

**Understanding Evidence-Informed Decision-Making
in a Community-Based Network Working Towards
the Baby Friendly Initiative**

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Abstract

Objective: To understand the use of evidence-informed decision-making within an interorganizational network, and identify the facilitators and barriers to achieving network goals.

Design: Case study.

Setting: Rural health district in Nova Scotia, Canada (2006 to 2011).

Participants: Members from 4 organizations representing community and hospital groups participating in a regional Baby Friendly Initiative network.

Methods: A descriptive mixed methods study using focus group and questionnaire methodology. Data were analyzed using framework analysis and social network analysis (SNA).

Results: The SNA results highlighted the role that relationships have on the sharing of knowledge among network members. The findings highlight the need for leadership at multiple levels (community, network members, primary organizations, and the provincial government). A lack of resources to achieve the network's goals was a key barrier.

Conclusions: The role of multi-level leadership is important for future network development and community consideration. The case study methodology facilitated momentum towards the network's goals.

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Definition of Terms

Evidence-Informed Decision-Making (EIDM): The EIDM definition that guides this study is a hybrid from multiple sources (Canadian Nurses Association [CNA], 2010; Dobbins, Jack, Thomas, & Kothari, 2007; Meagher-Stewart et al., 2012). EIDM is the deliberate consideration and use of the best available evidence, including research, local data, and practice-related knowledge, when making decisions regarding practice, policy or programming.

Interorganizational Network: Collaborative multi-disciplinary partnership representing different organizations, with members who are striving to achieve a common goal (Provan, Fish, & Sydow, 2007; Santoro, Borges, & Rezende, 2006). The network is self-managed and operates on consensus when making decisions (Chisholm, 1996; Santoro et al., 2006).

Key Acronyms

BFI	Baby Friendly Initiative
EIDM	Evidence-Informed Decision-Making
GASHA	Guysborough Antigonish Strait Health Authority
KT	Knowledge Translation
LLL	La Leche League
SNA	Social Network Analysis
UNICEF	United Nations Children's Fund
WHO	World Health Organization

CHAPTER ONE: Introduction

The Public Health Agency of Canada (PHAC) (2005) identified the development and translation of knowledge as a key strategy in improving the national health system and the health of Canadians. However, Knowledge Translation (KT) strategies have not produced the anticipated results in evidence-based public health decision-making (Kiefer et al., 2005). Further, it is suggested that existing approaches, frameworks, and tools used to understand KT within healthcare fail to recognize the unique characteristics of, and evidence used in, community-based settings (Kothari & Armstrong, 2011).

Developing collaborative partnerships with local agencies and engaging the community in shared decision-making are core competencies for staff in public health units and agencies in Canada (Community Health Nurses of Canada [CHNC], 2011; PHAC, 2007). Leading researchers in the field suggest that networks facilitate progress towards similar aims by using scarce resources effectively, strengthening collaboration, fostering change and innovation through shared learning, enhancing the flow of information, and building community capacity (Networks Leadership Summit, 2009). The Canadian Nurses Association (CNA) supports the development of evidence-informed decision-making (EIDM) in nursing, noting that there are many factors to consider in the practice setting, in addition to research evidence, when making an informed decision (CNA, 2010). Interorganizational networks are an example of collaborative partnerships that have the potential to mobilize knowledge (Huerta, Casebeer, & VanderPlaat, 2006), and are therefore a potential vehicle for learning more about EIDM in a community-based setting.

Despite the proposition that networks are an integral part of supporting a more effective healthcare system that considers the role of both community and acute care

services, there is little current research to guide community-based organizations in developing effective networks (Huerta et al., 2006; McPherson, 2008), nor is there sufficient evidence that explores the determinants of effective KT for public health practitioners (Hayward, 2006; Kiefer et al., 2005).

To better understand network processes vis-à-vis EIDM, an emerging Baby Friendly Initiative (BFI) network (herein referred to as “the network”) was chosen. The network is located in northeastern Nova Scotia, Canada. The network is considered “emerging” because it is less than five years old, and was selected for reasons related to feasibility – it is located in my town of residence, and I had previous experience with the network. The topic of breastfeeding, especially in the context of adapting international guidelines, was chosen in part due to my experience as a perinatal nurse, my strong interest in community perspectives, and the recognition of breastfeeding as an overall goal of public health.

The researcher’s perspective is important to consider for this study. In March 2010, I delivered a presentation to the BFI network regarding the results of a focus discussion with breastfeeding women in the community regarding their barriers and supports to breastfeeding. After that presentation, I was invited by the then network co-chairs to become a member of the BFI network. I remained an active member until January 2011 when the potential for a conflict of interest arose. At the time, I was offered and accepted a CIHR studentship opportunity thereby further aligning my research with that of the aforementioned team led by Dr. Kothari. I immediately resigned as a member of the network once the BFI network site was confirmed.

Yin (2009) suggests that a researcher’s use of prior knowledge is advantageous, if they are simultaneously maintaining an awareness of their perceptions to avoid being

confined by preconceptions. For example, my established relationship with network members enabled easier communication with the co-chairs for a discussion regarding the proposed study in the early stages of the research process. My prior knowledge also assisted in adapting an existing focus group guide to ascertain its relevance to the network.

Purpose

The primary goal of this study was to understand better the process of EIDM within a regional community-based interorganizational network. The research questions were anchored in the literature; the questions aimed to describe the multiple perspectives and multi-level contexts of an interorganizational network that is working on a complex health issue – achieving BFI designation and making breastfeeding the social norm. A case study design was used to answer the following research questions.

Research Questions

1. What are the individual and external factors that influence the use of EIDM and the achievement of the network's goals?
2. What are the interorganizational factors, including network structure, the sharing of information, and quality of relationships, that influence the network's capacity for EIDM and its ability to achieve its goals?

Potential Contributions

This study has the potential to provide a greater understanding of an emerging network model in relation to community-based collaborative partnerships. Results of the study may also be useful to guide future efforts of the local BFI network to engage in EIDM and to address the complex issue of persistently low breastfeeding duration rates. The identification of factors related to EIDM and the achievement of goals within the emerging

network could provide insight into the barriers that prevent networks from meeting their full collaborative potential. With a greater awareness of their interdependent roles and relationships, network members may be better prepared for identifying ways to build effective relationships and increasing their capacity for collaborative action (Huerta et al., 2006). Addressing this gap in knowledge is not only beneficial to the success of a developing network, but it may also assist public health in meeting its commitment to working in partnership with the community (PHAC, 2007).

The next chapter presents a review of the literature and a description of the conceptual framework. Also included are the propositions used to guide the study. Chapter 3 outlines the methodology, including case description, case boundaries, data collection and analysis, and ethical considerations. It also discusses the case and resulting ethical issues. Chapter 4 describes the study findings and Chapter 5 presents the discussion while offering final conclusions, potential implications of the study, and considerations for future research.

CHAPTER TWO: Literature Review and Conceptual Framework

The literature review was informed by multidisciplinary sources, including nursing, business, organizational management, health services management, sociology, medicine, and public health. A diverse range of sources of evidence provided the necessary empirical, theoretical, and practice-based grounding for this study. For example, in addition to several systematic and literature reviews, primary empirical studies, conceptual papers, and policy and professional guidelines, there was careful consideration to include personal communications and grey literature, such as local data and reports.

The chapter is organized using the key elements of a conceptual framework developed by the student. The conceptual framework includes individual, interorganizational, and external network factors related to EIDM that support network goal achievement. To capture the broader context of EIDM within community-based networks, empirical and theoretical literature was reviewed to identify the individual, interpersonal, and organizational factors already highlighted as facilitators or barriers to KT. Individual factors refer to each of the members of the network, while interpersonal factors consider the structure of the network as well as the quality and strength of the relationships among members (Edwards & Di Ruggiero, 2011). Examples of organizational factors include organizational structure, managerial support, leadership, and communication. Breastfeeding is described as the exemplar complex health issue requiring interorganizational collaboration. The final section in this chapter presents a diagram and description of this conceptual framework.

Literature Review

Background.

An article in the internationally renowned journal *Science* demonstrates the explosion of network analysis research in the past decade within the physical and social sciences, which spans disciplines from nursing and psychology to mathematics, physics, and economics (Borgatti, Mehra, Brass, & Labianca, 2009). The current understanding of interorganizational networks in healthcare settings has evolved from the research on communities of practice and clinical networks. In addition, a recent systematic review revealed three interconnected areas (network structure, management strategy, and outcomes of collaboration) from the public affairs literature that could inform the development of interorganizational networks in public health (Varda, Shoup, & Miller, 2012). Similarly, a systematic review of health professional networks lends support for furthering our understanding of the structure of networks and investing time and resources in their development (Cunningham et al., 2012). A review of the empirical literature on interorganizational networks focused on discussing networks as a whole instead of as a series of dyadic relationships, and revealed that most empirical studies discussed the following aspects of whole networks: their structure, development, governance, and outcomes (Provan et al., 2007). Despite the frequent mention of research involving networks in the healthcare setting, few occurred in a community-based setting (Provan et al., 2007).

The demand for research on the topic of KT in healthcare and, more specifically, in public health has led to the development of related systematic reviews and an increasing number of evidence-based best practice guidelines (Blake & Ottoson, 2009). Evidence-based practice in hospital-based healthcare and community settings is described in terms of the

application or use of scientific research and whether this use of research contributes to better health outcomes (Blake & Ottoson, 2009). The recent evolution from the term “evidence-based practice” to “EIDM” reflects the key role that resources or other contextual factors play in the decision-making process, in addition to empirical and even grey literature (Ciliska, Thomas, & Buffet, 2008).

Health practitioners require many different types of knowledge to satisfy their professional competencies requirements (Meagher-Stewart et al., 2012; PHAC, 2005). In the nursing literature, knowledge is often categorized as tacit or explicit. A recent qualitative study in eastern Canada examining public health practitioners’ understanding of the concept of EIDM revealed the need to recognize both explicit (empirical) and tacit (personal or experiential) knowledge in the EIDM process (Meagher-Stewart et al., 2012). Tacit knowledge refers to experiential and context-specific knowledge (Nonaka, 1994) and is the preferred source of knowledge for nurses in practice (Estabrooks, Chong, Brigidear, & Profetto-McGrath, 2005; Estabrooks, Rutakumwa, et al., 2005; Meagher-Stewart et al., 2012). In order to understand the complexity of the knowledge needed for nurses and other public health practitioners, it is recommended that social interactions and experience be given more attention in the literature (Estabrooks, Rutakumwa, et al., 2005). Kothari, Bickford et al. (2011) suggested that networks may be a vehicle for a more comprehensive strategy for KT that recognizes the role of tacit knowledge.

Insights from relationship models in the KT literature assist in explaining the connection between KT and the qualities of interactions of those using or receiving the knowledge (Graham et al., 2006; Ministry of Health, 2007). Best et al. (2009) clearly outlined the link between EIDM and networks: “...we see knowledge products as embedded

within relationships of linkage and exchange, which in turn are embedded within a larger system that is shaped by culture, priorities, and capacities” (p. 628).

Individual characteristics.

Greenhalgh and colleagues’ (2004) foundational systematic review of the “diffusion, dissemination and sustainability of innovations in health service delivery and organization” reports that motivation, learning styles and the individual’s capacity influence the use of evidence in practice. A systematic review of registered nurses’ use of research in the clinical setting revealed that nurses self-report a moderate to high rate of research use (Squires, Hutchinson et al., 2011). However, the authors cautioned that these results are optimistic and not necessarily generalizable due to methodological issues with many of the studies included in their review. Of interest is the fact that nurses’ self-report of use of research has remained stagnant at “moderate-high” despite the proliferation of available research and KT strategies since the inception of the evidence-based movement (Spenceley, O’Leary, Chizawsky, Ross, & Estabrooks, 2008; Squires, Hutchinson et al., 2011).

Registered nurses rely most on informal and interactive sources of information or knowledge (Spenceley et al., 2008). Typically, the reluctance of nurses to use research is attributed to personal characteristics, but it is unclear to what degree tacit (experiential) knowledge is informed by explicit (empirical) knowledge (Estabrooks, Rutakumwa, et al., 2005; Squires, Hutchinson et al., 2011).

Key facilitators to nurses’ research use include time to review and implement results (Estabrooks, Midodzi, Cummings, & Wallin, 2007; Hutchinson & Johnston, 2004), access to relevant research, and support from colleagues (Hutchinson &

Johnston, 2004). With respect to barriers, nurses reported the lack of authority to change practice or implement findings (Estabrooks et al., 2007; Hutchinson & Johnston, 2004), lack of awareness of available literature, and a lack of capacity to appraise critically the literature (Hutchinson & Johnston, 2004). In addition, another recent systematic review revealed that the only individual determinant that had a positive association with nurses' use of research was "attitude towards research" (Squires, Estabrooks, Gustavsson, & Wallin, 2011).

Interorganizational characteristics.

In his foundational work, Chisholm (1996) proposed that interorganizational networks are an appropriate forum for addressing complex inter-related problems. Interorganizational networks have the potential to influence population-level outcomes as well as instigate community-wide behaviour change and policy change (Roussos & Fawcett, 2000). However, some scholars have argued that there are significant disadvantages to networks, including the long-term investment of time and financial resources required to achieve anticipated outcomes (Abbott & Killoran, 2005; Provan et al., 2007).

The basic functions of a network include "embodying and maintaining vision, serving as a forum, promoting changes in attitudes and perceptions, and communication" (Chisholm, 1996, p. 216). Flexibility, joint control, and collective purpose distinguish interorganizational networks from centralized organizations (Santoro et al., 2006). Effective networks display the following characteristics: trust among members, inter-individual affinities, commitment, and professional or social norms (Fleury, 2006); and the development of smaller integrated groupings (Ruddy, Audin, & Barkham, 2005). Further benefits of the formation of networks

include “systemic change, relationship building, innovative operating procedures, and community inclusion” (Keast, Mandell, Brown, & Woolcock, 2004, p. 370).

Most of the foundational research on networks originated from the management literature. However, as the literature evolved it became apparent that networks were a potential “vehicle” or forum for complex issues (Chisholm, 1996). Thus, the majority of the empirical research on interorganizational networks in healthcare has focused on complex issues, such as chronic disease, addictions, and mental health (Barnes, MacLean, & Cousens, 2010; Pluye, Potvin, & Pelletier, 2004; Provan, Harvey, & de Zapien, 2005; Provan, Nakama, Veazie, Teufel-Shone, & Huddleston, 2003).

Structure of networks.

