; McElroy, 2010; Miller et al., 2004; Miller et al., 2006; Olson, Miller, Rodvang, & Yanke, 2005). Relevant to this study, public health nurses were not mentioned in consideration of these recommendations.

Agricultural Risks Related to Water

A significant risk to water quality that is particularly relevant in southern Alberta is related to agricultural practice (Caldwell, 2001). Several articles point specifically to concentrated animal feeding operations, hereafter referred to as feedlots, as a significant source of pollution to ground and surface water (Acharya et al., 2007; Grant Kalischuk et al., 2009; Greger & Koneswaran, 2010; Jiang & Somers, 2009; McElroy, 2010; Miller et

al., 2004; Miller et al., 2006; Olson et al., 2005). Of these, only Acharya et al. (2007) and Grant Kalischuk et al. (2009) gathered data from individuals and communities that provide insight into people's health concerns related to water supply and their knowledge of local water contamination. These researchers provide recommendations for public health policy development related to water management and sustainability, as well as identify the need for more socioeconomic and health survey information. The remainder of the articles focus exclusively on feedlot contamination of water and do not make reference to human health or interdisciplinary collaboration. Therefore, recognition of a potential role for public health nurses is absent. In addition, of all of the afore mentioned articles, only one is published in a nursing journal (McElroy, 2010). While this publication provides an overview of literature pertaining to environmental health issues, it is not a research study and does not offer the perspective of nurses or clients. Furthermore, it is not specifically focussed on water. Rather, McElroy (2010) captures all of the possible environmental risk factors associated with the business of agriculture. What is valuable is that it is a somewhat current article that brings environmental health issues to the attention of nurses, and therefore has potential to provoke discussion about a potential role for PHNs with respect to water.

Protection of ecosystems to enhance protection of human health has been proposed by several authors (Burkholder, et al., 2007; Jiang & Somers, 2009; McElroy, 2010; Miller, et al., 2006). This supports the use of a socioecological framework to explore the role of public health nurses in promoting health related to safe and secure water. Moreover, it is necessary to consider risks to agriculture as much as risks from

agriculture (Caldwell, 2001). From a socioecological perspective, the agricultural community supports social and economic factors related to the health of individuals, families, and communities.

Perception of Risk

There is much literature on risk perception related to environmental health (Bickerstaff, 2004; Caldwell, 2001; Dixon et al., 2009; Harnish, Butterfield, & Hill, 2006; Larsson, Butterfield, Christopher, & Hill, 2006; Suter, Vermeire, Munns, & Sekizawa, 2003) and to water quality specifically (Acharya, et al., 2007; Grant Kalischuk, et al., 2009; Jones et al., 2005; Jones et al., 2006; Jones, et al, 2007). The majority of these articles are research based studies (Acharya, et al., 2007; Dixon et al., 2009; Grant Kalischuk et al., 2009; Harnish, et al., 2006; Jones, et al., 2005; Jones, et al., 2006; Jones, et al., 2007; Larsson, Butterfield, Christopher, & Hill, 2006) that are informative to nursing practice despite the fact that only three of them are published in nursing journals (Dixon, et al., 2009; Harnish, et al., 2006; Larsson, et al., 2006).

Risk perception is defined as “people’s beliefs, attitudes, judgments, and feelings, as well as the wider cultural and social dispositions they adopt toward hazards...” (Bicherstaff, 2004, p. 827). The socioecological context must be taken into consideration when communicating risk, because if messaging is not in alignment with individuals’ and community’s experiences, and if it does not connect with their health frameworks, the message is likely to be disregarded (Bickerstaff, 2004). This is contrary to the assumptions of other studies, which attribute lack of action in response to risk

communication as lack of knowledge and understanding of the risks (Charrois, 2010; Jones, et al., 2006; Larsson, et al., 2006).

Lack of trust in regulatory agencies may also be a factor that influences risk perception. Bickerstaff (2004) claims such dissonance negatively impacts upon people's perceptions of their capacity to take action. This is congruent with the findings of Acharya et al. (2007), which suggest that many people do not believe water contamination reports. The findings of this study also suggest that people who *do* believe the reports often neglect to take action because they do not believe that they, personally, are at risk. Factors contributing to this denial included previous clean reports on the testing of their water and clean reports of their neighbours' water supplies. This points to a lack of understanding, because it is known that the state of water quality within one geographical location is dynamic and varied amongst others. Of significance to this study is that the research of Acharya et al. (2007) was conducted within the same communities in which public health nurses were interviewed for this study regarding their role in promoting health related to safe and secure water.

Conclusion

A safe and secure water supply is a public health issue in southern Alberta, particularly for those who access their water supply from private sources, and especially for people who live in communities with highly industrialized and intensive feedlots. Well maintenance and water testing to ensure it meets national recommendations for levels of contaminants are the responsibilities of individuals in Canada. Evidence informs us that this is not always done sufficiently or adequately, leading to risk of waterborne

disease. Factors that may contribute to this apparent lack of compliance may be deficient knowledge or underestimated risk. There may also be conflict between abiding by recommendations and compromising livelihood.

Much is known about how to decrease risk of water contamination at the source and how to prevent exposure to poor water quality; however, there has not been discussion among all of the relevant disciplines. Nursing has been notably absent in the literature on this topic, yet nursing has much to contribute to the discussion. Public health nurses form relationships with individuals, families, and communities, and are specialized to work within those contexts and promote holistic health. Therefore, the voice of public health nursing needs to be heard. There is much support for public health nurses to have an active role in this area from both theoretical and professional standpoints, but there may be barriers in connecting theory to practice. Thus, this study explores public health nurses' lived experience of promoting health related to safe and secure water in order to illuminate multiple levels of understanding of the meaning of that experience. A socioecological framework provides the nursing lens for this study to underscore that the work of public health nurses is based on a systems view of health, and that multiple levels of intervention are essential to promoting health related to safe and secure water.

Chapter III – Methodology

Characteristics of Qualitative Research

The philosophical underpinnings of a particular paradigm are what guide the design of a research study. A paradigm is descriptive of a world view, and holds thoughts, values, beliefs, attitudes, and orientations; and involves the understanding of socio-cultural aspects, anthropological conceptions, and psychological behaviours (Rodriguez, 2004). Guba (1990) defines a paradigm as “a basic set of beliefs that guide action” (p. 17). However, people typically act and react in the course of everyday living without forethought in a pre-reflective state (Smythe, Ironside, Sims, Swenson, & Spence, 2008). Rodriguez (2004) helpfully extends the definition of world view beyond mental structures to encompass action, interaction, behaviour and choices that manifest as influenced by mental understandings. Rather than viewing actions as guided *by* beliefs, actions are manifestations *of* beliefs. Therefore, a paradigm is more than a concept; it is indicative of a practice (Rodriguez, 2004; Wilber, 2000). This distinction, though subtle, is significant because it positions a researcher by framing the philosophical orientation that guides an entire study.

To be fully informed by a paradigm, it is necessary to be cognizant of the ontology, epistemology, and methodology as interpreted from the perspective of that paradigm. Ontology addresses questions about the nature of truth and reality (Patton, 2002) and what it is that can be known (Lincoln & Guba, 1994). Epistemology addresses the process of how the world is studied and how that knowledge is gained (Patton, 2002), and it describes the relationship between the knower and what can be

known (Lincoln & Guba, 1994). Methodology addresses the process of how the world is studied and how the knower can obtain the knowledge and understanding that is sought (Lincoln & Guba, 1994; Patton, 2002), guiding the researcher in selecting the appropriate study design to facilitate the discovery of what the researcher believes *can* be known by way of methods that support *how* the researcher believes something can be known (Lincoln & Guba, 1994). Study design is selected to best answer particular research questions, utilizing methods that are in alignment with the philosophical orientation of the researcher.

This chapter describes the study design used to explore the phenomenon of public health nurses' experiential meaning of promoting health related to safe and secure water within the context of their practice, in addition to their emergent understanding of barriers and opportunities in that regard. The core paradigm of constructivism, closely related to that of interpretivism (Guba & Lincoln, 2005; Lincoln & Guba, 1994; Patton, 2002), informed this phenomenological hermeneutics study. The method for data collection, semi-structured interviews, was consistent with the methodology, and was the strategy that best answered the research questions. Data analysis was done manually through thematic analysis (van Manen, 1990).

Philosophical Stance

Constructivism

The paradigm of constructivism incorporates a relativist ontology of multiple socially constructed realities (Guba & Lincoln, 2005; Lincoln & Guba, 1994; Patton, 2002); a transactional epistemology (Guba & Lincoln, 2005) that is subjective and

reflects its ontological orientation in seeking to understand people's constructed meanings of truth and reality (Patton, 2002); and a hermeneutic or dialectical methodology (Guba & Lincoln, 2005), which is characterized by particular strategies related to qualitative study design, data collection, and data analysis (Patton, 2002). Qualitative inquiry may be described as a subjective and values influenced (Erlandson, Harris, Skipper, & Allen, 1993) discovery oriented approach to research, in which the researcher is personally engaged with participants (Patton, 2002) in natural settings (Lincoln & Guba, 1985; Patton, 2002). It is also characterized by purposive sampling, a holistic perspective, inductive analysis of rich contextualized description (Patton, 2002), a tentative application to findings, and quality assurance by way of trustworthiness (Lincoln & Guba, 1985). The ontological, epistemological, and methodological orientations of constructivism are philosophical in nature; they are not prescriptive. Therefore, *methodology* should not be confused with *method*, which is merely indicative of the technical processes of conducting research (Patton, 2002).

Under constructivism, the aim of qualitative inquiry is to gain an understanding of people's individual and collective constructed meanings of truth and reality (Guba & Lincoln, 2005), including not only their perspectives, but their actions and interactions (Patton, 2002). It is assumed that individuals understand and experience the world differently within their particular cultural contexts, and that this manifests as people's perceptions, values, and interactions among one another (Lincoln & Guba, 1985). The divergent realities of individuals converge within a community to form a shared

understanding, which functions as a point of reference for individuals' perspectives and a framework for their actions (Erlandson, et al., 1993).

Phenomenological Hermeneutics

Hermeneutic philosophy, first developed by Frederich Schleiermacher and applied to human science research by Wilhelm Dilthey, focuses on interpretation (Patton, 2002). The phenomenological focus on the lived experience was introduced by Edmund Husserl in reaction to the context free generalizations of the positivist approach of natural science. However, true to the context within which he studied, he was influenced by the positivist tradition and attempted to objectify subjective experience through the technique of bracketing personal fore-knowledge. The aim of his phenomenology was eidetic descriptions of common knowledge that were free of context (Holloway & Wheeler, 2010; Munhall, 2007).

In contrast, Martin Heidegger rejected eidetic structures and brought the ontological realms of subject and object together, and expanded upon phenomenology to incorporate an existential philosophy (Von Eckartsberg, 1998) that centred on “being-in-the-world” and *meaning*, as opposed to *knowledge*. The basic premises of “being-in-the-world” included “Daseine,” the notion of relational and context informed meaning of being, and “situatedness,” the notion that “Daseine” itself is embedded within a broader social, political and cultural context (Holloway & Wheeler, 2010; Munhall, 2007; Plager, 1994). Heidegger’s existential hermeneutics proposes that “persons are not selves separated from a world that is presumed to exist completely independently of them. Rather, they are personal involvements in a complex totality network of interdependent

ongoing relationships that demand response and participation.” (Von Eckartsberg, 1998, p. 11). In other words, people not only experience their world, but they are implicated in creating it.

Hans-Gorge Gadamer took Heidegger’s ontological stance and expanded the focus on *being* to incorporate *understanding*, and presented a philosophical hermeneutics that can be apprehended for use in qualitative research studies (Dowling, 2004; Dowling, 2007; Munhall, 2007; Streubert & Rinaldi Carpenter, 2011). Neither Heidegger’s nor Gadamer’s phenomenological hermeneutics offer a prescriptive method for how to engage in research; however, neither do they promote a carte blanche approach to research. Rather, they provide philosophical structure to facilitate decision making that is conducive to the construction of knowledge under the constructivist paradigm (Fleming, Gaidys, & Robb, 2003; Patton, 2002; Smythe, et al., 2008). Hermeneutics “is not to develop a procedure of understanding, but to clarify the conditions in which understanding takes place...These conditions are not of the nature of a procedure or a method which the interpreter is of himself to bring to bear on the text” (Gadamer, 1989, p. 263). Thus, the goal of hermeneutics is to support the conditions that are involved in the processes of understanding and constructing knowledge, and with that, sound methodological decisions can be made.

Phenomenological hermeneutics is characterized by an interpretivist view, by which hermeneutics exists *for* understanding, and understanding is represented by the lived experience (Smythe, et al., 2008). Fundamental to a phenomenological hermeneutics orientation to understanding are the notions of historicity, dialogical

encounter, and temporal meaning. Historicity refers to the belief that true understanding is achieved as a result of inherent bias and prejudice of both the participant and the researcher, and that meaning is dependent on the cultural context within which it is constructed and interpreted (Palmer, 1969; Patton, 2002). Herein lies a stark difference between phenomenological hermeneutics and the phenomenology of Edmund Husserl, whereby pre-understandings in phenomenological hermeneutics are not bracketed, but embraced. The lived experience that is brought forward from the tradition into which a person is born is inseparable from current understanding because it is due to the nature of previous knowledge that something is interpreted as it is (Gadamer, 1989; Schwandt, 2000).

In addition to historicity, dialogical encounter and temporal meaning are fundamental principles of phenomenological hermeneutics, by which transient understanding that is specific to participants in a particular time and place is believed to be achieved through conversation and questioning. Understanding is bound to language, which includes what is *not* said as much as what *is* said (Smythe, et al., 2008). “Hermeneutics peers behind language; it ventures into the contextual world of a word, considering what is said, what is uttered, but at the same time what is silenced.” (Grondin, 1995, p. x). The implication of this for research is that the meaning of text is negotiated between the researcher and participants, and that meaning is contextually relevant to a particular time and place (Patton, 2002). The process of creating this understanding involves moving back and forth between the parts and the whole of the text in what is commonly referred to as the hermeneutic circle.

As a phenomenological hermeneutics study, this study took an ontological stance and focused on the meaning of *being* a public health nurse; who the nurse is and what the nurse does within practice that embodies that role. This was a necessary component of the context that served to illuminate the meaning that PHNs attach to their role in promoting health related to safe and secure water, and to shed light on their emergent understanding of barriers and opportunities for an enhanced role in this regard. The focus of this study was not on the job description of PHNs, and was independent of their workplace and employer. Thus, the context of this study was reflective of the perspectives of PHNs within their situated social and historical tradition, and aligned with the notion of nurses defining and developing their own role.

Theoretical Framework

Because it is necessary to view phenomenological hermeneutics within its current context in the world, and because this study was for the purpose of increasing nursing knowledge, it was important to support the study with a theoretical framework that informs nursing practice. A socio-ecological framework, described in the Ottawa Charter for Health Promotion (World Health Organization, 1986), outlines the essential dimensions of community health: peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice, and equity. All of these dimensions can be linked to a safe and secure water supply. Public health nurses promote community health, and given that individual, family and community health cannot be separated from the health of society, and since the relationship of human health to the health of the

earth's ecosystem is also recognized as an important dimension of health (Pender, et al., 2011), it is prudent to approach public health nursing from a socioecological perspective.

From this perspective, health is understood to be inclusive of systems within which people live, and is influenced by reciprocal relationships and interactions between individuals and their environment that includes other individuals, families, groups, the community, and the socio-political context (Parkes & Horwitz, 2008). It also links human health to the health of the ecosystem, and recognizes that individual health cannot be separated from the health of the community (McMurray, 2007; Pender, et al., 2011; Rodgers, 2005).

A socioecological framework is useful for understanding the interrelationships between people and their environments. Environments are viewed as complex systems and efforts to promote health must consider the interdependence among all of the components and levels of the environment (Parkes & Horwitz, 2008). Socioecological models have been useful for framing many health promotion strategies (Cole, 1999; Eyles, Gibson, & Ross, 1999), and they have been applied to such topics as physical activity, tobacco use, substance abuse (Pender, et al., 2011), sexually transmitted infections (DiClemente, Salazar, Crosby, & Rosenthal, 2005), nutrition education (Gregson et al., 2001), and poverty reduction (Cohen & Reutter, 2007). A socioecological autopsy of the E.coli outbreak in Walkerton, Ontario has also been conducted (Harris Ali, 2003). This framework supports the foundation of the Canadian Community Health Nurses of Canada Practice Model (Community Health Nurses of Canada, 2011) and

provided the nursing lens for this study. It was embedded within the questions of the data collection, and was considered in relation to the findings of the data analysis.

Role of the Researcher

Researcher as Instrument

In phenomenological hermeneutics, the researcher is implicated as the mode of interpretation (Laverty, 2003; Smythe, et al., 2008). However, one can only interpret the meaning of something from a particular perspective, or situational context, when conveying the understanding of study participants. The researcher's personal experiences and insight, or "situatedness," are important parts of the inquiry and critical to understanding the phenomenon (Patton, 2002). My role as interpreter necessarily placed me in close contact with the participants because personal experience and engagement are critical to meeting the aims of phenomenological hermeneutics. Together, the participants and I engaged in co-construction of meaning throughout the data collection and data analysis processes (Schwandt, 2000; Smythe, et al., 2008), and this is why, from here forward, participants in this study are referred to as my co-researchers.

This phenomenological hermeneutics study was largely underpinned by the work of Gadamer, in which all understanding is assumed to be dependent upon pre-understanding. With that, historical awareness and personal context were pivotal points toward the co-construction of meaning, or the fusion of horizons of understanding, between me and my co-researchers (Fleming, Gaidys, & Robb, 2003). Therefore, as the researcher and the instrument of this study, I engaged in reflection of my own pre-

understandings of the phenomenon prior to and throughout the duration of data collection and analysis.

