

Research in the Role of Trust in an Evolving Network for Knowledge Translation

by

Kathy L. Belton

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

In

EPIDEMIOLOGY

Department of Public Health Sciences

UNIVERSITY OF ALBERTA

ABSTRACT

With funding for public health and health promotion being cut significantly there has been increased pressure to ensure what is funded is improving health outcomes. This in turn has led to an increase in knowledge translation (KT) and knowledge translation networks. This qualitative study explores the role of trust in the development of an effective network for KT and its successes. A regional network, the Atlantic Collaborative on Injury Prevention, was used to explore the role of trust from the members' perspective. Using a case study approach, with key informant interviews and document reviews, a thick description of how members of an effective network for KT view the construction of trust and the role of trust in their successes was developed. Findings highlight three components that are essential to building and maintaining trust amongst and between member organizations and their representatives: facilitative leadership; time together and; effective open and honest communication. These findings raise new considerations related to KT: growing recognition of the vital role of personal interaction in the KT process; how best to facilitate this interaction in KT networks that span geographic areas; and what are the most effective communication methods for KT networks. The study has implications for KT, KT networks and trust.

PREFACE

This thesis is an original work by Kathy L. Belton. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, Project Name “Does trust have a role in knowledge translation networks”, No. Pro00036706, April 9, 2013.

No part of this thesis has been previously published.

DEDICATION

For my mother, Verla May Belton, who continues to inspire me.

ACKNOWLEDGEMENTS

Doctoral work is hardly the accomplishment of a single individual, and mine is no exception. I owe a debt of gratitude to many who have supported me both personally and academically.

I would like to first thank Rick and Joshua, whose love and support has made this possible.

Thank-you also to the many colleagues, friends, and family who have been with me for all these years and who keep me in touch with life's 'big picture.'

I am also grateful to my two supervisors who made invaluable contributions to this dissertation. Thank-you to Dr. Linda Carroll who has been endlessly generous in terms of valuable guidance and encouragement, intellectual insight, and practical assistance; and who has been both supervisor and mentor throughout this process. Thank-you to Dr. Trish Reay who encouraged me to think theoretically; and who added a depth of experience and appreciation for qualitative research. I would also like to acknowledge the expert advice and encouragement of other members of my advisory committee, Dr. Kim Raine and Dr. Carole Estabrooks.

I would also like to thank Dr. Robyn Braum for your tireless assistance as my writing coach. Your insights, questions, and prompts were invaluable.

Finally, an ocean of gratitude is also owed to members of the Atlantic Collaborative for Injury Prevention who so generously shared their time, experiences, thoughts and feelings with me. I am honoured and privileged by your stories.

TABLE OF CONTENTS

ABSTRACT.....	i
PREFACE	ii
DEDICATION	iii
ACKNOWLEDGEMENTS.....	iv
TABLE OF CONTENTS	v
List of Tables.....	viii
List of Figures	ix
CHAPTER 1: INTRODUCTION	1
Overview of the Study	1
Overview of Knowledge Translation	1
Overview of Knowledge Translation Networks.....	2
Overview of Knowledge Translation Networks and Trust	3
The Problem of Trust	4
Goal of the Study	4
Research questions	5
Organization of the Study.....	5
CHAPTER 2: Literature Review.....	7
Defining Knowledge Translation	7
KT Frameworks.....	8
The PARIHS framework.....	9
Networks of Organizations.....	15
Difficulties associated with networks.....	19
Trust.....	20
Trust and KT	27
Tacit Knowledge	29
Trust and Tacit Knowledge.....	30
Connecting KT, Trust, and Networks	31
CHAPTER 3: Research Methods	33
Research Rationale	33
Thick Description.....	33
Case Study.....	34
Setting and Population.....	35
Ethics	36
Data Collection and Analysis	37
Summary	45
Chapter 4: Findings - The Understanding and Construction of Trust.....	46
History of ACIP.....	46

Description of Participants	47
Current Membership and Structure	48
Trust Enabled the Development of ACIP	50
Trust and Tacit Knowledge in the Development of ACIP.....	51
Effective Facilitation: ‘The Alex Factor’	53
Evolution of Trust over Time	59
Communication: A Key to Building Trust	62
Open communication (speaking) builds trust	62
Summary	66
Chapter 5: Findings – Role of Trust in KT Network Success.....	67
ACIP as a Success.....	67
ACIP’s Successes	68
Members’ Growing Knowledge of Injury Prevention	71
Sitting at the Table	71
Curriculum.....	72
Members’ Understanding of How Trust Contributed to ACIP’s Success	72
Trust, tacit knowledge sharing and KT.....	75
Summary	77
CHAPTER 6: Discussion.....	77
Facilitation.....	78
Time.....	81
Communication	82
ACIP as a Case Study: Trust and Learning and KT	82
Study Limitations	84
CHAPTER 7: Conclusions and Recommendations	87
PARIHs	88
Knowledge to Action	89
Diffusion of Innovation	89
Conclusions from Research Question Findings	90
Recommendations	91
For KT Practitioners – Focus on the Human Experience	91
For Researchers – Future Research Possibilities.....	93
Reflections on My Researcher Experience.....	94
References	96
APPENDIX A – ETHICS CERTIFICATE.....	111
APPENDIX B – CONSENT FORM	112
APPENDIX C – PROPOSED INTERVIEW GUIDE	113

LIST OF TABLES

Table 1 PARiHS Framework

Table 2 Phases of alliance and a dynamic perspective on knowledge sharing and trust development

Table 3 Phases of analysis

Table 4 Participant characteristics

LIST OF FIGURES

Figure 1 The Stages of Trust Development

Figure 2 Model of development of trust in effective KT networks

CHAPTER 1: INTRODUCTION

Overview of the Study

Over the past 20 years, public funding for public health work and health promotion projects has been cut significantly. To receive funding, researchers and practitioners in both public health and health promotion have been required to meet stringent demands for value in terms of behaviour change and improved health care outcomes. The kinds of behaviour change demanded can take years, or even decades, to effect. Many of those in health promotion have turned to knowledge translation (KT) practices and KT networks to ensure that the strategies and initiatives implemented are based on the best available evidence. As a result there has been a proliferation of knowledge translation networks in Canadian public health and health promotion. These KT networks range from formalized networks such as Research Transfer Network of Alberta to less-structured communities of practice such as the Canadian Collaborating Centres for Injury Prevention.

In this dissertation I argue that trust plays a pivotal role in the development of effective KT networks and in their successes. I explore the premise that the degree of trust within a network is an important component of an effective KT network. I study the role of trust in a successful knowledge translation (KT) network, the Atlantic Collaboration for Injury Prevention (ACIP), from the members' perspective. My aim is to uncover and better understand the ways in which trust is effective in knowledge translation between members and member organizations of ACIP. In this research I have found that members of an effective KT network report and value a high degree of trust amongst themselves. Further, I have found that trust in KT networks is built primarily on interpersonal relationships. I have found specifically three components that are essential to building and maintaining trust amongst and between member organizations and their representatives: facilitative leadership; time together and; effective open and honest communication.

Overview of Knowledge Translation

The Canadian Institutes of Health Research (CIHR) defines Knowledge Translation as “the dynamic process of exchange, synthesis and ethically sound application of knowledge within complex

systems of relationships among researchers and users” (Canadian Institutes of Health Research, National Scientific Advisory Committee, April 2004). The power of knowledge translation (KT) is that it enables the collection and dissemination of knowledge, as well as the transformation and interpretation of knowledge to empower change. Change empowered by KT can lead to better health outcomes such as lower rates of falls among seniors, decreased rates of smoking among adolescent girls, or lower rates of diabetes among people of aboriginal descent¹.

Because knowledge translation is the transformation and interpretation of knowledge to empower social change, social interaction is key to its success. Change is sought in practice and policy but ultimately in groups of people and organizations. For example, ACIP informs its member organizations of best practices and evidence so that these organizations might change their policies and programs. Change through KT will eventually lead to better outcomes such as patient wellness, student achievement or profit margins. Along these lines, Davis (2005) asserts that an effective KT framework requires perspective not only on organizations and their structures, but also the micro-perspective of an individual.

Overview of Knowledge Translation Networks

Networks can develop naturally or can be established intentionally. They are made up of interconnected individuals, groups or organizations that interact with each other to achieve a common goal. Inter-organizational networks have become standard practice in health care as well as many fields outside of health such as commerce and education. Common goals for networks include knowledge sharing, problem solving, innovation, knowledge development, and inter-organizational capacity building. In the context of public health and health promotion, a key goal of these networks is always to increase the uptake of knowledge and evidence. Evidence suggests that there are clear factors that make networks successful, such as a clear purpose and goals, core values, flexibility, leadership, and adequate resources (Robeson, 2009). The ideal is that these inter-organizational networks “cultivate, graft, transplant and fertilize new thinking” (Hartley & Benington, 2006).

The CIHR (Canadian Institutes of Health Research) defines KT networks as structures that “connect researchers and knowledge users who might not otherwise have an opportunity to interact, enable dialogue, stimulate learning and capture and disseminate knowledge” (<http://www.cihr-irsc.gc.ca/e/41953.html>). I define a successful KT network as one able to influence effectively a change in

¹ Although KT is used in various fields, unless stated otherwise, throughout this dissertation I will only refer to KT in public health or health promotion.

practice or policy. A common phrase used by KT networks in their goal or purpose statements is ‘translation and exchange of research to improve ...’. The object of improvement can vary from patient care to better informed policy. Therefore, it is reasonable to accept that the goal for all KT networks is to increase the amount of “best” knowledge and evidence informing public health and health promotion practices.

Although KT is about implementing efficacious treatment or policies, the use of networks to achieve this has had variable success. Resistance to change amongst members and member organizations is commonplace. Effective treatments, strategies and policies are often well-understood and extensively documented. Further, the tangible factors necessary for network success, such as human and financial resources, are well understood. Despite all this knowledge of best practices and what is needed for effective networks, there is, by contrast, relatively little understanding of the less tangible resources, such as trust, required to facilitate the knowledge sharing process. These intangible factors are important as KT policies or interventions are blocked from being implemented due to mitigating factors such as low stakeholder engagement or a lack of political will. (Bate & Robert 2002; Hartley & Allison, 2002).

Overview of Knowledge Translation Networks and Trust

I argue that there are theoretical and empirical reasons to believe that trust within the KT network is an important factor for their success and that successful KT networks will necessarily have trust as an element of their successes (Robeson, 2009). Trust is a necessary (but not sufficient) component of both successful knowledge translation and successful networks of organizations. Knowledge translation is ultimately about learning and change and networks rely on cooperation. Research has shown that trust is a key element to successful learning and change as well as to cooperation and participation in networks and organizations. Early work by Rotter (1967) showed that trust is essential to learning. More recently Tschannen-Moran demonstrated that trust is crucial to building cooperation among people (2001) and Parent, Roy and St-Jacques (2007) found that trust enables people to recognize and value new knowledge.

Parent et al. (2007) suggest further that the development of trust requires the alignment of various factors such as beliefs, values, social status, motivation and relationships. They show that when these factors are aligned, there is trust and a readiness for change. Only then will knowledge be absorbed and learning occurs. This suggestion echoes my own findings in this study. Several factors, including culture, time together, social capital, a balance of power and effective communication, come together and align to

contribute to the creation and maintenance of trust in a **KT** network and this trust then enables cooperation and learning and the collaboration to develop new knowledge enables successful **KT** projects.

Understanding the role trust plays in successful **KT** networks and how that trust can be built and deployed can help to ensure that existing and new **KT** networks are optimized. The focus of my research has been to gain an “insider” perspective of how trust develops within a **KT** network and in turn affects the work of that network. An explicit understanding of how trust is built and understood by members as well as its role in the success of **KT** networks can enhance the effectiveness of public health and health promotion practitioners and networks.

The Problem of Trust

There has been little research to date on the impact of trust on the effectiveness of **KT** networks; the common databases for literature on knowledge translation, networks and trust contain limited resources. Trust has been studied for many years in other contexts. However, while there are some common elements to this literature, there has been very little consensus on exactly what trust is and how it is created.² Therefore, trust is the topic examined in the dissertation. From my own research as well as my examination of previous research findings, I suggest that trust was created in **ACIP** in the presence of three components: effective facilitation; effective communication and; time together and repeated interactions.

Goal of the Study

This study’s goal is to contribute to the **KT** literature by increasing our understanding of how trust is built amongst members and member organizations of a **KT** network, how members of that network understand trust, and what role network members understand trust to play in the network’s successes. I suggest that communication, effective facilitative leadership as a central hub to the organization and social aspects all play important roles in the development and deployment of trust.

² Rotter (1967) conceptualized interpersonal trust as expectancy held by others, groups or individuals, that one’s word, promise, or written communication can be relied upon. Larzelere & Huston (1980) conceptualized trust as “the extent that a person believes another person or persons to be benevolent and honest” (p.596). Erikson (1963) argued that the provision of care by the mother is the first trusting relationship built by humans and therefore foundational in the development of a trusting attitude (Erikson, 1963). Erickson’s premise “that higher levels of trust in relationships early in life lay the psychological foundation for happier and better functioning relationships in adulthood” is widely accepted (Simpson, 2007, p. 16).

Research questions

- In order to reach this understanding I have pursued the following questions:
 - How do members of an effective KT network understand trust?
 - How do members account for the development of trust in the network?
 - How do members experience trust?
 - How do members describe the features and qualities of trust?
 - How do members know whether trust exists in the network?
 - How do members describe the impact of trust (or lack of it) on the work of the network?
- In the view of members of an effective KT network, does trust have a role in that network's success?
 - How do members describe the trust-building process?
 - How do members describe the role of trust in the networks successes?

In modeling this study, I propose a horizontal plane from KT networks to effectiveness in order to emphasize that the aim of KT networks is to maximize their effectiveness. Trust is presented as a key-moderating factor in that pathway. In other words, within this model, trust can moderate (either facilitate or mitigate) the effectiveness of KT networks. Within this model, I explore the proposition that the effectiveness of the work done by KT networks is at least partially dependent on the degree of trust within the network. This case study explores the development of trust and its subsequent role in an effective KT network from the perspective of the members of one such network. Of course, I do not claim that trust is the exclusive factor in the network's success.

This study adds to the literature by describing the role of trust in effective KT networks. Trust should be a fundamental feature of KT as it is a key component to learning (Rotter, 1967) and absorption of new knowledge (Parent, Roy and St-Jacques, 2007), as well as cooperation (Tschannen-Moran, 2001) and each of these are essential to successful KT networks and their projects. Providing new insights on trust broadens our knowledge of what it takes to build effective KT networks.

Organization of the Study

This dissertation is organized into six chapters. Chapter 2 is literature reviews of pertinent research on knowledge translation, networks of organizations, and trust. Chapter 3 explains the qualitative research methods used for data collection and analysis. Chapter 4 presents a description of participants in this

research and the analysis and synthesis of the research findings. In Chapter 5 I present ACIP as a successful knowledge translation network and outlined the role that trust has played in ACIP's success. Chapter 6 presents a discussion on how trust underpins the KT process and the role of key players in the development of trust. The connection between trust and tacit knowledge is also explored. Finally, in my concluding chapter, Chapter 7, I discuss key considerations regarding the significance of my findings as well as further discussion of the implications for the use of networks for KT and areas for future research.

CHAPTER 2: LITERATURE REVIEW

This literature review focuses on the literature discussing the concepts of knowledge translation, networks and trust as well as the connections between and amongst these concepts. The review summarizes literature published in peer-reviewed academic journals, as well as literature disseminated by leading Canadian KT organizations.

Defining Knowledge Translation

This section of the literature review defines KT broadly, provides an overview of the KT literature and examines three widely-used KT frameworks.

In almost every field, but especially in healthcare, there is a gap between what is known and what is practiced. Because practice is slow to change, generally the gap only grows as knowledge increases (Grant et al., 2003 Westfall et al., 2007). Those implementing interventions in both policy and practice have to integrate and respond to a vast amount of literature, which takes time and can cause delays (Morris et al., 2005). According to Balas and Boren it takes approximately 17 years to turn 14 per cent of original health care research findings into changes in care that benefit patients (2000). This gap, and the belief that closing this gap by the successful implementation of knowledge in policy and practice will lead to better outcomes, has led to the field of knowledge translation (KT).

The current focus on evidence-based practice and decision-making in health is making headway but there remains a need for a concerted effort to implement proven interventions (<http://www.cihr-irsc.gc.ca/e/26574.html>). Towner et al. (1998) demonstrated that implementation is often stymied because new knowledge challenges established practices. Although the policies are effective, implementation is slow because there are so many factors that impede the ability to put into practice new policies and practices. For example, until 1976, there was no seatbelt law in Alberta because legislators were reluctant to establish the law for fears of backlash against personal freedoms. Some of the factors that impede the implementation of new knowledge include cultural barriers, political will, institutional inertia, and social norms.³ Efforts need to be focused on how to “identify the impediments to, and the critical success factors for effective uptake of

³ The barriers to KT have been reviewed and discussed extensively elsewhere and are beyond the scope of this work. However, one of the main barriers is a lack of fit between the knowledge and the user (Grimshaw et al., 2001; Kitson et al., 1998; Rycroft-Malone et al., 2004). This lack of fit may be related to financial or human resources, organizational structures or practises and peer or professional pressures (Grimshaw, 2012). For example, the implementation of a new screening method for disease x may require the purchase of new equipment that is too expensive.

research evidence” (Canadian Institutes of Health Research, National Scientific Advisory Committee, April 2004).

As an emerging field, KT has developed tremendously, as evidenced by the growth in numbers of peer-reviewed journals devoted to KT and the number of articles they publish yearly. However, a definition for the emerging field has been problematic. Does translation mean implementation of the knowledge without any adaptation for contextual factors? Or is it, as Weiss (1979) suggests, ‘nudging in the right direction?’ Or is KT the use of some knowledge that has been modified slightly to meet the circumstances or context of the user? Another alternative is for only a portion of the knowledge to be used. Adding to the uncertainty, other terms exist in the literature such as knowledge diffusion, knowledge utilization, and research implementation, with slight differences in the definitions of each. The most relevant definition of knowledge translation for this dissertation is that of the Canadian Institutes of Health Research is the “exchange, synthesis, and ethically sound application of knowledge within a complex system of interactions among researchers and users” (Canadian Institutes of Health Research, National Scientific Advisory Committee, April 2004). This definition highlights the elements of exchange and interaction within a complex system.

KT Frameworks

The following sections present three frameworks, which inform current KT practices as well as our current understanding of KT.⁴ I will review two frameworks that currently inform KT practices: Promoting Action on Research Implementation in Health Sciences (PARIHS) (Kitson et al., 1998) and Knowledge to Action (KTA) (Graham et al., 2006). I will also discuss one framework that helps us understand the processes of knowledge translation: Diffusion of Innovation (Rogers, 1995). The PARIHS model is about creating an atmosphere that is conducive to knowledge uptake and creating a context that is supportive of change. The KTA model was created in response to the “confusion and misunderstanding about the concepts of knowledge translation, knowledge transfer, knowledge exchange, research utilization, implementation, diffusion, and dissemination” (Graham et al., 2006, pg1). KTA is about the integration of

⁴ Thomas Backer chronicled the development of KT in the United States and set its history within a broader context (1991). Backer suggested that knowledge translation has been undertaken in three different ways over the course of history and that these three different ways can be separated into ‘waves’. The first wave, from 1920-60, consisted of the diffusion of innovation at the individual level. For example, during this time, one of the biggest innovations was the television. This innovation spread via individuals and individual households and families. The diffusion and acceptance of innovation by individuals continued with things like the pocket calculator. The second wave, in the 1960-80s, was characterized by the adoption of innovations and knowledge, by groups, such as companies and organizations. It was during this time period companies adopted practices such as “just in time” delivery for manufacturing. The third wave, 1990 - to the present, has consisted in the transfer of research and technology for the welfare of nations. For example, the global research transfer of the Edmonton Protocol, an islet cell transplant for people with previously uncontrolled Type I diabetes, has allowed many people to remain insulin-free, saving lives and resources. Another example is the World Wide Web, which has allowed for the transfer of information and knowledge at a speed never seen before.

knowledge creation and knowledge application. Diffusion of Innovation is about the process by which a population or an individual adopts new knowledge, ideas or technologies.