Networks, by definition, lack typical forms of power and authority (Keast et al., 2004). Whole networks consist of three or more organizations brought together to achieve a common goal (Provan et al., 2007). This informal structure relies on exchanges based on interpersonal relations rather than unilateral formal methods of communicating within an organization (Keast et al., 2004). Relationships among members of a whole network can be formal or informal, so long as they agree on a common goal or vision (Provan et al., 2007). Typically, members participate in interorganizational networks on a voluntary basis and the structure of such a network is self-organizing and horizontal (Chisholm, 1996). Flexibility, joint control, and collective purpose distinguish interorganizational networks from centralized organizations (Santoro et al., 2006).

Quality and strength of relationships.

Analysis of whole network structures can reveal the flow of information within the network (Haythornthwaite, 1996; West, Barron, Dowsett, & Newton, 1999). More

specifically, the strength of relationships can highlight the exchange of information (Haythornthwaite, 1996). The most prominent theory related to the strength of relationships and the sharing of information in networks is the suggestion that strong ties are formed typically by members who interact frequently and therefore share redundant knowledge, whereas new and innovative information is more commonly accessed through relationships with new and weaker ties within the network (Granovetter, 1973).

The overall success and sustainability of networks relies on trust and mutual respect (Gilchrist, 2006). Trust is a central concept when describing relationships within networks (Milward, Provan, Fish, Isett, & Huang, 2009), and by creating a culture of mutual respect and trust, networks likely can improve their rates of knowledge translation (Huerta et al., 2006). Precursors to trust include a history of a previous relationship with that individual or organization, past experience, and personal values depending on the primary agency to which that member belongs (Milward et al., 2009). Trust in networks typically evolves slowly over several years (Keast et al., 2004; Provan et al., 2003; Provan et al., 2005) and thus early or developing networks may have lower results. Another determinant of trust in networking is the necessity of face-to-face communication (Kothari et al., 2005). Effective communication is essential to ensure members remain connected within a network as well as to enable them to integrate their activities with other members while staying true to the larger goal or vision of the network (Chisholm, 1996).

External characteristics.

Bowen, Erickson, Martens, and Crocket (2009) proposed that the consideration of organizational design and diverse sources of evidence in lieu of the typical isolated combination of individual characteristics and empirical data will

assist in capturing the complex process of knowledge translation (Bowen et al., 2009). A qualitative study conducted in Manitoba, Canada with healthcare managers and decision-makers (including nurse managers) suggests that the key barriers to using evidence are not associated with individuals, but rather are at the system and broader contextual level (Bowen et al., 2009). More specifically, factors such as leadership, communication, and organizational structure (Bowen et al., 2009; Peirson, Ciliska, Dobbins, & Mowat, 2012), as well as human resources, organizational culture, knowledge management, and change management should be considered facilitators of EIDM (Peirson et al., 2012). Participants reported that individual characteristics, such as research capacity and access to data, were deemed less relevant barriers to EIDM than the lack of authority to make change, workload issues and organizational factors (Bowen et al., 2009). A study that considered multiple levels of influence on nurses' use of research revealed that collaboration among nurses and the provision of leaders or experts to assist with the utilization of research were key organizational facilitators (Estabrooks et al., 2007).

Public health nurses have reported the following facilitators to reach their full scope of practice: support from management, leadership, the opportunity to collaborate and maintain partnerships, ongoing professional development, and knowledge sharing (Meagher-Stewart et al., 2010). Public health nurses also express the need for flexible organization and funding in order to increase their capacity (Underwood et al., 2009). In addition, the successful growth and development of networks rely on a significant investment of time for the structure to adapt to its environment (Hill, 2002). Leadership from staff nurses to executives within the healthcare system is necessary to create a supportive environment for

EIDM (Cullen, Greiner, Bombei, & Comried, 2005; Gifford, Davies, Edwards, Griffin, & Lybanon, 2007). Generally, the success of a goal-directed network is facilitated by resource availability, whether it is human or financial (Provan et al., 2007).

The remainder of this literature review highlights the key areas of the literature related to the issues of promoting and sustaining breastfeeding. This foundation will assist in demonstrating the complexity of this health issue and in explaining its relevance in light of the pressing question of an increased understanding of community-based interorganizational networks.

Breastfeeding.

Breast milk provides the optimal combination of nutritional, immunological, and emotional benefits (Health Canada, 2004). It is recommended that healthy term infants be breastfed exclusively for the first six months of life (Canadian Paediatric Society, 2009; Canadian Paediatric Society, Dietitians of Canada and Health Canada, 2005; RNAO, 2007). Exclusive breastfeeding is defined as the infant receiving only breast milk with no addition of other liquid or solid foods (WHO, 2002). There is a significant gap between best practice recommendations (Canadian Paediatric Society, 2009; Canadian Paediatric Society, Dietitians of Canada and Health Canada, 2005; RNAO, 2007) and the current rates in Guysborough Antigonish Strait Health Authority (GASHA). Overall, 90.3% of Canadian women (PHAC, 2009) and 64% of women in GASHA (Public Health Services, 2012) are initiating breastfeeding. Only 14.4% of Canadian mothers (PHAC, 2009) are meeting Health Canada's (2004) six-month recommendation (identified above). In Nova Scotia, the exclusive breastfeeding duration rate falls to 9.6% (PHAC, 2009) and in GASHA it is similar, at 10.4% (Brown et al., 2013).

A review of the literature (Dyson et al., 2006) on the promotion of breastfeeding initiation and duration recommends improved collaboration among health professionals, social services, local health authorities, and the voluntary sector (Tiedje et al., 2002). However, it is essential that lay workers and community members, such as La Leche League leaders and breastfeeding women, be included in these collaborative efforts because often these women can see past traditional organizational boundaries and suggest solutions that work best for mothers and their families (Renfrew, Herbert et al., 2006).

The Baby Friendly Initiative.

In the early 1990s, WHO and UNICEF developed a framework entitled the Baby Friendly Hospital Initiative (BFI) that identified accredited interventions for healthcare providers and systems to assist them in promoting and supporting breastfeeding (WHO & UNICEF, 2009). In addition to a ten step process for hospitals and a seven point plan for community organizations, the program recommends a multi-level, multi-sector effort coupled with legislative protection and social promotion in order to support optimal infant and child feeding practices (WHO & UNICEF, 2009). Today there are more than 20,000 hospitals in 156 countries worldwide with BFI designated facilities (WHO & UNICEF, 2009). In the province of Quebec there are 24 hospitals and health units that have achieved BFI designation (Breastfeeding Committee for Canada, 2011). In the rest of Canada there are five hospitals, four health units, and three public health offices with the BFI designation (Breastfeeding Committee for Canada, 2011). To date, no facilities in Nova Scotia have achieved designation (Breastfeeding Committee for Canada, 2011).

There is considerable evidence to support BFI as an intervention to increase the initiation, exclusivity, and duration of breastfeeding in hospital and community settings, in

many countries worldwide (Caldeira & Goncalves, 2007; Camurdan et al., 2007; Kramer et al., 2001; Merten, Dratva, & Ackermann-Liebrich, 2005). In urban Brazil, the designation of hospitals with BFI status resulted in an increase in the median overall breastfeeding duration from 8.9 to 11.6 months, while the exclusive breastfeeding rate rose from 27 days to 3.5 months (Caldeira & Goncalves, 2007). Similarly, in Turkey BFI increased the duration of breastfeeding by 1.5 times in addition to prolonging the duration rate past 12 months (Camurdan et al., 2007). Hospitals in Switzerland that were complying with the BFI guidelines had an increase in exclusive breastfeeding duration from 6 to 12 weeks from 1994–2003 (Merten, Dratva, & Ackermann-Liebrich, 2005).

A systematic review (Dyson et al., 2009) that included three systematic reviews and more than 110 breastfeeding intervention studies focused on policy and public health recommendations to promote breastfeeding in developed countries, particularly in the United Kingdom, with persistently low rates. This review revealed that the most fundamental intervention to increase the initiation rates and to lengthen the duration of breastfeeding was the routine implementation of the WHO/UNICEF BFI in hospital and community services (Dyson et al., 2009). Despite the existing evidence to support the implementation of BFI guidelines, the Canadian Maternity Experiences Survey revealed low adherence nationally to BFI practices (Chalmers et al., 2009).

Conceptual Framework

Traditionally, networks have been described within the boundaries of management and organizational theory. More recently, the two most common theoretical perspectives for analyzing networks are at the individual (actor) or network level (Provan et al., 2007). Trist's (1983) foundational work on interorganizational networks argued that describing networks

through a socio-ecological lens distinguishes them from mere relationships. The success of public health programs and initiatives to achieve outcomes is dependent on their ability to consider the environmental context in which they are working (Rimer & Glanz, 2005). A conceptual framework, based on socio-ecological principles will guide this study to capture the environmental context and its influence on the functioning and the success of networks in their ability to engage in the EIDM process.

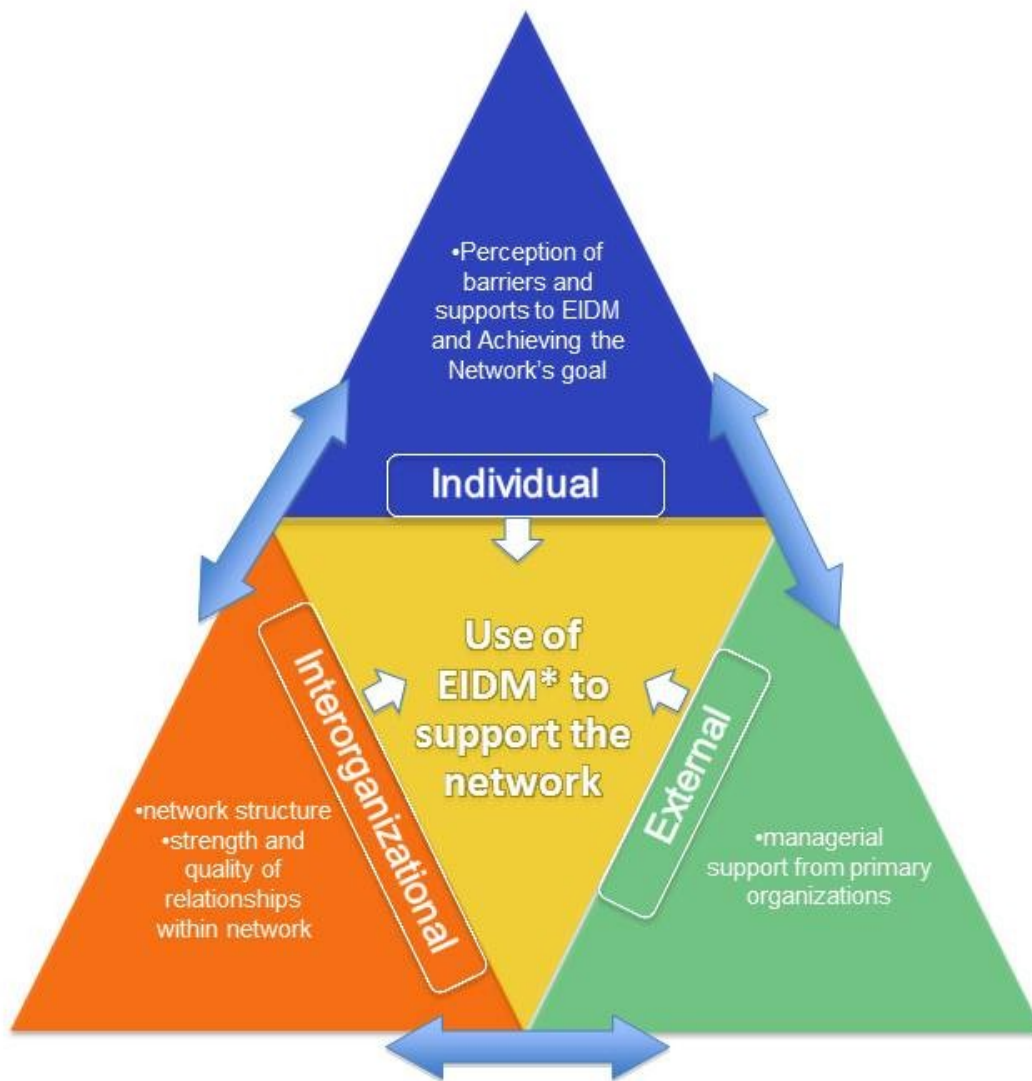
Two key tenets of the socio-ecological model are multiple levels of influence and reciprocal causation (Rimer & Glanz, 2005). For the purposes of this study, it is recognized that there are three levels of factors that influence the capacity of a community-based network to achieve its goals: individual, interorganizational, and external. The interorganizational model is an approach to network analysis that also uses three broad levels (individual, network and system) of analysis when considering the development and effectiveness of networks (Mizruchi & Marquis, 2006; Provan & Milward, 2001). The ecological perspective proposes that in order to successfully address a health problem, the interaction between and interdependence of factors within and across all levels of the issue must be considered (Rimer & Glanz, 2005). Socio-ecological principles define reciprocal causation in terms of a reciprocal relationship between humans and their environment (Edwards, Mill, & Kothari, 2004). Socio-ecological theory suggests that individual behaviour shapes and is shaped by the social environment (Rimer & Glanz, 2005).

A recent comprehensive integrative review of the barriers and facilitators to implementing BFI in the province of Quebec used a Multiple Intervention Program framework to guide the review, and organized the barriers and facilitators according to the following categories: extraorganizational, and inter- and intraorganizational (Semenic,

Childerhose, Lauziere, & Groleau, 2012). This review supports the need for a socio-ecological approach when addressing a complex issue such as breastfeeding.

Figure 1 depicts the proposed conceptual framework for this study with key concepts that emerged from the literature. The framework describes three levels of influence on the capacity for the BFI committee to engage in EIDM. These multiple levels are represented by triangles surrounding the core of the conceptual model. Within these levels are factors that can contribute to the capacity of networks to use various forms of knowledge such as: the individual's perception of their own capacity for EIDM, the quality of relationships within the network, and the managerial support from the primary organizations. The bi-directional arrows indicate that there is reciprocal causation and interaction among all levels of the framework (individual, organizational, and external).

Understanding the Use of EIDM to Support Interorganizational Networks



* **EIDM** – Evidence-Informed Decision-Making

Figure 1: Conceptual Framework

Propositions

A common strategy to guide data collection and analysis in a case study design is the use of propositions (Yin, 2009). Propositions are based typically on the research questions, which ultimately evolve from a review of the empirical and theoretical literature (Yin, 2009). The following propositions were used to guide the study, as described in Chapter 3.