It was important for me to articulate my beliefs and prejudices related to the interconnections between a safe and secure water supply, health, and public health nursing from a socioecological perspective. I needed to remain cognizant that, like my co-researchers, my interpretations were influenced by my own historical and contextual points of reference. It was important for me to consider what motivated my exploration and how I was already influenced, because in pursuing a phenomenological hermeneutics study, I accepted a potential transformation of my worldview through the experience.

Personal Situatedness

As a public health nurse, I brought to this study my own extensive knowledge and experiences with being a PHN. In addition, I brought forward my own experiences and context for practice within a small urban centre in southern Alberta. Of even greater significance, I brought my biases and strong belief that PHNs ought to have a role in promoting health related to safe and secure water.

Phenomenological hermeneutics is concerned with “being-in-the-world,” (Heidegger, 1962), and my way of *being* in the world is embedded within my own experiences of being a public health nurse and being a nursing instructor who teaches the concepts of health promotion and community health nursing. Also implicated are my strong beliefs that public health nurses need to practice at full scope and be involved in promoting health at all levels utilizing all strategies from a socio-ecological perspective. I acknowledge that I cannot bracket my own prejudices and pre-understandings. I have

knowledge and experience, as well as values associated with this topic, that inspired the particular focus of this research in the first place. My pre-understandings and my evolving understandings that emerged through the process of this research study influenced my interpretation and the role I played as co-researcher. It was through co-construction of meaning that I reached a fusion of horizons with my co-researchers.

Research Design

This study was an exploration of understanding and lived experience of public health nurses within the context of their practice. Part of their understanding and experience included their perspectives on behaviour and action: perhaps their own, or perhaps that of the community and other individuals within it. What was to be illuminated was unknown at the outset of this study. However, it is clear that a phenomenological hermeneutic approach was suitable for exploring the phenomenon of PHNs' experiential meaning of promoting health related to safe and secure water, as well as their emergent understanding of barriers and opportunities in that regard. To maintain alignment with the philosophy of phenomenological hermeneutics, a research design was applied to co-construct a shared understanding of promoting health related to safe and secure water among PHNs who practice in southern Alberta. The research questions were encountered by the co-researchers through an exploration of how they understand their role and how they have encountered issues related to water within their practice.

Although Heidegger and Gadamer do not provide explicit methods for engaging in research studies underpinned by their philosophies (Earle, 2010), van Manen (1997) offers a systematic approach to research that is largely consistent with Gadamer's

philosophical hermeneutics, with the exceptions of the role of pre-understanding and the manner of movement between the parts and whole of the text. While Gadamer reinforces the importance of continuous reflection of pre-understandings for gaining understanding, van Manen requires only an initial reflection of that nature (Fleming et al., 2003); and while van Manen opines movement from the whole to the parts of text, Gadamer reinforces the need for a return to the whole. This study was informed by the philosophies of Heidegger and Gadamer. Therefore, although it essentially followed van Manen's steps for research, specifically in regards to thematic analysis, this study was enhanced by concentrated ontological focus on the meaning of *being*, and was enhanced by my continuous reflection throughout the process.

Research Setting

Consistent with the naturalistic aspect of qualitative inquiry, individual interviews took place within communities across southern Alberta at sites chosen by the co-researchers. All contact, interviewing, and follow-up communication was conducted within the participants' personal time outside of working hours. Most of the interviews took place in the co-researchers' work settings; some took place in their homes; and one was conducted in my own work space at the University of Lethbridge. In all cases, the interviews were held such that co-researchers could be assured of privacy and confidentiality, thereby increasing their comfort level and facilitating generation of deep meaning and optimal richness of the data (Levy & Hollan, 1998).

Co-Researcher Sample

“Qualitative researchers sample for *meaning*, rather than frequency” (Munhall, 2007, p. 530). Therefore, the quality of the data, and ultimately the study itself, was dependent upon a co-researcher sample that had experience with being public health nurses, and who could offer thick, rich descriptions of their lived experiences. Purposive sampling is a strategy for selecting participants who have experiential fit (Munhall, 2007), and was used to recruit co-researchers for this study. Public health nurses practicing within the South Saskatchewan River Basin or the Milk River Basin were selected on the premise that they were information rich and had the capacity to illuminate the phenomenon based on their experience working with populations in southern Alberta (Patton, 2002). Recruitment of suitable co-researchers was facilitated through snowball sampling. I contacted a PHN who had previously self-identified as a willing co-researcher for this study, and who had stepped forward with an offer to initiate contact with other PHNs (Bryman, 2009). I also received an offer from an acquaintance to contact a PHN in another area of southern Alberta to generate a second snowball effect, effectively expanding the geographical range of co-researchers within the study’s designated boundaries of the South Saskatchewan River Basin and Milk River Basin. In the event that I had not been able to obtain a sufficient sample for saturation through these sources, I had a secondary plan to contact the media and provide posters to local supermarkets and other places where communities gather. This, however, was not necessary, as I was successful in recruiting a sufficient sample through my initial strategy.

The size of the sample was determined by data saturation, and was inclusive of 23 semi-structured interviews among ten public health nurses. One co-researcher, who participated in a single interview, withdrew from the study. All nine remaining co-researchers were interviewed twice, two of which were interviewed three times. Third interviews were conducted on the advisement of my supervisor as a strategy to enhance trustworthiness of the study. These additional interviews provided an opportunity for me to discuss the findings at a deeper level with two of my co-researchers who were deemed able to speak deeply to the topic, and served to enrich our shared understanding of the meaning public health nurses attach to their lived experience with promoting health related to safe and secure water. In addition, I was able to assess whether emerging themes related to the PHNs' lived experience and their emergent understanding of barriers and opportunities for an enhanced role with water resonated with these co-researchers.

Gadamer claims that understanding is ever evolving through engagement in the hermeneutic circle (Fleming, et al., 2003). Therefore, to facilitate development of understanding of the co-researchers, it was essential to interview them more than once. The first interview was used to explore how PHNs were encountering water related health issues within the context of their practice, their understanding of water as a public health issue, their understanding of their role in promoting health related to safe and secure water, the interconnections between these factors, and their emergent understanding of barriers and opportunities for an enhanced role in this regard. The second interview functioned to review prominent themes that arose from the first

interview in order to confirm my understanding of my co-researchers' perspectives and elaborate on issues deemed to warrant further exploration. Through this subsequent dialogue, a shared understanding between my co-researchers and myself was reached (Fleming, et al., 2003; Walker, 2011). This is in alignment with appropriate data collection and analysis strategies for phenomenological hermeneutics (Walker, 2011).

To determine eligibility of co-researchers, demographic information was collected during the initial contact, using the form in Appendix B. Inclusion criteria were defined as baccalaureate prepared public health nurses, of any age or gender who, at the time of the study:

- were currently practicing, or who had been practicing within the last two years, in southern Alberta
- had experience in the area of public health nursing, having worked a minimum of two years in the field
- had practiced within a particular community for a minimum of one year
- were currently working, or had been working, in a permanent or temporary position with a minimum of .53 of a full time equivalent
- were willing to share their experiences as a public health nurse
- were English speaking

Exclusion criteria for this study included public health nurses who:

- had not practiced in southern Alberta within the last two years
- had worked as a public health nurse for less than two years
- had not practiced within a particular community for at least one year

- had been working casually or in a full time equivalent (FTE) of less than .53
- were not English speaking

In addition to determining eligibility, the first contact provided an opportunity to establish rapport with my co-researchers and equalize any perceived power imbalances (Walker, 2011). Establishing a comfort level was critical to the generation of rich data at the time of the interviews. I also read the Letter of Invitation to participate in the study (Appendix C). This letter had already been sent to them by the initiators of the two snow ball effects, but I reviewed the letter to ensure potential co-researchers were clear in the details and ethical safety of participating in this study. Once agreement was made to participate in the study, I invited my co-researcher to select the location of the interview with respect to assuring privacy and facilitating an environment conducive to gathering and co-constructing thick, rich data.

Data Collection Procedures

It was through a hermeneutic circle of simultaneous data collection and data analysis that understanding prevailed and meaning emerged (Smythe, et al., 2008). Specific to the process of data collection, the focus was on in-depth inquiry that would produce thick, rich description and capture verbatim quotations from PHNs about their lived experiences (Patton, 2002).

Van Manen (1997) emphasizes that the type of interview used in a study should be determined by the research questions. Since the purpose of this study was to explore meaning attached to a lived experience, open-ended semi-structured interviews were the mode of data collection used (Ryan, Coughlan, & Cronin, 2009). These types of

interviews are conducive to meeting the aim of phenomenological hermeneutics to facilitate the necessary conditions for optimal understanding (Walker, 2011), and offer the flexibility needed to promote the development of themes regarding lived experience.

To maintain focused conversation on the phenomenon being explored, questions were organized under a list of topic headings on an interview guide (Appendix D). This provided the flexibility needed for deep exploration of the topic and facilitated the discovery of feelings, ideas, and concerns by allowing the public health nurses to reflect upon themselves and their experiences. Moreover, it lent insight into how their attitudes influence their behaviours or actions, and just as significantly, how these orientations do not motivate actions (Hollan, 2005). The interviews followed a natural progression primarily led by my co-researchers, with questions modified or added as needed to accommodate the exploration and clarification of emerging meaning. This type of interviewing is consistent with how knowledge is understood to be constructed within the paradigm that is supported by the philosophical underpinnings of phenomenological hermeneutics: namely constructivism.

To build rapport and promote the comfort of my co-researchers, interviews began with informant style questions, which also served to gather data on the context within which my co-researchers understood and interpreted their realities. It was important to capture not only personal experiences and interpretations, but also accounts of sociocultural relevance to situate and provide context for the study (Levy & Hollan, 1998). Moreover, to maintain alignment with the ontological and epistemological assumptions of the philosophical underpinnings of this study (Walker, 2011), it was

critical to develop an understanding of my co-researchers themselves, because such insight assists in placing a topic of study within its sociocultural context (Hollan, 2005; Levy & Hollan, 1998).

As the instrument for this study, I utilized dramaturgical questions that encouraged my co-researchers to share their experiences in a story telling approach that moved through time, as well as other open-ended questions that were wide in girth to allow for maximal reflection and sharing of personal experiences and interpretations (Hollan, 2005), while I listened and utilized probes as necessary to extend conversation and elicit deeper reflection. Probes were in the form of questions, statements, and gestures; they were focused or vague as required to motivate further exploration and produce richer data (Levy & Hollan, 1998; Walker, 2011).

Because Heidegger and Gadamer take an ontological stance to extend the focus on understanding to encompass the meaning of being; of living in the life world as it exists within a particular social historical context (Earle, 2010; Fleming et al., 2003), questions related to the meaning public health nurses attach to who they are and what they do in their practice were also addressed. The meaning PHNs attached to their role enabled a deeper understanding of the context of their practice, and it was the context itself that made it possible to interpret the meaning PHNs attach to the interconnections between their role, promoting health related to safe and secure water, and the health of individuals, families and communities in southern Alberta.

Because phenomenological hermeneutics facilitates a progressively deeper understanding of the meaning of lived experience, it provides a mechanism for getting

behind the surface phenomenon (Gleming et al., 2003). Therefore, questions related to the lived experience of PHNs in promoting health related to safe and secure water centred not on job description or essential structures and functions of the PHNs' day-to-day experience; rather, the interview moved beyond that to explore the meaning they attach to their encounters with water-related health issues and their emergent understanding of barriers and opportunities for an enhanced role in this area.

Once the topic seemed to be exhausted, I made every effort to extend it further with questions that delved deeper into the personal realm. Examples of these types of questions included, "how did you feel about that" and "how did you react to that." (Levy & Hollan, 1998). Upon completion of first interviews, I reflected upon them to identify missed opportunities and needs for further follow up in second interviews. At this point, I became involved in a process of simultaneous data collection and analysis as I wrote up a summary of initial themes to bring back for discussion with each co-researcher at their second interviews.

Prior to the end of each interview, I provided forewarning to facilitate ending well (Levy & Hollan, 1998) and thanked my co-researchers for giving their time and sharing their experiences with me. I avoided abrupt endings by asking if they had any further thoughts they would like to share on the topic before we parted ways (Walker, 2011).

Data Storage and Handling

Data were protected throughout the entire process. Interviews were audio taped and transcribed; however, a pseudonym of each co-researcher's choice was used in place of their actual name on all transcripts and notes related to their interviews. This

information remains under lock and key in my office and will be destroyed after seven years. Only I have access to information that relates to my co-researchers' identities. Besides me, only my supervisor may have access to the data, which does not contain any identifying information. In addition, the transcriptionist signed a statement of confidentiality.

Data Analysis Procedures

In keeping with Gadmaer's philosophical hermeneutics, interpretation of meaning was facilitated through a hermeneutic circle of simultaneous data collection and analysis, whereby understanding of the text emerged through a cyclical consideration of the parts and whole of the text (Patton, 2002; Smythe et al., 2008). To ensure that this study was methodologically sound, the analysis was pinned to the overarching paradigm of constructivism, as well as the embedded ontological and epistemological orientations of phenomenological hermeneutics.

Before beginning the actual data analysis, I immersed myself into the data by listening to the audio tapes while I simultaneous read the transcripts. This provided an opportunity for me to ensure accuracy of the transcripts and make any necessary corrections. I then engaged in a process reading and re-reading the transcripts to capture as rich and subtly nuanced data as possible (Walker, 2011).

Thematic analysis involves systematic coding procedures in which newly gathered data are continually compared to previously collected data (Bowen, 2008). Thematic analysis is a flexible method for identifying, analyzing and coding themes within data, and offers an alternative to the myriad of methods-informed

phenomenological approaches that are specific to particular schools of phenomenology, and that have been used by various nurse researchers (Braun & Clarke, 2006; Streubert & Rinaldi Carpenter, 2011). Mainly, these methods include bracketing, the disregard of researcher bias and pre-understanding, which is not fitting with the purpose of this study. Therefore, thematic analysis, as described by van Manen (1990), was the method of data analysis utilized in this study, as it is in close alignment with the philosophical hermeneutics of Gadamer (1989). However, it is important to note that, although van Manen's approach informed the technical and procedural dimensions of the data analysis, where there were philosophical differences, van Manen was superceded by Gadamer in guiding methodological decisions in this study.

Van Manen (1990) suggests three approaches to thematic analysis: (1) the wholistic or sententious approach, where the researcher "...attend[s] to the text as a whole [and considers] what sententious phrase...capture[s] the fundamental meaning or main significance of the text as a whole....;" (2) the selective or highlighting approach, where the researcher "...listen[s] to or read[s] a text several times [and considers] what statemen[s] or phrase[s] seem particularly essential or revealing abut the phenomenon or experience being described...." and (3) the detailed or line-by-line approach, where the researcher "...looks at every single sentence or sentence cluster and [considers] what [each] sentence or sentence cluster reveal about the phenomenon or experience being described" (p.93). I utilized all three approaches to identify meaning structures within the data, being careful to avoid generalization and opinion, and being cautious about prematurely designating emerging meaning structures into themes.

I used the sententious approach by reading and re-reading interview transcripts multiple times to gain an understanding of the overall tone and experience of each co-researcher. I utilized the selective approach in subsequent readings of the text by highlighting key statements and jottimg notes in the margins of the transcript that described the essential meaning stuctures of corresponding phrases. I used the detailed by highlighting key words and phrases used within each statement that might offer deeper understanding of the meaning co-researchers were attaching to their experience. These included provocative words, idioms, and metaphors. This began an iterative process, as I returned again to the whole of the text (Gadamer, 1984) and repeated the process several times. Throughout the process, I engaged in intensive reflecting, writing, and creating concept maps to come to understanding of the data. I did not know what would emerge, and I made a conscious effort not to be impeded by presumption, although I was always conscious that my own pre-understandings were the context within which I engaged in interpretation, and these pre-understandings and my new understandings would contribute to a shared understanding of co-constructed meaning that would ultimately present as formal themes in the findings of my study.

I was also very cautious in regards to falling into a restrictive method and betraying the aim of hermeneutics (Gadamer, 1984); therefore, I refrained from dismissing text that may have initially seemed irrelevant and avoided prematurely assigning themes (Moules, 2002). This allowed me to be open to underlying and deeply concealed shadow issues that would emerge and illuminate additional levels of

understanding, and to let go of things that faded in significance as I came to a fusion of horizons with my co-researchers.

It was through a deep level of understanding that I was able to begin creating themes, which I did by reviewing all my notes, making connections, and carefully relating the data to the research questions and theoretical framework of the study. After I generated my lists of themes, I extracted meaningful quotes from the transcripts, which I had identified and highlighted throughout the process. I clipped these into strips, sorted them, and manually organized them in labeled envelopes. I then created documents that grouped all of the relevant codes for each theme across the data set, effectively blending the parts into a whole. Next, I created thematic maps. During this phase, I expanded, collapsed, and reformulated themes into new ways of organizing the data. Because the phases of thematic analysis are not entirely linear, this phase was a time of deep reflection and contemplation that worked in tandem with other phases. I constantly re-evaluated the structure of my themes and reconsidered how I might further collapse some themes within other themes and structure new ones. Finally, I labeled the themes according to the deep meaning that they represented.

To ensure strong alignment with Heidegger's existential phenomenology (Heidegger, 1962) and Gadamer's philosophical hermeneutics (1984), I stayed mindful of the ontological orientation of phenomenological hermeneutics throughout the process of data analysis, and maintained a hermeneutic lens when interpreting data, constantly weighing everything against context, and considering text in terms of historical, temporal, and dialogical aspects. In addition, I engaged in ongoing reflection through journaling,

flow mapping ideas, and attending to the meaning and etymology of words and idiomatic phrases. Because hermeneutics is to bring multiple levels of understanding to presence, rather than essence (Moules, 2002), I treated all aspects of the phenomenon as central and important, and I came to an overarching theme that bridges four themes and 13 subthemes in an illumination of different aspects of the co-researchers' lived experience.