I rely on these frameworks because context plays a central role in each of them. Because trust is very dependent on context, these frameworks allow me to consider trust (Zucker, 1986; Sydow, 1998). Scholars who have also developed theories of knowledge translation have shown that the uptake of research in practice is negotiated within a social context (Estabrooks, Thompson, Lovely, & Hofmeyer, 2006; Grimshaw et al., 2001; Kitson, Harvey, & McCormack, 1998). Social context involves specific knowledge, as well as political, organizational, socioeconomic and attitudinal factors. As a result, KT scholars and practitioners have moved beyond the mere dissemination of findings to consideration of the context, the evidence being used, and the process of integration (Kitson et al., 2008; McWilliam et al., 2009; Rycroft-Malone, 2002; Rycroft-Malone et al., 2004). Several authors have highlighted the “importance, uniqueness and interactivity of contextual factors” (French, 2005, p.174). French suggests that factors that affect research uptake within a context are readily identifiable; but also suggests that it can be difficult to clearly ascertain the role these factors play and how they interact in the decision making process (2005).

The PARiHS framework.

The PARiHS framework identifies three elements that influence KT: the nature of the evidence used, the quality of the context, and the quality of facilitation (Kitson et al., 1998). The PARiHS model is unique insofar as it offers detailed elements for determining the potential success of any KT endeavour. Each of the three elements, evidence, context and facilitation, is of equal importance in determining the success of an attempt to integrate and use research. Further, each element is positioned on a continuum of low-to-high, with success most likely when all elements are at the high end of the continuum. These elements are shown in Table 1.

Table 1 PARiHS Framework

Promoting Action on Research Implementations in Health Sciences		
Evidence <ul style="list-style-type: none"> • Research • Clinical Experience • Patient Experience 	Context <ul style="list-style-type: none"> • Culture • Leadership • Evaluation/feedback 	Facilitation <ul style="list-style-type: none"> • Facilitator • Purpose • Role • Skills & Attributes

Evidence encompasses research, clinical experience, and patient preferences and local data or information, and is placed on a continuum from low to high quality (McWilliam et al., 2009; Sudsawad, 2007). An example of high-quality evidence would be research that is well-conceived and well-conducted; where the clinical experience is seen as a part of the design, where the patient experience is relevant and the local data or information is evaluated and reflected on. This broad view of evidence is then put to use within a specific context.

In the PARIHS framework, context refers to the setting in which people receive health-care services or the environment in which the proposed change is to be implemented. The three key themes under context are culture, leadership, and evaluation, each on a low-to-high continuum again. Context includes the physical environment in which the practice occurs as well as the characteristics conducive to research utilization, such as decision-making processes, patterns of power and authority, and resources. Organizational culture and evaluation for the purpose of monitoring and feedback are also part of the context. An example of a high-quality context would be a culture that values individual staff and clients, leadership that builds effective teamwork, and the use of multiple methods of evaluation.

Facilitation in PARIHS. Facilitation is the final element of the PARIHS framework but perhaps the most important for this study as I argue that effective facilitation is essential to building trust and that trust is essential to knowledge translation. It follows therefore that effective facilitation is essential to knowledge translation and indeed, this is what the authors of the PARIHS framework argue as well. PARIHS is unique amongst KT frameworks in developing this element of facilitation. Facilitation is defined as a technique through which one person makes things easier for others. The authors of the PARIHS framework believe that facilitators have a key role in helping individuals and teams understand what and how they need to change, in order to apply evidence to practice. Within this framework the role of a facilitator is an appointed one (rather than one arising from personal influence), and the facilitator can be internal or external to the organization. The function of this role is to help and enable rather than to direct or persuade.

The purpose of the facilitator will vary, depending on the context, from helping a team or a person achieve a specific task, to helping individuals and groups better understand themselves in terms of attributes that are important to achieve those tasks, such as attitudes, habits, skills, ways of thinking, and ways of working. For example, a facilitator might help a group understand how trust or a lack of trust is affecting their working relationships.

Critiques of the PARIHS model. The PARIHS model is highly complex and is comprehensive in its explanation of factors and elements related to the use of research and practice. The most updated version (Rycroft-Malone et al., 2004) is substantially more complex than the original (Kitson, Ahmed, Harvey, Seers, & Thompson, 1996). The authors revised all elements after analysis of extensive literature to form a comprehensive definition and scope. Although this revision has increased the nuance and complexity of the model, it is not certain how these changes would affect the actual use of the model as a general framework to guide research utilization in everyday practice settings. More demonstration of how the model could be applied in an actual practice environment is needed.

Further, despite the focus on implementation, the framework has not been used to study implementation strategies and also lacks any detail about how success would be measured. Helfrich et al.'s (2010) critical synthesis of the literature on the PARIHS framework found two major issues. The first is the lack of prospective use of the framework to study implementation strategies. The second major issue was the overall lack of detail about measurement of variables mapping to the framework and how conclusions were made (Helfrich et al., 2010). These authors suggest that PARIHS could be strengthened by more refined definitions for the elements of the framework as well as successful implementation.

Helfrich et al. (2010) also suggest that adding markers of evidence-based change could enhance PARIHS. Estabrooks et al. (2009) used the context variables of the PARIHS framework in the development of the Alberta Context Tool. They found that context variables account for over one third of the variance in organizational structure, suggesting that the context variables, as developed in the PARIHS model, are valid. Still other critics of the PARIHS framework say that it fails to address individual attributes of those providing or using the knowledge and that it therefore cannot manage these attributes as they play out through the KT process. The framework is said to fail to account for layers of relationships within the context of a KT process (McWilliam et al., 2009). These layers are often labelled the social context, and previous research has shown that it is the social resources—such as trust, values and social ties which are often embedded in relationships within the context—that are the true facilitators of KT (Van Wijk, Jansen, & Lyles, 2008).

A further shortcoming of the PARIHS model is that it does not address elements or factors related to the knowledge-creation process, even though knowledge creation is an important part of knowledge translation. While PARIHS could be improved in this regard, it is not dissimilar to most KT models in emphasizing the implementation component within the knowledge translation process.

Finally, the PARIHS model has been criticized because it does not address the distinctions and interactions between explicit and tacit knowledge, which are generally considered to be important for KT. Explicit knowledge has been or can be articulated, codified, and readily transmitted to others through tools such as manuals, documents, and procedures (Nonaka et al., 2001). Tacit knowledge, on the other hand, is highly personal and hard to codify or partly inexplicable; it is the knowledge of practice (Tsoukas, 2006; Collins, 2001). This form of knowledge is subtle and based on personal insights and intuitions.

Knowledge to action model. The Knowledge to Action (KTA) framework has two components, knowledge creation and action, each of which has several phases. Because it incorporates the knowledge creation process, experts consider KTA a comprehensive model for knowledge translation (Sudsawad, 2007). According to the KTA model, knowledge creation has three phases: knowledge inquiry, knowledge synthesis, and knowledge tools/products. Conceptualized as a funnel, knowledge creation has inquiry at the wide end of the funnel and arrives at the knowledge tools/products at the narrow end. Knowledge moves through the funnel by processes of knowledge synthesis. As knowledge moves through the funnel it becomes more distilled and refined. According to the authors of the KTA model, this process makes the knowledge more useable to end-users (Graham et al., 2006).

The action component consists of the activities involved in knowledge application, which, within the KTA model is conceptualized as a cycle. This cycle often begins with the identification of a problem or issue as well as the knowledge relevant to solving it. The other steps in the action cycle are as follows: the appraisal and adaptation of the knowledge to the local context; the assessment of the barriers and facilitators related to the knowledge, potential adopters, and the local context; implementation, monitoring and evaluation. The step of monitoring and evaluation is necessary to ensure that the plan, as implemented, is working and to determine where adjustments have to be made. Continuous monitoring and evaluation also allows for on-going adjustments to sustain the use of the knowledge in ever-changing environments and over time.

The KTA process is complex and dynamic in nature. There are no boundaries between the two components or their phases; they can occur sequentially or simultaneously. Further, the action phases are not unidirectional. For example, if program evaluation occurs at the same time as some of all aspects of program implementation, the results of the evaluation can then inform the implementation as it occurs.

Critiques of KTA. The KTA framework is being promoted by Canada's leading funder of health research, the Canadian Institutes of Health Research as the ideal framework for KT. It has also been

widely used in practise with varying degrees of completeness (Field et al., 2014). By the authors own admission the framework has its limitation in that it is drawn as a circular model while in fact implementation of knowledge is often messy, requiring changes to adjust to contextual factors (Straus et al., 2011).

Other criticisms of KTA relate back to the theories of planned action on which the KTA framework are based. These criticisms are based on the assumptions made, such as an assumption that the opportunities and resources to implement the new knowledge are present regardless of the intention to act (<http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/SB721-Models/SB721-Models3.html> accessed 10/12/2015). For example, training and tools for coaches regarding concussion management need to be made available, irrespective of their use by an individual coach. Also in keeping with the intent to act, while the KTA framework does assess barriers to knowledge use it be could strengthened by devilling deeper into other variables that factor into behavioral intention and motivation, such as fear, threat, mood, or past experience (<http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/SB721-Models/SB721-Models3.html> accessed 10/12/2015).

Diffusion of innovations. Diffusion of Innovations theory is a broad social psychology theory that describes the pattern of adoption of a new behaviour, explains the mechanism of diffusion and assists in predicting an innovation's success. Rogers defines diffusion as the “process by which an innovation is communicated through certain channels over a period of time among members of a social system” (pg.5, 1995). The theory offers considerations regarding the innovation itself, communication about the innovation, the decision-making process regarding the innovation, as well as the social context. Diffusion of Innovation is distinct from either PARIHS or the KTA model of KT insofar as it only describes how knowledge has been translated, rather than prescribing effective means by which knowledge might be translated.

Rogers (2003) suggests that there are five characteristics that affect people's perceptions and influence the rate of adoption of the innovation: relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). Relative advantage is the degree to which the innovation is perceived to be better than the idea that superseded it. Compatibility refers to the extent to which the innovation is compatible with the past experiences, existing values and needs of potential adopters. The degree of difficulty in understanding and using the innovation is referred to as complexity. Trialability refers to how easy it is to try and modify the innovation and observability refers to the extent to which others can observe the effects of using the innovation.

Within Rogers' framework, communication regarding the innovation goes beyond the normal communication process because it addresses a new idea (Rogers, 2003). As a result, communication regarding the innovation must go beyond the goal of mutual understanding that informs everyday communication and instead have a goal of reaching potential adopters of the new innovation. This is done at both macro- and micro-levels with mass media and interpersonal channels respectively. For example, advertising as well as discussions between friends are required to ensure the successful adoption of any new innovation (Bero, Grilli, Grimshaw, Harvey, E. Oxman, A. D., & Thomson, 1998).

Rogers (2003) suggests that there are five steps in the innovation-diffusion decision making process: acquiring knowledge about the innovation, accepting the value of the innovation, making a choice about the innovation, incorporating the innovation into daily activity and seeking approval for use of the innovation. These stages are also labeled knowledge, persuasion, decision, implementation, and confirmation. Knowledge is exposure to an innovation's existence and an understanding of its functions. Persuasion is forming an opinion or belief, favourable or unfavourable, about the innovation. Next a decision is made to adopt or reject the innovation. If rejection is the decision, actively or passively, then the innovation-diffusion process ends. If the decision is to adopt, then implementation occurs and the innovation is put to use. The final stage of confirmation is where the adopter "seeks reinforcement of the innovation decision already made or reverses a previous decision to adopt or reject the innovation if exposed to conflicting messages about the innovation" (Rogers, 1995, p. 181). The rate at which people and organizations move through the process depends on their comfort level with change or their involvement in the innovation, its development or adoption (Sanson-Fisher, 2004).

Rogers (1995) also identified five types of adopters of new innovation: innovators, early adopters, early majority, late majority and laggards. Clark and Payne derived the following set of descriptors for these categories: venturesome, respectable, deliberate, skeptical, and traditional (1997). The characteristics of the social system through which an innovation spreads, can also advance or impede adoption. These characteristics include such things as roles of opinion leaders, consequences of the innovation, presence of change agents, and the norms within the system. The decision to adopt or reject an innovation can be made at the individual or collective level.

Critiques of diffusion of innovation. Diffusion theory can help us to understand why some innovations are adopted rapidly and some lag despite the evidence that they are known to be effective (Sanson-Fisher, 2004). Haider and Kreps reviewed the impact of diffusion theory, and offered a very succinct view of the criticisms of diffusion theory (2004). In brief, these criticisms, also identified by Rogers

(1995 & 2003), are that diffusion theory has a pro-innovation bias, puts blame on individuals, is susceptible to recall issues and does not account for socioeconomic benefits. These biases are issues for diffusion theory because they can reflect and maintain inequities in society. If we view the diffusion of innovations as a form of knowledge translation and if as noted by Gurvitch (1971) and others (Davenport and Prusak 1998; Collins, 2001) that knowledge is socially constructed then the inequalities and biases put forward by the diffusion of innovations will or can work to maintain the status quo in society.

Dearing (2008) makes a distinction between classical diffusion theory and dissemination science and suggests three concepts that can advance dissemination science when used in a public health setting. First is the concept of the “societal sector as a collection of focal organizations operating in the same topical domain” (p. 103). For example, members of the Atlantic Collaborative for Injury Prevention would be considered a societal sector because its members are organizations that have injury prevention as some aspect of their mandate. Dearing (2008) maintained that using societal sector in this way would ease implementation by making organizations rather than individuals units of adoption.

Second, Dearing (2008) maintained that the nature of diffusion is messy and that diffusion occurs without a coordinated or strategic approach. Diffusion is the result of a complex array of variables interacting and timing plays a key role. Third, is the role of context. In classical diffusion theory, it was thought that effective diffusion happened as a result of adherence to and the integrity of the program, intervention, or innovation. Dearing argues, however, that modifications, adaptations, or combinations will arise that may best suit the unique nature of the context in which you are working.

Networks of Organizations

KT is often carried out through networks. Networks of organizations have become pervasive and this phenomenon has received considerable attention in the public management literature (e.g., Milward and Provan, 1993; Agranoff and McGuire, 1998). The widely held expectation is that such networks provide a two-fold benefit. First, member organizations benefit from improved information sharing, problem solving and capacity building. Second, networks can improve the effectiveness of service delivery and so benefit the clients of member organizations.

A ‘network’ can be described as a relational organizational form that involves interconnections among individuals, groups and/or organizations to achieve a common goal. An example of a KT network local to Alberta is the Health Research Transfer Network of Alberta (RTNA) (Robeson, 2009). The RTNA

is “a province-wide network that undertakes activities to strengthen the flow of knowledge between researchers, practitioners, patients, and policy makers. This transfer of knowledge supports informed research, policies, and practices that lead to better health outcomes for Albertans” (<http://www.assembly.ab.ca/lao/library/egovdocs/2006/alhfm/163518.pdf>, accessed 5/30/16). Networks are composed of entities, or nodes, which are connected through an organizing body, events, or something as simple as a website or listserv (Wasserman & Faust, 1994; Barabási, 2002). In some cases a network is built around an individual who is the hub and provides the connection between people. In the case of the RTNA the hub was built around the Alberta Heritage Foundation for Medical Research (AHFMR), which was the funder but also had a vested interest in promoting the uptake of health research in Alberta.

Networks can be valuable tools in information-sharing, capacity-building, and system change (Robeson, 2009). The Alberta Tobacco Reduction Alliance, another local example, is a network that was an instrument for information sharing between individuals about strategies for tobacco reduction. It built capacity among individuals to advocate for bylaw amendments to prohibit smoking. Because of the strength of this network, Alberta now has some of the strongest anti-smoking legislation in Canada. Networks and the study of network theory has been an area of focus for academic research and application since the 1930s when German psychology researchers developed the concept of social networks (Tesson, 2006). The theory gained considerable traction throughout the 1950s. In one well-known example, Milgram’s work in the 1960’s with residents in Wichita and Omaha in the United States led to the theory of ‘six degrees of separation’ (Milgram, 1967). Residents were asked to mail a letter to a particular individual, a stockbroker, but only if they knew the broker. If they did not know the broker, they were instructed to send the letter to someone else whom they thought might have a greater chance of knowing the broker. Milgram discovered that, on average, the packages reached their target after passing through chains typically comprised of just six people.

Granovetter (pg. 1360, 1973) built on Milgram’s results and developed the concept “weak ties.” This concept posits that the weaker links, or more distant connections, in a network can be the most significant in providing information and new knowledge. Granovetter studied how successful job applicants found out that there had been an open position and discovered that it was most often through an acquaintance; that is, someone with whom participants had only a weak social connection. Granovetter (1973) postulated that weak links tend to connect different social groups and so have access to slightly different information than people in our immediate network, those to whom we are most tightly bound. Weak links connect us to larger social networks. For example, perhaps we are friendly with our neighbour who is in a different line of work than we are. They are likely to have a circle of friends and colleagues

beyond our shared circle. These ‘weak links’ enable us to connect with new sources of information and even people with new capacities and abilities.

Granovetter’s (1973) work was also significant in that it introduced the concept of a network bridge. A network bridge connects networks or groups that would be otherwise unconnected. For example, in the Alberta context, until recently, the Alberta Heritage Foundation for Medical Research (AHFMR) played the role of network bridge by connecting the Alberta RTNA with two other organizations: Swift Efficient Application of Research in Community Health (SEARCH), a program to build research skills among health practitioners, with a collaborative of researchers that assisted with community research.

Sales et al. (2010) have argued that social networks extended by a network bridge may have a role in prompting information dissemination. Without AHFMR, the connections between participants in these three distinct entities would not have been made. If this connection had not been made the sharing of research findings and the integration between practitioners and researchers would have taken longer or never happened. As a past SEARCH participant, I can say that even though the RTNA and SEARCH cease to exist today the trusted connections made through these networks endure today.

Building on the work of Milgram and Granovetter, Watts and Strogatz (1998), developed the notion of ‘small world networks.’ Small world networks are sets of nodes connected with mostly local connections and a few randomly connected long distance connections. Using mathematical modeling they were able to determine that small world ties are neither random nor regularly organized but are “highly clustered, like regular lattices, but with small characteristic path lengths” (Watts & Strogatz, 1998, p. 440).

Albert-Laszlo Barabási took small worlds theory further and found that some of the nodes are far more connected than others (Barabási, 2002). Barabási (2002) named these nodes ‘hubs.’ He went on to explore why the loss of these ‘hubs’ had a more significant impact on the network when compared to other nodes. He found that when a hub was lost more connections were lost between nodes. For example if person A is the hub and has connections between person B through D, but person B was only connected to person C, and person C was only connected to person D, if person A is lost the connection between B and D is lost. This loss of connection can be extrapolated to a larger network.

Valente’s (1996) work on social network thresholds shows the impact of individual’s networks and opinion leaders within those networks and speed at which individuals adopt an innovation. He maintains that although peers do not instantly sway individuals, individuals monitor the behaviour of their peers and in

this way can have an effect on each other's behaviour. In terms of opinion leaders, Valente and Pumpuang (2007) reviewed 12 methods of identifying these leaders and found that the use of multiple methods will identify more leaders and increase the effectiveness of your program. Opinion leaders and their influence on the attitudes, behaviours, and actions of others has been shown to increase the successful implementation of community-based programs (Valente & Pumpuang, 2007). The roles and responsibilities of these opinion leaders and outcomes using opinion leaders is further explored through network theory.

Current work in the field of network theory is following two interrelated streams: social network analysis (Scott, 2000) and contemporary network theory (Barabási, 2002). Social network analysis focuses on measuring and analyzing social networks and conventional network theory focuses on the structures of networks. Social network analysis is about mapping and measuring relationships and flows between people, groups, organizations, computers, URLs, and other connected information/knowledge entities such as the number of times information is relayed between individuals. Conventional network theory is about identifying the dynamic structures of a network and the relationship between these structural properties and the network's behaviour (Barabási, 2002). For example, consider the dynamic nature of how many people are in the network and how they interact. Do they connect through one individual, producing a network pattern of a hub and spokes of a wheel? Or do they connect across the network with several individuals, creating a network pattern that represents a spider's web?