1. Registered nurses rely most on tacit knowledge for EIDM (Estabrooks, Chong et al., 2005; Estabrooks, Rutakumwa et al., 2005; Meagher-Stewart et al., 2012; Spenceley et al., 2008).
2. The greatest barrier to EIDM for healthcare professionals is at the organizational level, including workload issues and lack of authority to make change (Bowen et al., 2009; Meagher-Stewart et al., 2012).
3. Effective leadership and sufficient human and financial resources are key facilitators for EIDM (Bowen et al., 2009; Cullen et al., 2005; Estabrooks et al., 2007; Gifford et al., 2007; Peirson, et al., 2012) and for network goal achievement (Abbott & Killoran, 2005; Provan et al., 2007).
4. Network structure and the quality of relationships within the network influence the level of collaboration and the sharing of knowledge among members (Granovetter, 1973; Haythornthwaite, 1996; McPherson, 2008; Varda et al., 2012; West et al., 1999).

CHAPTER THREE: Methods

The study methodology was adapted from a recent national Canadian Institutes for Health Research-funded project entitled, “Advancing knowledge translation: Can community networks support the use of research and knowledge in public health?” The Principal Investigator (PI) was Dr. Anita Kothari from the University of Western Ontario. Dr. Charmaine McPherson (a thesis committee member) was a co-investigator and nominated Nova Scotia Co-Principal Investigator. The study examined public health networks in three provinces across Canada. The University of Ottawa master’s thesis research was conducted as an additional related study. (See Appendix A for permission from PI to use adapted tools.)

Research Design

A case study design was selected to address the research questions. Yin (2009) suggests that case studies can be used to capture the complexities and context of the case, while also accurately describing and mapping the network in question. Case study designs are often used in public health studies because they facilitate the investigation of complex social phenomena, especially with respect to group behaviour and organizational processes (Yin, 2009). Yin’s case study inquiry relies on the integration of multiple sources of data to support a rigorous process. The sources of data were people and documents.

Justification of the case.

The particular network case was selected based on its relevance to the study questions while considering feasibility issues related to the time constraints of a master’s degree research project. The network was located in the town where I reside and, as previously stated, was a network with which I had previous professional experience. Yin (2009) confirms that personal or professional experience is an appropriate starting point for research.

Given that I was novice in the areas of research design, methods, and analysis, it was particularly important that the case was congruent with my professional practice background (as a registered nurse with a clinical specialty in perinatal nursing) in addition to having a history as a former network member (see the section entitled “Ethical Considerations” for further discussion on the researcher’s perspective in relation to the committee).

The selected case was an exemplar emerging network working toward a community goal of implementing the recommendations of the WHO’s BFI program and to attain designation. Breastfeeding is a multi-tiered and complex health issue that could benefit from the aforementioned strengths of interorganizational networks for EIDM. Most interventions that strive to improve breastfeeding rates are focused on promoting change at the individual level (Tiedje et al., 2002) without recognizing the need for an integrated multi-sectoral approach such as the implementation of the BFI program (Dyson et al., 2006). To understand the context of a breastfeeding woman’s life, it is important to consider environmental influences, such as the family, healthcare system, community institutions, society, and culture (Brown et al., 2013; Tiedje et al., 2002). It has been proposed that considering individual, interpersonal, and community or external factors affecting breastfeeding rates when planning strategies and interventions may increase success and their long-term impact (Dyson et al., 2006). The collaborative and inter-disciplinary nature of the GASHA BFI committee exemplifies the necessity of an innovative approach to breastfeeding while engaging community members and a range of practitioners in the provision of breastfeeding support and services.

There is policy support for the presence and strengthening of the BFI committee in GASHA. For example, a provincial public health review reported the need to collaborate

with multiple partners on shared areas of interest (Nova Scotia Department of Health and Wellness, 2012). The Nova Scotia provincial breastfeeding policy (Nova Scotia Department of Health Promotion and Protection, 2006) supports the implementation of BFI committee/networks by local district health authorities and emphasizes its role in building community capacity.

The case.

The case was the GASHA BFI network. The data sources were people (network members) and documents related to the network's activities, including their terms of reference and work plan. Data collection strategies included a questionnaire and focus group to capture the context necessary that is consistent with the conceptual framework (Polit & Beck, 2008). The case was bound by five years (2006-2011). This time frame covers two key events: when the network established the existing structure of co-chairs from both the acute care and community health sectors and when they became affiliated with GASHA and the regional hospital's Children's and Women's Health Team. The case was also bound geographically as determined by the district health authority's legislated geographical boundaries, and by membership as described in the network's terms of reference.

The network was located in northeastern Nova Scotia. The Guysborough Antigonish Strait Health Authority (GASHA) is a large geographical area with a population of 43,715 (Statistics Canada, 2011). GASHA's organizational structure includes a board of directors made up of appointed volunteer members. The senior leadership team, which reports to the board of directors, is comprised of the CEO, vice-president of community health, vice-president medicine, vice-president of operations, and the director of public relations and community engagement (GASHA, 2012). St. Martha's Regional Hospital in Antigonish is

the only obstetrical facility in the district and in 2011, 442 deliveries occurred there (Public Health Services, 2012). Prenatal services available to women in GASHA include group and individual prenatal classes (depending on risk category) facilitated by public health nurses, lactation consultants at the Open Arms Family Clinic and the Family Resource Centre, and breastfeeding information provided by leaders from the local La Leche League (LLL) chapter. Following discharge from the hospital, all women are contacted by a public health nurse via telephone within 48 hours (unless this occurs on weekends). Postpartum breastfeeding services available locally include GASHA's public health nurse, as well as LLL, and lactation consultants from the Open Arms Family Clinic. If women have breastfeeding questions or concerns outside of business hours, they are instructed to contact the regional maternity unit or LLL.

The network has the ultimate goal of making breastfeeding the cultural norm and achieving BFI designation for the district's public health services and the maternity unit. The BFI network also fulfills the important role of gathering local input to determine the strengths and barriers that may contribute to or impede achieving designation (Dyson et al., 2009).

In 2004, a local obstetrician reported that there was a need to improve hospital practices to support breastfeeding women (N. Aquino, personal communication, February 4, 2011). This resulted in a meeting with key stakeholders in acute care and community-based services in the district. Shortly thereafter, the network was founded.

From 2004 to 2006, the BFI committee had co-chairs but did not have an official affiliation with the local health authority. In 2006, the mission of the network was reviewed and it was decided that the co-chairs should represent both acute and community care services. Therefore, the designated co-chairs were the nurse manager from the maternity unit

and the nurse manager of Public Health Services. In October 2006, following the appointment of the newly designated co-chairs, the network members attended a workshop on the process of achieving BFI designation. Following the meeting, the network filed a request with the local health authority to become a free-standing committee in GASHA and to hire a BFI coordinator. The request for a free-standing committee was denied and the BFI network became a sub-committee of the Children's and Women's Health Team at the hospital. The network is self-managed and non-hierarchical in its internal structure, but it remains under the broader umbrella of the local district health authority and it reports directly to the Children's and Women's Health Team at GASHA's regional hospital.

In 2009, several key stakeholders (Children's and Women's Health Unit, Public Health, and Kids First Family Resource Centre) agreed to fund the salary for a BFI coordinator for a term of 6 months. The specific role for the coordinator was to work with local eating establishments to promote breastfeeding-friendly spaces in GASHA. Upon completion of the contract, a report was provided to the network (N. Aquino, personal communication, February 4, 2011).

In January 2010, the network began a routine update of its work plan and decided to incorporate more formally the WHO/UNICEF's outcome indicators for the hospital-based ten steps and community-based seven point plan for achieving BFI designation (Appendix B). The network has since developed a 5 year plan (2010–2015) that is guided by the recommendations and tools of the Breastfeeding Committee for Canada for achieving BFI designation. The current co-chairs were nominated and elected by all members and include a public health nurse and two registered nurses from the Open Arms Family Clinic. The registered nurses from the clinic represent the acute maternity care sector in the region and

share responsibilities by rotating attendance. The nurses in the clinic are also members of the Children's and Women's Health Team. The secretary of the network is a leader from the local LLL chapter. Other network members represent the university, public health, hospital-based services, and community-based programs (see Appendix C for complete membership list) (N. Aquino, personal communication, February 4, 2011). According to the network's terms of reference, at the time of data collection, there were seven vacant positions. Historically, these members have been invited to participate in the network, but recruitment efforts were not successful (N. Aquino, personal communication, February 4, 2011).

Data Collection Strategies

The sources of data were people (network members) and documents that guide the network, such as the terms of reference and their 5 year workplan.

To establish entry into the proposed research site, I emailed the co-chairs of the BFI network to assess interest in participating in the research project. The co-chairs agreed to invite me to present the proposed project to network members at their quarterly meeting in June 2011. Following the presentation, the committee as a whole agreed to proceed with the recruitment process proposed during the presentation. Recruitment was by email invitation (Appendix D) to all members with a letter of information explaining the purpose of the study, the commitment required to participate, and a consent form (appended) that would be signed on the day of data collection (see Appendix E). Interested participants were then instructed to contact me to confirm their interest in the study. A list of interested network members was then given to the network co-chairs who created a doodle© poll to determine a convenient time for data collection.

Data collection occurred on January 20, 2012 at a location determined by the co-chairs. The location ensured privacy and comfort (closed door, lack of environmental noise). Upon entering the room, participants were asked to review the letter of information and informed consent document (Appendices X and Y). When all participants were present, I reviewed the purpose of the study, the anticipated length of the data collection process, and the ways in which confidentiality would be ensured. Once the informed consent sheets were signed, I reviewed the instructions for completing the demographics and Social Network Analysis (SNA) questionnaire. The person fulfilling the observational data recorder role was also introduced to participants, and her duties were described. Following the completion of surveys, the guidelines for the focus group were reviewed, such as issues regarding confidentiality of the network members in attendance, and ways to ensure a quality audio recording. The audio recorder was then turned on and I introduced the first topic of discussion.

Following the completion of data collection, I emailed the co-chairs with an invitation to participate in individual interviews and offered an opportunity to complete the SNA survey that would be forwarded to the two participants unable to attend the focus group on January 20th. The network members were encouraged to contact me by telephone or email if interested, however there was no response from either member.

For the purposes of adapting the focus group guide and gaining context prior to data collection, key documents were provided by the co-chairs of the network. As mentioned above, these documents included their terms of reference and their 5 year workplan.

Data Collection Tools

The questionnaire design (see Appendix F) reflects the roster method of whole network research, where every organization represented in the network is listed alphabetically, and network member participants were asked if they routinely interacted with the other organizations (Marsden, 1990). The extent of general network interaction was measured by asking if participants know network members by name only, whether they engage in regular conversations with the member, whether they seek advice from the member, whether they know the person more personally, and if they socialize with this person. Then participants were asked about their interactions related to EIDM. More specifically, participants were asked the following: who provides network-related advice, who provides research, who provides general information about the network topic, who do they discuss new ideas with, and who do they turn to for help when thinking through a problem.

Questions regarding research and knowledge needs were developed using Haythornthwaite's questionnaire (1996) as a guide and were pilot tested and adapted by Dr. Kothari and colleagues within a health unit in Ontario (Appendix F). To supplement this approach, participants were asked about their relationship with member organizations in terms of trust, joint activities, communication, and common goals. Questions related to collaborative practices were adapted from Provan, Sebastian, and Milward's (1996), "Measuring Interorganizational Relationships" questionnaire. Trust was measured indirectly through the members' self-reporting of the quality of relationships with other members. Therefore, it was assumed that if members report a high quality relationship, they had a high level of trust in that individual (Milward et al., 2009).

During the focus group, the perceived quality of relationships was also addressed. The focus group guide previously developed by the aforementioned CIHR-funded team of Kothari, McPherson, and colleagues was adapted according to the literature on breastfeeding while also considering the local context in which the network operates.

Analysis

Documents provided by the co-chairs of the network included a copy of the minutes from their most recent quarterly meeting, the network's terms of reference, and their 5 year workplan. The minutes from the previous meeting and a personal conversation with a long-standing member of the network provided valuable context for the adaptation of the focus group guide developed by the larger research team. In addition to adapting the content and order of the focus group guide, there was a new section added that highlighted the network's use of the WHO/UNICEF's integrated ten steps into their workplan. This discussion was essential in understanding how the network was using this evidence, especially in relation to the barriers and facilitators of implementing the steps. The documents provided by the network were analyzed using an informal content analysis whereas the more structured framework analysis was used to analyze the qualitative data from the focus group.

SNA was used to analyze the questionnaire data. Framework analysis was used to analyze the focus group data. Documents were analyzed using basic content analysis principles. Quantitative and qualitative data were analyzed concurrently in an iterative and interactive manner, and equal weight was given to both forms of data when presenting results in the case report.

Framework analysis.

Spencer, Ritchie, and O'Connor's (2003) framework analysis method was used to analyze the focus group data. Framework analysis is complementary to Yin's (2009) principles of case study research. According to Spencer et al. (2003) the following five key stages in framework analysis were used to guide the analysis of the focus group data: (a) familiarization; (b) identifying a thematic framework; (c) indexing; (d) charting; and (e) mapping and interpretation. These organized steps assisted in managing the verbatim transcript from the focus group systematically. Framework analysis is a rigorous matrix-based analytic method that assists the researcher in maintaining a clear connection with raw data while simultaneously considering various levels of abstraction. The initial familiarization with the raw data and cross-sectional labelling (indexing) informed the development of a thematic framework. The thematic framework was then used to guide the process of organizing data according to emergent themes and categories.

Social network analysis.

In the public health literature, the most common uses of network analysis are with transmission networks, social networks, and organizational networks (Luke & Harris, 2007). Network analysis as a research method has the ability to describe, explore, and understand the structural and relational aspects of health (Luke & Harris, 2007). According to Haythornthwaite (1996), social network analysis (SNA) is a method for empirically describing the social structure within interorganizational networks. Interactions can be described between individuals, groups, or organizations (Haythornthwaite, 1996). Typically, networks are represented graphically as a set of actors connected by lines or arrows that highlight relationships between members of the network. In addition to analyzing the pattern

of relationships, SNA can also describe the flow of information (Haythornthwaite, 1996). Whole network analysis will identify the key providers of information while also exposing structural holes that could be strengthened.

Responses to the SNA questionnaire were analyzed such that network-level measures were generated. Questionnaire responses are stored in an electronic spreadsheet (Microsoft Excel©). Data were converted to matrices for analysis in UCINET 6©, a network analysis software package. The usual network metrics (Scott, 2000; Wasserman & Faust, 1994) related to network structure (i.e., describing the distribution of relations among primary organizations) were computed for all interaction variables, based on the fact that organizations have multiple relationships with each other. For example, an organization may share information with another organization even though they may not be involved in joint activities. NetDraw, a feature in UCINET 6©, was used to generate diagrams of the network.

Ethical Considerations

Possible disadvantages of my prior relationship with the network include the risk of participants feeling coerced to participate, or the potential to unconsciously respond to members during the focus group when discussing topics that were familiar to me. In order to mitigate these potential risks to participants and the research rigour, I was diligent in deriving data collection procedures that were consistent with ethical practice. This section describes the processes used to support ethical research practices. Issues concerning informed consent, data collection procedures, confidentiality, and handling of data are discussed.