A preliminary analysis was completed after the first set of interviews, which was presented to the co-researchers at their subsequent interviews. This served two purposes: first, it facilitated feedback regarding my interpretation of their understanding, which enhanced the trustworthiness of this study. Secondly, and more highly emphasized in phenomenological hermeneutics, it maintained the integrity of the hermeneutic circle and facilitated a progressively deeper level of understanding (Fleming et al., 2003) that was anchored in the experiences of my co-researchers.

Rigour and Trustworthiness

In qualitative inquiry, the quality of a study is generally assessed according to the concept of trustworthiness and four criteria: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985).

Credibility

Credibility refers to the fit between the co-researchers' views and the researcher's representation of those views. Fit can be facilitated through prolonged engagement and persistent observation, and it can be demonstrated through member checks and audit trails (Lincoln & Guba, 1985). However, member checking is considered incompatible with phenomenological hermeneutics "because it contradicts many of the underpinning

philosophies” of phenomenological hermeneutics (McConnell-Henry, Chapman, & Francis, 2011, p. 28; Moules, 2002). Essentially, member checking calls for validation of an interpretation, which under the paradigm of constructivism, is impossible, since the whole point of hermeneutics is that there are multiple truths, and interpretations change every time a phenomenon is re-visited due to new experiences and insights, and new points of references being formed within a changing context of new understanding. However, I did utilize member checks by discussing the emerging themes of first interviews prior to engaging in second and third interviews. This enabled me to ensure accuracy of the transcription and congruency with my co-researchers’ intended meanings. More importantly, it allowed me to assess whether the findings resonated with my co-researchers, as the findings were inclusive of a blending of the whole in addition to the individual interpretations of each co-researcher. Second and third interviews not only enhanced the credibility of this study that cannot be beyond reproach, but they also served to enhance and extend data for a more in depth analysis, presumably getting closer to the true underlying meaning of the fusion of horizons of that moment between my co-researchers and myself as researcher.

Transferability

Transferability cannot be generalized under the constructivist paradigm because there cannot be a single correct or true interpretation or reality (Tobin & Begley, 2004). However, qualitative studies may have contextual application in other settings, described by Lincoln and Guba (1984) as “fittingness.” Although fittingness may seem apparent through the identification of patterns, it is prudent to be wary of generalizations across

time and space in a study that is not intended to produce generalizability (Patton, 2002). The findings of this study provide a unique interpretation of meaning for public health nurses at a particular time in their sociocultural context, and the findings may or may not reflect broader perceptions. It must be remembered that a phenomenological hermeneutics study is intended to create contextual understanding in a situated time and place that continues to be ever evolving.

Dependability

Dependability assumes that the entire research process has been logical, traceable, and documented. It can be facilitated through reflexivity and maintaining a record of the research process that includes ongoing self-evaluation (Lincoln & Guba, 1985).

Dependability can be demonstrated through external review and an audit trail. I maintained a regular and detailed account of the research process through intensive and ongoing written reflection, which included rationales for research decisions, and that was supported by textual excerpts from the interview transcripts to support my interpretations.

Confirmability

Confirmability refers to ensuring that a study is unbiased by the researcher. This is not possible within phenomenological hermeneutics and is contrary to the constructivist paradigm. It is fully acknowledged that the researcher cannot be completely immune to bias (Erlandson, et al., 1993). In fact, the researcher is the instrument of inquiry. Within this phenomenological hermeneutics study, open-ended semi-structured interviews were used to collect data, and I was involved in the co-construction of meaning with co-researchers. Therefore, confirmability in the traditional sense gave way

to a thorough review of all transcripts against the audiotaped interviews to ensure that proper and accurate transcription occurred, and that all of the subtle nuances between the words (the hesitations, the deep breaths, the shifting, etc.) were captured. In addition, my co-constructed interpretation of the initial interviews was shared with my co-researchers to confirm that my interpretations resonated with their own understanding of the meaning of their experiences.

Ethical Considerations

Ethics, under the constructivist paradigm, is intrinsic in the adherence to due process in qualitative studies (Guba & Lincoln, 2005). On a pragmatic level, ethical approval was obtained from the Human Subjects Research Committee of the Office of Research Ethics at the University of Lethbridge. In addition, the study adhered to the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (2010).

Informed consent to participate was obtained from all co-researchers (Appendix D) prior to participation. A letter of invitation (Appendix C) outlining the purpose, rationale, and research procedures was supplied that included an explanation of the right to withdraw at any time without consequence.

Co-researchers' names and identities are protected, and a pseudonym of each co-researcher's choice was used for data analysis and in the dissemination of findings in this thesis. Data will continue to be stored in a locked filing cabinet in my private office at the University of Lethbridge, and only my supervisor and I have access to it. The list of co-researchers will continue to be kept separate from the study, and will be destroyed upon

completion of thesis. The transcriptionist was required to sign a statement of confidentiality (Appendix E).

Dissemination of Research Results

Upon completion of this thesis, the findings will be disseminated to my co-researchers through preparation and provision of an executive research report. I also plan to publish findings in peer reviewed journals within the public domain, and present at conferences for health care professionals.

Conclusion

The research questions of this study were aimed at understanding meaning. Based on my beliefs about the construction of knowledge and the importance of context in generating the best understanding of lived experience, phenomenological hermeneutics was the appropriate design for this research project. The study design, data collection, and data analysis were informed by, and in alignment with, the paradigm of constructivism, and my approach was congruent with its associated philosophical assumptions of ontology, epistemology, and methodology.

The next chapter presents the findings of this study under an overarching theme that incorporates four themes and 13 subthemes.

Chapter IV – Findings

The purposes of this study were to gain an understanding of the meaning public health nurses attach to their lived experience with promoting health related to safe and secure water, and to illuminate their emergent understanding of barriers and opportunities for an enhanced role in this regard. Guided by Gadamer's philosophical hermeneutics, I entered into a hermeneutic circle, and through intense movement between the parts and whole of the text, I reached a fusion of horizons with my co-researchers. Multiple levels of meaning emerged, first at a superficial level, and then at progressively deepening levels beyond and below the surface. Following a description of demographic information pertaining to the PHNs who participated as co-researchers in this study, findings are shared in a presentation of four themes that shed light on different aspects of an overarching theme that places the lived experience of PHNs in a desert, a practice context absent of water. Within these themes, barriers to an enhanced role with respect to water are brought to light and, like the meaning attached to the PHNs' lived experience, barriers emerge within deepening levels of complexity. Opportunities for an enhanced role with respect to water seem non-existent at first, but also emerge in the negotiation of shifting sands between themes.

The Co-Researchers

Nine baccalaureate prepared public health nurses currently practicing in southern Alberta participated in this study as co-researchers. The geographical parameters of this study were inclusive of PHNs who, at the time of the study, were practicing within either the South Saskatchewan River Basin or the Milk River Basin. These regions cross

different health regions and are distinct from the South Zone of Alberta Health Services. All co-researchers were female, and their age range spanned from their thirties through to their sixties. Number of years of practice in public health nursing ranged from between five to over 20 years, as did the length of time each PHN had worked with their respective communities. A demographic summary is found in Table 4-1. The findings of this study represent an analysis and co-construction of meaning based on 20 interviews with my co-researchers. Pseudonyms of their choice are used in the dissemination of findings.

Table 4-1 Demographic Summary

Total Number of Participants:	9				
Gender:	Female = 9			Male = 0	
Age:	(20-29)	(30-39)	(40-49)	(50-59)	(60+)
	0	1	2	4	2
Setting:	Urban = 2			Rural = 7	
Length of time worked as a Public Health Nurse:	(< 1 year)	(1-5 years)	(5-10 years)	(10-20 years)	(20+ years)
	0	0	2	2	5
Length of time worked with current community:	0	0	3	2	4

Although each co-researcher is implicated in the shared understanding that was constructed at the particular time of this study, it is important to note that the co-researcher is not the object of a phenomenological hermeneutics study (van Manen, 1990). “The topic is not the participants” (Moules, 2002), and, as G.Tzu states, the “truth is not within the participants; it is within the interview. Therefore, the meaning is in their

understanding and their lack of understanding and beyond what they say" (personal communication, October 18, 2011).

Being in The Desert – An Absence of Water in Public Health Nursing

Hans-Georg Gadamer (1989) wrote that we cannot step over our shadows. We are connected in a continuous thread with our past, with traditions, and with our ancestors. We are living out traditions that have been bequeathed to us by others, and although we may be taking them up in different ways, they are still the source of who we are and how we shape and live our lives. The echoes of history are always inadvertently and deliberately inviting us into both past and new ways of being in the present. We live in a world that recedes into the past and extends into the future, rather than pitting ourselves against history, and therefore we need to remember, recollect, and recall it. This is not an epistemological quest but an ontological one, as we are historical. The address of tradition is not just something arching from before, for we are in tradition. (Moules, 2002)

The lived experience of the public health nurses in this study exists within their sense of presence, and it is oriented in their movement from their past through to their present, and also in their intention toward their future. The meaning that they attach to their lived experience with respect to their role with water is “forgetfulness” of the past, “absence” in the present, and “nihilism” toward the future; but there is something within this nothingness, and it is expressed through the use of metaphor. The meaning that PHNs attach to their lived experience is like being in a desert, a space where the absence of water is made startlingly visible against its backdrop. It is a space devoid of the life sustaining resources that nourish PHNs and enable a role in promoting health related to safe and secure water. *Being in the Desert – An Absence of Water in Public Health Nursing* serves as the overarching theme of this study.

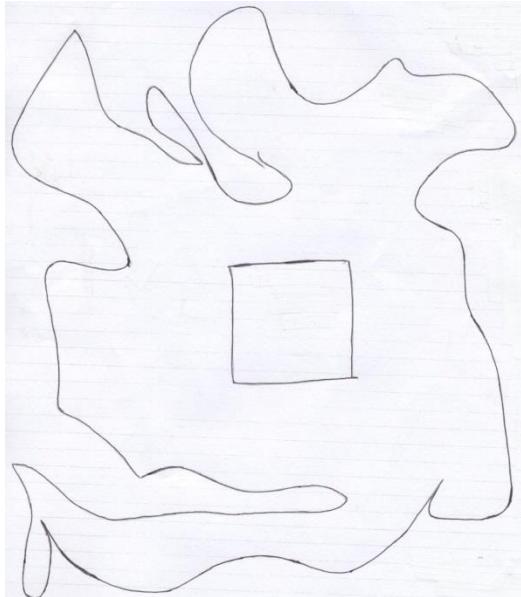


Figure 4-1 The Desert

This is how I think...and this is how my employer thinks. (Sharon)

The diagram in Figure 4-2 was drawn by Sharon as she explained the context of her practice environment. She started by drawing the complex and labyrinthine outer border. As she drew, she softly commented, “This is how I think...” Then, she placed her pen firmly and pointedly into the middle of this space and drew the four-sided box. She put the pen down and stared intently into my eyes, tapping the inside of the box with her right index finger, and proclaimed, “...and this is how my employer thinks.” The box inside the space represents the desert of public health nursing practice: a desert that separates PHNs from their traditions in water and the environment; a desert that confines them to a specialized role, limiting opportunities for health promotion; a desert that deprives them of the resources they need to function fully and effectively in their role; a desert that disconnects them from clients and communities; a desert that restricts their autonomy; a desert that distorts clear purpose; and a desert that creates a gap between

what PHNs feel they ought to be doing in practice and what they are actually doing.

Essentially, the box represents the desert of their lived experience, one that is absent of tradition, opportunity, and idealism.

The four themes that open understanding to the meaning public health nurses attach to their role in promoting health related to safe and secure water are (1) *Desertification of the Practice Context – Surveying the Landscape*; (2) *Desiccation of the Public Health Nurse – Feeling the Slow Death*; (3) *Adaptation of the Public Health Nurse - Fighting for Survival*; and (4) *Reclamation of Practice – Finding Hope through Awakening*. These themes do not reflect a linear experience; they co-exist parallel and embedded within one another. Although one may appear to precede another, there are multiple layers of meaning within each theme that not only lend understanding unto themselves, but that provide context for a deeper understanding of the meaning within each of the other themes, as well. Together, these four themes encompass the meaning of the wholeness of the PHNs' lived experience with promoting health related to safe and secure water. Emerging from the exploration of this meaning is a progressively deeper understanding of the barriers and opportunities for an enhanced role in this regard.

I entered the desert with my co-researchers through their stories, and the discourse is the vehicle by which we traveled. Our first glimpse of the landscape oriented us through an initial impression of the public health nurses' lived experience and the barriers they encounter to a role in promoting health related to water; however, it was in our movement and negotiation through the shifting sands of the desert that deeper levels of

meaning surfaced, and the PHNs' emergent understanding of barriers and opportunities became apparent.

Desertification of the Practice Context: Surveying the Landscape

What was once a fertile land for promoting health has been transformed into an inhospitable landscape; remote and distanced from traditional practice, and separated and removed from opportunities for health promotion. The public health nurses spoke of a past when they could "plant seeds" (Dirke) and "stay on the same branch that [clients] are choosing to go with" (Sharon). This place is now gone to them and is overtaken by a barren landscape, devoid of the resources they need to enact their full scope of practice. The "good old days," as Dirke referred to them, are in the back and beyond of the memories of the PHNs, lost in the distant tradition and idealized rhetoric of public health nursing.

There are three sub-themes that shed light on the desertification of the practice context for public health nurses. These are: (1) *Desolate and in the Middle of Nowhere*; (2) *A Harsh and Inhospitable Landscape*; and (3) *A Dry and Depleted Land of Scarce Resources*.

Desolate and in the middle of nowhere.

You don't hear that much about the health and the water together. (Granny B)

Regarding the role of public health nurses in promoting health related to safe and secure water, Pat was terse: "...Is there a specific role on a day-to-day basis? Not right now. No." As my co-researchers pondered how water fits into their role, almost without exception, their voices faded in a loss for words. They initially denied not only having a current role related to water, but having ever had one. One of the PHNs, who had been a

PHN for over 30 years said, “I can’t think that much about...not directly for water. I’ve never been involved that directly with water.”

To explain where water is in the minds of public health nurses, Dirke stated, “It’s not something that comes up at coffee, you know?” Coffee is often associated with something that promotes wakefulness. For example, the phrase, “wake up and smell the coffee” is used to “tell someone that they should try to understand the true facts of a situation or that they should give more attention to what is happening around them” (The Free Dictionary, 2014). Coffee breaks provide a forum for people to chat about what is most prominent on their minds. Dirke’s use of this idiom to explain where water is in the minds of PHNs was very telling in terms of just how forgotten water is; just how deeply concealed the meaning is that PHNs attach to their role with water; and just how far we would have to go on our trek through the desert to find it.

Water seemed to be elusive, out of sight and mind of the PHNs. Frankie explained, “I don’t think we see it every day...in most of our work...” Granny B stated, “...when it comes to health and water, you don’t hear that much about it. You don’t hear much about the health and the water together.” Several of the PHNs attributed this to the fact that water issues are addressed by public health inspectors (PHIs). Moreover, as Bella explained, clients are responsible for taking care of their own water:

I haven’t had [a water bottle for testing] in my car for years. People just come in...and get the sample bottles and do it themselves. Yeah, I’d say I have little, much less to do with it, and probably the health inspector gets all those kinds of phone calls and questions...and probably the front desk would refer them to the health inspector, not me anymore.

The public health nurses seemed to understand the link between water and health, but making a connection to a possible role with water seemed difficult for them. Stella stated, “I can understand [water], but I guess I can’t articulate it right now...because it’s not something that I’ve been involved with.” Upon further contemplation of what her role might be in regards to water, Stella followed with, “I don’t know. It’s not something I’ve ever really thought of before, but probably yeah. I don’t know what it would be, but probably, right?” She seemed, in that moment, to have the sense that she ought to have a role with water, and there was a glimmer of recognition of a role long forgotten.

The discourse awakened memory and the public health nurses started searching for water. As they reflected upon their role, they found some water. It seemed that water was lost in the past. However, it was shallow and within individual level nursing interventions focused entirely on water quality and disease prevention. This included providing bottles for water testing and disseminating information. Stella talked about her involvement: “...with babies, for sure....There were some things...information we needed to give parents about making sure the well water was safe for babies.” She continued, describing what she would do in the event of a boil water advisory in her community:

...It was more making sure the clients...had that information. But I don’t think we went beyond our actual office...to let the community know...We would put up signs in our office...and then tell our clients, but I don’t think we actually went further than that.

Nothing was said by any of the PHNs in regards to a role with water that went beyond the individual level. Everything mentioned was biomedical in nature, related to water quality in terms of advising individual clients to have their wells tested, collecting water samples

to send to the lab, and following up on enteric disease. There was no mention of water supply, social justice, or a health promotion role in the outer realms of the socio-ecological framework. There was also no recognition of the limitations of their past role. There was simply a lack of awareness and connection to the wholeness of their role.

As the public health nurses considered their declined level of involvement with water, they tried to rationalize this by initially denying awareness of any issues related to water. Bella reported, “we’re status quo or whatever; nothing too exciting that I’m aware of is going on in water talks,” and Stella stated that she did not “know any people struggling to secure water...” In fact, the PHNs seemed to lack awareness of the risks to water in this province. Frankie stated, “we don’t think of it...every day, because we’re so lucky here. We have clean water; we have plenty of water...” Several of the PHNs spoke to how fortunate they were to live in an area where water “has always been there...and easily accessible.” (Kootenay).