Network structures can also be categorized by processes/activities and outcomes/goals (Huerta, Casebeer, & Vanderplaat, 2006). Huerta et al. (2006) contend that the course networks can take run on a continuum from exploration, creating knowledge to exploitation and leveraging resources. These authors suggest that networks can also be used for knowledge conception or knowledge implementation. "Conception networks are those whose members focus on creating the conceptual and methodological discourse around a particular phenomenon. Implementation networks concern themselves with service delivery" (Huerta et al., 2006, p.13). Although they offer this categorization, these authors are quick to point out that networks can take on activities outside of their main goals. For example, a translational research network such as the Canadian Collaborating Centres for Injury Prevention takes on a needs assessment of educational needs of injury prevention practitioners in Canada. This work is outside its main goal of connecting and sharing knowledge between provincial and national injury prevention agencies.

Difficulties associated with networks.

While often seen in a positive light, there are distinct challenges and disadvantages to inter-organizational networks in managing collective action across independent entities. The mutual interdependence of network organizations makes each participant vulnerable to opportunistic behaviour by the others. Often organizations within service delivery networks are competitors for the same grants and contracts. Adler & Kwon (2002) noted that an organization may “over commit” or “over invest” in the relationship while their network partners take advantage of this and get a free ride.

Further, Grabher (1993) argues that social ties can blind members of a network, locking them into a specific world-view. This “group-think” can reduce responsiveness to changing conditions. In addition, many inter-organizational networks also contain loyalties and dependencies. These loyalties tend to lock in decisions with their current relationships instead of permitting flexibility (Portes, 1998). This locking of decisions by personal loyalties is also known as “the paradox of embeddedness” (Uzzi, 1997). “When the value of particular exchange partners is shifting dramatically over time, these committed relationships, while resolving social uncertainty, constrain the firm from shifting to new, more optimal exchange partners” (Lazzarini et al., 2008, p. 2). This suggests that trust can be a double-edged sword because “instead of embracing new, valuable exchanges with strangers whose propensity to cooperate is uncertain, individuals may prefer to preserve recurring ties with familiar actors” (Lazzarini, Miller & Zenger, 2008, p. 1). The organizational and financial risks can often be alarming. These risks include failure of the network, competing interests and loss of identity or turf (Barringer & Harrison, 2000). Other potential disadvantages are related to the nature of working across organization such as the loss of proprietary information, loss of organizational autonomy and flexibility, the risk of dependency and the sheer complexity of management of a network (Barringer & Harrison, 2000; Gulati, 1995). In addition there are challenges related to people factors to consider. For example, there are clashes of personalities, differences in organizational cultures, and the sheer time to develop effective relationships. The difficulty of working in networks is evidenced by the fact that sixty percent of all inter-organizational networks fail and ultimately break-up (Dacin, Hitt & Levitas, 1997).

Additionally, there are the over-arching questions of what constitutes network effectiveness and how it should be measured. A complete discussion of these questions is beyond the scope of this literature review. However, briefly, these questions involve an “examination of the relationship between inter-organizational network structures, and activities and measures of effectiveness” (Provan & Milward, 2001).

Further, in the area of network effectiveness, the seminal study by Provan and Milward (1995) is one of the first studies that explicitly attempted to link structural characteristics of networks to their effectiveness.

Provan and Milward (1995) and Lehman et al. (1994) noted that although it is still too early to conclude that networks are effective for complex policy problems that has not precluded their use. They suggest that the effectiveness of inter-organizational networks be examined through different lenses such as community, organizational, and network.

For the purposes of this research, I will use the definition of network put forward by Huerta et al. (2006). A network is “a group of three or more autonomous organizations working together across structural, temporal and geographic boundaries to implement a shared population health strategy that primarily exploits current research findings rather than seeking to create new knowledge” (Huerta et al., 2006, p.13). This definition is the most relevant to my area of interest; organizations working together to address a shared population health issue. Again, all relational strategies rely on connections between people or organizations. How these connections work or do not work is dependent on many things, one of which is trust.

Trust

This study is concerned with understanding the process by which trust is developed in networks that are effective for knowledge translation. Further, the study asks how members of these organizations conceptualize and understand trust and the role they understand trust to play in making their network effective for knowledge translation. In this section of the literature review, therefore, I first outline some of the major theoretical views of trust. I then review the literature investigating the links between trust and KT and trust and KT networks.

General concepts of trust. Trust has been and continues to be a topic of study in psychology (Erikson, 1959, 1963; Rotter, 1971; Simpson, 2007, Zucker, 1986), sociology (Coleman, 1995), economics (Fukuyama, 1995), and organizational science (Gambetta, 1988; Shaw, 1997). According to Ebert (2007) there were over 800 articles on various aspects of trust published in peer-reviewed journals between 1966 and 2006 (Ebert, 2007).

How the concept of trust is understood depends on the conceptual lens being used. Psychologists conceptualize trust as an individual trait, with antecedents and expectations. For example, using the

psychological lens in understanding trust, an individual may be said to have a trusting disposition. Disposition to trust involves the assumption that another person can or cannot be trusted.

According to Erikson's (1963) theories on the psychosocial stages of development, the focus is on individual development. In this conceptualization, the disposition to trust is formed in very early childhood, and this personality trait precedes and informs later beliefs about another's trustworthiness. Thus, disposition to trust is often cited as antecedent to or precondition to trust formation. Antecedents or preconditions are elements that precede interpersonal trust, such as the general belief that others can be trusted (Butler, 1991; Costa, 2000), although the actual formation of trust requires not only the development of the individual disposition to trust but also a social environment that permits trust. The psychological literature says that trust can be placed in both individuals and/or institutions.

Sociologists generally focus on trust as a social phenomenon, rather than the result of personal psychology. Throughout the sociological literature on trust, the social context is considered vital to trust. Context can be understood as a set of attributes about the environment, as the environment is a salient characteristic of a particular situation or state (Mayer et al., 1995). Context can be anything that characterizes the situation of a person or an organization or even a network. In the sociological literature, trust comes about via the existing interpersonal social rules such as specific institutional arrangements that come together to create shared meanings and normative rules. In complex societies where common histories no longer exist, institutions and structures provide support for trust to develop, hence trust is often said to be institutional-based. For example, in our shrinking global world it is not uncommon for people to work across professions such as multi-disciplinary teams but also across ethnic groups. In these cases, institution-based trust is relied on to decrease the uncertainty of the situation.

Sources for institution-based trust are particular professions, certifications, licenses, memberships in certain associations and brand names. This form of trust is constituted through the presence of formal rules, which leads to a certain level of reliability about the actions of, and interactions with, these trust agents. For example, almost everyone is aware of what to expect when you visit a physician. There is a code of conduct, a set of formal rules, and even though we don't know the specifics, there is a sense that we can trust in the institution of medicine.

Across disciplines, however, trust is seen as a multi-faceted construct largely dependent on source and context. Zucker (1986) characterizes the sources of trust as process-, characteristic-, or institution-based (Zucker, 1986). Process-based trust develops from concrete experience and interactions. Expectations about

how future interactions will unfold are based on past experience. This process-based trust is often rooted in personal relationships and earned trust, such as the development and maintenance of relationships in networks. Process-based trust culminates in reputation, which is a set of attributes given to a person or system based on past practices (Butler, 1991; Sydow, 1998).

Often this process-based trust is experienced second-hand through trusted colleagues, referred to in the trust literature as ‘trust intermediaries.’ The effect of the opinions of these trust intermediaries often influences our readiness to interact and cooperate with others (Sydow, 1998). For example, if I trust organization B and organization B trusts organization C, then I am more likely to also trust organization C. This kind of trust is important for the development of effective networks, of course.

The sources of characteristic-based trust are personal characteristics such as age, sex, ethnic group or economic status. Unlike process-based trust, there is no previous exchange or experience. The trust or distrust comes from a belief system, often subconscious, learned through early life experiences and the perpetuation of stereotypes. For example, the stereotype that women are nurturing can be positive if you are looking for a caregiver but negative if you are looking for a soldier.

Zucker’s final category of trust is system-based trust also called institution-based trust. In personal trust the object of trust is dependent on concrete interactions while objects of system trust are technical or social systems. In other words, when we engage in personal trust, we can point to some competence or goodwill of a person who is the recipient of that trust. However, when we refer to system trust we cannot reduce the nuances of the trust down to individual actors. For example, trust in democracy would be a system trust. It does not depend on a particular person or group of persons. Rather, it is the concept and process of democracy that is trusted.

Several facets of trust are prevalent throughout the literature on trust, which are particularly relevant to the topic of trust in KT networks: competence, integrity, benevolence, predictability, context, dynamic, and interdependence (Hoy & Tschannen-Moran, 1999; Tschannen-Moran, 2001). In a review of sixty-five articles that defined trust, McKnight, Cummings and Chervany (1998) identified four common elements in descriptions of trust relationships between individuals. These are competence, integrity, benevolence and predictability beliefs. In this review, trust in another person’s competence refers to belief that the other person has the ability to implement a chosen action. For example, the trustor has to believe that the trustee has the expertise that is needed. The competence belief does not extend past the capabilities of an individual. It is task-specific and involves a certain skill, trade or profession such as physicians and lawyers.

One might, for example, trust one's physician to diagnose and treat one's health condition, but this trust does not necessarily extend to a belief that they will treat one kindly or with respect. Integrity is the honouring of commitments even if in doing so means the loss of a more immediate beneficial opportunity. Positive reciprocity strongly influences the belief in another's integrity. The quality, not the quantity of reciprocal exchange is important. An example of positive reciprocity is the belief that another person will respond to a positive action with a positive action. A nurse might agree to cover a late shift as a favour to a colleague with a sick child, and in turn, feel confident that the favour will be returned at need. Benevolence is the belief that another person has our interests in mind and predictability is the belief that another's actions are consistent enough to be forecast. This prediction is largely based on prior knowledge of integrity and competence.

Teacy (2005) found that four elements are crucial to the context related to trust. They are the trustor's individual preferences, the relationship between the trustor and trustee, the type of action that the trustee is entrusted to do and the time of the assessment. According to Mayer et al. (1995) and McKnight et al. (1998), to really know if someone is trustworthy you need knowledge about their actual behaviour. In the absence of direct knowledge, trust is based on beliefs. When we have positive beliefs about the competence, predictability, honesty/integrity and benevolence of another, we afford trust to that person accordingly. These beliefs about another's behaviours are often referred to as the antecedents of trust.

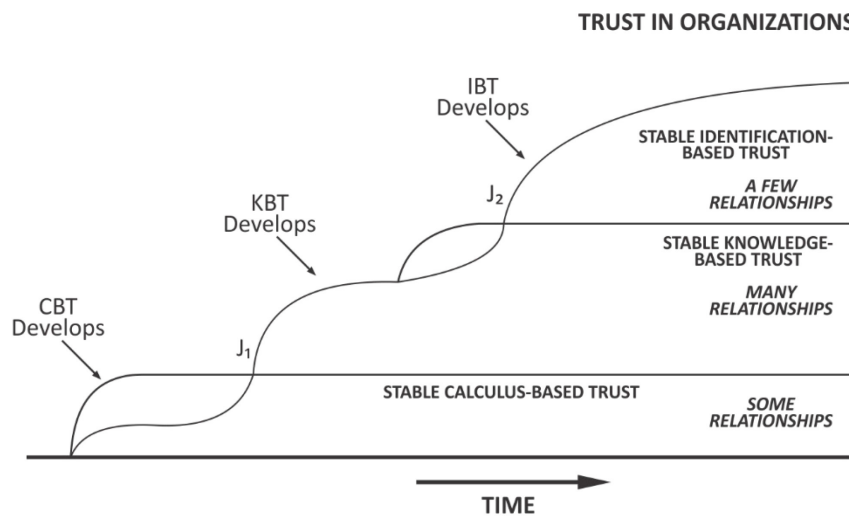
For some theorists, trust relies on some measure of interdependence (Rosseau et al., 1998) and vulnerability (Baier, 1985; Bigley & Pearce, 1998; Coleman, 1995; Mayer et al., 1995; Mishra, 1996). Interdependence creates vulnerability, as the interests of one party cannot be achieved without relying on another. The core of trust is making oneself vulnerable to the actions of another with some measure of confidence that their actions will not be detrimental to you. Trust is then a subjective probability, meaning that as a trustor you base your trust on your previous experience with that trustee.

Trust has also been conceptualized as the 'greasy wheel' to business transactions. From a socially-informed view of economic exchange, trust grows out of common values and norms along with the process of long association. It is also embedded in personal relations of friendships. Using this view, trust is the suspension of self-interest for the collective good. Inter-organizational trust is the confidence of one organization in another regarding a set of outcomes or events. In this way, trust is both a medium for, and an outcome of, cooperative interaction.

Stages and levels of trust. Rousseau, Sitkin, Burt and Camerer (1998) suggest that trust occurs within a kind of “bandwidth”, allowing for variation in trust within the same relationship over time, with the band narrowing when trust is at a low point. The bandwidth grows as the relationship expands. Within this framework they also conceptualize four different forms of trust. Deterrence-based trust is where the possible penalties for breaking the trust are greater than the rewards. Within the bandwidth framework, this is the narrowest. There is considerable debate in the literature about whether or not deterrence-based trust is in fact trust, but this debate is beyond the scope of this research.

Calculus-based trust is based on economics and exchange. Simply put, this is where the trustor believes that the trustee will do something beneficial. The decision to trust is based not only on the deterrence factor but also on credible information. The next level in the bandwidth in relational trust, where trust is built through repeated interactions over time. The trustor and trustee build a relationship based on shared experiences and, as the relationship grows, so does the bandwidth of trust. Institution-based trust is seen as a mechanism for both calculus-based and relational trust. By maintaining a set of practices, institutions establish a base from which to form trust.

Another way to think of the stages of trust development is shown in Figure 1 below.



- J₁ At this point, some calculus-based trust relationships become knowledge-based trust relationships.
- J₁ At this point, a few knowledge-based trust relationships where positive affect is present go on to become identification-based trust relationships.

Figure 1 The Stages of Trust Development (Lewicki & Bunker, 1996, p.124). Used with permission.

Lewicki and Bunker (1996) propose that trust is dynamic. Trust develops through repeated social interactions. These interactions generate the feedback that enables us to update the information we use to assess the trustworthiness of the person, the team, or the organization (Gabbarro & Athos, 1976; Lewicki & Bunker, 1996; Mayer et al., 1995; McAllister, 1995; Sheppard & Sherman, 1998; Williams, 2001; Zand, 1972). These repeated social interactions cycle through phases of conditional trust to unconditional trust towards blind trust (Jones & George, 1998). Movement from one stage to another is dependent not only on a change in the relationship but also a change in perspective. In the first stage, trust is based on calculated activities, such as trusting a colleague to produce a product. As this type of activity is repeated, the relationship moves into knowledge-based trust where trust is based on personal knowledge about past behaviour. The last stage is when there is identification with the colleague.

Trust and power. Power is an ever-present component of any social relationship. This is particularly true when the social relationship is one that requires trust. This is because trust is only needed or exists in “contexts of asymmetric information” (Chami and Fullenkamp, 2002, pg. 1789). That is, trust is only necessary when the knowledge or the actions of one player are invisible to another. You must trust other people to fulfill their obligations only when you are not present to witness them doing so. For example, if you could be present to witness the action, you would have no need for trust. Similarly when you trust someone’s knowledge about something you do so only when you do not have that knowledge. If you know about heart disease you do not need to trust that the doctor is giving you correct information, for example. Trust therefore has an implicit power dynamic. A power dynamic is based on the unequal distribution of the sources of power such as in the knowledge about heart disease. Power dynamics can and do influence relationships between individuals (VeneKlasen and Miller, 2002).

Power is particularly important to any consideration of trust and it could be argued that power is especially important to the trust required for a successful KT network. The trust required within a successful KT network is the trust required to learn with and from other members and member organizations of the KT network (Bainbridge and Wood, 2012, pg. 456). Researchers and theorists have established that learning requires a sense of equality and will therefore require the successful negotiation of the power dynamics inherent in the social relations of the network. In order to learn, we often need to change our minds in more ways than one. First we must change our minds from what we already know to accommodate new knowledge. But second, and perhaps more difficult, is changing our minds about the people from whom and with whom we are learning.

Power dynamics have the potential to enhance or derail collaborative situations or processes. Successful collaborative efforts require that these power dynamics be managed so that trust can be established and maintained. Actors within social relations perceive, share and use power between themselves and power can be shared to greater and lesser collaborative effect (Brush et. al., 2011, pg. 28). Shared power leads to effective collaboration, which in turn can lead to increased trust in the relationship. Less effective power sharing makes collaborative efforts less effective and can decrease trust between working partners.

Theory and research into trust and the establishment of trust suggest that the development of trust requires more than merely spending time together (Bainbridge and Wood, 2012, pg. 453). The time together must be spent in active engagement for collaborators to begin to trust one another. This active engagement requires the management of power dynamics to ensure that all partners feel comfortable contributing to the task at hand. For example, not only are power dynamics important in interpersonal relationships, but power dynamics can be found between social groups. “Social identity theory suggests that we tend to reinforce positive perceptions of our own group and less positive perceptions of out-groups, making it necessary to seek ways of reducing negative perceptions of other groups” (Bainbridge and Wood, 2012, pg. 453). If one party at the table belongs to what is considered an outsider group it’s possible that they can be kept out of engaging with the group because of this power imbalance.

Managing these power dynamics so that trust can evolve is important for knowledge translation networks because their work is to share knowledge and even develop new understandings from the synergy of their different knowledge bases. In order to learn from and with others requires trust because it requires presenting yourself in a vulnerable position, showing others where your shortcomings may be. This is not always easy, especially when surrounded by people who are experts in the area about which you are just learning. For example, someone with extensive community involvement might feel nervous about asking medical questions in a room full of medical experts, even though the input of the community is paramount to the success of the endeavour.

The work of managing these dynamics is not often explicit and is often left to the luck of having an effective leader who can manage power dynamics even if they are unable to articulate the skill. However, the need to manage power dynamics and the ability to do so can be made explicit and systemic (Brush et. al., 2011, pg. 32). A focus on power dynamics and the potential for imbalance can be a tool to increase trust and collaboration.

The question of power and trust also concerns questions of identity, which is also tied up with power dynamics at both personal and societal levels. We often have preconceived notions and stereotypes about people that will prevent us from feeling trusting or from acting in a trust-worthy manner in that relationship. Effective collaboration therefore can only take place once we have overcome these negative perceptions or stereotypes. This can only happen once we get to know people beyond what we know about their professional lives or their role in society as these things might actually reinforce the stereotypes. Instead opportunities to learn about someone's life and their interests can be coordinated in order to ensure trust develops and collaboration is possible.

Trust and KT

As stated previously, there has not been much research on the role of trust in KT. Bartol and Srivastava (2002) found that trust between an individual and an organization is a key enabling factor in KT. McWilliam and colleagues highlighted the need for relationship-building to facilitate KT (McWilliam et al., 2009). In a study of knowledge brokers, Dobbins et al., found that developing and maintaining trusting relationships was fundamental when facilitating KT (2009).

Szulanski (1996) showed that the quality of relationships is a marker for KT and recommended the fostering of closer relationships to improve KT. The existence of trust in a relationship has been shown to increase the likelihood that the information received will be understood and used appropriately (Abrams et al., 2003). In further research, Szulanski and others found perceived trustworthiness to be a precondition for KT (Szulanski, Cappetta, & Jenson, 2004). In a learning relationship, trust reinforces and sustains the norms of collaboration-communication, shared experience, common purpose and mutual respect. Trust strengthens our capacity to take risks, to depart from traditional ways of doing. Nelson and Coopriider (1996) found that team members who had higher levels of trust also shared more. Roche (1979) showed in her work on mentoring relationships that a "willingness to share knowledge and understanding" is crucial (p.24).

Jarvenpaa and Leidner (1999) showed that trust can be established in virtual global teams by fostering good "communication behaviours and member actions" (p. 813). These authors describe how trust facilitates communication for team members working across long distances. Building trust across miles, such as global teams and networks, is more difficult than building trust between face-to-face team members who share the social context of the workplace. Trust is beneficial to KT by making knowledge sharing more effective and less costly (Abrams et al., 2003). Successful KT therefore can also build trust.