Ethical approval was granted by the GASHA Research Ethics and Review Committee on October 18, 2011 and the University of Ottawa Research Ethics Board on November 1, 2011 (Appendix G). To address the issue of potential coercion, an email was sent to the co-

chairs for them to forward to network members on my behalf. Email was chosen as the optimal way to communicate with the members because this is their routine communication method (Appendix D – Email invitation to participate; Appendix E – Letter of Information and Consent Form). Network members then contacted me via email or telephone to confirm their interest in participating in the study, which gave them an opportunity to ask questions or to discuss any concerns related to the study.

On the day of data collection, network members were given another opportunity to seek clarity on any issues of confidentiality or other ethical concerns. The letter of information provided all relevant information for an informed consent process (Appendix E), such as the purpose of the study, activities participants would take part in, potential risks, benefits, and procedures to ensure privacy and confidentiality. The letter of information also explained the voluntariness of participation, and provided an opportunity to request further information or to ask questions before the letter of consent was signed. The letter of consent was signed and dated by me and the participant on the day of data collection. A signed copy of the letter of information was provided to the participant.

No personal or identifying participant information was collected or retained. Publications and presentations will not identify any individual members of the network or the organizations they represent. No personal identifiers were attached to the data thus restricting any means by which an individual may be linked to their data. I was the only individual with access to the identity of the participants in relation to data collection tools. The thesis supervisory committee had access to raw data (with assigned numbers for identification only) prior to coding in order to ensure triangulation of analysis, which enhances rigour of the

qualitative analysis. No individuals other than myself and members of the thesis committee had access to the data collected.

Digital voice files were stored on a password-protected computer in a password-protected file folder. The master list linking the participants' names with study identification numbers was stored in separate locked filing cabinets in a locked office in the researcher's home. No information will be released to third parties. A copy of all raw research data will be stored in a locked unit (requiring keypad passwords for entry) and locked cabinet in the Nursing Best Practice Research Unit at the University of Ottawa during the conservation period of five years (ending December 2016). Thereafter, secure deletion will be used for electronic data such as audio and data files, and the paper documents will be shredded.

Rigour.

Scientific rigour was maintained through the use of several key strategies to ensure the trustworthiness of data. Polit and Beck (2008), guided by Lincoln and Guba's foundational principles, identify four criteria by which trustworthiness is determined: credibility, dependability, confirmability, and transferability. Techniques to ensure credibility, defined as the believability of the findings (Polit & Beck, 2008), include: triangulation of data-collecting, both qualitative and quantitative data; peer debriefing (with the thesis committee); and a member check (Davies & Logan, 2012). Dependability is concerned with the data's accuracy in different times and conditions (Polit & Beck, 2008). Attempts to heighten dependability in this study include the creation of an audit trail of processes and results (Davies & Logan, 2012). Confirmability refers to objectivity and the reduction of bias (Polit & Beck, 2008). A reflective journal and a review of the raw transcript without identifiers by a neutral party, the thesis supervisor, were techniques used to ensure

confirmability (Davies & Logan, 2012). Transferability, or the generalizability of the data (Polit & Beck, 2008), was addressed by using detailed descriptions and direct quotations when presenting the results (Davies & Logan, 2012). In addition, potential sources of bias were avoided by using a data collection tool (questionnaire) that was adapted and pilot tested prior to this study, as recommended by Davies and Logan (2012).

Member check.

Following the initial data collection, study participants were asked how they would like to receive and discuss the results. I was asked to return to the network as a group and present the findings of the study. On September 13, 2012, the results were presented to participants to gain feedback. The presentation took place during the first 30 minutes of the regular quarterly meeting for the network. Four of the original 8 participants were present. All current executive members (2 co-chairs and secretary) attended the member check session. The third co-chair had changed employment and was no longer a member of the network. Two new members attended the presentation and contributed to the general discussion following the presentation. The results were presented using Power Point© slides, and key quotes were provided for review. The results were discussed in the context of the literature. Recommendations for practice and research were reviewed and participants agreed and added to them. Following the presentation, participants were asked to provide feedback and ask questions.

Summary

In summary, the purpose of this study was to increase the understanding of the process of EIDM in a goal-directed community-based interorganizational network. Individual, interorganizational, and external-level factors from the literature were considered

as a conceptual guide to analysis. The case study, a descriptive mixed methods study, used both focus groups and a questionnaire to answer the research questions. Focus group data was analyzed using framework analysis, and the data from the questionnaires was analyzed using social network analysis. Chapter 4 will present the study findings.

CHAPTER FOUR: Results

This chapter presents results of the analysis and interpretation of documents, focus group data, and SNA questionnaires. The first section includes a demographic description of the study participants. The findings will be organized according to the following key themes: network as a vehicle for EIDM, and leadership. In addition, the findings related to supports for the network and the challenges of achieving the network's goals of BFI designation and breastfeeding as the social norm will be discussed. Finally, the member check process will be described.

Demographic Characteristics of Participants

Eight of the 10 network members participated in data collection, resulting in an 80% response rate. All participants (n=8) were female, and most were within the age range of 30–49 years. Table 1 provides a detailed description of the demographic characteristics of the study participants. All participants had pursued some form of post-secondary education. Half of the participants in this study were Registered Nurses. A majority of participants (n=6) were healthcare professionals. The most represented organization was GASHA (n=5), with three from Public Health Services, and two representing acute care clinical services. The remaining participants represented community-based organizations. A majority of the participants had been working in their current role for 10 years or less.

Nearly 66% of participants had been members of the network for 6 months to 2 years. A majority of participants (n=6) were in paid positions that supported their role as a network member while the remaining (n=2) were network members emanating from the volunteer sector. Half of the participants reported “almost always” participating in activities of this network.

Table 1
Socio-demographic Characteristics of Participants (N=8).

Characteristic	No. of Participants
Age:	
30-39 years old	3
40-49 years old	5
Gender:	
Female	8
Education:	
Community College	2
University	6
Organizational Affiliation:	
GASHA	
Acute care	2
Public Health	3
Community-based	3
Years worked in this position:	
1-5	2
6-10	3
>10	3
Volunteer or paid status on Network:	
Volunteer	2
Paid (part of my job)	6
Length of Network Membership:	
6 months-2 years	5
3-7 years	3
Frequency of participation in Network:	
Occasionally	3
Frequently	1
Almost always	4

Overview of Findings

The results indicate that the role of the individual was difficult to capture in light of the broader organizational barriers being faced at the time of data collection. The interorganizational factors were essential in facilitating EIDM within the network. The key barriers and facilitators to EIDM and the achievement of the network goals were in fact at the

external level. This chapter will be framed using the two key themes of networks as a vehicle for EIDM and leadership.

Network is a vehicle for EIDM, but requires trust.

Key interorganizational factors included trust within relationships among network members, and the link between trust and sharing information. The same key players who were trusted within the network were also “keepers” of knowledge. Despite the stated commitment to a common goal, there were tensions among members about ways to achieve this goal. The following quotation shows this tension as one participant questions the focus on BFI, while potentially excluding the role of community organizations in achieving breastfeeding as the social norm:

But this committee as a whole, at the moment our workplan is entirely based around the ten steps...those are very much organizational, institution based, it isn't the community piece. I know what the tenth step says, but it tends to be an afterthought in the process. We're doing top down when we're working on BFI, not grass roots up.

The tensions were apparent in the SNA results when participants were asked to identify members with whom they interacted regularly, shared information, and collaborated. Trust and quality relationships were associated with the sharing of information.

When participants were asked about potential ways to strengthen relationships and build trust within the network, the following key factors were identified: effective communication, face-to-face meetings, pursuing a common goal, joint activities and subgroups, and informal discussions that occur outside of the meeting agenda.

Effective communication was described by participants as listening to other members and respecting their opinions. Face-to-face meetings were recommended in lieu of teleconferencing: *“The face-to-face makes a difference too, now that we’re in the mode of teleconferencing, like with provincial committee, it’s really hard to make that connection you know...”*

The role of joint activities was described in the following statement: *“...So you’re seeing them at various tables, you’re learning more about them, they’re learning more about your organization, and so again that is building relationships”*. The relevance of informal discussions was mentioned several times in the context of building relationships as well as sharing knowledge and evidence and learning about what resources are available.

Decision-making within the network is done by consensus. While discussing the consensus process, all participants expressed that working by consensus was an effective way to make decisions and they thought that it did not result in conflict or residual issues among members. The network has a flexible structure, as demonstrated by the flux in membership, the rotation of chairs every 2 years, and the decision to change meetings from monthly to quarterly in response to time constraints of members.

Several participants reported the relevance of the goals of the network in relation to unifying members and moving their agenda forward, for example: *“...everyone is marching on the same path. I find everyone wants the same outcome, no matter what level you work at. Having that clear vision of where we want it to go has been really helpful”*. Figure 2 presents the SNA graph that depicts those who “have common goals for the BFI committee”. The graph clearly indicates, by simply noting that not all arrows are reciprocal, that the network

does not completely agree on one vision for the network's future. This "intra-network tension" will be discussed further within the next subtheme.

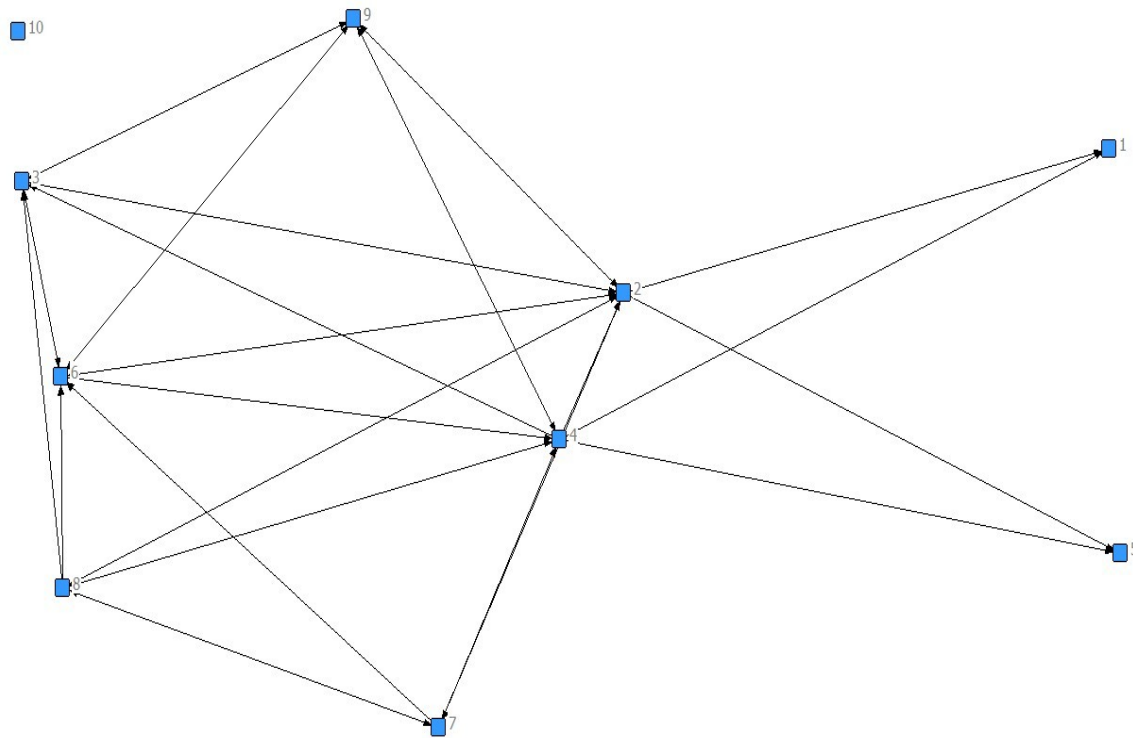


Figure 2: Common Goals

Throughout the focus group discussion, there were apparent intra-network tensions among members regarding the goal of the network and the approach taken to achieve this goal. As previously stated, participants mentioned the role of a common goal in developing relationships among members within the network. For example, one participant questioned the network's approach to achieving their goal within the context of informed choice and the potential for guilt and public judgment if the mother does not choose to breastfeed. All remaining participants were emphatically supportive of the network's goal during the focus group discussion. In addition, on several occasions, members reported that the ultimate goal

was to get breast milk to baby. A discussion about breastfeeding in public also generated some tension among members regarding the approach to increasing women's comfort with respect to breastfeeding in the community. For example, during this discussion about breastfeeding in public, and as tension grew, one participant asked the group, *"What is the ultimate goal, what do we want babies to get?"* One participant answered, *"Breast milk, bottom line"*. Following that comment, most participants were nodding their heads in agreement. Despite tensions regarding interventions and approaches to achieving the network's goals, the WHO and UNICEF's (2009) guidelines appeared to unify the group and provide clear direction on a plan for future action.

The conflict regarding the network's approach to achieving its goal, and the potential for achieving BFI designation without making breastfeeding the social norm, is evident in this narrative:

...so in my mind, one of the barriers to continue breastfeeding is that when a mom leaves the support that she gets at the hospital level, she's out there in the community and feeling like she can't breastfeed in public... how do other people's reactions to breastfeeding, how can they influence the breastfeeding mother, how can we improve those reactions to make other people more comfortable in seeing breastfeeding and I don't think that's the interest of the committee, necessarily at least at this point.

The impact of this conflict on the trust between this member and the remaining members in the network is clearly demonstrated in the results of the SNA questionnaires. The organization that is concerned about the lack of consideration of supports available in the community, as well as the public's response to breastfeeding, has been a member of the

network for 6 months to 2 years, but was reported by other members as not having common goals for the direction of the network. The organization had no shared activities or programs with other members, and had a low level of trust from other members to keep their primary organization's interests in mind during network activities and the pursuit of network goals. No members reported going to this organization for advice regarding BFI matters or receiving science-related research from them as it relates to breastfeeding in general or BFI.

Throughout the analysis process, there was a clear distinction between relationships among GASHA and community-based organizations. The participants who showed a high level of mutual trust and who shared joint activities and programs, who were relied upon to provide scientific research, to provide BFI-related advice, and to be resources when troubleshooting about a new idea or when problem solving, were all employed by organizations belonging to GASHA. The one exception to this was one community-based member that had a long-standing membership. The remaining community-based organizations had little interaction with other organizations.

Participation in the network provided network members with access to a diverse range of evidence, as exemplified by this statement: *"That's what's good about multidisciplinary. You know what other people do, you know they're the expert on that. I can use you as a resource and she's got access to all that data. I know she's got access to that, where if she had something, she knows we've got our resources..."*

When participants were asked about ways in which the network received new information, the following methods were identified: network meetings and emails from other members, emails from other organizations that belong to the network, informal discussions among members, and preparing for the presentation to the senior leadership team.