Bella explained why she does not think about water. “When I started [nursing], water testing was way more important, or more people did it than they do it now...so it’s not sort of key in my mind anymore...” Frankie concurred, “ten years ago, I was much more aware of it than...where I am now.” Kootenay emphasized that her level of involvement with water issues has declined to the point where it is only addressed incidentally, reinforcing a perception that water is not considered an important health issue:

We’ve...not been as involved with ensuring water is safe, other than mentioning to parents as we see them. And we don’t always do that either, of course. It’s not like I do it every single time, but for some reason, something might trigger me to

think, ‘well, have you tested your water?’ and talk about the safety of water. But, it’s not every visit that I have that I certainly talk about water.

It was in the recognition of this loss that their memory awakened to their former role, but it was apparent that the past did not hold all the missing water, and the public health inspectors only accounted for a very narrow piece of it. The vast role that public health nurses could have was elsewhere, in a place where health is promoted at multiple levels beyond the individual level to incorporate health at family, group, community, population, and societal levels; where water is considered a health issue of multiple dimensions extending beyond water quality to include supply, social justice, source water protection, and the sustainability of life as lived on earth. Dirke identified that place, where all that water is. She declared that water, and anything else related to the environmental health role of public health nursing, “has been left in limbo.” Limbo is a term that is commonly used to refer to an indescript place – somewhere inaccessible and out of reach (Merriam-Webster’s online dictionary, 2014). In this place, not only are issues related to water in a state of oblivion, but so is the opportunity to address them.

As Spike considered the reasons for her low and declined level of involvement with water, she also situated the environment in limbo through the use of the word, “familiar.” She stated, “there’s not enough time for what we do now sometimes, as well as taking on another role that we’re not familiar with.” Spike’s statement is very revealing. *Familiar* means something that is “well known from long or close association,” and refers to something that is “within normal everyday experience” (Merriam-Webster’s online dictionary, 2014); something known. *Known* refers to something “apprehended with certainty” (Merriam-Webster’s online dictionary, 2014).

In contrast, something *unfamiliar* is “not known or well known; something strange or unusual; slightly odd or even a bit weird” (Merriam-Webster’s online dictionary, 2014). This revealed much about why the PHNs seemed to struggle with connecting to the discussion about their role with water. Water is far removed from the context of PHN practice. Water is absent from the PHNs’ present; it is situated lost and forgotten in either the past or the back and beyond of limbo. It seems that water is not only lost in the past; it is also forgotten. The struggle that PHNs had in articulating their role with water was not only due to its occupancy in the past and its reallocation to public health inspectors, but to a disconnection from the issue in general; a disconnection of liminal space between the tradition of the past and their destination in the future.

This seemed to stir discomfort in the PHNs as they faced this loss in their role, this betrayal of who they thought they were, and they turned to blaming their lack of involvement with water on the role being “taken away” (Sharon) by the public health inspectors. The use of words and phrases like “pushed” (Frankie) and “handed over” (Pat) suggests that PHNs believed they *should* have a role in addressing water, and that not having one was a loss to them – one that they blame on others. Dirke remarked:

...we used to do a lot of things. We used to do food and water...borne illness follow up as PHNs, but now the public health inspectors do it all...So, you see, all of that's been taken away from public health nurses and given to public health inspectors.

Sharon stated:

I think when I first started maybe we were a little bit more involved with people coming to ask for the different bottles to do the testing for water, and I think about six, seven years ago that was totally taken over by the public health inspector, so we really are not involved with it.

Ironically, the fact that the PHNs were so perturbed by the idea of this role having been taken from them highlights how far removed they are from water; how forgotten it is. Contrasted with how they define themselves as PHNs, the PHI role is very narrow. The only thing that the PHNs were mourning was involvement in water testing and follow up of enteric disease. What was *not* said here was very revealing in terms of orienting to where the PHNs were in relation to water at this time.

A harsh and inhospitable landscape.

...I see more and more of the things that we were able to do being eroded. (Dirke)

As my co-researchers and I delved deeper into their desert, we became aware of some harsh elements in the desert that precluded public health nurses from having a role with water. Not only was water absent from their minds, but it was also outside of the purview and constraints of their mandate. The public health nurses described how their practice is dominated by immunization; something that they acknowledged as important, but also as something that has been preventing them from enacting a fuller role in regards to health promotion in general. Granny B explained:

Looking at immunizations, which is our mandated part of our practice, unfortunately, I feel that immunization part is overwhelming most of our other stuff now. It's getting more complicated; the schedules are getting more complicated. They're bringing in more vaccines all the time.

Every one of the PHNs pointed to immunization as their main role and focus in practice, and several of them spoke of this with regret. Pat stated, "Not that immunizations aren't important, they're very important...but they just always seem to come to the forefront and...everything else gets pushed to the side." Frankie observed, "we've sort of been pushed into a more specialized role, and that is to be the immunizers, and it takes away

from all the other health promotion activities that traditionally we've done as public health nurses." Like Pat and Frankie, several of the other PHNs used the term, "pushed," to describe how they have come into their large focus on immunization. The PHNs expressed that they have been pushed *out* of health promotion – including anything related to the environment – and pushed *into* immunization. These statements were early rumblings of the powerlessness that PHNs would find themselves within, which will be discussed in the next theme, and they were also very revealing in how remote water really is to the PHNs, and how challenging it might be to bring a focus on water back into practice, because water was more than just a matter of something forgotten; water was something held at bay by structural constraints beyond the control of PHNs. Frankie explained:

We used to have our own Board in public health; we used to sort of make our own programs for our local communities. And now that we're *one* with this structure, it's very much driven by the acute care and I don't think they understand what public health nurses do...I think that's contributed...to the decline in our ability to act, to function in full scope of practice...We're just seen as the immunization people.

The PHNs voiced that they have been pigeon holed through the loss of their generalist role. They lamented a belief that clients are no longer seeing them in their whole role and view them in a compartmentalized and limited way. Frankie explained:

If you start to be looked at as only the nurse that gives the shots, then it...pigeonholes a person into a role. If that's the only thing they see us do, then maybe they're missing...the wealth of knowledge that we actually bring to a community.

Granny B echoed this sentiment, “yesterday, when I went out to the [Hutterite] colony, the teacher, when I arrived, says, ‘oh, it’s the needle nurse!’ When I go to the schools, depending on time of year, it’s *sex* nurse.”

The public health nurses observed that the strong emphasis on immunization has resulted in a loss of their generalist role and, therefore, a separation from their clients. Frankie explained, “you have to start with family...I see...less opportunity for us to be in that role...It’s slowly being chipped away and eroded, our generalist role...” (Frankie). Dirke used the same words when she stated, “it’s frustrating. I see more and more of the things that we were able to do being eroded.” Frankie offered an example related to water:

We would get a lot of communicable diseases, like a lot of E. coli...just because people are working on the feedlots, and the families are there, so you would work with the family, do their baby visit out at the feedlot. And you’d say, ‘oh, this is where you live, this is where you work,’ and ‘do you have access to wash your hands when you’re working with the animals? What’s your drinking water like?’ You would ask them about that, and ‘who’s there to help you?’... When you have that opportunity to go see them where they live and where they work, you get to know them so much better. So, I would go out for every baby that was born. If there was a communicable disease, we contacted all the people, and then you would see that same family in the school setting too, so when you’re going to the school, you’d be, ‘oh, I did your baby visit, and now you’re in grade one,’ so it’s kind of like...you get to really know people and know the families and what they’re up against day to day...We had the freedom to spend time with families. This comment is multifaceted. It accentuates the value in PHNs being present and visible within their communities, and being integrated into various aspects of their clients’ and community’s lives. It also alludes to once having had freedom to do that, suggesting that this freedom is no longer available, and that PHNs do not spend that time with families anymore. This speaks to decreasing power, decreasing visibility, declining relationships, and increased isolation. In their invisibility, they have been struggling with

maintaining credibility, and with this, they feel they might not be fully accessed by their clients. Furthermore, PHNs felt they are not recognized for the contribution they could make, and that they are not utilized to their maximum potential, precursors to a sense of meaninglessness that will be discussed within the next theme.

As much as the public health nurses seemed to resent the domination of immunization within their jobs, it was apparent that they, themselves, view immunization as the greater priority when comparing it to health promotion. When Pat said, “...it’s hard to do just what *needs* to be done,” and Stella reinforced that her time is filled with “...getting things done that we *need* to get done,” and Pat emphasized that PHNs have to “deal with the...stuff...[that is]...*most pertinent*,” they were essentially insinuating a belief that water is not something that *needs* to be done, and not something that is considered *pertinent*. Pat also mentioned that post-natal follow up and immunization “bumps to the top of the list,” suggesting that water, or the environment in general, is being “bumped” *down* the list, and indicating that water may not be valued within the healthcare system.

Finally, in consideration of their practice landscape, some public health nurses discussed a lack of clarity in their role, obscured by the sand storms of top-down initiatives that are often sprung upon them and subsequently pulled back with little warning or explanation. Sharon explained, “...there’s always this back-and forth, a back-and-forth... There is not really a clear role.” Dirke made a similar comment, stating that the PHNs’ role is more clear “on an individual basis. On a group basis, it’s not as clear-cut or defined.”

A dry and depleted land of scarce resources.

...It isn't always as easy as just what we want to do. (Pat)

As my co-researchers and I turned to consider the resources that public health nurses might have to work with in the context of their work environment, they immediately pointed to time and knowledge as scarce resources that are essential for them to being able to engage in health promotion related to safe and secure water. The notion that they ought to have a role with water had emerged, but even if they wanted to pursue health promotion in this area, any efforts would be immediately blocked by lack of time; time not only to address water issues, but to fully integrate into the community to do so. This was an obvious barrier in and of itself, but it also served to perpetuate and intensify the barrier inherent in their separation from water, taking them further away from water and situating the environment more solidly in limbo.

The public health nurses felt they did not have time to do anything beyond immunization. There was no time for a broader role, and it went beyond not having sufficient time to engage in actual health promotion; it included not having enough time to plan. Pat explained:

...Where do you have the time to do the community education, outreach and teaching? ...There isn't enough time to do it. And those things, they don't just take time to do, but prepare and [make] inroads in trying to get there...I have no down time right now...It's a bit frustrating in that way, because you just never get to the things that...[matter].

This speaks to the importance of being able to enact the nursing process and the necessity of having relationships for making progress. To advance – to be effective – requires making “inroads,” suggesting that these roads are not in place. “In trying to get there” suggests that the nurses are not *there*, and not in the position of having the relationships

ready in order to do more. The PHNs' time is taken up such that they are separated from their clients, and now that gap has grown and it is even more difficult to overcome because of the time involved to build relationships in order to get *there* and access the population. However, Pat's reference to "never [getting] to the things that...[matter]," offered a glimmer of hope. She was responding to questions about water, and her response seemed to indicate a nod toward water as something that matters. Throughout the interviews, the PHNs often made reference to the importance of "doing it right" (Frankie; Stella), and if time was getting in the way of doing what matters, then time was getting in the way of "doing it right;" of considering bigger issues like water. Every recognition and awakened memory brought the PHNs a little closer to water, although for Pat, in that moment, it only seemed to reinforce the gap between what she does in practice and what she feels she ought to be doing in practice. She continued:

I don't know in a professional sense right now if we can [do anything to address water] because [we are] time strapped; we're regulated, and how much, what we do, or what our boundaries and our scope of practice is [is not under our control] and [water] is not longer part of our scope.

Water is out of bounds, outside of the box that is the desert of the PHNs' practice context. Dirk stated, "I'd like to see us do more, but I don't think there is – at this point in time – a lot of things we can do, given the time and our mandate." Spike stated:

Ideally, one should assess the community and find out what the community needs are, and try to meet the community needs, and sometimes there's time to do that, and sometimes you have a hard time doing even what is your *described* role and duties you need to get done in a day.

In the contrast made between what a PHN would *ideally* do and what *actually* happens, Spike flashed in awareness to the tug that PHNs seem to be experiencing

between what they feel they ought to be doing in practice and what they are actually doing. Her comment also spoke to a powerlessness in reconciling that gap through the use of the word, “described.” Time was the named barrier, and time was taken away by the mandate. *Described* means “abiding by what is written/ordered versus following community” (Merriam Webster’s online dictionary). It may also relate to the word, “pronounce” in terms of declaration. In other words, what the *powers* deem important: the official job description.

Frankie discussed some of the challenges she has experienced with entering into the community to interact with clients and attend community meetings:

It’s very distressing to me. I look at how I used to practice when I first started, maybe 20 years ago, and how I got to know families, and I got to see them in the community, and in different settings... There was lots of opportunities to work and interact with families. And now it’s becoming more like, ‘I’ve got to be at the office and running a clinic.’

Dirke seemed to feel similarly. In reference to water, she observed, “... If we had more staff, maybe we could spend more time with families, we could talk, we could do more home visits, we could talk about those kinds of issues.” Kootenay also discussed her desire to have more time for health promotion and community development:

I can’t make most of the meetings, just the way it goes between our clinic hours and other things that are going on. So I’ve missed...the last three meetings. Things like that are frustrating because I want...to be involved in that, and there’s a couple of other things on the go that I can’t always attend because there’s other priorities that have to come first.

In these comments, it is apparent that the PHNs are conveying that they would actually like to address water, but they are just not able to given barriers outside of their control.

In terms of knowledge, it was apparent in statements throughout the interviews that the public health nurses place a high value on having and disseminating knowledge. When they spoke of health promotion, it was almost exclusively in terms of health education, and there seemed to be a lot of focus on teaching and telling. This seemed to be how they have felt most effective in the past, and how they foresaw the possibility of being effective in future. Therefore, having insufficient knowledge would render them incompetent and challenge their sense of credibility, leading to an apprehensiveness about engaging in water related health promotion.

As the public health nurses' awareness increased in regards to the absence of water in their role, it seemed that their level of discomfort with this also increased. They seemed to accelerate in their ease of naming the barriers to an enhanced role in this regard. Primarily, they said they needed time, time to "be there" (Frankie) in the community, so that they could form relationships and have their messages heard. Besides time, the PHNs voiced a need for greater knowledge. They seemed to rely on knowledge as their sole strategy for health promotion, and they voiced that they feel incapable of dealing with water due to their lack of knowledge in this regard. Spike shared, "when I was thinking about my knowledge of water, I was thinking I really don't have a lot of knowledge and would need to do a lot of research and get a lot more information before I felt that I would be confident sitting on a committee." This ties back into the issue the time. Dirke explained:

The good old days when you used to have enough staff so you could really be current on what current practices were and evidence-based practice, that's long gone. You don't have the time to read anymore at work, to keep yourself current. You don't have the time to sit down and spend an hour with a client who's having

an issue. It's 40 minutes. If you're not done, tell them to make another appointment, you know?

The use of the phrase “the good old days” represented Dirke’s comparison of her current practice context to a “time in the past when [one] believe[s] life was better” (The Free Dictionary, 2014). This accentuated her loss, and illuminated the extent of depletion under current conditions. Some PHNs also expressed that clients are rushed through the system; therefore, PHNs are *not* “doing it right,” leading to a sense of self-estrangement and feelings of inauthenticity, which will be discussed in the next theme.

The PHNs expressed that they do not feel credible when it comes to addressing water issues. They feel very inauthentic at the notion of getting involved with water. They do not believe they would be effective, since people would not see them as a credible source. This speaks to a separation from tradition and an extraction of the environment from the PHN role. Sharon shared:

I’m not sure it would be seen as credible. Not that I’m not credible as a public health nurse, or as a nurse, but when you’re talking about water, that is, like environment and all of that...To me, that would almost have to come from somebody biology. You know, like people that really have a very good understanding of what all that means.

Discussion regarding these scarce resources intensified the experience of the desertification of practice through an examination of what PHNs formerly had in terms of time and knowledge. The opportunities that existed previously highlight the lack of same in the present. The depth of the shadow issues begin to reveal themselves in the next theme, *Desiccation of the Public Health Nurse – Feeling the Slow Death*, as the PHNs moved beyond reflecting upon their external environment to finding themselves desiccated: parched, thirsty, dying – their very existence threatened in lost connections,

powerlessness, meaninglessness, and inauthenticity. In this, we found deeper barriers to an enhanced role with water, and an almost extinct possibility for opportunities in that regard.

Desiccation of the PHN – Feeling the Slow Death

The public health nurses found themselves in a remote desert, far away from their traditional role with water, the environmental aspect of their role so far removed and separated from them that it was barely perceptible. Keeping it at bay were structural elements that had pushed the PHNs into a specialized role that excluded not only water, but opportunities for almost any kind of health promotion. In our movement through the desert, we caught glimpses of the effect that practicing in the desert has had on the PHNs, and how this has impacted on barriers and opportunities for an enhanced role with regards to water. There are four sub-themes that illuminate different aspects of the desiccated PHN: (1) *Isolation – Cutoff and Incommunicado*; (2) *Powerlessness – Chipped Away and Eroded*; (3) *Meaninglessness – Disoriented in the Shifting Sands; and* (4) *Self-Estrangement – Adrift in the Desert Creep*.

Isolation – cutoff and incommunicado.

You're...kind of out of the loop...for what's happening in the community... (Frankie)

The extent of the impact of isolation on the PHNs was revealed through examples from the past, and also in the words of the public health nurses regarding how important relationships are to being able to effectively promote health. This highlighted the contrast between the opportunities of the past and the depletion in the current context, and provided insight into the PHNs' lived experience of the desertification of their practice context into a place of nothingness that left them on the outside of water.

The PHNs are not just isolated from the issue of water, or the environment; they are isolated from their clients. The desertification has confined them to their office and limited their integration with the community. As a result, they have lessened knowledge of the community and are not necessarily aware of the issues. Frankie explained, “...you’re kind of out of the loop...for what’s happening in the community. So if there’s a boil water order, you’re kind of out of that loop. You might hear about it on the news....” She continued:

....we kind of miss...what the bugs are, because we’re not seeing them day to day....You kind of lose touch that way....It lessens us....We don’t have the full knowledge that we used to have of the community, and how that fits with all the different parts

Sharon spoke strongly about this too:

If we are directed to do more telephone assessments...I don’t have my visual. I rely tremendously on my visual cues. So that, to me, narrows it, what I am doing, and it takes away a little bit too of the insight, having your finger on the pulse of the community, and relationship building. You know, like you cannot do that as well.