Trust and Networks

Sydow (1998) and others (Axelrod, 1984; Barnes, 1981; Morgan & Hunt, 1994), suggest that ‘inter-organizational networks’ rely heavily on trust relations. In fact, they argue that trust is foundational. In addition, Sydow points out that inter-organizational trust within these networks can “support the formation of collective strategies; facilitate the coordination of economic activities; promote the open exchange of information and inter-organizational learning; ease the management of inter-organizational conflicts; and contribute to a significant reduction of transaction costs; and open up opportunities for strategic action, enhance system stability, and yet supporting system change” (Sydow, 1998: p. 32).

Sheppard and Sherman found that in settings such as networks or situations of ‘deep interdependence,’ trust is based on the assumption of a shared understanding of the world as it relates to the reason for the interdependence (Sheppard & Sherman, 1998). In the example of ACIP, therefore, this would mean that trust is built on an assumption of a shared understanding of the importance of injury prevention. This shared understanding is built on such things as shared strategizing, common values, and shared identity. These authors and others note that it takes time to build enough trust for deep interdependence (Sheppard & Tuchinsky, 1996; Rempel, Holmes, & Zanna, 1985).

Ammeter (2000) studied the factors associated with how trust forms between newly acquainted peers as well as how their trust forms over time. The author found that value orientation helped build both affect-based and cognitive-based trust. Having similar value orientation helped the workers view each other as “professional and competent” (Ammeter, 2000, p.98). Social contact was also seen as enabling the formation of trust.

Lee et al. studied the ways that trust influences leadership and knowledge sharing (Lee, Gillespie, Mann, & Wearing, 2010). They build on Zand’s (1972) work, which identified accepting influence and sharing information as illustrative of trust. They also built on Gillespie’s (2003) work, which refined these behavioural markers through the development and validation of a tool to measure trust in project teams. Her work provided two principle dimensions by which trust can be measured in working relationships: reliance-based trust and disclosure-based trust. “A person’s willingness to depend on another is reliance-based trust and disclosure-based trust is a person’s willingness to disclosure personal or work-related information to another” (Lee et al., 2010, p.476).

Tacit Knowledge

The phrase “tacit knowledge” was coined in 1958 by Michael Polanyi. Polanyi, a philosopher of science and former chemical engineer, found fault with the setting of the laboratory for research. For Polanyi, the laboratory, and more widely, the scientific mode of inquiry was too heavily oriented to inductive, propositional methods of inquiry. For Polanyi, this type of approach ignored the sets of skills actually required to work in a laboratory setting. He argued that other modes of knowing, such as hands-on, personal, unwritten, and/or embodied knowledges should not be devalued within a hierarchy that privileged explicit knowledge (i.e., written information that people can study). Tacit knowledge is that which is inarticulable by the person who holds it; this form of knowledge might only be visible in the person’s performance of the particular skill that is second-nature (or tacit) to the person in question. In other words, the person does not consciously employ tacit knowledge, or draw on a set of procedures from their memory. Instead, tacit knowledge encompasses the skills that we have but might not be able to explain to others (Polanyi, 1958).

Tacit knowledge is like what is often referred to as “muscle memory”. When we are first acquiring a skill we must consciously perform the actions. So, for example, when we are learning to drive a car we are very conscious of how the gas pedal feels under our foot. After some practice that knowledge is no longer conscious but becomes “interiorised” and automatic; it has become tacit knowledge. After a few years of driving we will no longer be able to talk about the feel of the pedal under our foot. When a person begins a career in injury prevention, they will be conscious of learning the principles of injury prevention. Perhaps they have taken a class and are required to memorize these principles for an exam. Once they have worked in the field for a few years, however, this knowledge has become part of their working and taken for granted knowledge. If, for example, a student is assigned to work on a project with an experienced injury prevention expert, the expert might be surprised to find that they need to articulate knowledge, which to them seems obvious.

This kind of interiorisation of knowledge allows us to continue to learn and to focus on a wider array of activities. For example, we can acquire knowledge in injury prevention and take this knowledge with us to different contexts or environments. For example, as injury prevention experts we can move from region to region or from organization to organization and, because our knowledge of the injury prevention principles is tacit, we can focus on learning about the new context or the responsibilities of our new jobs.

Because it is embodied and unstated, we take for granted our own tacit knowledge and, for all these reasons, it is often very difficult to articulate tacit knowledge. When people articulate tacit knowledge, it often takes the form of analogies and stories, or personal stories. These personal stories can reveal the ‘how’ and ‘why’ a professional in a field proceeded as they did and thereby reveal the tacit knowledge with which the professional was working (Holste and Fields, 2010, 128). Tacit knowledge is a form of insider knowledge and so stories can reveal the taken for granted aspects and underlying assumptions within any professional field.

Even while it is difficult to articulate, tacit knowledge can be transmitted and acquired. However, tacit knowledge cannot be taught, or transferred, in the same way that explicit knowledge is taught because it is difficult to articulate and impossible to codify. Research has found that the transfer of tacit knowledge typically requires that the learner spend time with the person who has the tacit knowledge they require. The transfer of tacit knowledge typically requires face-to-face interactions, practice, observations and imitation. Time together allows time for observation of practice in a full range of situations and contexts as well as for the transfer of knowledge through stories. Further, research has found that the transfer of tacit knowledge often occurs in the context of organizational retreats and get together.

Trust and Tacit Knowledge

The connections between trust and tacit knowledge are complex and deeply entangled, making them difficult to track and demonstrate in a linear fashion. Trust and the different kinds of trust we can have in a relationship will affect whether or not we will share our tacit knowledge with someone and also whether or not we will learn from another’s tacit knowledge. At the same time, the kind of knowledge we are attempting to share or learn will also affect that perceived trustworthiness of people with whom we enter into relationships. Trust in a relationship will reduce the “level of risk and uncertainty associated with the sharing and use of tacit knowledge” (Holste and Fields, 2010, p.130).

Despite, or perhaps because of, this complexity, the relationship between trust and tacit knowledge has received little scholarly attention. One 2010 study, by J. Scott Holste and Dail Fields, investigated the effect that different kinds of trust have on co-workers’ willingness to share their tacit knowledge and to use the tacit knowledge of their co-workers. They defined affect-based trust as trust that is “grounded in mutual care and concern” between people. Cognition-based trust, on the other hand, “is grounded in co-worker reliability and competence” (Holste and Fields, 2010, p.129). From their survey data, Holste and Fields found that “affect-based trust has a significantly greater effect on the willingness to share tacit knowledge,

while cognition-based trust plays a greater role in willingness to use tacit knowledge” (Holste and Fields, 2010, p.128). That is, care and concern will encourage a mentor to share tacit knowledge with a mentee, while respect for a mentor’s reliability and competence will encourage a mentee to use the tacit knowledge of a mentor. The authors conclude from their findings that, “both warm personal relationships ... developed through face-to-face interaction and solid respect for [another’s] professional capability is required for the sharing of tacit knowledge” (Holste and Fields, 2010, p.135).

Connecting KT, Trust, and Networks

Although the role of trust in both KT and in networks has been explored separately, there has been less work specifically linking the three constructs. Wathen et al. (2011) noted in their work the, “three T’s - talk, trust and time” (p.11). Repeated interactions between researchers and research users built up trust and facilitated the adoption of innovations over time. These authors also cite the need to assess the role of trust between researchers and research-users in a community of interest, as a way to further KT.

In their work on strategies for cooperation, Child and Faulkner developed a framework for examining the connection between the phase of the network, and trust development (1998). This framework was expanded by Marshall et al. to include the added dimension of knowledge and is shown in Table 2 (Marshall et al., 2005, p.47) (Used with permission.).

Table 2 Phases of alliance and a dynamic perspective on knowledge sharing and trust development

Phase of Alliance (Network)	Knowledge Sharing	Trust Development
Formation, matching resources and strategic positions	Technological, includes codified and explicit knowledge	Calculative, based on cost-benefit analysis
Implementation, coordination across and between operations and systems	Systemic, socially embedded policies and practices	Knowledge, based on understanding partners’ qualities and intentions
Evolution, strategic integration and operational autonomy	Strategic, common mental maps/vision of strategic and operational actions	Identification, based on mutual understanding and endorsement of wants

This framework demonstrates the complexity of the relationship between KT, networks and trust. Further to this, Marshall et al. (2005) concluded that, “the dynamic nature of trust is related to the knowledge sharing process, such that certain forms of trust facilitate sharing of specific types of knowledge at different stages of a strategic alliance (network)” (p.52).

When trust exists, people provide useful information willingly (Andrews & Delahay, 2000). People are also more willing to listen and to take in others' knowledge (Levin, 1997; Levin & Cross, 2004). Trust mediates the necessity of verifying information, making knowledge translation less costly (Zaheer, McEvily, & Perrone, 1998). Holste and Fields (2010) showed that trust predicted the use of information and knowledge from others.

Inter-organizational trust has been shown to increase productivity, enhance job performance, and strengthen commitments to projects (Dirks & Ferrin, 2001). Lee et al. (2010) found that "increased knowledge sharing helps team members to consider more options, to learn from the experiences of others and to better use the knowledge within the team, leading to improved decision making" (p.478). In addition, Zand (1972) found that high-trust groups were more apt to be open, to share, and be creative in their options than low-trust groups.

Summary

This literature review has provided an understanding of **KT**, trust, and networks, as well as the connection between **KT**, trust and networks. Generally, the literature supports the idea that trust is important to the functioning of networks and is also important for **KT**. Although it is sparse, the literature also provides some groundwork for exploring the nature and effects of trust for networks that are effective for **KT**. We know that the relationship among these constructs is complex and dynamic. Given the strong movement towards networks as a structure for **KT**, there is a need to better understand the elements of trust within networks and the role of trust in making networks effective for **KT**. This research addresses this gap in our understanding.

CHAPTER 3: RESEARCH METHODS

In this chapter I describe the rationale, objectives and primary research questions for this study. I then describe key components of the methodologies I used to conduct this research: the research design; setting and population; data collection and analysis. The design component outlines the rationale for the exploratory case-study method and the value of a thick description. The setting and population component describes the organizational context and study participants. The sampling strategy contains a description of how individuals were selected for the case-study interviews. The data collection and analysis component contains a description of the data collection processes, protection aspects, including ethical considerations, instrument design, and implications from my research role. Methods used to analyze and present the collected data are described in the final methodology component.

Research Rationale

With the increasing interest in KT and KT networks in health promotion this study contributes both theoretically and practically to knowledge about the role trust plays in successful networks for KT. Understanding the role of trust in successful KT networks provides valuable insights regarding how members build and experience trust and how trust influences success in KT and KT networks. Given that trust is a key component to the learning environment (Rotter, 1967), cooperation (Tschannen-Moran, 2001) and absorption of new knowledge (Parent, Roy and St-Jacques, 2007), this study can make contributions to the KT literature on several fronts.

Insights gained through this study illuminate the precise nature of trust as well as the effects trust has on networks that are effective for KT. Insights will also be gained into the meaning assigned to trust by members of an effective KT network and how trust is seen as influencing the effectiveness of KT networks. These insights will broaden our understanding of the role of trust in networks and possibly highlight ways to build trust in KT networks to become effective. I hope that it will invite further analysis of the trust process in KT networks, provide a framework for future research in this area and offer some interesting insights to a topic that remains unclear.

Thick Description

The intent of this study was to understand how members of an effective KT network construct trust and to provide a thick description of what 'trust' is within a KT network and how it works to make the

network effective. Thick description refers to describing a phenomenon in sufficient detail that one can begin to make explicit the patterns of cultural and social relationships that constitute the phenomenon and put them into context (Holloway, 1997). Thick description is a term used to characterize the process of paying attention to contextual detail in observing and interpreting social meaning when conducting qualitative research (Geertz, 1973). A thick description of a social event or action takes into account not only the immediate behaviours in which people are engaged but also the context as well as the social actors' experiences and understandings of those behaviours that render the event or action meaningful (Holloway, 1997). In case-study research, thick description involves looking at the rich details of the case and sorting out the complex layers of understanding that structure the social world (Lincoln & Guba, 1985).

In order to acquire an understanding of trust as experienced by members within a KT network, I used a research method that focuses on the experiences and contextual conditions of the individuals in the network. Further, my primary research question was a question that deliberately sought to uncover contextual conditions related to trust. As stated by Patton (2002), research design should be dictated by the nature of the research question. Therefore, the study took a qualitative, exploratory case study approach. My research question is as follows: from the perspective of individuals working within an effective KT network, how did trust develop in the network and what role has trust played in the effectiveness of that network.

Case Study

A case-study approach seeks to answer 'how' and 'why' questions and assumes the researcher works in a situation where they have little control over events. Further, in case studies, the focus is on a contemporary phenomenon (Yin, 2003). These principles align with my research question, the context of the study and the construct being researched. Further both Creswell (2007) and Stake (1995) identified that purely quantitative designs lacked the flexibility needed to adapt to a dynamic environment. As my study is influenced by organizational and inter-organizational undercurrents having a flexible study design was an essential component and a critical success factor.

A case study method allows for the close examination of phenomena within a specific context or contexts. Case studies explore and investigate contemporary real-life phenomena through detailed contextual analysis (Yin, 2003). Yin (2003) also described the case study as a comprehensive research strategy that "relies on multiple sources of evidence, with data needing to converge in a triangulating fashion" (p. 14). Blatter & Blume (2008) pointed out that case studies offer researchers a means to explore

a phenomenon in great depth. In this way, researchers gain a rich understanding of individual views. In turn, this can lead to theoretical innovations because the views expressed allow the examination of the relationships between different elements of a research question in a contained context.

Case studies “can bring about discovery of new meaning, extend the reader’s experience, or conform what is known” (Merriam, 1998, p. 30). Stake (2000) noted that a case study could be a reflection on human experience. Guba and Lincoln (1981), like Yin (2003), hold that each case study is made up of five key components: the research question, its propositions, its units of analysis, a logic framework linking the data to the propositions, and criteria for interpretation. Yin (2014) presents a twofold definition of a case study. First, “an empirical inquiry that investigates a contemporary phenomenon (the ‘case’) depth and within its real-world context, especially when boundaries between phenomenon and context may not be clearly evident” (p.16). The second part of the definition deals with what Yin (2014) calls “methodological characteristics” (p.17). A case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical propositions to guide data collection and analysis. (p.17)

Setting and Population

Rousseau et al. (1998) assert that the context in which you study trust requires special attention. Context has the potential to affect the results of trust research. This is because positive and negative experiences within the context affect trust development and relationships.

In selecting a context for this study I wanted to study a health promotion network as it is the broader field of my area of expertise – injury prevention. Other criteria were that the network was national or regional, multi-disciplinary, well-established and considered a success by both its members and external stakeholders. These criteria were considered important because of the growth of KT networks with these characteristics, therefore the significance of the findings would be relevant to a broader audience. The field setting chosen for this case study was a health promotion network in Canada, the Atlantic Collaborative on Injury Prevention (ACIP). Composed of the four Atlantic Provinces in Canada, Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland and Labrador, the ACIP is a regional network of organizations and individuals who are working to “reduce the burden of injury in Atlantic Canada” (www.acip.ca accessed August 2015).

Focusing on a network from one geographic area reduced the potential of geo-cultural issues affecting the understanding of trust. Without this overlay of geo-cultural interpretations of the role of trust, the themes about how members understand and construct trust should be more salient. The ACIP network was less than 10 years old when this research was conducted, so knowledge about how trust was developed and its impact should be subject of less recall bias.

The degree to which ACIP truly reflects health promotion networks, and networks in general is not known, but purposeful sampling of this sort can yield information-rich data (Gall, Borg, & Gall, 1996). My intent in choosing a purposeful sample is, as Yin (2014) noted, based on the theoretical propositions I wish to illuminate through this case study. Knowledge translation is an important issue for health-promotion organizations. They are often fighting for survival in a healthcare sector that faces significant challenges. Health promotion and prevention is often underfunded and thus competition for funds can be fierce. The difference in their survival is often dependent on being able to implement knowledge to yield positive results.

In addition, because the field of injury prevention in Canada is quite small, I had professional knowledge about ACIP as an effective knowledge translation network. My professional relationship with some participants in ACIP facilitated participant recruitment and the sharing of insights. I believe that my relationship with some participants also led to more confidential sharing of defining events and the subtleties of interactions between ACIP members. This, in turn, has led to a richer description of the role of trust in networks that are effective for KT.

Ethics

Approval was obtained from the University of Alberta Human Ethics Review Board (Appendix A). Ethical approval was renewed as needed throughout the dissertation process. All individuals participating in my research were informed that I am a PhD student conducting my dissertation research. I received written consent from each participant interviewed (Appendix B) and all participants were also informed that they could withdraw their interview data at any time. No participants withdrew from my study. All information provided has remained confidential and has only been reported with no identifying information.

Data Collection and Analysis

This case study involved in-depth interviews and a review of their key documents. This follows Stake's (2000) thesis that in a case study, "what detail of life the researchers are unable to see for themselves they obtain by interviewing people who did see it or by finding documents recording it" (p. 445). As with all naturalistic inquiries, I, the researcher, was the primary instrument for data collection and analysis. A review of key documents, as secondary data, was used initially to develop an understanding of how ACIP functions, the breadth and scope of projects undertaken and to gain an understanding of the current context of ACIP. I reviewed administrative documents such as bylaws, minutes of meetings, strategic plans, position papers and conference proceedings. Having a solid understanding of the context of ACIP before I started the interviews, the primary data collection, allowed me to integrate this knowledge with what I was hearing through the interview process.

Interview sessions. Semi-structured, one-on-one interviews were used to gain an understanding of how the members of ACIP perceived and formed trust. As noted by Fontana & Frey (1994) and Schein (1990), interviews are a means to examine the experiences of individuals from their own perspectives, assumptions and behaviours. Further to this, Yin (2003) states that the interview is one of the most important sources of case study information. Interviews also provided insights into how participants made sense of their experiences of trust within ACIP.

The interviews were conducted using an interview guide, to ensure comparable information was gathered from each participant. The semi-structured format permitted for deviation from the interview guide when it appeared that the participant had relevant information to clarify and elaborate beyond the scope of the common questions (Rothe, 2000). Three types of questions were included in the interview. Opening questions addressed demographics and previous experiences with networks and KT. These questions were included in order to develop rapport between interviewer and participants and to determine the variability among participants. The second set of questions addressed the participants' general views on trust processes inherent in networks and their perceptions of what role (if any) trust plays within a network. For those who perceived trust to play a role in the network, the third set of questions addressed the participant's perception of the role of trust in the effectiveness of KT networks in general and ACIP, in particular. If trust was not identified as an important factor by the participants, the third set of interview questions were designed to focus on the factors that the participant identified as important in effective KT networks and ACIP. The questions were ordered from general to the specific so that I could get a sense of the participants overall perspective on networks and trust before discussing ACIP explicitly.

The interview process was founded in Yin's and Stake's case study approach and relied primarily on 'how' and 'why' questions (2003). When participant comments were unclear, the participants were asked to further define their comments, "Is there anything else?" or "Any other thoughts?" or "Why do you think that is?" or "Can you give an example?." While the overall focus of the interviews was to examine the role of trust within networks that are effective for KT, the questions asked during the interviews centered on three topics areas: the participants understanding of the nature of trust and how they experience trust, the construction of trust in a network and the contextual nature of trust as it relates to effectiveness. Because the interviews were open-ended, no two interviews took exactly the same direction and each participant spent varying amounts of time within each topic area; however, the themes that emerged were largely homogenous. The participants also provided many good examples of their experiences relating to the role of trust within ACIP. By using a semi-structured process I was able to ask follow-up questions and ask for examples to clarify assumptions and perceptions (Patton, 1990). This also allowed for participants to identify symbols of trust and to tell stories that illustrated the development and role of trust in ACIP. This co-discovery of new knowledge and reflexivity are integral aspects of case studies, as I could quickly adjust my questions based on the direction of participant responses.

Because of the time and expense related to travel to eastern Canada, and the availability of the participants during times I was able to travel to eastern Canada, only a portion of the interviews were conducted in a face to face setting. Twelve of the nineteen interviews were conducted by telephone. While interviews conducted by telephone can be arranged to suit both researcher and respondents, and many people are comfortable with the relative anonymity of the telephone interview, I always reaffirmed that the timing of the call was convenient and engaged the participant in some general conversation to provide a little time to 'warm up' on the phone before starting the interview. In addition, because of the lack of body language cues, I was careful to allow the participant some 'silent' time before probing or re-phrasing the initial question. This was to avoid, as much as possible, interfering with participants' thinking time.