Participants also indicated that they continue to use the telephone to make personal contact with other network members when requesting practice-based information or inquiring about resources available for clients. The role of informal discussions is apparent in the following excerpt: *“I think that it’s not just an agenda that you’re coming to a meeting for, it’s the sharing of information. You know somebody’s name, you can call and find out more information. It’s a connect”*.

Participants noted that the development of a presentation to GASHA senior leadership team instigated the gathering of various types of evidence, as shown by the following statement:

Well I’d say a great example would be the recent presentation to senior management. There was a great deal of research done on all of our parts to pull together evidence from different areas to really draw a clear picture to senior management in our district.

In addition to the WHO and UNICEF’s BFI guidelines (2009), the following types of evidence were mentioned as sources of support for the workplan and other network activities: local statistics and reports, material from an 18-hour breastfeeding course, documents and publications related to individuals’ professional organizations, provincial handouts and materials for clients, and the Health Canada website.

The SNA graphs provided important support for the aforementioned discussion on the sharing of evidence within the network. In Figure 3, it is clear that most members chose a core group when answering the question, “regularly seek advice from this person in relation to BFI matters”. The core members that were relied upon for advice on BFI matters were also trusted to have a common goal with most members (as shown in Figure 2). With respect to

providing scientific research related to BFI, the same core members were identified (see Figure 4).

Participants were asked to identify which steps in the WHO guidelines will be the most challenging to implement when the designation process begins. The discussion that ensued was an indication of the potential to share knowledge and problem solve regarding ways to adapt international guidelines in rural NS effectively within a network. With each challenge stated, potential solutions were identified that were specific to the context of their organization. Most of the solutions were based on practical knowledge gained by participants in their professional roles. These discussions showed the potential for networks to share knowledge, as depicted in Table 2. The data supporting this theme have been organized using three selected BFI steps (WHO & UNICEF, 2009) as an organizing framework.

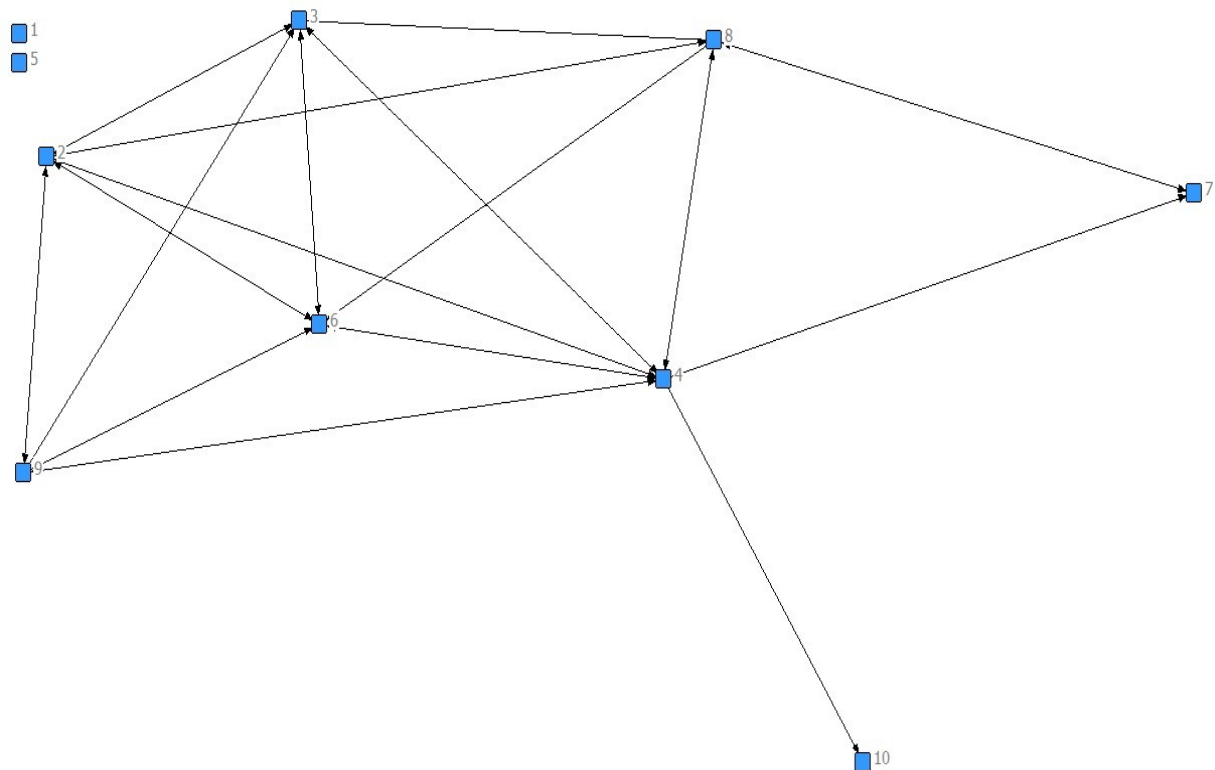


Figure 3: Seek Advice Regarding BFI Matters

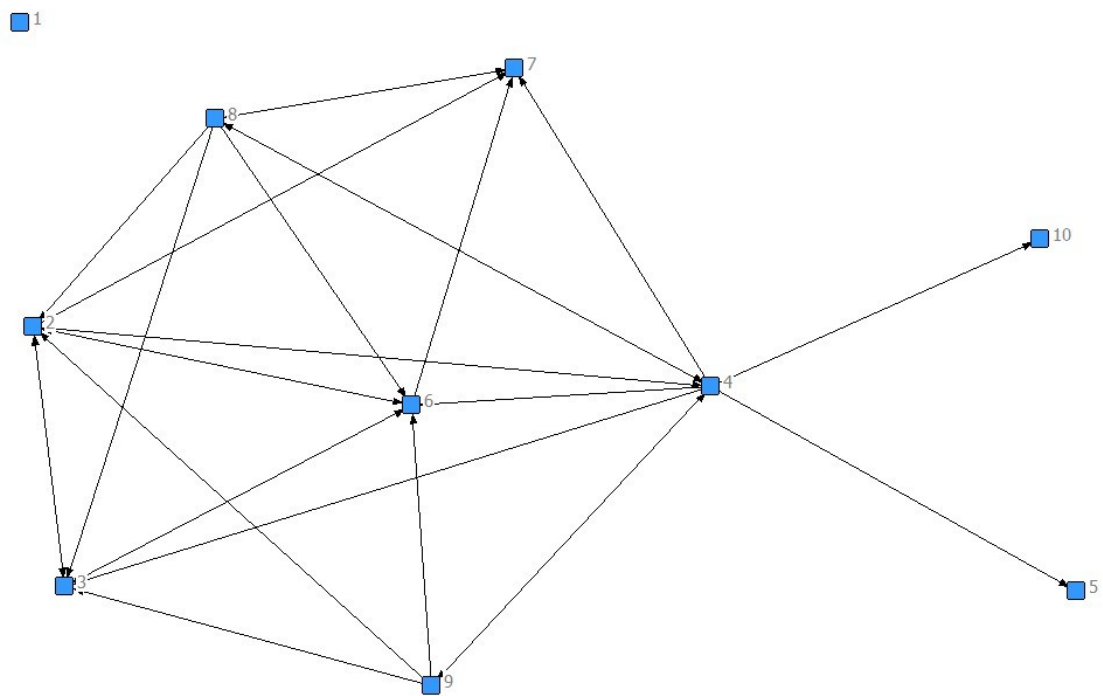


Figure 4: Providing Scientific Research Related to BFI

Table 2

Examples of Problem Solving in Relation to the BFI Ten Steps.

Step	Challenge	Problem Solving
Step 1 Have a written breastfeeding policy that is routinely communicated to all healthcare providers and volunteers.	“...a written breast feeding policy, do we have that yet, that’s consistent across public health, acute care. Remember we were going to get all our policies together, there are two or three somewhere...”	“Can they do BFI or some kind of related tutorial on e-learning? Can that be for all staff?”
Step 2 Ensure all healthcare providers have the knowledge and skills necessary to implement the breastfeeding policy.		“We do have a physician champion, (name), who would like to take it and then maybe develop something. She has spoken to us about that. Maybe she will take the next course that we’re offering and then be the physician champion because we do recognize that we need a physician champion. It’s something that a lot of the other organizations in Canada are looking at you know, doing one step or a CME per month with a physician champion presenting, which would work a lot better.”
Step 10 Provide a seamless transition between the services provided by the hospital, community health services, and peer support programs. Apply principles of Primary Health Care and Population Health to support the continuum of care and implement strategies that affect the broad determinants that will improve breastfeeding outcomes.	“It’s getting the moms to connect with these groups. We do have a fair number of alternatives for them, but it’s to get them to make the connection. I’ve been struggling with this for 14 years.”	“...in some rural communities there’s the mother to mother support. You get a list of names of who you can call if you’re having issues and I mean years ago someone did their Masters on mother link, linking mothers prenatally to other mothers. So you link them up and then they call this person after they have their baby”. “Maybe the mom upon discharge can sign a sheet that she’s willing to give her number to La Leche League, whoever she wants, Kids First...”

Leadership: Both presence and financial support needed.

External factors transcended the individual and interorganizational factors identified in the initial conceptual framework (see Figure 1). In particular, leadership emerged as an

overarching theme within the context of supporting EIDM in a network and assisting that network in achieving their goals. Within this overarching theme, there are two subthemes: resources and managerial presence.

The majority of the barriers to EIDM and achieving the network's goals were related to external factors, including human and financial resources, and in-person or network membership support from management. The one reported barrier to making breastfeeding the social norm in GASHA was the time required, more specifically, the time for change to occur within the broader community. Essentially, human and financial resources were identified as the key barriers to implementing the programs and social marketing campaigns necessary to achieve the network's goal. The following passage gives an example of the need for more human resources to achieve the network's goals: *"...if you're saying to me, we'll hire somebody for a year, BFI would happen, because you would have somebody dedicated to do just that..."*. There was considerable discussion on the topic of including more tangible financial and human resource support for the BFI program with the written commitment of senior leadership to BFI, as is demonstrated in this participants' comment: *"You can't have a strategic direction if you have a bunch of people trying to do it off the side of their desk. So you got to step up to the plate"*.

Two factors were reported as affecting individuals' ability to participate in the EIDM process as well as contribute to the achievement of the network's goals: competing priorities in the workplace and lack of time assigned to network activities. The following passage outlines a participant's struggle with workload and the desire to support the network effectively: *"...if I get 5 minutes to look at this I will, but to be honest, it is a priority in my*

mind, but to actually put it into action... ”. In response to workload issues, the network identified the need for a full time BFI coordinator.

Throughout the focus group, participants frequently discussed recommendations for practice and interventions necessary to achieve the network’s goal and facilitate EIDM. All members agreed that a full-time BFI coordinator is required to put the workplan into action, as demonstrated in the following comment:

I think again resources, looking at somebody that’s going to be a champion, that’s going to be able to have time to really look at a community, what we have with our tobacco coordinators, somebody that’s going to spread the word.

According to participants, the coordinator would function as a champion to move the BFI agenda forward, especially in connecting with the community. They would also assist in extending the network’s membership and in appealing to other community organizations by tailoring the existing presentation provided to the senior leadership team at GASHA. Further, the coordinator would contribute to making breastfeeding the social norm by using consistent terminology when reaching out to key stakeholders. The following quote identifies some stakeholders that could be recruited:

...getting in with the town council, getting in with the chamber of commerce, getting in with the organizations in town that have those business owners on it, that get the word. Connecting with not just breastfeeding supporting people that are here, but we need to get out with the mayor, we need to get out with the chamber of commerce, the business owner that’s the president this year,

let's go see them and meet with them and let them know what we're talking about.

The role of the coordinator was compared to a recent success with the provincial tobacco strategy (Nova Scotia Government, 2011). This provincial initiative had a social marketing campaign and a provincial committee, while also having regional coordinators to implement programs. Participants were clear that they believed the success of the tobacco strategy was in large part due to the human and financial resources that were allocated, but also to the dedication to multiple levels of programming, from the individual to managers in health services. It was suggested that in order to mobilize these resources it was essential to have a manager in the BFI network. In addition, the participants stated that the next presentation to the GASHA senior leadership team should include a clear request for human and financial resources as a demonstration of their commitment to the strategic plan.

Within the context of EIDM, participants reported time as the greatest barrier to sharing and putting evidence into practice. Again, they suggested that the role of a coordinator could include the sharing and interpretation or synthesis of evidence for the remaining network members. There was also discussion about the potential role of the local National Collaborating Centre for Determinants of Health (NCCDH, 2010) in the network's work. Only two members of the network were aware of the NCCDH's role, and they suggested that perhaps this organization could support the network with current and applicable research evidence.

In addition to resources, participants reported the need for managerial presence within the network: *"I think, one big resource missing from this table which we did have but we don't have right at this moment, is we need a middle or senior manager at this table"*.

Further discussion ensued to explain that the benefit of having management at the table was their authority to execute some of the changes required to achieve the network's goals.

Participants consistently mentioned a particular champion who was present within the network for a short time while acting as interim manager for one of the organizations. This individual was instrumental in assisting the network to prepare for the presentation to the senior leadership team by gathering appropriate evidence and providing extra staff support from their organization. Since the manager completed her term responsibilities and thus left the network, there have been no other managers participating in network activities.

Rural challenges.

When asked about adapting evidence to the local district, participants identified the challenge of making recommendations for practice that were typically developed in an urban area work in a rural setting. The following statement exemplifies their concerns:

We're in a rural setting and that's a big component of it, some of the research or the articles or the projects are being rolled out in much larger centers, and so we have to think about how we roll that out here, and because we are rural it often does mean sometimes that we have less resources, technically we have less people out in the population, but we still have to do the same kind of work, and so that can be challenging, but I think sometimes its just trying to gear any of our programs or initiatives to a rural setting, and I don't think people get how rural we are.

Concerns regarding the challenges of living in a rural setting arose again when discussing the challenges of adapting the BFI guidelines to the district, as demonstrated by the following participant:

I think of the mom, of a mom in xxx (rural community, population 806) (Statistics Canada, 2011) who has no other family members that have children, she is really the one that will not seek that support network. I really feel that it's demographics with a lot of the people, you'll see more issues in the rural (communities).

The concerns of access to services for clients were compounded by issues of traveling in the district as a volunteer:

...the other issue with the peer support is most of it is volunteer based, and when you start with the volunteer, with rural areas, like our group has to fundraise for just our day to day organizational costs, for me to drive to xxx (rural community) to offer an outreach group, that's money out of my pocket personally. It's another aspect that is exacerbated by the rural barrier.

Supports.