Not only did the PHNs emphasize how disconnected they are from their communities of practice, but some of them mentioned how their disconnection to their role with water is intensified because of this. Pat stated:

If I were to see a couple of people coming in with concerns of E. coli, and there was a trend or...all went swimming in a canal, I would be able to be seeing those sorts of things, but we don’t hear about it or get any results of it, the local water that’s tested. It’s really difficult to address, to know what’s going on in the community if you don’t have...a hand on it.

The phrasing used by the PHNs to explain their disconnection with the community really emphasized how profound that is to their practice. Frankie alluded to being excluded from a chain of communication by being “out of the loop.” Sharon and

Pat both used phrases that conveyed a physical disconnection when they respectively referred to “[not having their] finger on the pulse of the community,” and “[not having] a hand on [the community].”

The greater the separation between the PHNs and the community, the less effective they can be in their care, which contributes to an overall sense of meaninglessness in their work. Frankie highlighted this point:

The less opportunity you have to be out in the community and working with people, and seeing where they live, where they work,...where they go to school, finding out what their issues are, the less we can be effective as public health nurses.

There is a second effect of this division between the PHNs and their communities, and that is that the PHNs feel invisible to their clients. They feel they are not seen, heard, nor understood by community, and this leads to PHNs not being accessed by the community.

Frankie felt like her former role with water in the past was helpful to them in being accessed for multiple reasons by their communities. She stated:

It's kind of sad to see it go, because it's like, [water] was a big role for us. I think when people saw us in those different roles, too, they saw us more as public health nurses, rather than just, 'Oh, that's the baby nurse, or that's the nurse that gives the shots.' I think it really gave us credibility in the community that we are real nurses, we work to prevent illness, and we work on many different levels to prevent illness. So to have that one piece gone, it kind of takes a bit away from the public's perception of us as full-blown public health workers.

This comment speaks to fragmentation of the PHN role – a loss of wholeness, and how that affects not only the public's perception and access of PHNs, but the PHNs' own sense of credibility and effectiveness. In fact, this may be reinforced by experiences some of the PHNs have had being turned away by their communities. As Pat explained:

I've been asked to not contact [schools] unless I've been contacted [by them]...so it's a bit of a step back when you're expecting to go in and say, 'Here, I'm here to help you,' and you're getting told, 'No, you're not. We don't have time for you to be here.'

Powerlessness – chipped away and eroded.

I just think [water is] kind of a bigger issue than me... (Bella)

The public health nurses feel powerless, in part, because they are isolated from the population and unable to engage in health promotion. There is also an increasing awareness of the degree to which they do not really know how to do it. This puts them into a state of embracing powerlessness as a way to avoid working on water, an adaptive strategy that is explored later in the theme, *Adaptation of the Public Health Nurse*.

Discussing the water related health issues, Sharon stated that it made her feel, "inadequate, powerless." Similarly, Bella stated "I just don't feel I have any power in [water] at all." The PHNs conveyed that they do not believe that they are a credible source in regards to water, partially due to a lack of knowledge, but also due to strained relationships with their clients that are a result of the PHNs' isolation from their communities. They no longer believe they are credible; that they could offer a voice of influence. In fact, Sharon stated, "...I think really to give a powerful message, it really should be somebody very closely associated with water. If it were to come from us, it is almost diluting the importance of it..." This suggests that the PHNs do not believe that they could make a difference, and Sharon reinforced this by referring to herself as "just a PHN." This serves as a barrier to addressing water issues, because, as Pat said, "if you're viewed as not being credible or reliable...whatever you're trying to say is affected in some aspect..."

Most of the PHNs felt that they do not have voice. Stella stated, “I don’t know where my voice could reach.” Frankie offered an example of how the voice they once had is now lost:

When we had our own board, I could go to the Board as a nurse and say, ‘I think this issue in the community is important,’ and the Board would listen. And the Board would say, ‘okay, bring us some data on that,’ or ‘let see what your proposal is.’ So we had a direct line to the decision-makers, and they actually controlled the funding. [The Board would say], ‘okay, make a working group and see what you can do to educate and turn that practice around so the community is healthier.’ If I were to try that now [laughs], I don’t think I would get very far... First of all, I wouldn’t know who to talk to. I don’t think my managers would know who to talk to, and it would be a long and arduous process because then they’d say, ‘okay, is this an issue for the whole province? And if it is, how are we going to implement a program so that it will deal with...the whole population?’

The PHNs are trapped in a place, confined by physical structures and processes that create barriers in their desert, and do not have control in their work. They have lost their former autonomy and are not free to make decisions about their work. When asked what guides their practice, their responses included, “what you’re handed that day” for Frankie, “what I’m assigned to do” for Spike, and “what’s determined by the tiers above me” for Stella. There is a gap between what they would like to do and what they feel capable of doing. On the subject of moving from regionalized to a centralized delivery of public health care, Sharon declared:

...It is cutting off, or clipping our wings a little bit... You don’t feel as free to do and definitely more restrictions on, for example, going to different committees, going to different workshops where you would...get more information that you can then deliver...

Meaninglessness – disoriented in the shifting sands.

...There’s always this back-and-forth, a back-and-forth... There is not really a clear role.
(Sharon)

A significant contributer to meaninglessness is a lack of clarity or ambiguity in one's role. A few of the PHNs spoke to this lack of clarity in their role, and they attributed it to the constant insertion and removal of various top-down initiatives into their regular duties. Sharon explained:

So, when things are taken away that have been historically and traditionally part of public health – they're taken away and then after a few years are given back, ‘Oh, no, you guys did a good job, actually’ – there’s some of the fire, some of the passion, some of the motivation. Maybe it is kind of like, ‘really, now you want us to do it again?’ ...It is part of the autonomy, you know, like, from what is the respect given to public health nurses and how is it viewed, you know, like, by other professions as well as the public? Like, there’s always this back-and-forth, a back and forth. There’s not...To me, there is not really a clear role.

Without clarity, and only the map of their mandate to follow, it has become difficult for PHNs to navigate any remaining flexible time they have within their schedules and impedes their capacity to take initiative on health issues related to water. Pat offered another reason that “taking on water” would be pointless, “...when you put so much time into it and you get no response...or little response.” The PHNs’ broken connections with their clients and communities have left the PHNs with little hope that they can make a difference.

Meaninglessness comes out of isolation and powerlessness in the form of the types of activities the PHNs are involved in, including one-to-one, task oriented care. Granny B stated:

What I've found is that the health promotion...a lot of the really neat things that we did with public health, doesn't seem to be happening much anymore. So you do a lot of that one-on-one as opposed to groups. And it's not the same. It's not that you're not concerned about all those health issues and safety issues. It just doesn't seem to be happening the same anymore.

With meaninglessness comes a belief that they can't make a difference, and therefore it is pointless for them to address water. This becomes an excuse in itself to not work on water, thereby relieving them of the responsibility, an adaptive strategy that will be discussed in the next theme. The PHNs have been following the map of their mandate, and this has not led to fulfillment in their role. Dirke even questioned if they are doing more harm than good in their current model:

I see the pressure from the managers, the powers – and I'm saying managers, but it's a hierarchy, you know – we've got to do this, we've got to reduce our wait times, and we've got to get people in and out, ta-da-ta-da-da, and are we really doing them a great service, or are we doing them a disservice?

Making change is very important to the PHNs, so any loss of job satisfaction is indicative of a feeling of doing meaningless work, and by extension, not making a difference in the health of their clients. Dirke continued, "I am very disillusioned with nursing right now...I don't like what I see anymore. I don't see us providing caring...care, you know? It's well-child clinics, get 'em in, get 'em immunized, get 'em out." There was an overwhelming sentiment of "not doing it right." Many PHNs expressed that they feel they are not caring anymore, and therefore have been struggling to find meaning in their work.

Kootenay provided profound insight in the following quote: "I think...our role is not only to do what we're mandated to do, but also to help ensure the best possible health outcomes for communities." The mandate has rendered the PHNs powerless, but the quote is also very revealing on another level: what PHNs are doing is at odds with promoting optimal health of their clients. It exposes the mandate as limiting and pushing them into individualized care, and PHNs know that this is not "doing it right." Granny B

made a similar point, “ I used to tell the clients when they came in and I booked a 45 minute [appointment], ‘you know what, the shots are the smallest part of the whole thing we do.’” These statements provide a glimpse into how the PHNs’ activities are out of alignment with their purpose.

Self-estrangement – adrift in the desert creep.

What I do and who I am, it’s a constant struggle... (Frankie)

Self-estrangement is about a denying one’s own interests or essence. It epitomizes the struggle between ‘ought’ and ‘do’ – the gap between what the PHNs feel they ought to be doing in practice and what they are actually doing – a conflict between the situation and their sense of self.

Self –estrangement is a problem of authenticity and bad faith. It means not being true to one’s personality, spirit, or essence, and it involves adopting false values. The effect of self- estrangement on the PHNs is they have been so wrapped up in trying to justify their existence, that this has led them to a complete disconnection from their role, what Frankie refers to as a loss of their “core.” In this, the notion of addressing water issues would just irritate this wound by making visible, and uncomfortably obvious, their inauthenticity and questionable reason for being.

The PHNs talked about the struggle between what they ought to be doing in practice and what they are actually doing. Pat described it as follows:

You’re still expected to do your role at a certain standard, not just according to your employer...but to your own governing body, and to yourself as a professional and an individual, and you have standards. And when you feel like you’re just playing catch-up a lot of the time, it’s a very dangerous road, I’d say, to keep going down.

Frankie elaborated:

It's like I have my agenda, that our bosses want me to cover this and this and this and this. But for me, [the client is] the most important person, and that's how I always start my visits with clients.... because I think that is the basis of building a relationship with the client, and we are so often forced by our managers, 'you must do this and this and this and this and this in clinic,' and it's focusing on the tasks, like you have to weigh and measure, you have to do postpartum depression screen, you have to do all these things. And for me, it's what the client has...what they come with, what, I guess, their issues are and what you deal with first. And that will build relationships... I'm a partner and a helper, and I'm here for them, ultimately, yeah.

The PHNs revealed that they were disheartened and have lost their core. Pat spoke to this:

It's a little disheartening to think what you...want to achieve and what I expected to want to do. I was very gung-ho to be a school health nurse...and...had envisioned being in there and having these display boards of...nutrition or body image, or smoking, tobacco use, sexual health, etc. And then now, it's probably not even 5% of what I do. Sadly...even the parts I do with public health is immunization based.

Frankie also spoke to the PHNs' core when reflecting upon a time in past practice when, "we kept our core and kept our focus on the community." The use of the words, "disheartening" and "core" are very revealing to the significance of this loss. They speak to loss of heart, and heart begets life, and the PHNs seemed to be suggesting that they are in a vulnerable place of questioning their own reason for existence. In the next theme, *Adaptation of the Public Health Nurse*, the fight to hang on and justify their existence is explored.

It became apparent that PHNs do care about water, but they need to separate themselves as people from themselves as PHNs in order to address water issues. Although they recognize the link between water and health, they need to take it outside of their role to do anything about it. In this way, they are involved in sabotaging themselves – their role – and being further driven away from their traditional practice, contributing to the distance and forgetfulness of who they are. While several of the PHNs

spoke to this, Granny B and Frankie were explicit in this interest being driven by their role as a PHN, even though the follow through was within their personal world. Granny B stated, “it’s been more...through my interest as a public health nurse, but I’ve been representing me, not public health...” In reference to the possibility of attending town council meetings, Frankie said, “ it would not happen in my work time frame.... This is something I do outside....[but] it’s the PHN that makes me want to do it..”

This exacerbates a loss of the big picture and a drifting away from the past; from traditional practice; and from self. It sets the PHNs adrift in the desert creep as the desert gets larger and the PHNs get proportionately smaller. Granny B said it best, “I think public health role has gotten smaller instead of bigger. I think...the focus has gotten more narrow.” Granny B also summed up the loss in the distancing of PHNs from their core, “I think that public health, that one of the advantages of public health, or *was* one of the big advantages was that you were big picture seers. You were big picture seers. You looked at a *whole...*” (Granny B), suggesting they do not do that anymore. The big picture is fading from view.

Adaptation to a New Environment – Fighting for Survival

...I think we are talking the talk, but not walking it... (Dirke)

This theme is framed in hypocrisy – the gap between what public health nurses do and what they say they do. This represents the liminal space that the public health nurses are navigating through. The PHNs have created new truths; they have lowered standards, and they have offered a number of justifications and excuses for their low level of involvement with water. Also embedded within this theme are contradictions that are

apparent within the whole of the interviews that serve as adaptive strategies to compensate for what is absent; to narrow or close the gap between what they feel they ought to be doing in practice and what they are actually doing. In fact, these adaptive strategies permit complacency and set them even further adrift in the desert creep. Both hypocrisy and complacency feed self-deception, a tactic to try and fool oneself. The PHNs seemed to still know the truth, though for the most part, they seemed to push it away. These glimpses of truth, however, were the little minerals of hope that exist in the desert.

Conserving relationships within isolation.

I think [water] probably would be a touchy issue. (Stella)

Relationships are fundamental to effective nursing practice, and the PHNs are largely cut off from their communities of practice. Their relationships are broken and fragile, and they feel like outsiders. PHNs avoid addressing water in an effort to preserve existing relationships; they feel that water is a *touchy* subject, and that it could drive a wedge in any other health promotion opportunities that might exist. Stella, in reference to water, explained. “I think it is a very touchy subject for public health as well as for town administrators to get into.... So that to me, from the outside looking in, sort of dictates what is happening or not happening.” The PHNs reinforced that they are outsiders when it comes to their clients and communities of practice, that they can’t impose, and that they really should not bring up an issue that could impact on the livelihood of their clients. Dirke stated, “when you go into the community, you’re a guest in...their home... You have to make it client centered... You have to see what it is they want.” In other words, a PHN should not broach the subject of water unless it is brought forth by the client.

The PHNs were using this excuse, not only to protect their relationships and keep themselves relevant and alive as PHNs, but as a way to justify not working on water. A contradiction became apparent as they described water risks with specific examples, yet mentioned uncertainty that it is even an issue for their clients. Kootenay shared her perspective:

Being in a small community, you need to be cognizant of ruffling feathers, and not to get people's backs up before you really know if there really is an issue or not. I think you need to be really careful in going about investigating anything, before you start making too much noise, because if you're wrong, you can certainly cause a lot of problems... You might lose some trust in the community and that would really hamper anything you want to do in the future. It would take a long time to build up trust again.

It is interesting that Kootenay advised to be careful not to make "too much noise" on an issue unless they are certain it is an issue. She said this in the name of protecting the PHNs' relationships in the community, but it is a very insightful comment to being shy about using her voice, and highlights a sense of powerlessness.

Several PHNs reinforced the notion that water is a sensitive issue that they are not comfortable addressing with their clients, solely for the purpose of protecting their existing relationships. They felt that this could jeopardize any other opportunities they might have to interact and make a positive difference in the health of their clients. The reason that the PHNs felt water is such a sensitive topic is because so many of their clients rely on the agriculturally based economy for their livelihoods. This placed the PHNs into a quandary between which determinant of health to value more. Stella stated:

If you were looking at someone who's living on a farm or something, and they're using pond water, and there's the chance that [it] could be contaminated, I think it probably would be a sensitive issue if we were to go in and say, '...your water source isn't safe and we need to do something about it.'... That's their home and that's their resource, their property.

Pat added:

When...you're questioning how they do their farming practices...how receptive and how welcomed you are to talking to individuals significantly changes. You...get shut down very quickly...You're not to be asking those questions, which I've been told on a few occasions.

Frankie recalled going to a meeting:

and bringing up our CDC levels...and saying, 'well it's because we have so many feedlots.' And I remember a lady there just so mad. She said, 'this is our livelihood; this is what keeps our community going,' and she was very offended that I said, 'well, maybe there's risks to this industry being so concentrated and it may be harming...our health, our environment.' So...I learned very quickly at that meeting that it's a complicated issue, health and water, and when you start getting people's livelihoods involved, when it's putting meat on the table...feeding their families, it's not an easy thing to do as a public health nurse...

It seemed that the southern Alberta context does play a part in why PHNs are not addressing water. Sharon explained:

... To bring awareness [about water] as a public health nurse, I think especially in southern Alberta, is going to be really, really difficult because of it touching on what they're doing, like the cattle industry... If it comes from the government...where it is directed from the top down, I think that would be something easier than from the bottom up.

Sharon's comments brings to light the difficulty in the issue of water as a touchy subject; however, they also serve to reinforce her stance that it is not her job to address water; that water is "beyond where [she is]," and about PHNs rejecting it as part of their role. They used the notion of imposing as an excuse to not address water, again in the interest of protecting fragile relationships. Dirke asked, "So where do you draw the line? How much can you do, and how much do you impose upon people?" She followed with, "you are a guest in their homes and it's not, 'you will do something.' It's, 'here's some

options for you,’ and *they* make the decision of what they’re going to do with their lives or health behavior...”

Dowsing for voice within powerlessness.