Sampling strategy. The co-chairs of the network were initially approached via a telephone call to outline my proposed research project and to gauge their interest in being involved. The response was very positive so a draft copy of my research proposal including the details of the proposed methods was e-mailed to the co-chairs for their full consideration. After approval, participants were recruited from the ACIP Leadership Team and the ACIP membership via email invitations to participate from the Acting Executive Director and the Co-Chairs of ACIP. Care was also taken to obtain the right participants for this study to

maximize the likelihood that each participant would add information that allows for the discovery of meaning. I therefore used a purposive sampling approach for this study to choose participants who reflected an awareness of the anticipated or emerging features within the phenomena under study (Thorne, 2008; Thorne, Reimer, Kirkham, et al., 2004). For this reason, participants were sought from those that had previously or at the time of data collection had a seat at the leadership table and those that had a major role in a project of the network, such as a report or conference.

Following a review of the positive responses received from the first email invitation to participate in the study, sampling took a more targeted approach to ensure that there was representatives from all levels within the network. Two additional email invitations from the Acting Executive Director were sent out targeting the general membership of the network. The Co-chairs of the network also sent out targeted messages to the membership and all volunteers were interviewed.

Each interview was transcribed and stored in a password-protected word file. I verified all transcripts against the original tape recording. I also transcribed my own notes and thoughts into a separate password-protected word file and used these throughout the interview and analysis processes. These two tasks constitute an initial stage of data analysis, as it immersed me thoroughly in the data, offered the chance to test early assumptions and look for possible themes within and between interviews.

According to De Gagne and Walters (2010), “determining an adequate sample size in qualitative research is the researcher’s judgment call in that a sample size of 12 may be big enough to derive significant outcomes for the intended study, while a size of 5 can be big enough to reach the point where no new information is obtained” (pg. 358). The projected size varies depending on the number of interpretations and descriptions of the phenomena being studied (De Gagne & Walters, 2010). Participant recruitment and interviews stopped when no new data emerged from interviews. This is in keeping with the notion of saturation; no new perspectives were heard (Groenewald, 2004). Also, after discussion with my co-supervisor (Dr. Linda Carroll) it was felt that there was enough information to describe and understand how trust is constructed and understood by members of an effective KT network. An outline of the interview guide is in Appendix C.

Data analysis procedures. “Data analysis is the process of bringing order, structure, and meaning to the mass of collected data” with qualitative data being “a search for general statements about relationships among categories of data” (Marshall & Rossman, 1995, p. 111). As Coffey and Atkinson (1996) noted, “it is important for qualitative researchers to explore their data from a variety of perspectives” (p.4). Richards

(2005) emphasized that, “establishing the ground for your claims requires adequately knowing, exploring, searching and making sense of your data” (p.144). According to Yin (2003), analysis focuses on linking to the propositions and explicating the criteria by which the findings are interpreted.

Data reduction is required if a story is to be told or an account given of what the data show (Richards, 2005). As the questions in the present study were primarily a guide, analysis by question was not appropriate. Instead, the data collected from the interviews were analyzed using thematic analysis to identify, analyze and report patterns within the data (Braun & Clarke, 2006; Mold & Peterson, 2005). This method of analysis was selected for its flexibility, ability to summarize a large body of data and ability to highlight unanticipated insights (Braun & Clarke, 2006). The analysis followed the six-phases of analysis approach as outlined by Braun & Clarke and summarized in Table 3 (2006, p.87).

Table 3 Phases of analysis

Phase		Description of the process
1	Familiarization	Transcription, reading and re-reading data, noting down initial ideas
2	Initial Codes	Coding interesting features of the data in a systemic way, collating data relevant to each theme
3	Searching	Collating codes into potential themes, gathering all data relevant to each theme
4	Reviewing	Checking if themes work in relation to coded extracts and the entire data set
5	Defining & Naming	On-going analysis to refine the specifics of each theme, overall story that the analysis tells, generating clear definitions and names for each theme
6	Reporting	Final analysis and relating back of the analysis to the research question and literature to produce a scholarly report

Each interview was examined; recurring topics were highlighted and coded to fracture the data into discrete segments about the role of trust in networks that are effective for KT. The data were then reassembled into interrelated themes and categories to provide a more detailed explanation of how trust is constructed and experienced by members of a KT network and the relationship between trust and effectiveness. In addition, throughout the analysis process I checked my understanding of themes and categories with ACIP members such as the co-chairs and other members of the leadership team (Miles & Huberman, 1994) and with colleagues and mentors. Moreover, when I determined what I believed to be the finalized themes for the study I travelled to Halifax and presented these to the ACIP Leadership table

for discussions about whether the themes resonated (or not) with this group of knowledgeable informants. After discussion, the Leadership table confirmed that the themes were consistent with their understanding of KT processes within their organization. These themes were also presented to my supervisory committee for discussion.

This approach challenged me to explore and extract the common essence of the trust experienced by members within an effective KT network from among the participants varied perspectives and experiences. As Morse and Field explain,

Often the theme does not immediately ‘jump out’ of the interview but may be more apparent if the researchers’ steps back and considers, ‘What are these folks trying to tell me?’ The theme may be beneath the surface of the interview but, once identified appears obvious. Frequently, these themes are concepts indicted by the data rather than concrete entities directly described by the participants. (p. 139)

In this study, thematic analysis brought order and structure to the mass of data depicting the varied experiences of KT network members. Mind maps are also developed and used to make sense of the data. They provided a visual representation of concepts and themes as they emerged from the data. Though the creation of themes was driven by the research questions, results are presented in a way that provides as complete a picture as possible of the role of trust within a network that is effective for KT through the respondents’ own words.

Thematic analysis requires significant involvement and interpretation from the researcher. This is because thematic analysis requires not only the counting of specific words but the description and identification of specific themes as they appear in the data, whether they’re explicit or implicit. This makes thematic analysis especially useful for this particular study as people’s understandings of trust can be difficult to articulate and so themes are often implicit.

Themes and categories, or codes develop by reading transcripts line by line and considering each phrase for what it represents or summarizes. Key phrases from each answer are highlighted. After the data set has been read and highlighted once, the researcher re-reads the highlighted data set a second time and notes initial thoughts on potential themes to codify. Notes are made of these initial thoughts and as these initial thoughts develop, formal ideas are developed and a set of codes is established. Once the codes are established, the researcher can return to the data set to confirm the codes and analyze the findings. Methods for analyzing themes that emerge include comparing the frequency with which particular categories appear in the data, identifying when themes appear together and developing visual representations of themes, their frequencies and relations to each other.

Thematic analysis is useful for capturing complex, nuanced and abstract concepts, like trust. However, because it deals with large chunks of text, thematic analysis requires more interpretation of the data to develop categories and so is susceptible to reliability issues.

Document review. Document review was used to corroborate and augment evidence collected from the interviews, one of the most important uses (Yin, 2003). I have used records and documents created by ACIP as a primary resource in an “unobtrusive method” to reconstruct the history and developmental process of the network. I have built the story of ACIP from their historical record in order to aid my own understanding of the organization as a whole, to provide the background and context for the analysis of trust in ACIP, as well as to present a cohesive narrative for the reader. “Unobtrusive methods” involve “collecting data from records on the past” and are used frequently for “historical event” and “process research” (Schutt, 2012). Researchers use historical methods to establish sequences of events in the past in any particular instance. Research undertaken with historical documents is used to write the story of the events under investigation and can be used to develop partial, or even complete, explanations for events as they develop.

The examination of all social phenomena, such as the development and running of a knowledge transfer network, are best understood in their historical context and will therefore require work with historical documents. Further, unobtrusive methods are an important part of research when experiment or direct investigation is impossible (Neuman 2011). For example, it is unethical, as well as impossible, to establish experimental knowledge transfer networks using different methods of development in order to see which is most effective and how. In cases like this we must instead look to the past of a successful network such as ACIP in order to account for and determine the reasons and causes of their success. Historical methods enable researchers to answer “big questions” about processes of change and development in large-scale social organizations (Neuman 2011).

Another benefit of using documents as a historical resource is that these records are not created for the purposes of research, in the way that people participate in interviews. When records of events are made, they are made only as a record, not for the purposes of research. By contrast, when a participant sits down with an interviewer she or he is aware of the reason for the discussion and it is well-known that the research context can affect participants’ answers. Historical documents provide the benefit of a non-reactivity to the research situation (Padgett 2012).

The method is analytical by its very nature. The presentation of ACIP's history will necessarily involve an explanation and analysis of the processes by which factors combined during the network's formation (Padgett 2012). Further, the historical record can provide context and background to the participants' stories and increase our understanding of their significance.

Historical records will also of necessity present a limited account of the events and processes they record. Documents created during any social process can belie or conceal the power relations underlying the situation. It is therefore important to consider the record critically. Further, additional methods can be used to flesh out the narrative reconstructed from the record. For example, the interviews for this study expand upon the historical record drawn upon.

Often the historical methods are used in order to compare the processes leading up to two or more past events (Schutt 2012, Padgett 2012). In this instance, however, there is only one case and, as a result, the historical record establishes only the timeline for the development of ACIP. Should researchers in the future wish to compare the development of other knowledge transfer networks with the development of ACIP, they can work with the research and historical analysis will be available to them here.

I reviewed the standard administrative documents available from ACIP including minutes from meetings, strategic plans, position papers, and conference proceedings. Each type of document provided insight into how the network functioned and its values. For example, a review of the minutes demonstrated the network's value of consensus decision-making and giving all members a voice.

Topic reports such as alcohol and injury and the social determinants of health and injury showed that ACIP was not just about focusing on the immediate individual causes of injury but its aim was to challenge the status quo and examine up-stream societal factors in injury prevention. For example, a child breaks their arm while playing in a junk yard. Instead of focusing solely on making sure the child does not have access to the junk yard, the immediate cause of the injury, questions are raised to determine why the child was playing in a junk yard in the first place. By asking the question 'why' you can determine the 'causes of the causes' and get to the root cause of the injury. Maybe the child has nowhere else to play because the neighbourhood is rundown, they live there because their family is poor, and the family is poor because they only have one income (<http://publications.gc.ca/collections/Collection/H39-468-1999E.pdf>).

Conference proceedings showed the network's efforts in building and supporting community capacity to do injury prevention. Within each of the conferences hosted by the collaborative was a mix of

sessions, some meant to impart the best evidence in injury prevention, some meant to build skills, and some meant to highlight injury prevention programs and projects happening in Atlantic Canada.

The business case for the establishment of ACIP developed by the Leadership Team in 2007 highlights the passion for injury prevention held by members of the leadership team. It also sets out specifics as to the benefits not only for the member provinces but also for the individual members of the leadership team as professionals including “networking in action”, “knowledge development” and “knowledge transfer in Atlantic Canada.”

The one document that struck me as having a different tone than other documents was the bylaws of the Network. All other documents reflect a passion for and a value of injury prevention whereas the bylaws are very formalized and neutral in tone. While I recognize that the bylaws reflect how the Network will conduct its operations and the need to adhere to legislation regarding non-profit organizations, associations and societies, the formality with which the by-laws are laid out seemed out of place as I started my research. Later in my research I came to appreciate the need for the formality as ACIP evolved.

Reviewing documents chronicling the evolution of ACIP provided me with a basis for understanding the development of ACIP, providing the context for my research question. While documents were purposefully selected and can be viewed as subjective, this should be seen as a benefit and not as a limitation especially for a case study (Berg, 1998). By conducting the document review prior to the participant interviews allowed me to contextualize comments made by participants. For example, reviewing the minutes of meetings gave me a feel of how ACIP arrived at consensus to add to the understanding of the consensus model described in [their] terms of reference. Combined, the feel and understanding of ACIP or story, as portrayed through documents provided me with the background in which to overlay my research question. Further, knowledge gained through the document review allowed me to integrate my understanding about ACIP into the interview process.

Trustworthiness of the data (rigour). A structured plan was used to ensure that the study remained aligned with the intended research goals and I detailed all the steps I have taken in the collection and analysis of the data. Rigour, or soundness, in a qualitative study is established through adherence to four principles analogous to the concepts of validity and reliability in quantitative research. The principles of rigour were addressed using Lincoln and Guba’s (1985) four constructs: credibility, transferability (generalizability), dependability and confirmability.

Credibility seeks to ensure that the findings reflect reality and to promote confidence that I have accurately documented the phenomena being studied. In this case study credibility was achieved through the following provisions: the adoption of well-established research methods, the development of an early familiarity with the culture of participating organizations, triangulation, voluntary honest participation, iterative questioning, debriefing sessions, and peer scrutiny.

Transferability or generalizability is concerned with the applicability of the research findings to other settings. This construct of trustworthiness is met by providing sufficient detail about the context and case, ACIP. If practitioners believe that the situations described in the study are similar to their own, they may relate the findings (Lincoln & Guba, 1985). I also interviewed multiple participants to help me understand the case from different perspectives and to increase the congruence of themes.

Lincoln and Guba (1985) also stress the tie between credibility and dependability noting that demonstrating the first helps ensure the latter. To address the dependability, the methods and methodologies I used within the study are documented in sufficient detail that they could be repeated.

Confirmability is making sure that the results truly reflect the participants' experiences and ideas rather than the researchers. This was done by asking for clarification on comments I did not understand (either during or after the interview) and also re-questioning participants as I gained insights from interviews. In addition, throughout the analysis process I tested my ideas with some ACIP members (Miles & Huberman, 1994) and with colleagues and mentors. Moreover, when I determined the finalized themes for the study I presented these to the ACIP Leadership table for confirmation. There were no conflicts with the themes. These themes were also presented to my supervisory committee for discussion.

Summary

In my qualitative case study, I used a document review and interviews to analyze the role of trust in a network that is effective for knowledge translation. I was responsible for each element of the study. The data was collected, categorized and analyzed to identify how members of ACIP construct trust, as well as how trust relates to ACIP's effectiveness as a KT network. The constructions of trust and their relationship to the functioning of ACIP are presented in Chapter 4 of this study.

CHAPTER 4: FINDINGS - THE UNDERSTANDING AND CONSTRUCTION OF TRUST

This chapter presents a description of the participants and the typology of trust found from the thematic analysis of the interviews. The typology is organized by theme and through the use of quotes from the interviews I build a rich narrative that describes the participants' experiences with trust. To provide a context for these quotes I provide an overview of the history and membership of ACIP.

History of ACIP

The impetus for the Atlantic Collaborative on Injury Prevention came from an opportunity that presented itself when a well-known and respected injury prevention professional who I will call Alex, moved back to Atlantic Canada in the summer of 1999. This individual had credibility, having worked in injury prevention for over 15 years, and had previously resided in Atlantic Canada. This individual's previous role was community development within Health Canada where one of her main roles was to bring together non-government organizations and government representatives to share best practices. With funding from SMARTRISK to pay her for a half-day a week,⁵ Alex began some community development in Atlantic Canada on injury prevention. SMARTRISK provided funding as part of their overall mandate and vision to have injuries recognized as a major health issue across Canada and to get the Federal government to fund injury prevention initiatives and research.

One of the early steps in the process of building a collective around the issue of injury in Atlantic Canada was to get all the players in the same room. So a one-day meeting was held in December of 2000 with sixty multi-sectoral representatives from the four Atlantic Provinces. This initial meeting was made possible by the support of SMARTRISK, Safe Kids Canada, and the Safe Communities Foundation. Meeting participants worked at some point along the "injury prevention and control continuum," from prevention, pre-hospital care, acute care, and rehabilitation. Every effort was made to be as inclusive as possible. The agenda for the meeting included a presentation from the founder of SMARTRISK, Dr. Robert Conn. Dr. Conn's remarks provided the right mix of highlighting the urgency of the injury issue and actions that could be taken to tackle injuries. The meeting ended with the decision to develop the Atlantic Network for Injury Prevention (ANIP). Additionally, each province was encouraged to organize its own network to collaborate intra-provincially. A strategic leadership team for ANIP, comprised of government and nongovernment member representatives from all four Atlantic Provinces was also established. This leadership team was established to provide guidance and direction for ANIP, organize interprovincial

⁵ A national non-profit, charitable organization dedicated to injury prevention.

networks and advocacy, and facilitate interprovincial collaboration on research, evaluation, surveillance, program development, and capacity building (Business Case for the Establishment of a Secretariat for the Atlantic Collaborative on Injury Prevention, November 2007).

Meetings of the strategic leadership team were held four times a year and at least one of those meetings was face-to-face. During this time SMARTRISK provided funding support for a part time Secretariat and a listserv.

In 2007, recognizing that this funding and staffing model was unsustainable and hindering the growth of injury prevention activities in Atlantic Canada, the ANIP leadership team developed and submitted a business case to the four Atlantic Provinces for the establishment of a full-time secretariat for the Atlantic Collaborative on Injury Prevention (ACIP). This funding would allow ACIP to continue the work of the network and build more capacity for injury prevention in Atlantic Canada. Specific objectives of the ACIP Secretariat are to promote Atlantic and interprovincial leadership in injury prevention, to contribute to surveillance and research activities, to support injury prevention policy development, and to provide capacity building opportunities. In June 2008 the Atlantic Collaborative on Injury Prevention became a reality and in November 2008 the first full-time staff person was hired.

Description of Participants

At the time of the interviews the ages of the 19 participants ranged from 29 to 65 years of age; 5 were males and 14 were female. Having been in the field of injury prevention for over 25 years I can say that this pattern of more females than males is typical within the field of injury prevention. Most participants were mid-career, with three being early in their careers and three being late career. The majority of participants had post-secondary education at the Master's level and most were educated in a health-related field. The participants also represented different roles related to ACIP, while the majority of the participants, twelve, were current members of the leadership team; the remaining seven were both past leadership team members and members of the broader membership of the network. This provided a two-dimensional look at the role of trust and how ACIP members, past and present, experience it. The participants in my study could be labeled as key informants as all of them have first-hand knowledge about ACIP but are also leaders in their own fields of injury prevention. Participant characteristics are summarized in Table 4 below.

Table 4 Participant characteristics

Variable	n (%)
Gender	
Female	14(73.7%)
Male	5(26.3%)
Age (years)	
<30	3(15.8%)
31-40	1(5.25%)
41-50	8(42.1%)
51-60	6(31.6%)
60+	1(5.25%)
Career stage (years)	
<10	3(15.8%)
10-25	13(68.4%)
25+	3(15.8%)

The interviews were conducted between the 16th of May and the 23rd of August 2013. Seven interviews were done in a face-to-face setting but due to both participant and researcher limitations twelve were conducted via the telephone. Interview sessions were an average of 42 minutes in length and audio recorded with consent.

Current Membership and Structure

The Collaborative is incorporated as an association and is governed by a set of bylaws. These bylaws set out membership, meetings, decision-making processes, conflict of interest and finances, accountability, and reporting.

The Board of Directors, called the Leadership Team, consists of a minimum of four to a maximum of 16 members, with the Executive Director as a non-voting ex-officio member. This allows for each Atlantic Province to have up to three members on the Leadership Team, one of whom must be a representative from the provincial government. There is also the provision for an additional four members

to be appointed by the Leadership Team. Members serve two-year terms and decisions to extend the term or appointments to vacant position are made by consensus.

Current membership of the Leadership Team is set up as follows: a combination of regional divisions of national non-profit organizations, such as the Canadian Red Cross and Safety Services; government representatives from the health portfolio of the Atlantic Provinces; hospital-based injury prevention programs, such as Child Safety Link; trauma programs; and provincial injury prevention coalitions. The individuals who represent these organizations are the decision-makers for their organization or influencers of decision-makers. Officers of the network are elected annually and include two Co-Chairs and a Treasurer. Meetings are held at least three times a year and decisions are made by consensus model.

Members of the Leadership Team are required to attend 80 per cent of all scheduled meetings and provisions are made within the bylaws for leaves of absence, and for removal for conduct contrary to the best interests of ACIP.

Formal network structures do not always reflect the true nature by which network work is done. When ACIP first began it was a very informal network, largely operating off the sides of people's desks in Atlantic Canada and with some minimal financial support from a national NGO. Some participants view this period as a time in ACIP's evolution when it was extremely effective. This effectiveness came from the trust that members had in each other in terms of their commitment to accomplish certain tasks for ACIP. Although I do not believe that the type of informal model of a KT network is sustainable in the long term, as a starting point this approach enabled participants to develop a basis of trust that is built on the vulnerability participants felt as they relied on each other to accomplish their shared vision. With the formalization of ACIP what they gained in commitment from the four Atlantic Provinces, they lost in terms of their need to rely on each other thereby maintaining a high level of trust.