The focus group discussion concluded with an open-ended question about the network members' perceived barriers and supports to achieving BFI designation in GASHA. The participants addressed the two main components of the goal (social norms and designation) separately. Since the challenges to achieving designation were similar to those needed to support EIDM, and were already discussed in prior sections, the following paragraphs will discuss the supports for the network as they move forward.

A key support for the network that provided momentum to move forward was the presentation to the senior leadership team in July 2011. Participants reported two important outcomes following the presentation: the elimination of the regional hospital's formula contract and the inclusion of BFI in GASHA's strategic plan.

The following quotes describe the motivation gained following the presentation:

It inspired me to keep going and you know, when we got that positive feedback from senior management, I think if anything just working closely, developing that presentation, pulling from our resources, pulling from each other what we needed, and succeeding in accomplishing some of it and accomplishing more of what we actually wanted to accomplish. I think it inspired us.

...members have changed and at some points over the years we've had management present, at other points over the years we haven't had management present, but in all of the behind the scenes things that we've done, I really don't believe until the senior management presentation took place, did management as well as outside people really have a handle on some of the great work that we've been doing.

Other supports for network members include their organizations' support for time to attend meetings, and the personal and professional support from other network members.

Member check.

The overall response from participants following my presentation of the results was the “bitter sweet” feeling when the barriers to achieving their goal were displayed on one slide. Despite being encouraged by the areas in which they could easily make changes that would benefit the network (such as improving their relationships with community organizations), there remained a feeling of being overwhelmed by the number of barriers present. It is possible that this response was in part due to a recent meeting with the senior leadership team in which their request for a coordinator was denied.

Network members reviewed the quotes and agreed with the key themes presented. They did not request changes to the quotes or themes, and agreed they captured their discussion appropriately. Following the presentation, one member discussed the relevance of the personal qualities of long-standing members as rationale for the remaining members' report of a high level of trust and thus sharing of information with the executive. The network members also clarified that under the subtheme of managerial presence, it was one particular manager, the VP of Community Services, who was requested to join the network. They also reiterated the barrier of being an advisory group within GASHA with no authority to make change.

Network members requested that I present the findings from this study to the senior leadership team. Frustration was again voiced with respect to the recent presentation of strong evidence to support the BFI without the commitment of financial and human resources.

Network members were asked what future research is needed to move forward with BFI. Their recommendations included a response to the rural challenge by identifying the barriers to breastfeeding duration specific to this district. Network members agreed that GASHA has a diverse and unique population that requires specific interventions that are tailored to their needs. Network members also suggested that some baseline research on the reasons for breastfeeding cessation would assist in providing appropriate programs to support breastfeeding women in GASHA.

Finally, participants reported that they were grateful for the opportunity to participate in this study. They also stated that the interest in the network made them feel more

recognized and valued. They are especially excited about the findings of this study being communicated to the senior leadership team.

Summary

The key facilitators and barriers to EIDM and goal achievement were clearly at the external level according to the original conceptual framework for this study. Leadership was a pervasive theme and was identified in all three levels of potential facilitators or barriers named in the initial conceptual framework (Figure 1). The results of this study show that working within an interorganizational network facilitates the building of trust that precedes the sharing of knowledge. However, it is noted that sharing information and resources builds trust, thus contributing to a reciprocal relationship between trust and EIDM. The key facilitators of trust were: organizations having a common goal, in-person meetings, and joint activities or programs. There is an equally relevant case to be made for having access to many types of evidence in the EIDM process, as well as maintaining a diverse membership of organizations. These key findings will be discussed further in the context of the literature, and the implications for nursing practice and research in Chapter 5.

CHAPTER 5: Discussion

Overview of Findings

This thesis aimed to answer the following research questions: What are the individual and external factors that influence the use of EIDM and the achievement of the network's goals? What are the interorganizational factors, including network structure, the sharing of information, and quality of relationships, that influence the network's capacity for EIDM and its ability to achieve its goals? In addition, four propositions were used to summarize the literature and guide the data analysis process to assist in answering the research questions.

The propositions described and referenced in Chapter 2 are briefly summarized as:

Registered Nurses rely most on tacit knowledge for EIDM; the greatest barriers to EIDM are organizational, such as workload issues and lack of authority to make change; key facilitators for EIDM and goal achievement include leadership and human and financial resources; and, network structure and the quality of relationships between network members influence collaboration and thus knowledge sharing.

To my knowledge, this case study is the first research to approach BFI using an interorganizational network lens. The results were mostly consistent with the theoretical propositions outlined in Chapter 2, however the key difference lies in the assumption that equal weight or consideration should be paid to all three levels of proposed factors: individual, interorganizational, and external. Whereas the initial conceptual framework and propositions emphasized the importance of considering the intersection of all three factors as facilitators to EIDM and achieving the network's goal, the study findings clearly indicate the broader and more pressing need for multiple levels of leadership.

The key findings and insights gained from empirical and theoretical research are depicted in a revised conceptual framework (see Figure 5) entitled, “Facilitating EIDM and Goal Achievement in a BFI Network”. The overarching theme of leadership and, in particular, the need for multiple levels of leadership, is shown at the center of the model, which is shaped as a network. The multiple levels of leadership are: community, network members, primary organizations, and the provincial government. The key barriers and facilitators to EIDM and achieving BFI designation are identified within the network continuum. In addition, the sources of evidence used by the network to make decisions are included in the model.

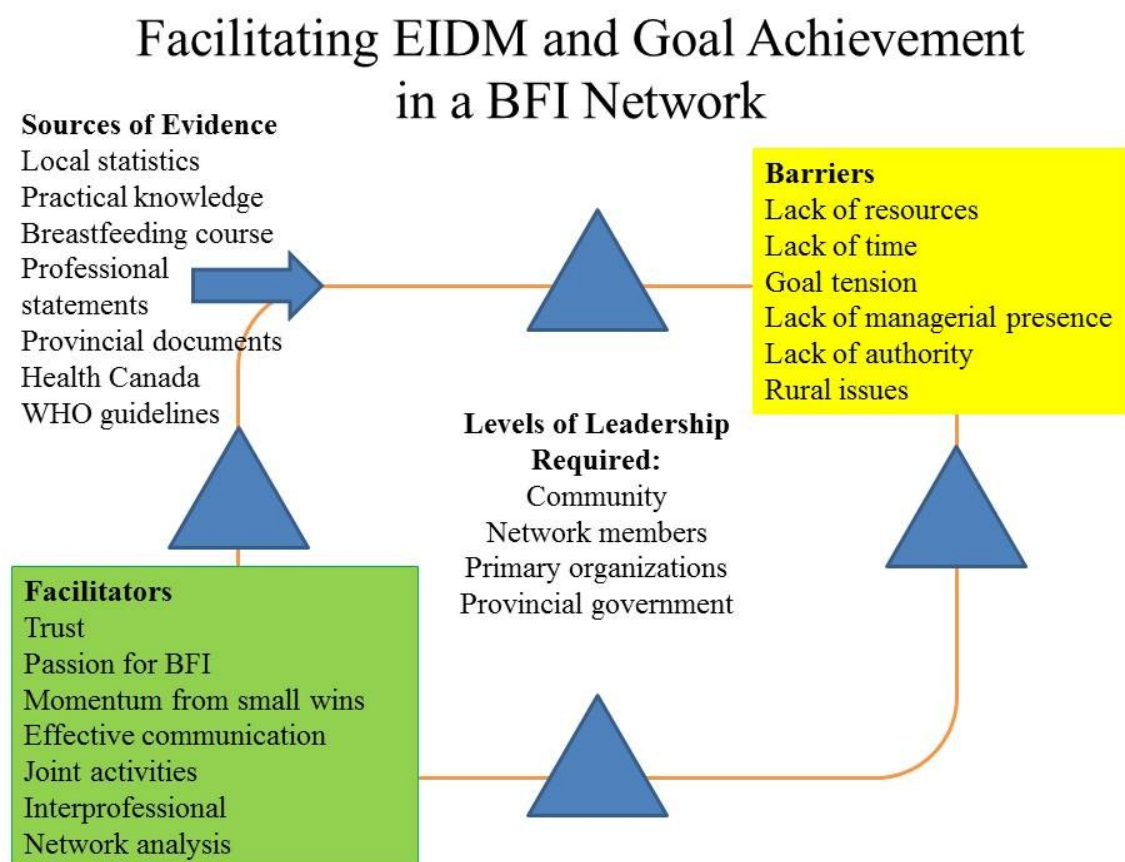


Figure 5: Revised Conceptual Framework

Leadership: The Dominant Factor at Multiple Levels

Leadership emerged as the study's overarching theme in the investigation of the factors necessary to support EIDM and achieve the network's goal. Participants in the GASHA network identified the vital role of leadership at multiple levels in assisting the network to achieve its goal. These levels include the broader community, individual network members, the organizations that are represented by individual members, and the provincial government. More detailed examples of multiple levels of leadership include the presence of breastfeeding mothers and community-based organizations on the network, existing network members advocating for more time and resources to do BFI-related work, GASHA committing sustainable financial and human resources to BFI, and the provincial government providing a reporting structure that coordinates all BFI activities in the province while also re-instating the provincial steering committee.

A recent evaluation of the implementation of the provincial breastfeeding policy in Nova Scotia provides important support for the findings of my study (Kirk, Hemmens, Price, & Sim, 2011). The evaluation consisted of focus groups with all BFI committees in each health district, one focus group with the provincial breastfeeding steering committee, and three interviews with senior leaders (Kirk et al., 2011). The provincial policy was launched in 2005, and has three objectives: "provide leadership for protection, promotion, and support of breastfeeding; improve the health status of mothers and babies by increasing initiation and duration rates; and support the implementation of BFI" (Nova Scotia Department of Health Promotion and Protection, 2006). The policy was meant to leverage support at the provincial and district level, and the provincial steering committee was accountable for its implementation (Kirk et al., 2011). An evaluation of the implementation of the policy

revealed that the current efforts are insufficient in Nova Scotia's "unsupportive breastfeeding culture" (Kirk et al., 2011). As was reported by participants in my study, much of the work on breastfeeding continues to be done by volunteers, while management and executives (provincially and at the district level) are paying lip service to breastfeeding without providing the necessary resources and support (Kirk et al., 2011).

Postscript

Since the results of the GASHA case study were presented back to the network, and during the final writing stages of this thesis, I started an employed position in Public Health in GASHA. I have also been nominated to be chair of the BFI network and can therefore report on the key changes that have been observed since December 2012. Since the BFI network meets quarterly, I became chair at the next meeting after presenting my results. I was able to witness the impact of using the network analysis results to know where to focus on building relationships in order to facilitate the use of EIDM. The network graphs depicting a GASHA-centric network increased network members' awareness of the need to broaden membership, which resulted in the recruitment of a family physician (who is also a Lactation Consultant) and a breastfeeding mother from a rural area.

In addition to increasing the personal accountability and leadership among network members, the appointment of a new chair outside of acute care with a direct link to decision-makers and the provincial monitoring and evaluation committees, has helped leverage the BFI agenda in GASHA. In my new role, I am required to provide a quarterly report on BFI activities to the VP of community services in GASHA to bring to the board of directors to monitor BFI progress. I believe this channel of regular communication has been instrumental in gaining leverage with the senior leadership team. Other districts have supported the key

role that senior leadership teams have when engaged on a regular basis and were easily accessible for communication (Kirk et al., 2011). Within the first week of starting my new role in Public Health, I was asked to prepare and submit a grant to the provincial government's recent breastfeeding fund. The BFI network had great input during this process, and it was deemed that a peer support program, especially focused on rural areas, was the greatest priority. This would give us time to prepare for the well-documented challenges in Step 10 of the BFI process (WHO/UNICEF, 2009). The grant was awarded in March 2013 and has enabled a volunteer member of the network to be paid for their valuable work. Unfortunately, the funding is short-term, which was a key concern named in the provincial evaluation report (Kirk et al., 2011). As in the current study, one of the major recommendations for creating a more supportive breastfeeding culture was sustainable funding (Kirk et al., 2011).

There was great momentum gained from the case study, and it resulted in the application for the first step in BFI designation. In February 2013, we received the Breastfeeding Committee for Canada's certificate of participation, the first health district in Nova Scotia to receive this certificate. The significant changes in policy and practice since the report back to the network in September 2012 are a clear indication of the potential for network maps to be used to facilitate discussion and build awareness of ways to improve the network's potential for goal achievement. The similarities between the findings of the evaluation report conducted by Kirk et al. (2011) and this case study is indicative of the role that a strengthened commitment from multiple levels of leadership, from network members to CEO's and provincial departments, could have in pushing Nova Scotia further in establishing breastfeeding as the social norm.

Participants clearly stated the need for leadership commitment in the form of managerial presence, as well as human and financial resources to support the inclusion of achieving BFI designation in the GASHA strategic plan. A relevant case study that followed the process of a Canadian public health department in its goal of becoming an organization devoted to EIDM reported similar external facilitators (Peirson et al., 2012). Further, the request for the presence of the Vice President of Community Health services for GASHA (highest level of leadership applicable to BFI) to become an active member of the network is consistent with the literature (Kirk et al., 2011; Peirson et al., 2012), but the existing literature fails to identify clearly the frequency and actual role of senior leadership in networks, especially with a network in the process of implementing BFI. The provincial evaluation of the implementation of the provincial breastfeeding policy lacked detail and commitment in its recommendations for implementing BFI in all districts, despite the fact that it is one of the three major objectives of the provincial policy (Kirk et al., 2011; Nova Scotia Department of Health Promotion and Protection, 2006).

Interorganizational Factors: “It’s a connect”

The present study highlighted the relational aspect of sharing knowledge as a key facilitator in the implementation of the BFI guidelines. Ploeg et al. (2007) supported this finding by stating the opportunity to learn about the guideline in a group with peers (for staff), as well as the presence of interorganizational collaboration and networks (for managers and administrators) were identified as key facilitators.

Many types of evidence are used by the BFI network in its decision-making. In addition, these multiple forms of evidence interact in a reciprocal way during the EIDM process (Meagher-Stewart et al., 2012). Table 2 reflects the intertwining of practice-based

and empirical, peer-reviewed evidence as the study participants considered the WHO guidelines in the context of their professional experience and the unique needs of their community.

Opportunities to collaborate within the BFI network, as well as having a broad multi-disciplinary membership, increased access to relevant evidence. The benefits of interorganizational collaboration in relation to EIDM are clearly identified in a recent case study of a cancer research network in the United States (Harris, Provan, Johnson, & Leischow, 2012). As was reported by participants in the GASHA case study, collaborations within a network improved knowledge exchange (Harris et al., 2012). Surprisingly, in response to the reported barriers of working in a rural health district, Harris and colleagues reported that collaborating organizations are less likely to report geography as a barrier once they have begun working together. Indeed, perhaps there is a “warming up” period that networks experience, and as the BFI network is emerging and relatively young, may become less of a barrier as time goes on.