I put the information out there. I can’t make you drink. (Bella)

Within powerlessness, the PHNs submitted to not having the time; not having the knowledge or expertise, as excuse for not working on water. Spike stated, “you have to limit what you’re going to focus on... There’s not enough time for everything, and so it’s best left to the people who have the expertise.” Bella agreed, “I feel it’s a little out of my scope. There are better [educated] people that...their thing is water, but on a very basic level of talking to people about water, we could...too.” (Bella)

They did acknowledge that, technically, there could be some time to do something about water, but they were actually choosing not to. Therefore, they could convince themselves that they were exercising their voice; their power. Bella stated, “I guess if I had a great interest to...go gung-ho, then I might. I don’t.” Similarly, Sharon observed:

[Being involved in the community level] would definitely fit into the role, but I think [not being involved] is more by choice, because, again, I don’t live here, and most of those meetings would happen in the evening or...when there’s other things going on, and that may be... my bias as well, because I would attend things in my own community, and if it is something that is outside of what...[is] part of what I am doing, or I don’t get the opportunity to flex my time,...then that has an effect on my time.

There was a large emphasis on the value of doing one-on-one, task oriented care because there they can make a difference. They overemphasized the kinds of things they *do* tell clients (using their voice) related to water or other health messaging, but excused their powerlessness by making it the clients’ fault if the message is not received, “... some days they kind of look at you like, ‘huh,’ like, ‘you don’t know what you’re talking

about,’ but... I put the information out there. I can’t make you drink” (Bella). Dirke compared it to talking to clients about immunization:

[You] explain why it’s important to have these vaccines, etc., etc., and they walk out the door and you know bloody well they are never going back for the vaccines. You have to take away that, ‘I know that I did the best I could.

Spike clarified the PHN role as being limited in its scope and justified the powerlessness of PHNs:

I see [my role]... as providing information, giving the people the information...and then it’s up to them to decide... if they’re going to use it or not... So that’s sort of my role as...a provider of information.

Throughout the interviews, there were a lot of quotes about talking, telling, explaining, and providing information – an overemphasis in fact, suggesting that PHNs were clinging to low level health promotion strategies because this is all they have time for; all they know how to do. It provides them with some level of connection to clients; gives them some choice and autonomy within their work; and they can convince themselves that they are making a difference and are therefore fulfilling their purpose. In their focus on *telling*, they found some clarity in their role.

Sustaining purpose within meaninglessness.

If I can do my job within clinic...and the purpose of my job is to provide vaccinations...and if I can do it well, then I am[doing it right]. (Stella)

Here, the public health nurses were trying to restore clarity and a sense of purpose in their role. Stella explained:

It’s our job to care...like, you know, nurses provide care; we care for our clients; we care for our community...And I think if I can do that in my job...wherever I am...then that is what brings me...that professional...satisfaction.

They do this through creating new truths, redefining what is meaningful, lowering the bar for what constitutes effective care, and changing the goals of care. Even though most of the PHNs reflected on grand ideas about what their role is meant to be, many of them submitted to a readjustment of what is meaningful. Pat shared:

I love one-on-one teaching, so even just the small successes... help[ing] a mom breast-feeding when she's having a nightmare time, and all of a sudden your little bit what you've tweaked, seems to help, to me is a huge success and it might as well be a world of difference in...two individuals' lives... That's where I draw a lot of satisfaction from, from there.

Several PHNs also justified a present time orientation, as opposed to a forward thinking, upstream perspective. Dirke stated:

... You have to deal with what's the most important for the client today, what the issues are, because if you start telling them, 'you need to do this, this, this, this, this, this, this, this,' you've lost them by the third *this*.

They also overemphasized what defines success. For example, Dirke stated, "Knowing at the end of the day that...when I leave work knowing that I've been the best I could, and if I've made a difference in one person's life, I'm 100% successful."

The PHNs also find meaning in things that provide oases for them, namely babies. Here, again, their connections are clear; their power is restored; and they feel they are making a difference. They can see the difference they are making, and this provides meaning and reconciliation. Sharon explained:

...What I do talk about with the baby visits...is like, 'how do you bathe your baby,' and 'what water do you use,' and 'are you aware'...because the baby is a very critical new addition.

Bella reinforced that the most important part of her role was "giving babies the best start in life we can," and Dirke stated:

...It's really hard to talk about environment...and talk about this and that, and ta-da-ta-da-da-da, when you want to make sure this kid grows and thrives, so you want to make sure he's being fed properly, and you want to make sure he's immunized. So those are your bigger goals, so it would be hard to put a lot more into it.

Another strategy that some of the PHNs used to build meaning into their role was sneaking in opportunities to find satisfaction. The fact that they have to sneak these opportunities in suggests that they need to do things unofficially and do not want their involvement to be detected. Therefore, these activities are perceived by the PHNs to be inappropriate or unapproved; the belief that discovery would lead to trouble. This points to feelings of oppression and disempowerment, but also speaks to these activities as having to take place outside of their defined role – which, again, drives a further wedge between ‘ought’ and ‘do,’ and drives them further away from their core; their tradition. When asked why she sneaks these opportunities in, Granny B stated:

Why do I [sneak in opportunities]? Because that's...I think it's so important, and it's public health. It's public health. The shots are public health, but I think...that doing the parenting and talking about brain development...that's the upstream, and not the downstream public health. I like the upstream.

Sharon also spoke about making an intentional effort to bring meaning into her work:

...So you try to find different ways again, you know, like from what is very meaningful to me are those contacts, so I'm seeking those out more than I used to before, because I knew there would have been a steady supply of that, whereas now I am not always certain of that...I...try to manage my time in such a way that I am ensuring for myself that I get that contact or that supply happening on top of what needs to be done under the mandated issues.

Preserving authenticity within self-estrangement.

What I do, I think, is always a balancing act between where...the organization says, 'you're taking on this task now,' and I guess incorporating that into who I am. (Frankie)

The major task of this compensation strategy is to close the gap between ‘ought’ and ‘do.’ Frankie explained:

I kind of look at what’s expected. And then I have to look at, okay, what can [I] do? [You have to] think about what’s best, and think about what’s right, and do it as best job that you can, but you always have to keep the resource issue and what the managers and what the health system...is expecting. You have to balance both of those worlds. So this is what’s expected from me, and the other half is what do I do to make sure I’m doing the best job I can in all those areas.

Stella spoke to the same struggle:

When you look at what is our mandate, what we have to get done in public health...it's immunizations, for sure...The piece that we're focusing on is getting everybody vaccinated, and preventing outbreaks... There is so much potential when you think of what we could be doing as far as health promotion goes... I do feel like our job is to have high vaccination rates... That's...where all the resources are going right now...and everything else is, I think, like an added bonus... We have to do our home visiting piece, but even that's...not our priority either. It's like, ‘what do we *have* to do? We *have* to immunize right?’ And then I think all the little extra programs...If you can fit them in, that's great...

The PHNs fool themselves, and feed their souls by finding “the little nooks” (Pat) to fulfill their purpose. As Pat explained, “I still love what I do....I just have to find the little places that you can do it, because on the whole, as a big picture, it wasn’t quite what I was expecting.” Pat stated the “the little nooks” are in the individuals, so this perpetuates a focus on individualized and task oriented care. This intensifies the barriers to working on water, as it holds PHNs in a place of false contentment and they stop fighting to expand their role.

The PHNs tell themselves that they do the best they can, and they reiterate that working on water is not really their job – much like they said when we first entered their desert – but this time, it was in the form of justifications, not facts, that are blind to the truth. A lot of the reasons for low level involvement in water that were considered when

we were surveying the desert had now turned to excuses and justifications. For example, Bella stated:

I do see [water as] very important, but I don't see it's just my role at all... There's [public health inspectors] out there, and other government departments, and the water co-ops themselves could do more education. You know, it doesn't have to be the public health nurse.

Similarly, Sharon questioned, "Like for public health nurses, we can jump on all sorts of wagons, you know, like from this is what is best for you, that is what is best for you. Is it the government's role?"

Sharon was among several PHNs who seemed to deflect the responsibility for addressing water onto other disciplines and push it into the outer realms beyond the PHNs' level of influence. Ironically, those outer levels are within the socio-ecological framework and ostensibly within the purview of PHNs. However, the PHNs are so far removed from these outer levels of care, that this part of their role is forgotten. Dirke stated, "...it's really hard to say that we could put a lot of perspective on [water]. I think it has to come from...the city, from government...those kinds of things." Granny B struggled with this too, "I don't know if it would be necessarily be the nurse on the front line... It would be nice to be front-line and do it. I'm not sure if...the local level is where it needs to be."

Another deflection was made to the clients themselves. Stella stated, "...we just assume people have access to information either through books or the Internet, or whatever," and Bella stated, "...anyone who is involved in the co-op is made known that it's up to them to test their water... It's not really my job to be telling that..."

There is also justification for individual, task, and present orientation as being congruent with what PHNs ought to be doing. This is different than justifying these things to create meaning; in this context, these justifications tell them that they are doing what they ought to do. For example, Bella shared, “I think it always has been, it probably always will be, immunization seems to be my one, and number one role immunizing people against disease, so that’s my main goal I would say, is immunization.” The goal is not in alignment with what the PHNs claimed gives them satisfaction, and what Bella herself purported to make the biggest difference in the health of the community. As Dirke stated:

...You have to deal with what's the most important for the client today, what the issues are, because if you start telling them, “you need to do this, you've lost them by the third this.

“My client is...the person that is...with me at the moment.” (Frankie)

The PHNs have fallen into complacency. Pat offered:

I get tired, burned out... You feel like you're just...running through the motions... I would normally spend a lot of time trying to educate them on it, understanding where they're coming from, taking the time to listen to where the information came from, to re-focus...and spend a lot of time talking, and I just don't have it in me right now. So it's, *no*, it's *their* decision... ‘Call me if you change your mind.’

Frankie summed it up: “you get tired after a while. You get tired of fighting...the hurdles just seem bigger and more, and you just kind of, ‘okay, whatever.’”

The complacency permits the PHNs to redefine who they are and reconcile what they do with who they are, but there was some recognition and self-awareness that they were making these adjustments, and this discourse led us to the next theme.

Reclamation of Practice – Finding Hope through Awakening

It's a wake-up call; maybe that's our job as a nurse...to educate populations and make sure that they are aware of the concerns before it becomes that little girl that's hospitalized due to an e. coli outbreak...that could have been potentially prevented. (Pat)

This theme revolves around the awakening of PHNs to their tradition; to their role; and to water itself. It is in the remembering of their role that some of the PHNs let go of hypocrisy and were startled out of complacency. “We can’t just sit back and say our job is to immunize kids and go see babies. There’s way more to it than that.” (Kootenay)

Although there were moments of recognition to their role as we explored the desert through the other themes, the little signs of life, the gems and minerals that do exist in the desert, often went unnoticed, or they were pushed away in favor of holding onto the hypocrisy that helped the PHNs feel whole. Some PHNs admitted it along the way, like Dirke, who claimed that PHNs “...talk the talk but [are] not walking it.” What was different now, however, was facing the truth and admitting responsibility, and therefore opening up to reclaiming power. Some PHNs were truly seeing; some were cautious and a bit dubious, and a couple of them did not see it yet.

Reorienting to the internal compass.

Of course, we're mandated for immunization and communicable disease, but our role can be much more, and is much more than that. (Kootenay)

Through the discourse, as we travelled the desert, we were constantly disoriented by the shifting sands that changed the view from great obstacles to potential opportunities, to the difference between concealment and unconcealment. There was some recognition seen in the agitation of PHNs when they realized that they were in conflict between ‘ought’ and ‘do,’ and in their expressions of remorse over lost tradition.

There was comfort as the shifting sands changed our path and our view turned to other aspects of their lived experience. At this juncture, however, as the dust settled, some PHNs courageously raised their gaze. In a second interview with Frankie, she stated that the first interview had “planted the seed for [her] to be a little bit more aware of water and how essential it is to health.” The PHNs had certainly been able to speak to the connection, but this was bigger. It was more about remembering that water does present a risk, and that there is a role for PHNs. Pat stated:

It’s a wake-up call; maybe that’s our job as a nurse...to educate populations and make sure that they are aware of the concerns before it becomes that little girl that’s hospitalized due to an e. coli outbreak...that could have been potentially prevented.

Suddenly what seemed now obvious was epiphany, and in that admission, the hypocrisy was let go, and many truths were faced. Some of the PHNs realized that they had some responsibility in letting water evaporate from their role. Bella noted that involvement with water “isn’t happening anymore *because of us*...We stopped the [fluoride] program so we kind of stopped worrying about fluoride anyways. People were on their own then.” Although Bella was talking about another aspect of water, more specifically tied to a particular program, she was acknowledging that the profession let go of this, and with this, the PHNs let water evaporate into forgetfulness. Bella also talked about how people were on their own for water testing and that it isn’t really her role to address water because other people do it. This illustrates that not having involvement leads to forgetfulness, and in this case, loss of knowledge and skill. Pat said, “I think unfortunately that’s the kind of world we live in; if you’re not pushing for higher standards, sometimes things get lax or slip...” Granny B, linking her present thought to

tradition, said, “Florence Nightingale did [water], but I think we dropped the ball after her....Maybe public health nursing could pick it up...Somebody’s got to.” This was a profound statement, because it showed a glimmer of taking back the power and following her own internal compass to pursue what she knows needs to be done: it is up to the PHNs to do something about it. Doing things *right* was a common thread throughout the interviews. It is something that lends meaning to the PHNs’ jobs. Frankie said, “...To do things right...when I look at water, it’s, ‘okay, do you have access to clean water?’ And lots of people in our community, not fifty miles away, don’t. So why are we letting that happen?” Admitting that not being involved with water equates to not *doing it right* clearly demonstrated acknowledgement that there are health issues associated with water, and recognition that public health nurses have a role in addressing those issues. As the PHNs considered their needs, Granny B reflected, “Maybe, as public health, we need to be aware of what’s going on in the community more.” Kootenay stated:

We need to know what the issues are, what’s coming down the pipe for a problem coming up...We need to help prevent things from happening; we need to help promote good health and people, and I think we always need to be on the forefront of what’s next.

Creating swales to catch water.

I just feel like I’m not doing anything anymore with water...and it just kind of says to me there is so much more to do... (Granny B)

Here, the PHNs started to see the possibilities and expressed a desire to pursue them. Here is where Aletheia closed the door on hypocrisy and opened it to possibility. Not only did the PHNs now have a clear view, but they had found their internal compass to guide them. They were reconnecting to tradition and their sense of species essence.

Now that Aletheia had brought water back from the dead, Granny B proclaimed:

I think we have to figure out how we can make it work, and how we can still keep that issue alive. And it might not be us that is doing all the work, but we can support [it] and say, ‘yes.’

Frankie added, “I think as a public health nurse, I think we have to promote the basic need to keep [water] safe, to keep it available; to keep it available to people to keep it safe.” In line with this thinking, Kootenay stated, “I don’t know what the next step would be...Maybe we should start the conversation somewhere...”

The PHNs started to offer possibilities and consider ways they could, under the current system, have greater involvement with regards to water. Granny B offered, “there is a limited amount of time that we can now fit into our hours for community development. So how could water fit into what we *do* do?” Sharon also suggested, “if you can combine things with what we are already doing, like going into the schools, or going into the homes, or seeing the infants and toddlers at the well-baby clinic.” Several PHNs pointed to the baby as perhaps the oases where water could be addressed. Spike also found that there could be opportunities within their role with new babies, “If I was doing a home visit to a new mom with a new baby.” Sharon stated, “...maybe the best contact for us is the baby.”

In this, they were somewhat cautious. As Sharon observed:

I think it is individual basis, you know, like it’s starting with just dropping little hints here and there, like, going back to the babies... I don’t think it is going to be like a *rah rah* kind of lobbying out there. It is going to be baby steps, because...all I can do is plant the different seeds.

Some of the PHNs voiced discomfort in bringing water into their practice within the current practice context and mandate. Bella stated she would be able to address water, “if they added it to our assessment at home visits and clinical...because often you don’t

[bring up water] unless it comes up for some reason.” In stating it this way, although there was an emerging openness to water, there was still a blocked view in terms of water being a viable issue that needs to be addressed.

Kootenay saw the wholeness:

...We touch on lives in so many different ways, and...people have a lot of trust in us, and I think...we could promote healthy water sources just as easily as promoting good nutrition for somebody's baby. You know...it flows into everything we do, because we touch on everything in a person's life, as far as health.

Spike recognized her opportunity and credibility:

We are in contact with all ages of people, and in most cases are accepted...within the homes and in the community. And because our other information that we provide is credible, hopefully the people will look at the information that we're providing regarding water as being credible information. So that would be how I would see us doing it, as just providing information.

Although Spike still placed a limitation on what she sees as her role, she did acknowledge her own potential. Pat wasn't so hopeful. She expressed that although it would be nice, she does not see any way for change: “...It's not to say that we couldn't ask questions...especially if we were seeing issues or finding out what's going on within our communities as a whole...”

In all this, PHNs are finding ways to reconnect to water, reconnect with themselves, and they are suggesting the need to create opportunities and hold onto this aspect of their role. They also recognize the limitations within this under the current structure.

Conclusion

This chapter presented the findings as co-constructed and understood between my co-researchers and me. The next chapter provides a discussion of these findings and relates them to relevant literature.

Chapter V – Discussion

This chapter frames a discussion of the findings in regards to the meaning public health nurses attach to their role with promoting safe and secure water, and their emergent understanding of barriers and opportunities for an enhanced role in this regard. A summary of the research findings is linked to scholarly literature, where it is available. This study contributes new knowledge regarding PHNs' lived experience and no similar studies were found. This is followed by a discussion of implications for nursing practice and education, strengths and limitations of this study, and recommendations for further research.