Having a key player who had power and influence is one of the factors that led to the effectiveness experienced by ACIP in those early years. In fact, participants indicated the significance of a key player that was crucial to the development and evolution of ACIP. Early on Alex was seen as a key player who was well connected and well informed. Comments from participants viewed this person as a leader in bringing people together, coordinating efforts and bridging gaps. Alex's approach was that of building relationships through interactions. She was the glue. Key players such as Alex are able to coordinate activities and direct resources most efficiently because of their knowledge of and access to members in the network.

At the inception of ACIP because of its informal nature, the key player set the agenda but also was influential in meeting the objectives. Currently, with ACIP, the executive director is viewed as being influential in meeting the objectives and although power is said to be equal there was an undercurrent of power being centralized in Nova Scotia.

Trust Enabled the Development of ACIP

Interview participants felt that trust was an essential early component to the development of ACIP as an organization. The formation of ACIP as a network required trust because of the nature and structure of networks themselves.

I think there's a level of organizational trust that is required in order for any collaborative to be effective. ... Probably especially for networks because you don't have ... a line or responsibility or a line of accountability that keeps us all together.

Participant 14

As the literature has shown, trust also strengthens capacities to take risks. Developing the organization was a risk because there was no money. Group members therefore had to assess whether or not to take the risk. They took the risk based on their trust of one another and of Alex.

If there had been no trust, I don't think they could have done anything because there was no money. At the beginning ... they were all doing it as extra.

Participant 9

Each of the early members of the network were connected to Alex and to each other in some way and, having known each other and each other's work previously, members were able to trust that they could come together effectively in a collaborative effort.

Because we were all so well connected ... I think trust is absolutely at the core of what was enabling us to work... because we knew each other.

Participant 12

That's probably why we were able to hit the ground and get running pretty quickly because there was some trust already between like-minded organizations.

Participant 18

Alex's ability to develop and nurture good working relationships was key to the success of the early collaborative effort. In fact Alex's ability to make participant's feel like they know each other even when there was no pre-existing relationship.

They did not have a pre-existing relationship. They may think they did. They developed it over time.

Participant 9

The fact that early members had working relationships already established, enabled trust and therefore enabled effective KT efforts between members.

It started because of the good relationships we had before the network was formed. ... Even before the network started ... government and community groups around injury had good relationships.

Participant 13

The more you share, the more you trust and so the more you share. The initial trust is often a personal trust but the sharing is to the group, which strengthens trust within the group and sharing to the group. The trust and the sharing build on and sustain one another.

Once we sat at the table ... and got to know each other and understand that a lot of our mandates were similar, I don't think it took that long to recognize that working together and having one voice, we could be stronger.

Participant 18

Trust and Tacit Knowledge in the Development of ACIP

The injury prevention community in Canada is small and tight knit. As a result, injury prevention professionals have tacit knowledge of the nuances of both injury prevention and how the Canadian organizations work. One of the ways that injury prevention groups work in Canada is that they try not to duplicate each other's work. As early members developed ACIP, they developed an organization that fit into the landscape of injury prevention in Canada without duplicating the efforts of other organizations. This demonstration of tacit knowledge on the part of early members built trust among ACIP members as well as in the wider injury prevention community in Canada.

I think trust was built in ACIP ... as a shared vision for one goal. [T]he people who came together [knew] ... they must work together and they must trust each other.

Participant 4

Additionally most of the respondents identified having common values and beliefs, both personal and professional as influencers of trust. Having similar personal values and common world-view were seen as

being the necessary groundwork for deep trust. Solid respect for the other person's capability is required for the sharing of tacit knowledge.

Similar values and similar ways of thinking, certainly makes someone feel more comfortable and further a deeper trust if values align.

Participant 19

The tacit knowledge within injury prevention is the manner of approaching each program or project. It is a capacity to adjust to and work within the specific contexts of each program and project. The tacit knowledge is the awareness that not every situation will warrant the same approach as well as how to weigh and evaluate the various factors in different contexts. It is like, for example, the art of painting. You can be taught the different brush strokes. But capturing the essence of the scene is a matter of tacit knowledge.

While a few participants alluded to it, one participant suggested explicitly that people in injury prevention have similar world-views. Injury prevention professionals believe injuries are predictable and preventable. And this world-view can manifest itself differently from the mainstream view of injuries. For example, folks outside of injury prevention can talk about events involving injuries as "just accidents." Such a description is anathema to an injury prevention professional.

I do think we think very similar[ly]. . . our whole mindset. To be in prevention number one makes you different than the rest of the world almost.

Participant 7

Some respondents related the ability of certain people to garner trust from others because of the passion they exhibited for the topic area, injury prevention.

[She] really had a passion that was hard to dismiss, this combined with an openness really laid the groundwork for trust development in the early days of the network.

Participant 19

I suggest that passion for the topic exhibits significant personal buy in. Passion for a subject conveys significant tacit knowledge in a manner similar to the telling of personal stories. Passion for a subject is an expression of the difference the topic has made to that person's life. Passion also can demonstrate or signal mutual care and concern for others involved in the subject. Because passion demonstrates the personal buy in to a topic, others are more willing to trust someone's tacit knowledge and to use the tacit knowledge they see demonstrated.

Having similar values, including what was described as a ‘Maritime’ culture, was also identified as having an impact on how these participants trust.

Like I said, in the Maritimes, Atlantic Canada, we've always been very collaborative and we've needed to do that because we are small provinces. So there's always been that bit of a culture.
Participant 6

Interestingly a number of participants highlighted the impact of individual, organizational cultures as an influencer of trust. Most participants were from the health field and valued collaboration.

We are used to working with other organizations. That's just who we are.
Participant 6

Additionally, some participants felt that the organizational culture from which they came posed significant challenges when it came to the network.

For me to be heard, [within my work culture] I had to be a bulldozer. I tried to put that same...trying to put that into a diplomatic structure in a charitable world has been a big challenge for me personally.
Participant 15

Effective Facilitation: ‘The Alex Factor’

One of the key factors in the success of ACIP was the role played by the part-time secretariat. This individual played a key role in establishing the foundation of collaboration and building linkages where none had previously existed. For the purposes of anonymity I will refer to this person as Alex. Because of Alex’s personality and skills, as well as her ways of thinking and working, she was able to foster trust and thereby lay the groundwork for effective collaboration and knowledge translation.

Alex was well equipped to take on this role of key player in ACIP because of her skills and experience gained through a long career. Her training in social work provided a strong knowledge of community development and facilitative leadership. Career experience at Health Canada provided the opportunity to hone her community development and facilitation skills.

At Health Canada, Alex brought together provincial government representatives and non-government organizations to share best practices in injury prevention. Representatives from each Atlantic Province attended these meetings, providing Alex with the opportunity to forge relationships. On more than one occasion, Alex introduced the provincial government representative to their most active non-government provincial or regional organization in injury prevention. Alex's knowledge of the non-government organizations in Atlantic Canada came from pre-existing contacts with NGOs who often sought out resources or information from Health Canada. These linkages between government and NGOs provided a starting point to move injury prevention forward in Atlantic Canada. Alex's willingness to share these ties with people and organizations made her a bridge and facilitator of action.

Alex was also a key player in getting attention for injury within the federal government. During her time there, Health Canada was the driving force behind the development of several key resources for injury prevention in Canada such as the Directory of Canadian Child/Youth Injury Prevention: Programs and Researchers and the Compendium of Child and Youth Injury Data Sources. Alex's skills in working inside and often behind-the-scenes in a huge bureaucracy such as Health Canada have been credited with ensuring that injury prevention was never left off the public health agenda. These skills and abilities provided Alex with a high level of credibility about her competence as she took on the role of Secretariat for ACIP. This Secretariat role was all encompassing from coordination to facilitation and management.

Coupled with her skill set and competence was Alex's unbridled passion for injury prevention, a passion that was easily seen in her commitment to the development of injury prevention in Atlantic Canada. Because of her passion, Alex was willing to 'go that extra mile' in terms of the time spent doing ACIP work; her work went well beyond the amount of compensated time.

Alex was also influential in securing funding for ACIP and in the establishment of ACIP. Because of Alex's positive connections to national injury prevention organization such as SMARTRISK, SafeKIDS and Safe Communities Canada she was able to get leaders of all three organizations to come to Atlantic Canada and meet with stakeholders. These organizations funded this initial stakeholder meeting and SMARTRISK agreed to fund Alex to begin to do some community development work in injury prevention in Atlantic Canada.

Alex's facilitation skills are so extraordinary that many members in the newly-established ACIP presumed that they had already met each other, when in fact they had never met prior to coming together for ACIP. Her skills are people-centred efforts to bring stakeholders together, to build relationships, to

cement collaborations and alliances and to understand the abilities and needs of all stakeholders. This 'human force' behind effective KT is known as knowledge brokering (CHSRF, 2003). Knowledge brokering is about dialogue, relationships, and sharing by a senior, well-connected individual who tends to have experience in both the research and policy worlds. Alex was this 'human force' in the development of ACIP, as an effective KT network.

ACIP members expressed strong views about the role of the initial coordinator and the subsequent executive director and their roles in the construction of trust within the network. In the early development of the network, many members indicated that trust was constructed through what they called the 'Alex' factor. This factor was a mix of the personality, abilities, and connections of Alex.

They talked about Alex's ability to make everyone feel welcomed into and valued in the network. Further, participants thought her open communication style was paramount to building trust amongst members, as nobody felt left in the dark.

Alex was also seen as credible in terms of her knowledge in the area of injury prevention and her connections to the broader Canadian injury prevention network. Adding to this was her encouragement and development of linkages between ACIP members and the broader Canadian injury prevention network of practitioners and researchers. Alex's commitment to injury prevention was seen as a vocation rather than a job.

Alex's ability to gain the trust of others was fundamental to the establishment of ACIP. Alex views trust as follows:

respect and valuing the input of other people, doing what you say you're going to do ... a feeling that [you] are not going to be left high and dry"

This view is central to how ACIP works with others and therefore key to the development of this effective KT network.

For Alex, the coming together of a KT network such as ACIP is really a process of interdependence.

[The broader injury prevention community] said what they could do for us and we asked and talked about what we could do for them ... it's a two-way street.

Building trust for Alex was about modeling and demonstrating commitment to the process of development and the overall goal of the network. *“I think trust was built because we follow through.”* According to Alex, this visible commitment and willingness to do for others, *“builds the trusts and builds a sense of entity.”* This visible commitment was also shown through *“spontaneity and some enthusiasm and lots of communication. So they didn’t have to wonder whatever happened to . . . what was going on.”*

The explanations behind why others saw Alex as trustworthy are as varied as the definitions of trust. This is not surprising given that trust is a multifaceted construct, largely dependent on the source and context. We use trust in our everyday lives to alleviate uncertainty by making assumptions about others based on how they react to us.

Several participants expressed the sentiment that Alex played an important role in the establishment of ACIP.

Trust or the expectation of trust is built into certain roles within ACIP such as the roles and positions of Executive Director and the co-chairs.

I think the Executive Director is critical to foster that trust.
Participant 6

I don't feel that there's a difficulty that hasn't been managed well and that has helped increase the trust that exists within the membership. Credit to the co-chairs.
Participant 14

It is evident by these comments that currently the trust ACIP members put into the positions of executive director and co-chair is derived partly from the structure; both the characteristics of the position itself which engenders a baseline of trust, but also dependent upon the skills, abilities, and experience of the people in these positions. Within the construction of trust in ACIP the influence the social structure of the position has on trust is influenced by personal interactions with the individuals holding those positions irrespective of the system they were working in.

In addition to these common themes, the role of a facilitator emerged from a handful of the respondents as an important element in the construction of trust. Alex had the hard, concrete, explicit knowledge because of her background in community development. However, she also brought the personal factors to know how to interact with different personalities in the group. For example, some people need

detailed knowledge while others only need to hear the big picture. Alex knew who needed what and was attendant to these needs.

Then of course there was the Alex factor. There was a certain amount of passion with Alex and corporate memory and knowledge ... about general injury topics that led to a deep trust.
Participant 19

"I got to meet [Alex] and I was like, wow okay you're who I want to know and work with."
Participant 19

We just kind of turned to the most senior person who happened to be [Alex] in terms of experience and so all that trust was put to her and we just worked . . . everyone just sort of chipped in
Participant 6

Participant 12 echoed this sentiment.

"[Alex] was trusted in that work. She single-handedly grew that network mostly because of the people she knew and the passion she had. I think trust is absolute the core what was enabling us to work.

Participant 6 also credited Alex with being a driving force behind the establishment of ACIP.

There was a real commitment from the individual around this, that we can really do something with this it brought like-minded people together. It was very collaborative, very friendly, a lot of trust.

It was participant 19 that labeled this the "Alex factor." This participant suggested that her *"passion was hard to dismiss, this combined with an openness really lay the groundwork for trust development in the early days of the network."*

Several participants also credited Alex for moving injury prevention from individual efforts to collective action. Participant 2 felt that ACIP's success as an effective KT network was related to three things:

[T]he work that [Alex] did bring people together in 1999 and the desired people to really work together to build something.

Alex knew that trust existed in the network by the behaviour of its members.

They divided tasks, they each contributed or feel they are contributing or it's something that needs to be done quickly they felt they've made the decision to delegate that and they are comfortable with that.

For Alex, these behaviours showed trust between the network members and in her, as the Secretariat.

Members' experiences of effective facilitation. It is evident from the quotes below that an effective facilitator was key to building trust in the network. Even though Alex was only paid for one day a week, the effect that she had on the organization was every day of the week. One of the ways that she made her presence expand beyond her one day a week was that she took the time to get to know the members as well as their needs.

Alex was a day a week ... devoted. She kept everybody in touch and together.
Participant 16

People came to develop trust as a leader in the organization because of her ability to understand and to meet individual's needs. So members would experience her understanding of their needs and communicating appropriately. This was effectively facilitation that created trust in the organization.

You have to invest a lot of time in allowing for people being all over the place ... if you end before you work through that phase [then you have]... less trust in the process, less trust in the decision or a missed opportunity.
Participant 2

The leadership was a big part in developing that trust.
Participant 18

Members' Experiences of ineffective facilitation. With the transition to the formal organization, several participants expressed concern about the facilitation process by which new board members were introduced to the board. Specifically they felt that more could be done to introduce new members to the culture of ACIP. Participants implied that this lack of facilitation meant that either new members behaved in an inconsistent manner with the ACIP culture to that point or that ACIP was not as welcoming to new members as they ought to have been.

I don't think there's been a level of formality to the onboarding process to new members ... that I think the organization could benefit from. [This] is probably where I hope we can go over the next little bit. Be even more deliberate about that just to make sure that people understand what we are

and that we have operated in a trusting relationship and what that means to us and therefore what specific behaviours are okay with us.

Participant 14

One of the things that wasn't done ... in the past that would have helped establish that trust ... there wasn't really an orientation package or process in place to bring on board new members.

Participant 11

Here a lack of effective facilitation to introduce new members to ACIP resulted in a missed opportunity to establish trust between the group and new members.

Evolution of Trust over Time

Time as a theme has both physical and social components. The physical proximity of individuals was felt to be important. Social interaction between individuals created the trust.

Trust is a history. Trust is something that's earned.

Participant 10

All the respondents in my study felt that trust is built over time, as time is needed to build up beliefs about each other's behaviour.

Getting people together a couple times a year builds relationships, taking the time to go to dinner together and doing other things in addition to doing all the business I really believe makes a big difference. You develop personal relationships as well.

Participant 5

The value of spending time with each other was felt to be paramount to trust development between the members of ACIP. This was evident in the participants' responses as those members who had been associated with the network from the earliest days had more trust between them than the newer members.

We had the ability you know early on when I was involved to meet face-to-face on a regular basis and get to know each other.

Participant 13

It's important that people come together.

Participant 12

Spending time together was so central to the early work of ACIP that participants who had been with the organization since the beginning would even equate trust with spending time together.

Trust is ... in the beginning we had more opportunities to get to know each other.
Participant 16

Because of the open communication we were able to have for those two days where everyone had a say and got to speak how they were feeling.
Participant 17

You're at a two-day meeting ... and you have time to go out for dinner or lunch. You are getting to know people better and understanding where they are coming from and that builds trust.
Participant 18

Several participants related that, during the early development of ACIP, time together galvanized the interpersonal relationships between members and influenced the development of trust. Shared experiences such as a meeting when the power went out and meeting participants were huddled under blankets to keep warm and another meeting at the farm house of one ACIP member were recalled with fondness by many of the participants.

I still remember meeting in Halifax early on . . . The power was out and we had blankets wrapped around us. We met in (a) farmhouse in PEI one time. We made an effort to do things a little different rather than meeting in a hospital boardroom every time.
Participant 16

These shared experiences are pivotal in building trust over time. Time and the sharing of experiences let people demonstrate their trustworthiness.

You see maybe the real person versus the professional put on the face person how people react to different places. ... Kevin (a pseudonym) is always good at coming up with innovative ideas of how to meet. I think that has helped for sure.
Participant 16

Sharing of experiences was thought of as being vital to the trust-building process within ACIP. These shared experiences ranged from accomplishments, meetings, to simply *“sitting down over dinner with people”* (Participant 2).

Time together builds social relationships and trust. The link between social relationships and trust became evident as members of the network became friends over time. It therefore stands to reason that

social activities enhanced the trust between members. Social activities allow for personal disclosure, which builds trust.

We started off as colleagues but became good friends over the course of the work we did. It wasn't just the work.

Participant 12

Even though it's a formal network, the social side ... even an opportunity to go for supper at an annual general meeting, it gives members a chance to meet each other outside of just the work place.

Participant 13

Because tacit knowledge is often shared in the form of anecdotes and personal stories, social time together would have provided the opportunity for the sharing of tacit knowledge and therefore a further increase in trust amongst members.

In addition, time was needed to ensure inclusion of all members is also important to building trust.

So not being acted upon but being acted with, ACIP didn't arrive with a product and try to sell it to me. They included people in the development of the product.

Participant 10

Working together builds trust. These experiences were not limited to social experiences. Trust also grew when members of the network shared work. Sharing tasks and projects were identified as one of ways in which trust was built between and among the members of ACIP. The need to rely on others to accomplish the goals of the organization was seen as necessary to building trust. As participant 12 noted “*all ACIP members have a lot on their desks so we need to work together to get things done.*” The sharing of work was also viewed as an outward sign of commitment to the network and its goals. As participant 9 put it, “*trust was built because . . . how can I put this, we followed through.*” By sharing work to complete projects, members developed first-hand knowledge of the capabilities and competencies of their fellow members, which was considered a building block of trust.

They divide tasks, they each contribute or feel they are contributing or they've...if it's something that needs to be done quickly, they've felt they've made the decision to delegate that and they are comfortable with that.

Participant 9

In addition, trust developed further between and amongst the network members after their early work produces such major success, such as the *Alcohol & Injury in Atlantic Canada: Creating a Culture of Safer Communities* report and the National Conference on Injury Prevention.

I guess [trust was built] because I worked with them on many, many projects.
Participant 7

But also, and perhaps more importantly, once this foundation of trust was built it really supported the work of the network.

Oh it did definitely enable the work to happen because again everybody rolls up their sleeves and did everything that they can do with the time that they had available to move things forward so you know whoever has a few minutes to work on something, they work on it.
Participant 8

Communication: A Key to Building Trust

It is not surprising that the members of ACIP identified communication as a key to building trust. Like our interactions with others, communication shapes our worldview.

Open communication (speaking) builds trust

I need to be able to operate in a safe environment ... where I know I'm not going to be defined by one thing I saw too quickly without thinking completely before saying it. It's important to me to be trusted to participate with best intentions. ... To be understood to be coming from a place of positive intentions. To be considered worthwhile enough as a participant that people will check with me ...
Participant 11

Here Participant 11 demonstrates that he or she speaks openly and candidly as a way to encourage feedback on his or her contributions. This method of encouraging feedback demonstrates a trust on the part of Participant 11 for the other members of the group to provide feedback that is useful. In speaking openly Participant 11 also demonstrates the possibility to others in the group and thereby encourages a willingness to trust and communicate openly in the wider group.