As was reported in the current study, in order for a range of knowledge to be shared among members in the network, it is essential for multiple levels of the primary organization to be represented (Provan & Lemaire, 2012). For example, in GASHA there needs to be representatives from practice, policy-makers, and decision-makers at the table.

During discussions with network members prior to data collection, and upon review of the documents provided for context, it seems that there has been considerable fluctuation of membership in the network, which may be a barrier in developing trusting relationships. With respect to network membership, consistent fluctuation of representation from organizations is detrimental to the success of the network (Provan & Lemaire, 2012). In

addition, the fact that the network is tied to the Children's and Women's Health Team, where managers and decision-makers are present, does not seem to have met the needs of the network as it moves towards its goal. This is in conflict with the network's request to have access to more decision-makers. In reality, the Children's and Women's Health team has approximately 45% physician, 33% acute care (nurses and midwives), and 10% community-based organization membership. The remaining membership includes social work and acute care management. Physicians and frontline healthcare providers, including nurses, have been reported as barriers in implementing the BFI guidelines (Semenic et al., 2012). The rationale for requesting the presence of a senior manager may be the reaction to fluctuating membership and the perceived lack of action as a result. It also may be a reaction to the lack of action from the decision-makers on the Children's and Women's Health Team. In light of this, McPherson (2008) reported the need for senior management's presence only as required. As stated above, there is a need for clearer direction regarding the role of management and decision-makers in goal-directed networks. Logistically, the presence of a senior manager at each quarterly meeting is unlikely, and costly, but reflects the need for the presence of an advocate with decision-making power.

According to stakeholders, the following key factors are influential in improving the success of clinical networks: building relationships, effective leadership, use of strategic evidence-based workplans, adequate resources, and the ability to implement and evaluate network initiatives (McInnes et al., 2012). All five of these factors are consistent with the facilitators identified by participants in the GASHA case study. The last strategy, related to the implementation and evaluation of initiatives, was discussed in the context of needing resources and managerial support in order to achieve the network goal of BFI designation. It

is also recommended that leadership be engaged at multiple levels, as shown in the revised conceptual framework, to assist the network in achieving its goal (McInnes et al., 2012). The simple act of hiring a BFI coordinator and having the presence of a senior manager at the table will not address the systemic barriers that are present in the flow of information, the tensions in relationships regarding the goals and direction of the network, and the lack of commitment from the senior leadership team which has the power to allocate sustainable funding to the network. In learning from the SNA results, and through experience since data collection occurred, it appears that having a chair with access to resources and who is reporting to the senior leadership team on a quarterly basis is improving the momentum of the network's achievement of its goal.

Varda and Retrum (2012) recently used SNA to identify the structural and organizational characteristics of public health collaboratives with 11 networks in the United States. As was identified by participants in GASHA, external and interorganizational dynamics influenced the outcomes of the networks (Varda & Retrum, 2012). Increasing reciprocal relationships within the network, as shown among the most trusted network members, would encourage a greater flow of information (Varda & Retrum, 2012). The participation of network members in meetings and in leading subcommittees also increases the flow of information. With respect to the GASHA-centric network, others have found that paid staff and members with specific health expertise provided by an organization were more trusted than unpaid or volunteer members (Varda & Retrum, 2012). Similar patterns were seen in the network maps of my study as noted by the increased number of reciprocal ties, and thus trust, demonstrated among predominantly GASHA staff. In addition, the following factors were associated with successful network outcomes: exchanging information and

knowledge, sharing resources, encouraging interaction among diverse stakeholders, and providing the opportunity for the development of informal relationships (Varda & Retrum, 2012). Following the member check, and after viewing the network maps and GASHA-centric relationships in relation to recent literature, network members verbalized an understanding of the way that relationships enhanced the success of the network. This shows potential for network maps to identify existing relationships and to be used as a KT tool to strengthen relationships and increase the likelihood of achieving their goals.

Implications for Policy, Practice, Education, and Research

Given the plethora of nursing competencies, standards, and guidelines that recommend collaboration, there is a clear need to understand the network and organizational factors required to work successfully within community-based regional networks toward EIDM while using the WHO/UNICEF BFI guidelines. The findings of the present study have potential implications for other BFI networks that are working toward designation. The results suggest that in the early phases of the BFI process, the network may require multifaceted leadership, the opportunity for relationship building and the sharing of various forms of evidence. Future research could include the consideration of using network maps as a KT tool for strengthening network relationships, but also in identifying the specific supports needed in rural health districts as they pursue BFI. Given the perceived importance of the key role of network leadership, especially managerial presence described by the participants in this study, future guideline implementation models could articulate more clearly the role of different types of leaders.

Some recommendations relevant for the GASHA network for the successful implementation of BFI include: strong government commitment and sustainable financial

support from the GASHA senior leadership team, BFI coordinators at the national and regional level, implementation of an evaluation program to encourage sustainability, integration with other programs and policies, and strong leadership (Semenic et al., 2012). In order to be successful in implementing the WHO guidelines, the BFI network could, in addition to identifying key barriers to implementation, address these barriers by tailoring evidence-based implementation strategies to the individual, while also considering the social, organizational, and environmental context (Brown et al., 2013; Ploeg et al., 2007; RNAO, 2012). At the current stage of evolution of the GASHA BFI network, it is recommended that the progress be considered in light of the RNAO toolkit for guideline implementation (RNAO, 2012). In a non-deliberate way, the network has completed some of the key steps as recommended in this toolkit, such as using the WHO/UNICEF guideline and adapting the recommendations to the local context (RNAO, 2012). The current study has identified key barriers at multiple levels, and deliberative planning by all members to jointly discuss strategies to minimize barriers and maximize facilitators based on the suggested options in the toolkit could assist in overcoming barriers in an effective, sustainable way (RNAO, 2012).

As outlined in the adapted model (Figure 5), there is a need to maintain and build on existing relationships by having face-to face meetings, working on joint programs, and recruiting representatives from family medicine and municipal council, for example, to broaden membership. The strengthening of relationships as described above will impact trust and thus the sharing of information with other members, which will build capacity and may assist in sustaining the implementation of the WHO/UNICEF guideline. Leadership as the foundation of the model needs to come from within the network as well as from external

decision-makers. All levels of leadership, from nurses to managers, must be engaged in guideline implementation (Gifford et al., 2013). By recruiting and engaging decision-makers, it is anticipated that the network will have access to more resources. Network members need to engage the broader community and celebrate successes to increase awareness and secure commitment from the GASHA senior leadership team. Further testing of this model for BFI is recommended.

In the present study, participants identified the supportive role a BFI coordinator could have with respect to EIDM. This finding is supported by the RNAO (2012) toolkit for guideline implementation. In order to create infrastructure that is supportive of EIDM, a long-term commitment to interventions aimed at multiple levels, from the individual practitioner to the CEO of the healthcare organization, is required (Newhouse, 2007). However, as the RNAO toolkit provides clear direction on achieving success in implementing best practice guidelines, there needs to be such a toolkit for the district level BFI networks as they determine their structure and membership and anticipate the resources necessary for implementing an international guideline and adapting it to the needs of their communities. There is little direction from the WHO, Breastfeeding Committee for Canada, or the provincial policy and steering committee regarding what type of collaboration is effective, and what resources are necessary, for achieving BFI.

Study limitations.

The self-reporting nature of data collection methodology used in a focus group and by the survey may have resulted in responses with a social desirability bias. The focus group occurred at one point in time, limiting the knowledge of how this emerging network evolved over time, although a document review was helpful in outlining the process. The

disproportional representation of the nursing profession in the network membership, due to historically persistent vacancies, may have limited the generalizability of this work to other disciplines. There were new network members at the review of the results for the purpose of member check of the data. Thus, there is difficulty in ascertaining validity of the results. However, the themes presented resonated with all network members present at the member check.

Study strengths.

Despite the small sample size of one network, the response rate was 80% of the whole network, providing a representative sample of this particular network. The researcher's previous experience with the network and personal nursing practice experience provided important knowledge and context for adapting tools and analyzing the data (Yin, 2009). This study contributes to a limited knowledge base on the challenges of implementing BFI in rural areas and in conducting SNA analyses for knowledge translation.

Recommendations for Future Research

1. Implement a longitudinal study of BFI networks in rural and urban settings, especially those that have achieved designation. Identify ideal mix of disciplines, capacity, resources, and leadership needed to implement and sustain the WHO/UNICEF guidelines.
2. Evaluate the use of network maps as a KT tool to identify where there is a need to strengthen relationships, and to assess barriers to goal achievement.
3. Evaluate on a national level stakeholders who are important to the BFI process. Plan a mixed methods study, focusing on stakeholder's knowledge of BFI, their buy-in, perceived barriers to implementation, and ability to lobby for change.

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Appendix A: Permission to Use Adapted Tools

Anita Kothari to Sionnach Lukeman
date: Fri, Jul 15, 2011 at 12:32 AM
subject: Permission to use

Sionnach Lukeman has my permission to use and adapt the instruments used in the Advancing KT: Can Community Networks Support the Use of Research and Knowledge in Public Health project. This includes the SNA questionnaire, the Focus Group guide and the Demographics questionnaire.

Sincerely

Anita Kothari

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Anita Kothari
Associate Professor, School of Health Studies
CIHR New Investigator

Appendix B: UNICEF & WHO Ten Steps and Seven Point Plan

UNICEF & WHO Ten Steps to Successful Breastfeeding

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within a half-hour of birth.
5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.
6. Give newborn infants no food or drink other than breastmilk unless *medically* indicated.
7. Practise rooming in - allow mothers and infants to remain together - 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

(WHO, 2009)

The 7 Point Plan for the Protection, Promotion and Support of Breastfeeding in Community Health Services.

1. Have a written breastfeeding policy that is routinely communicated to all staff and volunteers.
2. Train all health professionals in the knowledge and skills necessary to implement the breastfeeding policy.
3. Inform pregnant women and their families about the benefits and management of breastfeeding.
4. Support mothers to establish and maintain exclusive breastfeeding for six months.
5. Encourage sustained breastfeeding beyond six months with appropriate introduction of complementary foods.
6. Provide a welcoming atmosphere for breastfeeding families.
7. Promote collaboration between health care providers, breastfeeding support groups and the local community.

Breastfeeding Committee for Canada, 2002, adapted from UNICEF UK BFI, 1999 (BCC, 2004).

Appendix C: GASHA Baby Friendly™ Initiative Committee Terms of Reference

Goal:

To achieve Baby Friendly™ (BFI) designation for both St. Martha's Regional Hospital (SMRH) and Public Health Services District 7 (PHS) within GASHA. The GASHA Baby Friendly Initiative™ Committee will build commitment throughout GASHA for breastfeeding and implementation of BFI. Ultimately, breastfeeding will become the cultural norm for infant feeding.

Membership:

Community Health Board (position vacant)
 DCS Social Worker
 Family Physician (position vacant)
 Kids First Family Resource Centre
 La Leche League Canada
 Midwife
 Mother(s) (position vacant)
 Nurse Practitioner from the First Nations reserve health centre
 Obstetrician (position vacant)
 Open Arms Family Clinic
 Nurse/Lactation Consultant (2)
 (co-Chairs)
 Pediatrician (position vacant)
 Public Health Nurse (co-Chair)
 University Educators
 Nutrition (position vacant)
 Nursing (position vacant)
 Psychology (on maternity leave)
 First Nations community member

Objectives:

1. Create a strategic work plan for GASHA guided by the “Integrated Ten Steps Practice Outcome Indicators for Hospitals and Community Health Services” from the Breastfeeding Committee of Canada (BCC).
2. Facilitate implementation of work plan
3. Evaluate implementation of the work plan
4. Seek BFI designation
5. Co-ordinate World Breastfeeding Week events

Reporting Structure:

1. The BFI Committee chair/co-chair or designate will report to the CWH Team.
2. Minutes from the BFI Committee will be sent to the Chair of the CWH Team.
3. The Chair of the BFI Committee will also be a member of the CWH Team.

Terms of Order:

1. The Co-Chairs will rotate and will represent Acute Care (SMRH) and Community Care (PHS); normal term will be 2 years
2. The committee will meet quarterly
 - a. Acute care and Community working groups will meet as required
3. Minutes will be circulated to all members of the committee and the Chair of the CWH Team, within one week of the meeting. Minutes will also be posted to the GASHA intranet.
4. Items to be added to the agenda should be sent to the Co-Chairs two weeks prior to a scheduled meeting. He or she will circulate the agenda one week prior to the meeting.

Recorder/ Minute taker:

Recorder will rotate on an annual basis

Decision Making:

By consensus, with at least one representative from each of SMRH, PHS and Community Support Services present.

Terms of Reference to be reviewed yearly

(GASHA BFI, 2011)

Appendix D: Email Invitation

On Fri, Nov 4, 2011 at 2:58 PM, Sionnach Lukeman wrote to BFI co-chairs:

Please circulate to all members of the BFI committee and ask them to contact me if they are interested in participating on November 24. See official invitation to participate below:

Dear BFI Committee Members,

Please consider this email an invitation on behalf of Sionnach Lukeman to participate in the research study entitled: **“Understanding the Role of Evidence Informed Decision Making in the Process of Achieving a Common Goal within a Baby Friendly Initiative Network in Rural Nova Scotia”**.

Attached to this email you will find a letter of information describing the study and a consent form that will be signed on the date of data collection.

If you are interested in participating in this study, or if you have any questions or concerns about the study, please contact Sionnach (contact information removed for purposes of publication).

Appendix E: Information and Consent Form for GASHA BFI Committee Members



Université d'Ottawa • University of Ottawa

Faculté des sciences de la santé
École des sciences infirmières

Faculty of Health Sciences
School of Nursing

Understanding the Role of Evidence Informed Decision Making in the Process of Achieving a Common Goal within a Baby Friendly Initiative Network in Rural Nova Scotia.

The Research Team

The Principal Investigator for this study: Sionnach Lukeman, RN, BScN. Masters thesis student at the University of Ottawa.

The thesis supervisor: Barbara Davies, RN, PhD, University of Ottawa.

Additional members of the supervisory committee: Charmaine McPherson, RN, PhD, St. Francis Xavier University; Josephine Etowa, RN, PhD, University of Ottawa.

Purpose of the Study: The primary goal of the proposed research is to better understand the general interactions, information activities and collaboration of the members of a community-based network. In addition, we are hoping to gain a greater understanding of how public health networks make decisions using many different types of evidence in a group that involves public health in partnership with multiple community organizations.

Participation: Your participation will consist of completing two short surveys and attending a focus group discussion. The survey and focus group discussion should take approximately 90 minutes in total. The two short surveys should take 20 minutes to complete. The focus group discussion will take approximately 70 minutes to complete.