Summary

The research questions that guided this study were: (1) What meaning do public health nurses in southern Alberta attach to their lived experience with promoting health related to safe and secure water; and (2) What is their emergent understanding of barriers and opportunities for an enhanced role in this regard. Through cyclical movement between the parts and the whole of the text, I came to a fusion of horizons with my co-researchers, and what emerged was a practice context for PHNs that is like a desert. It is a space absent of water, disconnected from the traditional practice context, and devoid of the support and resources PHNs need to promote health related to water. *Being in the Desert – An Absence of Water in Public Health Nursing* served as the overarching theme in the findings, and the experience of being in the desert was illuminated through four themes: (1) *Desertification of the Practice Context – Surveying the Landscape*; (2) *Desiccation of the Public Health Nurse – Feeling the Slow Death*; (3) *Adaptation of the*

Public Health Nurse – Fighting for Survival; and (4) Reclamation of Practice – Finding Hope through Awakening.

The first research question was answered across all four major themes, which illuminated the meaning of different aspects of the PHNs' lived experience in the desert across time and different levels of depth. These themes emerged as I traversed the desert with my co-researchers and the discourse led to new experiences and insights. The second research question was also answered across all four major themes, and was understood at progressively deeper levels as we made our way through the desert. As in the tapestry of any landscape, the desert is ever changing, and not all is visible on the surface. The barriers to a role in promoting health related to safe and secure water intensified the further we traveled, but gems and minerals also exist deep in the desert, and in them, we also found emerging hope for opportunities in the awakening of the PHNs to a lost and forgotten role.

Desertification of the Practice Context – Surveying the Landscape

The first theme, *Desertification of the Practice Context – Surveying the Landscape*, served to contextualize the public health nurses' current practice environment as it is experienced by the PHNs, and it is understood through three subthemes: (1) *Desolate and in the Middle of Nowhere*; (2) *A Harsh and Inhospitable Landscape*; and (3) *A Dry and Depleted Land of Scarce Resources*.

Essentially, this theme focused on the disconnectedness of public health nurses from not only their traditional roots in water, but from health issues related to water and opportunities to address it within their current practice. The PHNs understood the

connection between water and health, but did not see water as part of their role. In their experience, addressing water issues is within the purview of public health inspectors (PHI), or it is something that clients take care of themselves. In fact, water quality does fall under the mandate of PHIs in Alberta, and individuals are responsible for the maintenance of their own wells in Canada (Charrois, 2010; Jones et al., 2006). Despite the fact that the PHNs reported some level of involvement with water in the past, it seems that water is simply not relevant to them in the present. In fact, although water was within the job description of rural PHNs year ago, it no longer falls under the mandate of public health nursing (Alberta Health Services, 2014).

The public health nurses' past involvement with water is reflective of their traditional biomedical focus, primarily attending to disseminating information in regards to well maintenance, providing bottles for water testing, and following up on enteric disease. However, health issues related to water extend beyond a biomedical focus on water quality, and nothing was shared by the PHNs in relation to water scarcity, social justice, or protection of source water and the aquatic ecosystem. This suggests that PHNs maintain a narrow view of health that is in opposition to PHNs' claims that they view health from a holistic perspective; place a high emphasis on social justice and equity as their fifth pillar of the metaparadigm of nursing; and promote health at multiple levels, beyond the individual, by taking action on the determinants of health through a variety of strategies (Community Health Nurses of Canada, 2011). Access to safe and secure water is, in itself, an important determinant of health, and considering its interaction with other determinants of health, and taking into account the role of the PHN as delineated in the

Candadian Community Health Nursing Professional Practice Model (CHNC, 2013) and Standards of Practice (CHNC, 2011), it certainly seems that PHNs are clearly poised to support the objectives of the Alberta Water for Life Strategy (Government of Alberta, 2008).

However, there seems to be missing a sense that water is vulnerable, and issues related to water are regarded as infrequent and “out there.” Several PHNs spoke to how lucky they are in this part of the world to have reliable water, and suggested that people in southern Alberta do not need to think about water. This, of course, is not true. Bjornlund (2010) reports that water scarcity is a concern in Alberta, and the area with the greatest amount of water stress (and risk to quality) is in the southern part of the province, which includes the river basins that define the geographical parameters of this study; where these PHNs are currently in practice.

The separation of water from public health nursing; the PHNs’ forgetfulness of their own past role and tradition; and the denial of water as a health issue represent fundamental barriers to having a role with respect to water. The PHNs are not mindful to what their role could be, and therefore do not take initiative in addressing issues, becoming informed, or demanding to be at the table for discussion on water. In fact, it is quite the opposite. Water is far removed from their present and is located within their past, within their tradition, and within the rhetoric.

The public health nurses in this study struggled to articulate a potential role with water, and voiced that water is not something they think about. Although they certainly acknowledged that risks to water quality do exist, they seemed to be blind to health issues

beyond that realm. When it was brought into discussion, what emerged were PHNs not just separated from their role with water. It was much more than a forgetfulness of water altogether; it was also a separation from opportunities for health promotion in general and a diminishment of freedom to engage in it, exacerbated by a narrow view of health promotion. The PHNs' past and present experience with health promotion has been limited to health education, to the point that they do not discuss or reflect on other strategies that are described in the Ottawa Charter for Health Promotion (1986), and that are also embedded within their own professional practice model and standards of practice (CHNC, 2011).

Ultimately, water is forgotten, and any opportunities to promote health related to safe and secure water seem to be undermined by the fact that public health nurses do not see the opportunities and do not recognize their bigger role. This represents a huge barrier that is perpetuated in the effect on the PHNs of being in this desert, and in their survival strategies to compensate for their losses.

Public health nurses are also confined by structural barriers within the restrictions of their practice; barriers that prevent them from having a role in promoting health related to safe and secure water. The PHNs shared that they have lost their generalist role as their mandate has pushed them into a more specialized role centered on immunization. Water is not part of their described duties, and is not a priority within the provincial mandate. Essentially, the PHNs are confined to their office and unable to immerse into the community. This bars them from engaging in health promotion of any nature, including water.

The public health nurses indicated that they feel that they have less freedom and autonomy than they once had, and that they have little control in their work. The thrust of their activities are at an individual level. They seemed to be conscious that they are not fully effective, as many comments were shared about feeling rushed and less effective and responsive in their interactions with clients. One PHN even suggested that they are doing a disservice to their clients. The fact that water is not part of their mandate, and not part of their described duties, and that there is very little room for health promotion within their schedule, sends a clear message that water is not a priority of the health care system in Alberta. As a result, the PHNs working under this system are in a position to forget about water. The health care system seems to support a primary care approach, and the focus is on getting as many people through the system as quickly as possible. Within the current structure, the PHNs have lost their generalist role and ability to respond to clients in a holistic way. They are unable to operate within the larger realms of the socioecological model. Therefore, their level of influence is limited.

The public health nurses easily identified barriers to a role in promoting health related to safe and secure water. They voiced that they see no possibility for opportunities, as they simply do not have the resources they need to engage in that role. Primarily, they stated that they need time. They need time to “be there” in the community; to have presence and build relationships. They also need freedom to make the decision to address water. However, there is no dedicated time for it, and any flexibility within their day is taken up by priorities decided upon by the Mandate and the “powers” above them. They expressed that health promotion of any kind is largely

neglected, and their stories about health promotion remain focused on the individual or group level specific to health education and health behaviour change. This is contrary to the broad scope of how health promotion is defined, and how it is supported for PHN involvement within their own professional practice standards (CHNC, 2011).

The other resource that public health nurses identified as lacking is knowledge. It was apparent, through their shared experiences, that the thrust of their experience with health promotion has been with health education as their primary strategy, and the PHNs placed a high emphasis on teaching and telling during their interviews. The PHNs reinforced that it is very important to them that they “do [their job] right,” and if they are unable to provide information, they are not “doing it right”. This indicates that PHNs have lowered their gaze on the extent of what their role could be.

Perhaps public health nurses have not kept up with the rhetoric and developments within the discipline of Public Health. The PHNs discussed how other disciplines and professionals are now doing things that PHNs used to do. Perhaps it is in the structure of the provincial healthcare delivery that PHNs have been extricated from health promotion in favor of other health professionals, but the field of public health nursing is only just beginning to recognize this in practice. Certainly, the literature still supports a high level of involvement for PHNs to be involved in health promotion, and the Community Health Nursing Professional Practice Model (2011) illustrates this, as does literature and text books used to teach nursing students.

It would seem that this theme carried only barriers to a role in promoting health related to safe and secure water; but, in fact, the discourse on scarce resources brought

the PHNs to a place where they expressed dissatisfaction in the fact that they feel unable and “unequipped” to address water, and this intensified the experience of the desertification of their practice context as they considered what they have lost in terms of time and knowledge. Former opportunities and memories to broader level community action highlighted the lack of this in the present, and increased their hopelessness for the future. However, in their distress was beginning consciousness of the internal battle they are facing in the midst of this desert: the struggle between what they are doing in practice and what they feel they ought to be doing in practice.

Desiccation of the Public Health Nurse – Feeling the Slow Death

The second theme, *Desiccation of the Public Health Nurse – Feeling the Slow Death*, served to illuminate the effect that living in the desert has had on public health nurses. Four subthemes shed light on this aspect of their lived experience: (1) *Isolation – Cutoff and Incommunicado*; (2) *Powerlessness – Chipped Away and Eroded*; (3) *Meaninglessness – Disoriented in the Shifting Sands*; and (4) *Self Estrangement – Adrift in the Desert Creep*.

This theme illuminated the effect the desertification of the practice context has had on public health nurses and their ability to enact a role in promoting health related to safe and secure water. Within this level of understanding of their lived experience, the PHNs brought forward many barriers to such a role, and they could not see any opportunities.

Within the confinement of their offices and limited scope of practice, the PHNs spoke of how they are largely cutoff from their communities of practice, and they

reported that their relationships with their communities are broken and fragile as a result. The PHNs expressed feelings that this has lessened them as nurses, not only because they have diminished knowledge of their communities and lack of awareness in regards to water issues, but because PHNs are invisible to their clients. Not being visible, understood, or recognized for their abilities means that PHNs are not accessed by the community, and they are not considered as a resource for health-related water concerns. Furthermore, PHNs reported that they seldom communicate with public health inspectors. If there have been opportunities for them to be involved at the community level in regards to water issues, they have neither been aware of them, nor have they ever been invited into multidisciplinary discussion on these matters. This may have contributed to assumptions expressed by PHNs that water is not an issue of importance or concern in their communities.

In terms of powerlessness, the public health nurses stated that they do not feel that they have any power or influence in general, and therefore do not believe they are positioned to make a difference where water is concerned. They do not believe they have credibility, and they really cannot make a decision to address water within the confinement of their work day. Their schedule is decided upon for them by the “powers.” Because the PHNs are not able to get into their communities, they are limited in having voice. Moreover, the PHNs expressed a loss of agency through the use of phrases, such as “just a PHN,” to explain the futility in trying to address water issues. A significant barrier in this is that they seem to believe in their powerlessness, and they use it as an excuse to

not address water issues. This permits them to keep their gaze low and tread water, driving them further away from opportunity.

Meaninglessness stems from lack of clarity in one's role. The Public health nurses spoke of other professionals doing things that PHNs used to do, and of top-down initiatives that they have been required to implement that are disconnected from the needs and interests of their individual communities. They expressed that these initiatives are often short lived and then taken away from them once it is deemed that another professional is better suited to take on the task. This creates confusion for the PHNs in terms of their purpose, where to invest their energies, and where their focus ought to be. This ambiguity ultimately results in complacency, whereby the PHNs surrender to meaninglessness as a justification for not addressing water issues. Furthermore, PHNs reinforced their belief that they are not doing their job "right," and if they are seen as not good at what they do, this could impact on their clients' trust and destroy any chance for building relationships and providing effective care. Since they do not have the knowledge required to address water issues, they expressed it would be a disservice for them to promote health related to water.

A significant barrier in relation to meaninglessness is that public health nurses do not believe they make a difference; they are engrossed in one-to-one task oriented care that they admit is the smallest part of what they could do. Involvement in these types of activities keeps them away from water and perpetuates the myth that water is not an important issue. The value of water is diminished as "just another thing," and the PHNs

do not recognize the contribution that they could make in regards to promoting health related to safe and secure water.

Self-estrangement represents the epicentre of the public health nurses' struggle between what they feel they ought to be doing in practice and what they are actually doing. Self-estrangement comes out of isolation, powerlessness, and meaninglessness, and manifests as the very compensation strategies that are discussed within the theme of *Adaptation of the Public Health Nurse – Fighting for Survival*. In self-estrangement, the PHNs are conscious and plagued by the discrepancy between what they know to be right and what they are proclaiming to do. Therefore, they feel inauthentic in their focus on extrinsically satisfying, rather than intrinsically satisfying experiences; their focus on short term reward and measurable outcomes; and their focus on tasks. They are permitting these activities to serve as a distraction that helps them avoid tackling the bigger issues, like water. The PHNs talked about the things that they value and what gives meaning in their work, and they spoke with passion in regards to “being there” in the community. However, they are not *there* anymore. They also spoke about their ability to make difference and make change. This is no longer. The essential barrier in self-estrangement, as it relates to water, is that as the PHNs disconnect further from themselves and their role, the more the big picture fades from view and intensifies their forgetfulness of water.

This theme spoke to a shadow issue within the reasons for PHNs' lack of voice on water issues. Although there is a Canadian study that reports that community health nurses are in crisis, and that they are being replaced by other professionals (Schofield, et.

al., 2011), there are no other studies that link these factors to role of public health nurses in promoting health related to water.

Adaptation of the Public Health Nurse – Fighting for Survival

The third theme, *Adaptation of the Public Health Nurse – Fighting for Survival*, served to expose the compensatory strategies that public health nurses have been engaging in to offset the impact that the desertification of their practice context has had on their role as PHNs. In their navigation through the liminal space between what they feel they ought to be doing in practice and what they are actually doing in practice, they have fallen into hypocrisy in an attempt to narrow or close that gap. They are embroiled in a self-deception that helps them reconcile their disconnected relationships and restore a sense of empowerment, purpose, and authenticity in the face of isolation, powerlessness, meaninglessness, and self-estrangement. These survival tactics provide them with a way of holding on to their reason for being. The subthemes that open understanding to this theme are (1) *Conserving Relationships within Isolation*; (2) *Dowsing for Voice within Powerlessness*; (3) *Sustaining Purpose within Meaninglessness*; and (4) *Preserving Authenticity within Self-Estrangement*.

The public health nurses do not fool themselves about the tenuous relationship they have with their clients. However, they do use their fragile relationships as an excuse to avoid addressing issues or initiating discussion related to water. In the name of protecting any further disconnection from their clients and communities of practice, PHNs have become complacent regarding water. They are telling themselves that water is not a concern for their clients; that water issues do not exist in southern Alberta. This is

not supported in the literature, as the Government of Alberta (2008) reports that water scarcity and quality are issues in this province, and the greatest area of water stress is in the southern regions (Bjornlund, 2010), inclusive of the river basins that bound this study. In fact, the geographical area that defines this study is intensely agriculturally based with heavy reliance on irrigation, huge feedlot operations, and ongoing discussion and contention around water rights for farmers.

By denying the issues and risks, the public health nurses excuse themselves from feeling like they need to address them. The greater focus for these PHNs is on holding on to the relationships they do have, and they are clear that addressing water would further jeopardize these fragile relationships. They refer to water as topic that is “touchy” and “sensitive,” and one which places the determinants of health in contest with one another, because addressing water threatens people’s livelihoods and socioeconomic status. In the PHNs focus on “finding the nooks” to build relationships and interact with their clients in meaningful ways, their focus is turned to individual level, one-to-one interactions and they are turning a blind eye to higher level interactions. The PHNs spoke about how they are kept out of the communities due to the restrictions of their mandate and associated time constraints. However, in their quest to alleviate this discomfort, they have actually surrendered to it, and are keeping themselves out of this realm through their lowered gaze.

The public health nurses fall to excuses for not addressing water based on their values and beliefs. The Community Health Nursing Standards of Practice (CHNC, 2011) state that the PHN “respects, trusts and supports or facilitates the ability of the individual,

family, group, community, population or system to identify, solve and improve their own health issues,” (p. 16) but this does not mean to abandon clients. However, this seems to be the case when the PHNs stated that it is not their job to address health related water issues because it is not their place to impose, and that people need to take care of these issues themselves. In fact, in Canada, individuals are responsible for the maintenance of their own wells (Charrois, 2010; Jones et al., 2006).

The major adaptive strategy used by the public health nurses in regards to restoring a sense of power has been in finding their voice. They have done this through placing a strong emphasis on the importance of teaching and telling as their primary health promotion strategy. This has prevented them from building competency in other areas of health promotion and has kept their gaze narrow and focused on individual and small group behaviour level change, effectively permitting them to disregard broader level issues like water.

To sustain purpose within meaninglessness, the PHNs have engaged in redefining their purpose to suit the types of activities that they are involved in. This has aided in restoring clarity. In addition, they have lowered the bar for what is meaningful in their work, overstating success and using a number of justifications and excuses for their low level of involvement with promoting health related to safe and secure water. In holding onto these strategies, PHNs are denying awareness of the need for a broader role, and it is keeping them content with a low level of influence within the socioecological framework.

Similar to finding purpose within meaninglessness, preserving authenticity within self-estrangement involves an attachment to a narrower view of health and a commitment

to a lower level of influence within the socioeconomic framework, and it focuses to one-to-one, measurable, extrinsically motivated activities. In contrast to finding purpose within meaninglessness, preserving authenticity within self-estrangement has an opposite intention. While finding purpose, or meaning, is about holding on to hypocrisy for dear life, finding authenticity is about letting go of hypocrisy and surrendering. To restore authenticity, to be real, means leaving tradition behind, and this poses the ultimate barrier to PHNs in having a role related to promoting safe and secure water. It sets them further adrift in the desert creep and the big picture is slowly vanishes from view.

This theme spoke to an intensely deep shadow issue within the reasons for PHNs' lack of voice on water issues. There are no other studies that address survival strategies as a perpetuating barrier to promoting health among public health nurses in relation to any topic, including water.