I trust a colleague if I know they will be confidential and they will appreciate my perspective or my inquiry. ... I trust that I can go to them with any question, regardless of what it might be or any issue and they would be willing to assist me.

Participant 12

Participant 12 is willing to be open and vulnerable in his or her communications with colleagues and when they reciprocate with open and attentive listening then trust is built. Again, participant 12 suggests that he or she builds trust by communicating her values and beliefs as openly and honestly as he or she is able.

Demonstrating the work that you do that you have ethics and morals and integrity and you're respectful and confidential. You have to do it in a way that represents your values ... you come to know if you're trustworthy or not.

Participant 12

Members of ACIP felt they could share their opinions, even if they were contrary to the consensus of the group. In speaking their mind at the meeting and having the continued support of members as friends and colleagues after the discussion, members increasingly trusted the network.

Such unrestricted expression of opinions also contributed to the development of trust in the organization as it contributed to the store of knowledge about individual members.

Unrestricted debate about the issue being considered. ... Openness about any potential conflict that folks might have when they do come to the table for a particular discussion. When those things are true ... it collectively affects us too. [T]rust builds more.

Participant 14

[I knew trust was in ACIP] when they were able to talk about different topics. Some were good and some were challenges within the group. That's healthy as well to be able to communicate that.

Participant 17

[R]eal deep trust includes space for dissent, for the contraries, the deep conversation and at the end of day, things are well communicated and the trust is intact and the camaraderie is intact.

Participant 19

Members also stated that transparency in communication was important to building trust in the organization.

Transparency and communication is key [to trust]. I think proactive versus reactive organizational communication is pretty key. I think clarity of vision and intent is pretty key.

Participant 14

If you're linked to a role and you are transparent in what your objectives and your beliefs are, then I think it's easy to trust.
Participant 15

One moment of dis-function for the network was created by a lack of effective communication. At one point, the Executive Director, the first hired staff of ACIP requested a leave of absence. The two co-chairs granted the leave without appearing to consult with other members of the board. A lack of communication amongst the board members strained the trusting relationships that had been established to date.

Open communication (listening) builds trust. Of course, communication is not only a matter of speaking but also of listening. And listening openly is required in groups where potential disagreements will need to be understood and worked through.

I'll normally just try to listen more attentively because often I haven't listened enough.
Participant 11

I [developed trust when] I was able to listen to other people's perspectives.
Participant 18

[T]hey've both been really good sounding boards. So I feel a lot of trust in my ability to communicate with the membership.
Participant 5

Most of the literature pertaining to communication and knowledge translation networks speaks to formal communication. Within networks that are effective for knowledge translation the importance of informal communication to building trust cannot be over stated.

I think when trust exists...sometimes I think it actually comes through in less formal communication. So to me anyways obviously you have your formal emails that go out but sometimes when there's a lot of trust, I feel the need to be less formal in some ways because you've got that strong relationship.
Participant 5

Tacit knowledge and communication. Trust develops not only from the shared tacit knowledge of the work that's being done but from a commitment to articulating ones position within that understanding. This willingness by members to assume, use and share tacit knowledge also implies a degree of trust.

Trust comes from the fact that we know that each of us is there for the right intentions. ... When we are speaking from self-interest and to be transparent enough to indicate, 'Actually this serves me better but I can see from the broader perspective that that may not be the way to go.' When we are able to have discussion like that where there's great transparency. That helps facilitate the trust.

Participant 11

Indeed, this member goes on to say *"the trust comes from that kind of transparency and comes from people declaring sort of the biases that we each have."* (Participant 11). This member has clearly experienced this kind of communication and, having seen it demonstrated, is confident that he or she can share their own thinking within a community of tacit knowledge users.

The assumption of shared tacit knowledge can also prove incorrect; members will not always be talking about the same thing. In these instances, open and honest communication is required to establish understanding.

We find through discussion and some disagreement that we are talking about the same thing. We are just using different words. Or we are using the same words but we are meaning different things.

Participant 11

The willingness to enter into these discussions and disagreements will build trust.

Electronic communication makes communication difficult. Several participants echoed the findings of the literature in stating that the types of communication methods used affected how the message was received and their ability to trust. Once the group has meshed, email and teleconference can work to support the group. Until that group has coalesced, however, the methods of communication need to be more personal. Once the trust is established, the shortcomings of electronic communication become easier to tolerate.

One member, who was not familiar with email in the first place, joined the group a bit later. The combination of this member's discomfort with electronic communication and the member's lack of historical knowledge of the group, came together to create some difficult communications.

In groups where trust has been established already, when a confusing email is received, members can fall back on the trust to reply and ask for clarification. A member new to the group, on the other hand, might not feel comfortable enough to follow up.

Email is an unfortunate thing sometimes. No tone of voice and sometimes I think that was a big part of the issue.

Participant 5

I believe that [recent conflicts] are because of more technology than personality. For me to communicate by email or text and things like that just doesn't work. I need face-to-face or at least voice-to-voice.

Participant 15

Potentially email is not a great thing for me.

Participant 11

These findings suggest that as is shown in Figure 2 below communication, time, and facilitation are pillars that trust rests on and that trust is a foundational piece to effective KT networks.

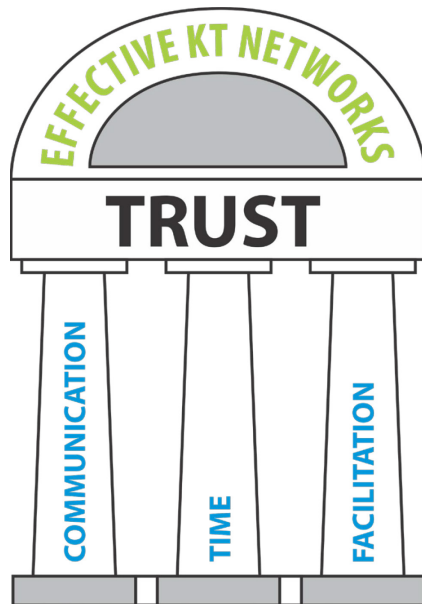


Figure 2 Model of development of trust in effective KT networks

Summary

This chapter presented the typology of trust found from the thematic analysis of the interviews. The typology of trust relates to the members of ACIPs understanding of trust and the process of trust development within ACIP. I discussed how members viewed trust as a social dynamic construct built on factors such as shared experiences, self-disclosure and time. I also highlight the importance of strong facilitative leadership and communication to the development of trust in a KT network.

CHAPTER 5: FINDINGS - ROLE OF TRUST IN KT NETWORK SUCCESS

In this chapter I will present ACIP as a successful knowledge translation network and outline the role that trust has played in ACIP's success. As a knowledge translation network, ACIP has been able to increase the capacity and innovation for, as well as awareness of, injury prevention in Atlantic Canada. It has also created benefits for its member organizations. These benefits range from a wealth of information shared, to having willing partners to support each other's efforts in injury prevention.

Trust within inter-organizational networks is fundamental to making these structures effective and all members of ACIP indicated that trust played an important role in the overall effectiveness and success of the network.

ACIP as a Success

One of the major successes of Alex's reign was the establishment of the network itself with the limited human and financial resources. Participants identified the very creation of ACIP as one of the major successes. Prior to ACIP there was little or no consistent injury prevention presence of Atlantic Canada, with only what could be described as pockets of injury prevention activity throughout Atlantic Canada.

Nationally, ACIP has become the go-to entity in Atlantic Canada for input, feedback, support, and collaboration in injury prevention. For example, ACIP recently participated in the Canadian Collaborating Centres on Injury Prevention (CCCIP) and the planning of, consultation on and implementation of several national initiatives. These initiatives range from national conferences on injury prevention and safety promotion, to the development of a national strategy for injury prevention and publishing of national reports and resources.

Prior to ACIP's participation in CCCIP, there was only one representative from Atlantic Canada in the organization. Since ACIP's involvement, there are six representatives from Atlantic Canada in CCCIP. The increase is significant. The CCCIP is a community of practice representing injury prevention centres throughout Canada. Its membership comprises all of the provincial injury-prevention centres and the leading national injury-prevention organizations in Canada. The CCCIP provides a unique opportunity for leading injury-prevention professionals to share knowledge and experiences, support individual and collective initiatives, policies, and research, and further the work of injury prevention throughout Canada.

Building on this foundation of successful collaboration as a network, and as an essential tool for translating local injury prevention initiatives maritime wide, a proposal was put forward to continue the work and establish a full time Secretariat. The goal of the Secretariat would be to coordinate and accelerate injury prevention activities and to reduce the burden of injury in Atlantic Canada. The first full-time executive director to undertake the Secretariat function was hired November 2008.

ACIP's Successes

Having argued earlier the importance of trust to effective KT networks, I will now present evidence of why ACIP is a successful KT network. As an effective KT network, ACIP has increased awareness of injury as a public health issue and made injury prevention efforts more successful in Atlantic Canada and nationally.

The national injury prevention organizations have held conferences bi-annually since 2001. ACIP participated on the program-planning committee of the 2003 national conference and ACIP and the Nova Scotia Department of Health Promotion and Protection were the local co-hosts of the 2005 national conference in Halifax. Because of ACIP's strengths, and the awareness of and excitement created by ACIP in Atlantic Canada, the national injury prevention organizations chose to hold the national conference on injury prevention in Halifax in 2005. This conference provided the opportunity for ACIP to highlight the progress Atlantic Canada has made in injury prevention. The conference was an overwhelming success, with delegates from across Canada. ACIP continues to be represented on the planning committee for every national conference.

ACIP has played a key role in the development of a national strategy for injury prevention. In 2003, through ACIP, each Atlantic province hosted a stakeholder consultation meeting to contribute to the development of the national injury prevention strategy. Because of the networks and partnerships that ACIP created, identifying stakeholders for the consultation process was easy. In 2009, the Public Health Agency of Canada developed a Pan-Canadian Health Network to strengthen public health in Canada. The network was made up of various expert groups and task groups and representatives came from many sectors and levels of government. Part of this network structure was the formation of a task group on injury prevention and a representative from both ACIP and Nova Scotia were members of this task group. The task group provided Atlantic Canada the opportunity to influence the direction of injury prevention nationally and to showcase injury prevention successes in Atlantic Canada.

By combining the efforts and resources of the four Atlantic Provinces, ACIP has ensured that all four provinces have a voice in injury prevention. This has strengthened and enhanced all injury prevention efforts in Atlantic Canada. By sharing costs of initiatives, activities and infrastructure has allowed for tremendous growth in injury prevention in the region. Without ACIP, some Atlantic provinces would have struggled to maintain any presence in injury prevention. The financial commitment made by the health departments of the Atlantic Provinces is minimal in relation to their return on investment and compared to what they would have to spend to create and staff their own collaborative network.

With the new executive direction in place, one of ACIP's early successes was a project entitled Under Your Own Influence. This project provided an opportunity for the collaborative to coalesce and demonstrate the value of interprovincial networks. The project also broadened the reach of ACIP, creating linkages with a wide array of stakeholders. The purpose of the Under Your Own Influence (UYOI) project was to evaluate the effectiveness of approaches to educating youth about drug and alcohol use, the consequences of use, and to provide youth with skills to avoid misuse. In developing their program, UYOI examined the effectiveness of two injury prevention programs: No Regrets and Prevent Alcohol & Risk-Related Trauma in Youth (PARTY). The examined these programs with respect to impact on knowledge, attitudes and behaviours regarding substance use, risk-taking and related injuries. The findings from this research provided a foundation to direct and inform future interventions that address injury and substance use among youth.

ACIP has also played a large role in the availability of reports on the impact and breadth of the injury issue in Atlantic Canada. They have published surveillance reports on injuries to children and youth, and reports outlining the economic burden of unintentional injuries in Atlantic Canada. Surveillance reports detail mortality and morbidity related to injury. Prior to the surveillance report released by the Network, provincial reporting of deaths related to injury was limited due to the small numbers at the provincial level and to ensure confidentiality. By releasing a regional report these issues were minimized. The information within these reports has been used for injury prevention planning in each Atlantic province and in setting regional priorities for Atlantic Canada.

ACIP has also been instrumental in the development, enactment and implementation of legislative measures for injury prevention in Atlantic Canada. They have been responsible for the development of policy analysis reports, engaging stakeholders to advocate for policy change and bearing witness to enactment of injury prevention legislation. For example, ACIP led the social marketing component of a campaign on the use of ski and snowboard helmets in Nova Scotia. While it was unusual for ACIP to do

something so provincially specific, it took on this role with the idea that the social marketing component could be moved to the other provinces if there was interest. With funding from Nova Scotia Department of Health and Wellness, ACIP coordinated the research, development and execution of two campaigns. The first campaign “*Wear it Proud*” was in advance of the legislation and was an attempt to increase the acceptability of helmet-use by celebrating helmet hair. The second campaign, called “*Helmet Match*,” was after the Bill had passed but before it came into effect with the intent of informing people of the new law and the regulations. This second campaign is still active, providing ongoing information for skiers and snowboarders. ACIP also wrote a letter supporting the legislation to the Nova Scotia government.

In addition to supporting injury prevention policies, ACIP policy-analysis reports have been written on graduated driving licensing and distracted driving. These reports bring together evidence on policy options and assess where each of the Atlantic Provinces are in terms of the policy.

Critical to ACIP’s success as a KT network has been the ability to produce ground-breaking reports and advocate for action. In 2010, ACIP released the report *Alcohol & Injury in Atlantic Canada: Creating a Culture of Safer Communities*. The report, the first of its kind in Canada, highlighted best practices in reducing alcohol-related injuries and made recommendations for action. This report has been profiled in all four Atlantic Provinces, across Canada and internationally. The political nature of some of the recommendations regarding access to alcohol made presentation of the findings of the report sensitive for some of the member organizations of ACIP.

In 2011, ACIP again broke ground with its report *The Social Determinants of Injury*. Highlighting the interrelationship between the social determinants and the need for multiple strategies, this report synthesized literature and data on social and economic conditions that affect injury rates. “The report also identifies the implications for injury prevention strategies and considerations for best practices in injury prevention and control” (ACIP Annual Report, 2010/2011, p.5). Health Canada chose this report as the focus of multi-stakeholder pilot project, which culminated in the development of a knowledge exchange workshop. This also showcased ACIP as a successful KT network. Besides presentation of the report findings, regionally and nationally, the results were shared with First Nations populations, a high-risk for injury population, through the Atlantic Policy Congress of First Nations Chiefs. Further ACIP was contracted to use the report as the basis for the development of a resource for the national Community Action Program for Children, a program for vulnerable and at-risk children in Canada.

The success of these reports is a product of the trust ACIP had in its Executive Director and in the development process.

Members' Growing Knowledge of Injury Prevention

One of ACIP's successes is the expansion of injury prevention knowledge to what are, traditionally, not injury prevention organizations. In the injury-prevention community, these organizations, not typically focused on injury prevention, are referred to as "non-traditional partners." For example, the Red Cross has been a significant non-traditional member of ACIP. In fact, they sit on the leadership team.

The Red Cross is a "humanitarian network," and has traditionally been involved in crisis management and disaster relief work. For example, the Red Cross will send a relief team to a disaster-zone with food, water and blankets. Having said this, the Red Cross has always been involved in "niche" injury prevention programs, for example, their Red Cross water safety and swimming lessons and more recently a violence- and bullying-prevention program. However, injury prevention has been, and remains, a small part of their mandate.

ACIP's success is that, within Atlantic Canada, the Red Cross has a deeper understanding of injury prevention as a public health issue. That is, the segment of their work devoted to injury prevention hasn't increased, but the scope of understanding within the Red Cross, has deepened. This, in turn, has led to an increase in injury prevention capacity for the Red Cross.

Sitting at the Table

The ability for the Red Cross to address injury prevention in its programming has increased as a result of its place on ACIP leadership team. This has happened in a few different ways. First, members' injury prevention knowledge is increased simply as a function of participating in meetings and hearing from injury prevention experts. Reports presented to ACIP as well as discussions at the table can inform members' work with their home organizations.

Trust between ACIP members makes their meetings and discussions particularly effective venues for people to learn about injury prevention. One way that this happens is that members feel their counterparts have credibility in injury prevention. Members also have confidence in the information they get from their counterparts because of their passion for and commitment to injury prevention.

Curriculum

A significant success for ACIP has been to actively educate members on injury prevention and thereby increase injury prevention knowledge in the Atlantic Provinces. For example, the Canadian Injury Prevention Curriculum (CIPC) was delivered as a post-conference activity to the national conference held in Halifax in 2005. ACIP leadership-team members were trained to facilitate the delivery of the CIPC. This was done to enable delivery of the CIPC across the Maritimes. ACIP has enabled other professional opportunities, including the delivery of the pilot test of the Canadian Falls Prevention Curriculum (CFPC) in Charlottetown in 2007 and the development of a teleconference/ webinar learning series, which highlights new research, initiatives or strategies in injury prevention. Participants in the CFPC were chosen from across the Maritimes to ensure that each province built capacity to address fall prevention. Because the learning series is offered through teleconference/webinar format, requiring little or no travel by participants', attendance has been good and evaluations have been positive. This method of developing capacity and knowledge through alternative-instructional methods and ensuring that representatives from all Maritime Provinces are present for face-to-face training opportunities has ensured that no region is left behind.

Members' Understanding of How Trust Contributed to ACIP's Success

Participants expressed the belief that because of the foundation of trust within ACIP, the reports discussed above have been well received, as have the advocacy efforts.

When I think of how easy things happened here on many issues is because we trust each other and because we know each other and we are the go-to people."

Participant 12

Our experience has been that overall [trust] has been certainly helpful in contributing to the success of ACIP.

Participant 14

I think [trust] has largely enabled what has been accomplished.

Participant 14

I think trust did play a big part in the public profile of ACIP.

Participant 19

The ability of ACIP to be the advocate for action and take on that role despite any potential backlash meant that no member organization was left alone to advocate. As participant 10 remarked, when asked about ACIP as an advocate,

There's nothing more powerful than standing shoulder to shoulder when the media or others are starting to challenge the credibility of organizations who have a different opinion.

Participant 10

[T]heir credibility was challenged a couple of times in the media. They stood fast and stuck to their points. They were professional and credible doing it. That proved a lot to me.

Participant 10

Trust in KT relies on expertise. Participants indicated that trust in the expertise of fellow members enhanced ACIP's knowledge translation efforts. The willingness to defer to another member because of their expertise demonstrated the trust that they had in their fellow members and also demonstrated the value of the collective.

There was ... trust around expertise.

Participant 19

I know their background in terms of knowledge and school and what they've done. ... I would trust.

Participant 7

I think people in injury prevention aren't too easy in terms of buying into something. We need to be shown the evidence and the resources.

Participant 7

Trust was built on a balance. Had we not had competent people at the table that were willing to invest both professionally and personally, I don't think it would have gone as far as it did.

Participant 9

The accomplishments concrete work being done then you get the buy in and trust from others as well."

Participant 18

ACIP members relied upon each other and that built a foundation of trust that enabled the KT to happen and, as a result, they could meet the goals and objectives of the group. Expertise goes in to KT strategies and the KT strategies then meet the goals and objectives of ACIP.

Trust and KT. Participants indicate that because they had trust in the expertise of the members, the knowledge that came from those members was also accepted as evidence to put into the KT projects and programs. There was no questioning the evidence because there was trust in the expertise and credibility of any member who brought evidence forward. The credibility of the knowledge was never up for discussion. The discussion amongst members was always about how to use the knowledge, not whether or not the knowledge was correct. It was a given, presumed, that the knowledge brought forward by members was correct.

[ACIP is successful] because we are evidence based ... and people trust the evidence. Knowing that we have produced literature and reports or opportunities for networking and made those available is a big part of [ACIP's success].

Participant 4

When an organization is credible it breeds trust too.

Participant 5

[The public] needs to trust that the research or the evidence is valid. ... You can take the alcohol issue as an example. It's very opposite to the culture and the political will of governments, for example. So there has to be a lot of trust that the information is true.

Participant 6

They've got the right knowledge base in terms of understanding evidence and that sort of thing.

Participant 7

Trust and tacit knowledge. While members trusted implicitly the knowledge brought forward for use in projects, the majority of the discussion was around how to use that knowledge. The use of the knowledge and the development of KT projects is what I discussed earlier as the tacit knowledge component of injury prevention. Many of the participants saw the connection between trust and the sharing of tacit knowledge in that the sharing of the how-to.