Risks: There are minimal risks or discomforts associated with participating in this study. However, your participation in this study may be inconvenient due to personal time constraints.

Benefits: Your participation in this study will provide a greater awareness and understanding of community networks, as well as the ability to improve the use of research and other types of information in the network's decision-making processes. Therefore, it is anticipated that the benefits outweigh the potential harm or inconvenience due to time constraints.

Confidentiality and anonymity: Please be assured that the information you share will be kept confidential. The contents will be used only for the purposes of this study and your confidentiality will be protected.

Only the research team named above will have access to the data collected. All personal identifying information will be removed from the data and your data will be identified by a code known only to the Principal Investigator and the thesis supervisor. All data will be kept in a secure locked location at the researcher's home. A copy of the data will also be kept on a locked unit in a locked cabinet at the University of Ottawa for a period of five years. If the results are published, your name will not be used and no information that discloses your identity will be released or published without your explicit consent to the disclosure. Also, please note that focus group members are asked to keep everything they hear confidential and not to discuss it outside of the meeting. However, we cannot guarantee that confidentiality will be maintained by group members.

The focus group session will be audio recorded. Your identity will be kept in strict confidence by assigning the focus group a numeric code and removing all participants' identifying information from the transcripts. We will exert ourselves to report our findings in a way that maximizes your anonymity and that of other focus group participants.

The audiotape from the focus group will be destroyed five years following completion of the data collection. The written transcripts of the focus group and survey data will also be maintained for a period of five years at which point they will be destroyed (i.e. December 2016).

No individual or organization names will be revealed in any reports, publications, or presentations resulting from this research.

Voluntary Participation: You are under no obligation to participate and if you choose to participate, you can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. Participation (or refusal to participate) in the study will not affect individual's role within the BFI committee.

If you have further questions or concerns please contact:

Principal Investigator: Sionnach Lukeman, RN, BScN
MScN student at the University of Ottawa
(Address and phone number removed for purposes of publication).

Thesis Supervisor: Barbara Davies, RN, PhD
University of Ottawa
(Address and phone number removed for purposes of publication).

If you have any questions regarding the ethical conduct of this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5

Tel.: (613) 562-5387

Email: ethics@uottawa.ca

There are two copies of the consent form, one of which is yours to keep.

Acceptance: I, _____ agree to participate in the above research study conducted by Sionnach Lukeman of the School of Nursing in the faculty of health sciences at the University of Ottawa, whose research is under the supervision of Dr. Barbara Davies.

Participant's signature: *(Signature)* Date: *(Date)*

Researcher's signature: *(Signature)* Date: *(Date)*

Appendix F: Data Collection Tools

GASHA BFI Committee Demographic Survey

1. Please indicate the organization you are representing on the BFI committee: ☐ La Leche League ☐ GASHA ☐ Department of Community Services ☐ St Francis Xavier University ☐ Kids First ☐ Paq'tnkek First Nation ☐ Public Health ☐ Community Health Board ☐ Other (Please describe) _____
2. What is your current position? Please check all that apply. ☐ Registered Nurse ☐ Registered Midwife ☐ Lactation Consultant ☐ Nurse Practitioner ☐ Social Worker ☐ Manager ☐ Professor ☐ Other (Please describe) _____
3. Please indicate the number of years that you have worked in this position. ☐ Less than 1 ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ More than 20
4. Please indicate the highest level of education you have completed ☐ High School ☐ Trade school or vocational college ☐ Undergraduate degree ☐ Master's degree ☐ Doctoral degree ☐ Professional degree (MD, JD, etc)
5. Please indicate the amount of time you have you been a member of the BFI Committee. ☐ Less than 6 months ☐ 6 months-2 years ☐ 3-7 years ☐ Since the network's inception (2004)
6. Please indicate how often you participate in the BFI Committee activities (meetings, events, etc) ☐ Almost never ☐ Rarely ☐ Occasionally ☐ Frequently ☐ Almost always
7. Please indicate your volunteer or paid status on the BFI committee ☐ Volunteer ☐ Paid (part of my job) ☐ Attend on my own time but represent an organization
8. Please indicate your gender: ☐ Female ☐ Male ☐ Transgendered ☐ Other _____
9. How old are you? ☐ 20-29 years ☐ 30-39 years ☐ 40-49 years ☐ 50-59 years ☐ 60+

SOCIAL NETWORK ANALYSIS QUESTIONNAIRE

Thank you for participating in the study “**Understanding the Role of Evidence in the Decision Making Processes of an Emerging Baby Friendly Initiative Network’s Pursuit of the Goal of ‘Breastfeeding as the Cultural Norm’ in Rural Nova Scotia**”. The research objective is to determine the extent to which public health networks are effective structures for evidence informed decision making (EIDM). Social network analysis is a novel tool to capture EIDM, and involves collecting relational information and analyzing the patterns of relationships within organizations. It helps focus more attention on how the use of various types of evidence in community-based networks depends to a large extent on collaborative relationships.

Listed on the following pages are all members of the BFI committee. We would like to know what information, links or ties **you** maintain with the others on the list. We have listed several types of involvement you might have with your colleagues, under the categories of **general interactions, research and knowledge** and **collaboration**. For each category, please go through the list and indicate (with a ✓) which individuals you regularly interact with.

Following the three categories, there are open-ended questions that we ask you to complete that are more specific to the BFI committee and local context.

Social Network Analysis: General Interactions

Please go through the list and indicate (with a ✓) which individuals you regularly interact with related to **general interactions**. For each member, please check all categories that apply. When you come to your own name, please write “self” under the name and leave the categories blank.

COLLEAGUE	NETWORK INTERACTION				
Names of GASHA BFI Committee members	Know this person by name only	Engage in regularly occurring conversations (more than just saying hi)	Regularly seek advice from this person in relation to BFI matters	Know this person more personally (know personal information, such as the name of a family member)	Socialize with this person regularly outside of BFI business.
Name 1					
Name 2					
Name 3					
Name 4					
Name 5					
Name 6					

Social Network Analysis: General Interactions (Page 2 for this section)

COLLEAGUE	NETWORK INTERACTION				
Names of GASHA BFI Committee members	Know this person by name only	Engage in regularly occurring conversations (more than just saying hi)	Regularly seek advice from this person in relation to BFI matters	Know this person more personally (know personal information, such as the name of a family member)	Socialize with this person regularly outside of BFI business.
Name 7					
Name 8					
Name 9					
Name 10					

Social Network Analysis: Research and Knowledge

Please go through the list and indicate (with a ✓) which individuals you regularly interact with related to **information activities**. For each member, please check all categories that apply. When you come to your own name, please write “self” under the name and leave the categories blank.

COLLEAGUE	INFORMATION ACTIVITIES				
Names of GASHA BFI Committee members	Provides BFI related advice	Provides scientific research related to BFI	Provides general information about breastfeeding or BFI	Who you are likely to turn to in order to discuss a new or innovative idea	Who you typically turn to for help in thinking through a new or challenging problem
Name 1					
Name 2					
Name 3					
Name 4					
Name 5					
Name 6					

Social Network Analysis: Research and Knowledge (Page 2 for this section)

COLLEAGUE	INFORMATION ACTIVITIES				
Names of GASHA BFI Committee members	Provides BFI related advice	Provides scientific research related to BFI	Provides general information about breastfeeding or BFI	Who you are likely to turn to in order to discuss a new or innovative idea	Who you typically turn to for help in thinking through a new or challenging problem
Name 7					
Name 8					
Name 9					
Name 10					

Social Network Analysis: Collaboration

Please go through the list and indicate (with a ✓) which individuals you regularly interact with related to **trust, joint activities, communication, and common goals**. For each member, please check all categories that apply. When you come to your own name, please write “self” under the name and leave the categories blank. You might have thought of another way that you collaborate with others in the BFI committee. Please describe this in the last column.

COLLEAGUE	TRUST, JOINT ACTIVITIES, COMMUNICATION & GOALS					
Names of GASHA BFI Committee members	Trust to keep your primary organization's interests in mind	Planned joint work-related activities (e.g. social marketing campaign)	Have ongoing joint programs or shared staff	Use a common language to describe the issues related to BFI	Have common goals for the direction of the BFI committee	Other (please describe)
Name 1						
Name 2						
Name 3						
Name 4						
Name 5						
Name 6						

Social Network Analysis: Collaboration (Page 2 for this section)

COLLEAGUE	TRUST, JOINT ACTIVITIES, COMMUNICATION & GOALS					
Names of GASHA BFI Committee members	Trust to keep your primary organization's interests in mind	Planned joint work-related activities (e.g. social marketing campaign)	Have ongoing joint programs or shared staff	Use a common language to describe the issues related to BFI	Have common goals for the direction of the BFI committee	Other (please describe)
Name 7						
Name 8						
Name 9						
Name 10						

Please complete the following questions:

1. Do you support the BFI committee's goal?

Goal:

To achieve Baby Friendly™ (BFI) designation for both St. Martha's Regional Hospital (SMRH) and Public Health Services District 7 (PHS) within GASHA. The GASHA Baby Friendly Initiative™ Committee will build commitment throughout GASHA for breastfeeding and implementation of BFI. Ultimately, breastfeeding will become the cultural norm for infant feeding.

Please describe why or why not.

[illegible]

2. Do you feel supported by management and senior leadership from your primary organization for your participation in the BFI committee? Please explain.

3. What is your personal and professional experience with breastfeeding?

Focus Group Guide for GASHA Baby Friendly Initiative Committee

The purpose of this focus group is to talk in more depth about:

- working in a network
- how new information comes into your Baby Friendly Initiative committee, and how this influences your own decisions, including interacting with other individuals in your community.
- the barriers or facilitators to achieving the committee's goal.

(Section I: Working in a network collaboration)

1. Do you think that the exchange of information that occurs during network collaborations through the BFI committee benefits you as a professional in your field?
 - a. Why or why not?
 - b. Can you provide an example?

2. Let's talk about the relationships among members in your committee. I am interested in knowing more about what could strengthen the relationships in your network.
 - a. What do you think helps build trust among members in the committee?
 - b. Are there ways in which you think that the quality of relationships could be improved?
 - i. possible probes - improved tools/processes, communication technology, more time with members, more joint activities, more meetings, more social activities.

(Section II: How new information comes into network collaboration)

3. What types of evidence do you as a committee use to support your workplans? (for example: practical experience, local reports and statistical data, research, best practice guidelines).

- c. How have you adapted this evidence to your local area?
- d. Have there been challenges to adapting research evidence to your local area?

4. Has the need for new information ever come about because of a complex or challenging health issue? Can you tell me about that?

5. I'd like you to think back to the last time new information was introduced to your collaboration—Baby Friendly Initiative Committee— like, for example, to address a specific health issue, such as breastfeeding.

- a. Can you describe the last time that happened and what the topic was?
- b. How did the new information come into the collaboration? How did you hear about it?
- c. How, exactly, was what you typically do changed (or not)?
- d. Did the whole process go well? Why or why not?

6. In general, how well do you think your collaboration keeps up to date on new research evidence about breastfeeding and BFI related matters?

- e. Who takes the lead on this?
- f. How often does this usually happen?
- g. How is everyone kept up to date (i.e. by what specific communication methods – team meetings? Electronic communication? Continuing education sessions? Etc.
- h. How is the decision to adopt new approaches usually made?
- i. Does this process work for you? Why or why not?
- j. Would the addition of specific information tools or resources facilitate this process? If so, please specify (probe for types of resources or tools; new professional roles – e.g., a librarian or information specialist, a clinician with special training in information retrieval and appraisal, etc.).

7. As you are aware, the World Health Organization has guidelines for the implementation of practices that will help hospitals and

communities achieve Baby Friendly Initiative designation. Take a minute to review the World Health Organization guidelines (See Appendix B for document to be handed out).

- a. Can you tell me about how these guidelines are being used by this committee?
- b. Which steps or points do you anticipate will be challenging to achieve? Why?

(Section III: Barriers and Supports for Future Work)

8. What are the main barriers or challenges your committee faces to achieving your goal of BFI designation and the ultimate recognition of breastfeeding as the social norm for infant feeding in GASHA?

9. What do you think are the main supports to help you move forward in achieving your goal?

Final questions and remarks?

Appendix G: Ethical Approval

File Number: H09-11-07

Date (mm/dd/yyyy): 11/01/2011



Université d'Ottawa **University of Ottawa**
 Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

Ethics Approval Notice Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

<u>First Name</u>	<u>Last Name</u>	<u>Affiliation</u>	<u>Role</u>
Barbara	Davies	Health Sciences / Nursing	Supervisor
Sionnach	Lukeman	Health Sciences / Nursing	Student Researcher

File Number: H09-11-07

Type of Project: Master's Thesis

Title: Understanding the role of evidence in the decision making processes of an emerging Baby Friendly Initiative network's pursuit of the goal of "breastfeeding as the cultural norm" in rural Nova Scotia

<u>Approval Date (mm/dd/yyyy)</u>	<u>Expiry Date (mm/dd/yyyy)</u>	<u>Approval Type</u>
11/01/2011	10/31/2012	Ia

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:
 N/A

File Number: H09-11-07

Date (mm/dd/yyyy): 11/01/2011



Université d'Ottawa **University of Ottawa**
 Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

Ethics Approval Notice

Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
Barbara	Davies	Health Sciences / Nursing	Supervisor
Sionnach	Lukeman	Health Sciences / Nursing	Student Researcher

File Number: H09-11-07

Type of Project: Master's Thesis

Title: Understanding the role of evidence in the decision making processes of an emerging Baby Friendly Initiative network's pursuit of the goal of "breastfeeding as the cultural norm" in rural Nova Scotia

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
11/01/2011	10/31/2012	Ia

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:
 N/A

October 18, 2011

Ms. Sionnach Lukeman, RN, BScN

Dear Ms. Lukeman,

Re: Understanding the role of evidence in the decision making processes of an emerging Baby Friendly Initiative network's pursuit of the goal of "breastfeeding as the cultural norm" in rural Nova Scotia

Thank you for your recent submission of the above noted study to the GASHA Research Ethics Review Committee. The GASHA Research Ethics Review Committee has reviewed the proposal and I am pleased to inform you has approved the proposal. We did have a question regarding the need for a third party signature block on the consent form. We wondered why this was included on the form considering the population that is signing the consent.

The study approval date is October 13th, 2011. Should your study be ongoing in one year we would request that you submit an Annual Renewal Form to the Committee, which can be found on our website. Should there be any adverse events or changes in procedure, these also need to be reported to the Committee using the form on our website. When your study is completed, please submit a Study Termination form (also found on our website) and a short, plain language summary that could be posted on our website and circulated within GASHA. Good luck with your study.

Yours truly,

Mary Mac Farlane, MSW, RSW
Chair, GASHA Research Ethics Review Committee