Reclamation of Practice – Finding Hope through Awakening

The fourth theme, *Reclamation of Practice – Finding Hope through Awakening*, served to open up hope in the awakening of public health nurses to opportunities for an enhanced role in promoting health related to water. This theme is presented through two subthemes: (1) *Reorienting through Internal Compass*; and (2) *Creating Swales to Catch Water*.

There were moments of agitation across the other three themes that symbolized recognition of the desertification of the PHNs' practice context, their desiccation, and their adaptive strategies to compensate for it all. Many of these moments were not consciously noticed by the PHNs themselves; however, there must have been some

awareness on some level since the PHNs' words spoke to what they ought to be doing; since their words reflected inherent values of PHNs and ties to traditional practice. They expressed dissatisfaction with the current conditions. They spoke to a loss of opportunity, and they admitted feelings of isolation, powerlessness, meaninglessness, and inauthenticity. So, there was awareness, an awareness that has been hidden from themselves in an attempt to restore equilibrium. These moments led to a startled awakening for some of the PHNs to the memory of their tradition, and the realization of the discrepancy between the rhetoric and reality of their situation. In this recognition, opportunity was discovered, as the PHNs found their internal compasses to help them navigate through the desert based on their values, rather than by way of a map that does not correspond to the shifting sands that obscure landmarks. This brings the big picture, and water, back into view. It connects the PHNs back to their tradition and sense of wholeness.

The public health nurses have noticed that there are gems and minerals in the desert, and they see that they need to create swales to catch more opportunities to bring water back into their role. They will venture forth tentatively as they consider ways to inject water into what they already do within their practice, and they recognize that it is a long road to changing the context of their practice to incorporate more focused attention on promoting health related to safe and secure water. As with the last two themes, there are no other studies that speak to these findings.

Implications for Nursing Practice and Education

No study like this has been done before. It is important to take the findings back to public health nurses in southern Alberta and explore their views. This is new information for public health nurses, of which they may not have conscious awareness. It may not be visible within the realm of all of their responsibilities, but perhaps, like the PHNs in this study, there is an agitation about what they are focusing on in practice. Public health nurses are instrumental in finding a way forward. This study has given voice to the lost voice of nursing.

It is also be prudent to share findings with other people in the discipline of Public Health to open discourse about public health nursing as a relevant discipline to contribute to the discourse on this important issue. It is unknown the extent to which the PHN role has been eroded and the degree to which there are limitations or opportunities for them to promote health.

An implication realted to education is that PHNs' knowledge regarding water is lacking, and their understanding of their role in promoting health is questionable. They voice values that are congruent with a broader role, but they do not engage in those levels, and when it comes down to it, they don't speak to it either. It would be prudent to assess the curriculum of nursing education to determine if nursing students are receiving adequate preparation to engage in broader level health promotion as a whole, as well specific to environmental issues such as water. This reinforces the need to take the findings of this study into a larger arena for discussion: if curriculum changes are needed, there has to be compete endorsement of PHNs to have a role and to be involved in

delineating what the roles and responsibilities are. Therefore, it is important that these findings are published and presented at national conferences.

Strengths and Limitations of the Study

There are limitations within this study, but they do not diminish the value of the meaning that the co-researchers attached to their lived experience in promoting health related to a safe and secure water supply. Phenomenological hermeneutics serves to facilitate “the conditions to make it possible to interpret meaning” (Patton, 2002, p. 116), and as such, it is the space, time, context, and *being* of the PHNs that enables or prevents a role in promoting safe and secure water. In understanding the context of practice for PHNs, I can better understand why the voice of public health nursing has been absent in regards to water. The PHNs’ honest discussion on the phenomenon has illuminated understanding of their lived experience, which has facilitated understanding of barriers and opportunities for an enhanced role with respect to water.

It might be argued that the situated context and presence of researcher bias and prejudice in this study are limitations. On the contrary, these factors are considered strengths in study that is held to the philosophical orientation of Gadamerian phenomenological hermeneutics. In the spirit of authenticity, the purpose and aim of this study was stated at the commencement of the study, and all subsequent research decisions were pinned accurately, consistently, and transparently to the philosophy throughout the study (Arminio & Hultgren, 2002; Tobin & Begley, 2004).

Although generalizability is not the purpose of a qualitative research study, some may argue that there are limitations in the fact that the co-researchers’ lived experience

may be different from that of PHNs in other areas of Canada or Alberta. Not only were the PHNs' accounts based on their own personal meaning, but they were interpreted within the context that is southern Alberta – geographically, climatically, politically, socio-culturally, and historically. In addition, all nine co-researchers were female. This could be significant within the context of an oppressed profession that has been historically dominated by women; the experience of men could be different. This study also did not account for age range of years of practice. Therefore, conclusions drawn from this study will not clearly distinguish the differences in the experiences or understanding between different age groups or varying years of practice. Obviously, the historical and political context would differ among these groups. In addition, most of the sample was comprised of PHNs in a rural focused setting and the urban population is underrepresented. Moreover, the urban PHNs in southern Alberta are considered to be rural within the overall Alberta context. However, it is prudent to be mindful that generalizability was not the purpose of this study, and the above mentioned limitations provide opportunities for further research to garner the lived experience of other public health nurses at their own particular time in history within their particular contexts.

A true limitation of this study may be in the continued public health nursing practice of the co-researchers that extended beyond the time frame of the study. As they continue in their practice, their understanding of their experiences is bound to change; in fact, their understanding evolved during the course of the interviews as we worked together to come to a fusion of horizons of shared understanding. Essentially, this study

represents a snapshot in time of a certain point in history and PHNs' understanding of their role in regards to water, and it ought to be honored as such.

Recommendations for Further Research

This phenomenological hermeneutics study contributes to new knowledge in regards to the meaning public health nurses in southern Alberta attach to their role in promoting health related to a safe and secure water supply. It also sheds new light on barriers and opportunities to an enhanced role in this regard. Based on the progressively deepening levels of shared understanding that fused among co-researchers as I advanced through the interview process and brought my own new understandings into subsequent interviews, a recommendation for further study is to extend this understanding through the use of focus groups with the co-researchers or other public health nurses in southern Alberta. The process could promote further awakening and enriched meaning that could heighten understanding of the phenomenon.

Further recommendations include exploring the phenomenon in other parts of Alberta, or across a larger geographical area, and including co-researchers from other areas experiencing water stress, including First Nations Communities.

In addition, a critical ethnography focused on the governing structure of Alberta health care and how public health nurses are supported or hindered in promoting health within a socioecological context would also enhance understanding to barriers and opportunities for PHNs to promote health related to a safe and secure water supply. In addition, such a study could explore what is happening with PHNs' capacity for health promotion within the current context of their practice.

Conclusion

This study explored the meaning that public health nurses in southern Alberta attach to their role in promoting health related to safe and secure water, and also illuminated their emergent understanding of barriers and opportunities for an enhanced role in this regard. In the first chapter, I provided background information related to the state of water in southern Alberta and the current climate of public health nursing in the province. In Chapter II, I provided a review of scholarly literature pertaining to the role of public health nurses in regards to water and their environmental health role. In Chapter III, I discussed the philosophical stance, methodology and theoretical framework that guided this study. In Chapter IV, I presented the findings of this study; and in Chapter V, I discussed the findings as they correspond to the literature, as well as considered implications for nursing practice and education, strengths and limitations of the study, and recommendations for further research.

The meaning that PHNs attach to their lived experience with promoting health related to water is absence; something lost to the past and fading into nihilism toward the future. This nothingness is like a desert. PHNs have experienced the desertification of their practice context as their environmental health role – including that related to water – has disappeared into the past, covered in a blanket of sand. This has placed PHNs into a space that is remote and removed from their tradition and idealized rhetoric. It has put them into a space where they must endure harsh and severe elements of standardization and specialization, and where resources needed to do their work effectively are scarce. This has led to the desiccation of PHNs in their role, where they are isolated from their

clients, powerless to make decisions in their care, disoriented and lacking in clarity of their purpose, and estranged from themselves as they struggle with an internal battle between what they feel they ought to be doing in their practice and what they are actually doing. In their struggle to survive, the PHNs have made many adaptations to adjust to the new environment in an effort to restore connections with their clients, their sense of empowerment, a sense of meaning and focus in their purpose, and authenticity within themselves. Their strategies include hypocrisy, compensation, making do, holding on, letting go, and complacency, and the problem in all of these is they provide an ‘out’ for PHNs to work on water, intensifying the barriers that already exist for them to have an enhanced role in promoting health related to safe and secure water. Worst of all, these adaptations set PHNs adrift in the desert creep. As the desert gets bigger, and the PHNs get proportionately smaller, and barriers to working with water are intensified further as PHNs lose sight of the big picture. However, through the discourse of the interviews, little minerals and signs of life were noticed. The discourse facilitated an awakening for a few of the co-researchers, an awareness of their barriers on a deeper level, and some PHNs expressed desire to address them. Herein lies hope, because with awareness comes opportunity for change

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Appendix A
Demographic Form

Gender:	<input type="checkbox"/> Female	<input type="checkbox"/> Male
Age: <input type="checkbox"/> 20-29 <input type="checkbox"/> 30-39 <input type="checkbox"/> 40-49 <input type="checkbox"/> 50-59 <input type="checkbox"/> 60+		
Are you a Public Health Nurse?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Length of time worked as a Public Health Nurse: <input type="checkbox"/> < 1 year <input type="checkbox"/> 1-5 years <input type="checkbox"/> 5-10 years <input type="checkbox"/> 10-20 years <input type="checkbox"/> 20+ years		
Do you currently work as Public Health Nurse?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Have you practiced within the last 24 months?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Do you/did you practice in southern Alberta?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
In what type of setting?	<input type="checkbox"/> Urban	Rural
Is/was your FTE .53 or greater?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Length of time you have worked with your community: <input type="checkbox"/> < 1 year <input type="checkbox"/> 1-5 years <input type="checkbox"/> 5-10 years <input type="checkbox"/> 10-20 years <input type="checkbox"/> 20+ years		

I consent to the collection of my demographic data to confirm eligibility to participate in the research study: "Water for Health: The Role of Public Health Nurses."

Signature of Participant

Date

Appendix B

Letter of Invitation to Participate in Research Study

(Insert Date)

Dear _____:

I would like to invite you to participate in a research study entitled “Water for Health: The Role of Public Health Nurses” that I am conducting as part of my Masters of Health Sciences degree. I am seeking to understand the experiential meaning of promoting a safe and secure water supply within public health nursing practice in southern Alberta communities. It is anticipated that the study will contribute to nursing knowledge about opportunities and barriers to an enhanced role for public health nurses in promoting a safe and secure water supply for the health of individuals, families and communities.

Participation in this study will include two in-depth interviews with me, each of which will take approximately one hour, and will occur at a location conducive to privacy and protective of your confidentiality. Prior to the interview, I will collect demographic information to confirm your eligibility to participate in the study. This should take only five minutes. Interviews will occur outside of work time, and you are free to select the location. Interviews will be audio recorded and transcribed by a transcriptionist, who will sign a statement of confidentiality. The tapes and transcriptions will be kept under lock and key in my office, and only I will have access to them. A pseudonym of your choosing will be used in place of your actual name in all documents related to this study, and all information collected will be destroyed after seven years.

Participation in the study is completely voluntary, and should you choose to participate, you are also free to leave the study at any time without question or consequence.

If you are interested or have any questions, please feel free to contact me, Penni Wilson, through the contact information listed below. You may also contact my supervisor, Dr. Ruth Grant Kalischuk through the Faculty of Health Sciences office at 403-382-7152 or at kalischuck@uleth.ca. You may direct general inquiries regarding your rights as a participant in this research to the office of Research Ethics at the University of Lethbridge at 403-329-2747 or susan.entz@uleth.ca.

Thank you,

Penni Wilson, RN BN
M.Sc. Student
Faculty of Health Sciences

University of Lethbridge
403-332-4031
penni.wilson@uleth.ca

Appendix C

Letter of Consent

(Insert Date)

Dear Participant:

You are being invited to voluntarily participate in a study entitled “Water for Health: The Role of Public Health Nurses” that seeks to understand the experiential meaning of promoting a safe and secure water supply within public health nursing practice. The purpose is to explore how public health nurses are encountering water issues within their practice; their understanding of health related water issues in southern Alberta, their perception of their role in promoting a safe and secure water supply, and their insight into opportunities and barriers to an enhanced role in this area. It is anticipated that the study will contribute to nursing knowledge and increase understanding about how public health nurses can work with individuals, families, and communities to promote health related to a safe and secure water supply.

Participation in this study will involve two in-depth interviews between you and me. Each interview will take approximately 1 hour. The first interview will be used to explore your perceptions and experiences related to a safe and secure water supply as a public health issue and the meaning of a safe and secure water supply to health. The second interview will be to review prominent themes from the first interview in order to confirm my understanding of your perspective and elaborate on issues that we determine warrant further exploration. At the end of the study, your information will be combined with that of other participants to produce a final report for my thesis. Findings will be disseminated through presentations at conferences and publications. In addition, I will share a summary of the findings with you and any other relevant groups who may express interest in the topic.

Please be assured that your identity will be protected throughout the entire process. Interviews will be audio taped and transcribed; however, a pseudonym of your choice will be used in place of your actual name on all transcripts and notes related to your interviews. This information will be kept under lock and key in my office and will be destroyed after seven years. Only I will have access to information related to your real name. Besides me, only my supervisor will have access to the data, which will not contain identifying information. In addition, the transcriptionist will sign a statement of confidentiality to ensure privacy and confidentiality.

Participation in the study is entirely voluntary, without remuneration, and you are free to withdraw from the study at any time, including during the course of an interview. You are under no obligation to answer any questions, and there will be no questions asked or negative consequences for you should you choose not to participate or to leave the study.

There are no anticipated physical or mental risks for participating in this study. However, should you become emotionally uncomfortable talking about your experiences or concerns, you are free to stop the interview at any time. If you choose to withdraw from the study, all of your data will be confidentially destroyed.

If you have any questions or require any further information about this study, please feel free to contact me, Penni Wilson, RN BN, by telephone at 403-332-4031; by email at penni.wilson@uleth.ca; or by mail at the Faculty of Health Sciences, University of Lethbridge, 4401 University Drive, Lethbridge, Alberta, T1K 3M4. You may also contact my supervisor, Dr. Ruth Grant Kalischuk through the Faculty of Health Sciences office at 403-382-7152, or by email at Kalischuk@uleth.ca. You may also direct general inquiries regarding your rights as a participant in this research to the office of Research Ethics at the University of Lethbridge at 403-329-2747 or susan.ENTZ@uleth.ca.

I have read (or have been read) the above information and I consent to participate in the study entitled, “The experiential meaning of a safe and secure water supply for health: Implications for Public Health Nurses.”

Signature of Participant

Date

Signature of Researcher

Date

Appendix D

Interview Guide

	*Pre-understanding	*Context	*Temporality
	<ol style="list-style-type: none">1. Encounters with Water-related Health Issues<ol style="list-style-type: none">a. Can you please describe how you have encountered water issues within the context of your practice? In your community?b. Can you reflect on a time when you promoted health related to water? A safe and secure water supply?c. Can you please discuss the reasons for your level of involvement/lack of involvement in issues related to the water?<ol style="list-style-type: none">i. What influences your practice decisions?d. What is happening in your community around water issues?e. What is happening/not happening in practice around water issues?f. Can you describe how you deal with health-related water issues in practice?g. Can you describe the scope of environmental health within your practice?2. Water as a Public Health Issue<ol style="list-style-type: none">a. How would you describe the state of water/issues related to water in southern Alberta? In your community of practice?<ol style="list-style-type: none">i. What have you heard from the community?b. What does a safe and secure water supply mean to you?c. What does a safe and secure water supply mean for the health of individuals, families, and communities that you work with?<ol style="list-style-type: none">i. How do you see a role for PHNs in that?		

Probes

*What was that like for you?
*How did you come to that understanding?
*Why don't you; what stops you?
*What made you think/believe that?
*How do/did you feel about that?
*Why do you feel that way?
*Why are things as they are?
*What sense do/did you make of it?
*Are there some ideas you are struggling with?

3. Role of the PHN
 - a. What does it mean to be a PHN? In your community?
 - b. When you were first nursing, how did you view your role? How now? How has that changed over time? What changed?
 - c. Where is the focus of the PHN right now?
 - d. How in your role do you contribute to healthy people; healthy communities; healthy water supplies; healthy environment; healthy ecosystems?
 - i. What are your thoughts on what PHNs could do? Should do?
 - e. How do you work with individuals; families; communities; populations?
 - f. Can you please discuss your thoughts about the connection between what you do in your practice and the health of individuals and communities you work with??
 - g. What is meaningful to you as a PHN related to promoting health from an upstream/population health/determinants of health perspective?
 - h. What guides you in practice; how do you decide what to do?
 - i. Supports; challenges?
4. Barriers and Opportunities
 - a. What do you see as opportunities for an enhanced role in this area? Barriers?
 - b. In an ideal world, what contributions should PHNs make in the future?
 - c. What supports would you need?

Probes	*What was that like for you? *How did you come to that understanding? *Why don't you; what stops you? *What made you think/believe that? *How do/did you feel about that? *Why do you feel that way? *Why are things as they are? *What sense do/did you make of it? *Are there some ideas you are struggling with?
--------	---

Appendix E

Statement of Confidentiality

Transcriptionist

I, _____, do affirm that I will not, directly or indirectly, disclose to any person any information that I become privy to regarding the participants or communities involved in the research study entitled, "Water for Health: The Role of Public Health Nurses in Promoting a Safe and Secure Water Supply," by reason of my involvement with the said research study.

_____ (Printed Name)

_____ (Signature)

_____ (Date)

_____ (Printed Name of Witness)

_____ (Signature)

_____ (Date)