People who have lived similar experiences may trust each other.

Participant 4

[ACIP members] had a common interest, a common passion. ... [T]rust and that common passion was integral to the network being formed.

Participant 5

Understanding is huge. I can't imagine not trusting someone who has this deep passion for what they are doing. It makes ... the trust.

Participant 7

Tacit knowledge and KT. Because the group undertook different programs and projects, they combined the different tacit knowledge of everyone around the table about how to implement successful injury prevention programs. Members all had similar explicit, concrete knowledge, the knowledge of how to execute specific programs relies on tacit knowledge as each program or project is dependent on context.

[ACIP] brought different opinions and beliefs together under injury prevention. We were all doing different programs and projects. ... We were all in injury prevention, so giving it that name - we could all see and identify ourselves in there.

Participant 18

In the world of health promotion or injury prevention, I think the people in those worlds really embrace collaboration.

Participant 3

Trust, tacit knowledge sharing and KT

The decisions we make at the end of our discussions only are effective ones if we are able to work enough on the basis of trust if we are open and discuss in a meaningful way issues of injury prevention. If we are not able to establish that trust and work from it, then we are caged in terms of what we share and don't share. We just don't come up with the best decisions.

Participant 11

Here Participant 11 gestures to a common knowledge field of injury prevention and demonstrates that a willingness to share tacit knowledge about the common field is determined by the presence or absence of trust in the group. Perhaps most significantly, Participant 11 implies that this sharing of tacit knowledge about the field is when the group is able to come up with the best decisions for knowledge translation. Trust here is a foundation for the development of effective KT.

You know who to go to if you need to connect with somebody who is in an organization or is connected to somebody else who you need to get to. ... Like for instance child safety link is extremely credible in terms of getting knowledge and information but they are also very effective because it's about children and they are child based. There is that compassion there that is somewhat unique I think. ... It's based on that emotional piece that in the public eye they are the go-to place.

Participant 12

Here participant 12 demonstrates the ways that a network of organizations that shares tacit knowledge is free to focus on developing the translation part of the KT process. Here participant 12 articulates the tacit knowledge that the credibility of ‘child safety link’ is built, in part, on the emotional response of the public. This shared tacit knowledge within the injury prevention community enables members to focus on using that resource for KT projects.

There was a small core group at the beginning ... there was a general camaraderie around an issue, a public health issue that frankly was a bit of an underdog public health issue I think there's always ... some bonding around that because you're not receiving the kind of attention that other public health issues are receiving.

Participant 19

Establishing an understanding of how participants interpret the effect of trust on the network's effectiveness as a vehicle for KT relied on the uncovering their thoughts on what contributes to the effectiveness of ACIP as a network for KT and the how trust (or lack of trust) influences ACIP.

All the participants felt that when trust is high the work is easier because that is where the focus is, there are no distractions about processes or how the Network should function. In periods of low trust time is spent on the workings of the Network and not the work of the Network.

The trust allowed for things to happen. It allowed for ... resources and supports to go out that some people or groups might not have ever done.

Participant 5

I think to move ahead with projects of any kind, you need trust in the members and the executive director. You need trust in say the chair to make those...help the executive director with kind of those decisions that really don't need to go back to the whole group.

Participant 16

I think trust in a collaboration is so important because if you don't have trust, you may get stalled in moving forward.

Participant 3

Respondents also indicated that when trust was high the work took less time.

I think you've got a continuum there and if everybody sitting around the table does trust one another and things are going very smoothly, then you're sort of at the high end of that continuum.

Participant 8

As shown above, the connection amongst trust, tacit knowledge sharing and KT, laid the groundwork and was an important factor in the success of ACIP as an effective KT network. It's hard to disentangle each component - the trust, tacit knowledge sharing and KT - because they are so interwoven when ACIP succeeds. This dissertation therefore has drawn attention to the question of how to interweave these components to make a KT network successful.

Summary

In this chapter I presented ACIP as a successful knowledge translation network and outlined the role that trust has played in ACIP's success. I provided examples of why ACIP is an effective KT network including its development and activities. I discussed how ACIP's successes were the foundation for moving injury prevention forward in Atlantic Canada and their impact on the field of injury prevention nationally. As illustrated I believe that trust was a critical factor in the success of ACIP as an effective KT network.

CHAPTER 6: DISCUSSION

In my dissertation I have sought to understand the role of trust in inter-organizational networks that are effective for knowledge translation. My main data are from the 19 interviews. I supplemented the interview analysis with a review of key documents regarding the development, structure, and operations of the ACIP. The review of background documents provided me with a solid understanding of the mission, projects, and operational structure of ACIP. This helped me to better interpret comments that were made by participants. The document review was also used to corroborate and augment information gleaned in the interviews, such as the activities and projects of ACIP. The review of ACIP meeting documents further allowed me to infer the communication structures and workings of ACIP (for example, the breadth of communications).

The findings in this dissertation extend previous findings about the importance of facilitation, communication and time to effective knowledge translation networks. I have sought to answer the following question: how do participants within an effective KT network understand and experience trust, and how do they view the role of trust in the network effectiveness? The data revealed three major themes that members think are important to trust and that contributed to ACIP's success as a KT network: facilitation, communication, and time. These categories and their sub-categories are displayed in Figure 2 below. Although each of the themes identified by this research are presented as a unique variable, they are

interconnected and influence the experiences of the study participants. A certain level of transferability is supported by the similarity of these findings to those previously reported by other researchers.

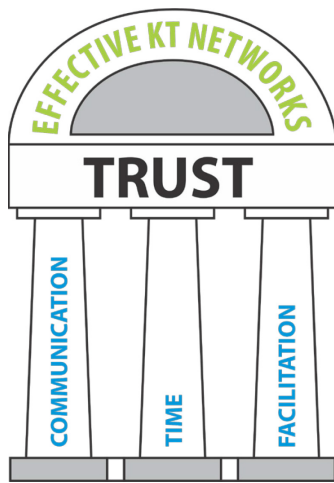


Figure 2 Model of development of trust in effective KT networks

This chapter is organized according to my theoretical contribution: understanding how participants of an effective KT network construct and experience trust, and how their perspectives on the role of trust work to make ACIP an effective organization. In each section, I discuss my research results in relation to existing literature. In so doing, I emphasize this study’s contribution to the field, which is this: the leading KT models outlined in the literature review fail to consider the integral role of trust as demonstrated in this study. Trust influences and constitutes positive interpersonal interactions of individuals within an effective KT network. Trust is built through effective facilitation, time spent together, and effective communication.

Facilitation

The successful transfer of knowledge within a network requires a blend of tacit and explicit knowledge, key players, and ‘trusted linkages’ (Havelock, 1973; Kitson et al., 1998). My findings, in particular regarding Alex’s role, are both consistent with and extend previous research. Alex drew on her explicit knowledge regarding community development and used her tacit interpersonal skills to connect others and build trust.

As previously discussed in the literature review of this dissertation, tacit knowledge is a form of wisdom that is difficult to articulate by the person who holds it; this form of knowledge might only be visible

in the person's performance of the particular skill that is second-nature (or tacit) to the person in question. In other words, the person may not consciously employ tacit knowledge, or draw on a set of procedures from their memory. Instead, tacit knowledge encompasses the skills that we have but might not be able to explain to others (Polanyi, 1958). This study showed that Alex's wisdom in working with individuals and groups (facilitation) allowed her to build the needed connections and relationships to develop the ACIP network in ways that facilitated an effective KT network.

This study also shows that tacit knowledge and trust are interdependent which is consistent with the findings of Holste and Fields (2010), discussed previously in the work. These authors conclude from their findings that, "both warm personal relationships ... developed through face-to-face interaction and solid respect for [another's] professional capability is required for the sharing of tacit knowledge" (Holste and Fields, 2010, p.135). For example, because the injury prevention community in Canada is so small, sharing tacit knowledge was important in building trust and vice versa. Organizational leaders were careful not to replicate the work of another organization—an implicit faux pas. Participants also alluded to tacit knowledge in saying that trust was built when members shared similar world-views (e.g., being part of 'Maritime Culture').

Furthermore, tacit knowledge in the context of injury prevention required flexibility. Each program and project had to be specific to the contexts in question. Tacit knowledge, in this vein, involves knowing that adjusting one's approach is required for a successful outcome. Knowing what approach to take as a member of the ACIP network was also a matter of tacit knowledge. For example, those with experience working within the health field valued collaboration, and perceived it as influencing trust. Conversely, another participant had to do away with a collaborative approach and modify their behaviour in order to be heard within the network. In this way, how participants employed their tacit knowledge in order to achieve KT reflects Hartley and Bennington's 2006 research where they write that: "It is precisely this kind of knowledge which has to be drawn on for the successful transfer of promising practices between individuals" (p. 103).

The findings reported in this study highlight the pertinent role of (a) key player(s) in successful KT, specifically in my close analysis of Alex's role. KT networks are more likely to be successful when key players—those with important roles in the organization—are highly connected (Long, Cunningham & Braithwaite, 2013), are opinion leaders (Valente & Pumpuang, 2007), and are highly motivated and passionate about the topic area in question (Buchel & Raub, 2002). KT requires 'collaborative interactions and trusted linkages' and therefore the success of a KT network is dependent upon the connections and the community respect attached to key players (Havelock 1973). As reported in this study's findings sections,

Alex, ACIP's part-time secretariat, was crucial to the success of ACIP. Based on her previous employment history and experience, she established collaborations and linkages that had not existed. She drew on a wide network of connections to the benefit of ACIP. As such, this study's results are consistent with previously reported research that has found that KT needs these 'collaborative interactions and trusted linkages.'

Having a key player who had power and influence is one of the factors that led to ACIP's effectiveness in its early years. In fact, study participants highlighted the fact that a key player was crucial to the development and evolution of ACIP. At the outset of ACIP, Alex was seen as a key player who was well connected and well informed. Participants viewed this person as a leader in bringing people together, in coordinating efforts, and in bridging gaps. Alex's approach focused on relationship-building and quality interactions—she was the glue. Key players such as Alex are able to coordinate activities and direct resources most efficiently because of their knowledge of and access to members in the network. In this sense, Alex's positive qualities allowed her to serve as a facilitator, knowledge broker, opinion leader, and change agent and thereby contribute to ACIP's success.

Because Alex was both well known in her field and well connected, she can further be seen as a key player in that key players utilize their professional connections and their knowledge of social and political contexts to efficiently coordinate activities and direct resources throughout the network. The PARiHS model views key players as facilitators whose role is to make things easier for others, helping and enabling as opposed to telling or persuading (Kitson et al., 1998). This role can encompass a broad spectrum of purposes ranging from helping someone to achieve a specific task to helping individuals better understand and navigate the context in which they are working. The Knowledge to Action model views key players as knowledge brokers, whose interpersonal relationships focus on linkage and exchange between individuals. The Diffusion of Innovation model sees key players as opinion leaders and change-agents that influence others by their behaviours (Rogers, 2003). Alex's passion and enthusiasm, in concert with her connecting those around her via ACIP can be seen as influencing and motivating others toward the goals of ACIP.

Long et al.'s (2013) findings support the importance of key players but also found that key players play two distinct roles. The first is being powerful in terms of setting the agenda. Secondly, they are influential in terms of achieving the objectives. My study goes further; whereas Long et al.'s (2013) study found that there are multiple key players, and shows both that the role of key players changed over time, and that successful KT can occur with only one key player. As ACIP evolved as a network, so did the role key players assumed from being the outward face of ACIP to being an advocate within the provincial governments. For example the Executive Director became the very public face of ACIP so that members

of the network had very tangible presence. While other key players because of their position became advocates for ACIP within government, never letting an opportunity pass by to highlight the network's value. Because of ACIP's informal nature at inception, the key player set the agenda, but was also guided the network to meet its objectives. Currently, the agenda is set by the leadership team and implemented by the executive director. The executive director is viewed as being influential in meeting the objectives and although power is said to be equal there was an undercurrent of power being centralized in Nova Scotia. In these ways, this study differs from Long et al.'s (2013) work in showing that if the culture of the network is informal, the person who sets the agenda and directs the group to achieve its goals can in fact be the same person.

Time

The duration of relationships and its effect on trust was a salient finding of this study. Trust was something built over time, as a result of both spending time together, and building social relationships with one another. This finding is similar to those found by Bose et al. (2002), Lewicki & Bunker (1995), and Zaheer et al. (1998) who found that groups with face-to-face interaction outperform other groups who have never met face-to-face.

Specifically, trust was tied to personal relationships, especially among the long-term members who had a shared past. The information that individuals used to make decisions was related to their past experiences, and whether they could trust someone based on their shared histories. These findings support previous research findings in that the longer people interact, the longer their 'shadow of the past' (Axelrod, 1984, Meyerson et al., 1996, Raub, 1997). As Weber and Carter (2003) have noted, "the mere act of spending time and experiencing life together provides the opportunity for trust construction. Time frames the interactional process by allowing for opportunities for self-disclosure that enable perspective taking can result in behaviours that reflect the orientation of trust" (p. 26). Time and trust are related: longer relationships provide more information on which to assess another's about trustworthiness. Time also pertains to future co-operation; the prospect of cooperating in the future casts a shadow upon the future trustworthiness of the other person, and yields ample possibilities to monitor an individual's behaviour.

The socio-political context in which ACIP is operating should also be noted in this discussion about trust via relationship-building over time. Because of current funding cuts to public health, there is not always the time or the resources needed to build the trust that might enhance the effectiveness of KT networks.

While Getrich et al. (2013) show that the nurturing of trust takes time and attention, my study extends this consideration to factors inherent in the wider political context affecting the success of knowledge translation.

Communication

Communication was paramount to providing the conditions to build trust in this study. Open communication, transparency, listening to others, and sharing tacit knowledge were seen as facilitators to proper communication, which lent itself to trust. Electronic ways of communicating such as email, on the other hand, was seen as impeding good communication.

Participants in this study highlighted the importance of self-disclosure and openness in building trust, with participants citing face-to-face social interaction as the preferred mode of being open with one another. This theme was demonstrated in the rich detail provided, and the vibrancy participants exhibited, when they relayed experiences outside of the expected interactions between participants of a network. These experiences, as noted by one participant, allowed insight into the personality and values of people. This theme of self-disclosure and openness, and its importance to building trust, is consistent with the findings of Ellison et al. (2003).

Conversely, electronic communication was seen as difficult to interpret. Many participants relayed difficulties with email communication in terms of an inability to read the nuances that are often conveyed in face-to-face communication. Most participants felt that email and teleconference were best used to support networks after relationships have been developed. This finding is similar to those found by Bose et al. (2002), Lewicki & Bunker (1995), and Zaheer et al. (1998) who found that groups with face-to-face interaction outperform other groups who have never met face-to-face.

ACIP as a Case Study: Trust and Learning and KT

As reported in chapter 5, inter-organizational trust was instrumental to the success of ACIP. Inter-organizational trust allowed outsider organizations to have ‘a place at the table’ which provided a setting to disseminate knowledge to groups working outside of this area. In this sense, knowledge translation was achieved directly as a result of including outsider organizations. This is consistent with previous research which shows that knowledge translation is achieved via networks (Milward and Provan, 1993; Agranoff and McGuire, 1998). While the literature on the effectiveness of inter-organizational networks is sparse and inconclusive (Lehman et al., 1994; Provan & Milward, 1995, 2001) this study reveals that inter-

organizational networks, when operating on a foundation of trust, are seen as effective by those involved. That trust is essential for inter-organizational networks has been reported previously reported by (Axelrod, 1984; Barnes, 1981; Morgan & Hunt, 1994; Sydow, 1998).

Participants reported that trust allowed for a positive uptake of knowledge; because they trusted each other, they readily believed the reports and opinions being communicated to be credible. Trust in ACIP was also built when they stayed united and on-message in the face of media and public criticism. In this sense, participants saw ACIP was seen as competent and professional—qualities that have been cited as leading individuals to trust an organization (Lee et al., 2010).

Knowledge translation was also aided in that participants believed their peers to be experts in their own right. Trust provides the conditions for people to willingly use information (Andrews & Delahay, 2000, Zaheer et al., 1998), to listen to others, and consider their points as valid (Levin, 1997; Levin & Cross, 2004; McKnight et al.'s, 1998). In my study, participants trusted the expertise of others, which impacted the levels of trust they had in the collective. This trust in the other's expertise also meant that evidence presented by their trusted peers was not challenged. Instead, they focused on how to mobilize the knowledge at hand.

Trust was also established in the collective via the sharing of tacit knowledge, which provided a foundation in which to meet the KT goals of the organization. My study goes beyond Roche's (1979) work on mentoring relationships by showing that a "willingness to share knowledge and understanding" is crucial (p.24) for the sharing of tacit knowledge in a KT setting.

Participants also felt that trust allowed the organization to accomplish its goals because members focused on their task at hand instead of questioning how ACIP operated. Participants also thought that ACIP was able to accomplish its goals in less time because of the trust that had been established. As such, trust functioned as a means to increase the efficiency of knowledge translation. The relationship between trust and efficiency has been reported by Zaheer et al. (1998) who found that trust saved time in that information was not always questioned, and subject to verification—processes that can be arduous and time consuming.

While not identified by the participants as an issue, the high level of trust among members raises the risk of ACIP network developing 'embeddedness' or 'group think'. Moving forward, ACIP may be advised to guard against personal loyalties obscuring the value of new perspectives and connections.

Study Limitations

This dissertation inevitably has limitations. Exploration of the role trust in networks that are effective for KT is unavoidably limited by the choice of network as the context for investigation.

Similar to all qualitative research, the transferability of the findings of this study may be strongest when considering individuals and situations that are similar to those in which the findings were obtained (Gall, Borg, & Gall, 1996). Qualitative research is used to generate rich descriptions about a phenomenon based on information from insiders. Consequently, I have undertaken to make this dissertation as descriptive as possible about the context, setting and population to enable readers to recognize essential similarities to cases of interest to them. This is in keeping with Stake's (1995) concept of naturalistic generalization. In keeping with this need to be descriptive I have been mindful that after theoretical saturation is reached, additional data may give rise to difficulties in understanding beyond the research setting. By reaching a point beyond saturation, additional data becomes repetitive and, eventually, superfluous and difficult to apply to other research settings.

There are also limitations to the primary data gathering method, interviews, used for this study. Frey and Oishi (1995) define an interview as "a purposeful conversation in which one person asks prepared questions (interviewer) and another answers them (respondent)." This conversation is dependent on the relationship between the interviewer and participant. What is shared may be selective, biased and/or ambiguous (Fontana & Frey, 2005). Additionally, I may not have been able to differentiate the critical theme from less important information during the interview, missing an opportunity for expansion or elaboration. I tried to mitigate these potential concerns and biases top of mind and ask for clarification and elaboration from participants and also by interviewing a good cross section of ACIP participants. Further, due to the physical distance of the study network, Atlantic Canada I was unable to observe ACIP in any activities. The lack of observational data meant that I never really experienced or saw ACIP in action. Observing and experiencing events as a member of ACIP could have provided another dimension to the insider view of how they experienced and constructed trust.

As well, researcher bias is a concern in qualitative studies as the researcher designs the questions, is the primary data collection vehicle and then brings the data together to share a story (Chenail, 2011). As all researchers should be, especially qualitative researchers, I was aware that my own views may have had an effect on the data produced in this study, on the analysis and on the interpretation of findings. As noted by Norris (2016) knowing oneself and one's views in relation to the phenomena under study is necessary to

manage with bias. How this is done varies on the researcher. I choose to try to minimize the impact of my biases on this work, in part, through an explicit declaration of my personal perspectives so that their influences may be evaluated by readers. Thus, I acknowledge that I started this research with the view that interpersonal trust is important in the effective functioning of a network. Lipson (1991) states that a researcher's background, education, professional training, beliefs and personality can impact the subjective perceptions of a phenomenon under study. My past and current professional experiences with networks may have influenced my work. I have been the member of a very effective national network for over ten years and have observed first-hand how networks can benefit individual members and achieve common goals. Thus, I began my work with a positive bias toward networks. My own observations and experiences have led me to my views about the importance of trust in networks.

I also tried to minimize the impact of my biases on this work through reflexivity. Reflexivity is a process of examining and explicating one's assumptions, biases, and preconceptions that could impact the research (Berger, 2015). As I developed the research methods and undertook data collection and analysis I tried to guard against value laden language that could unintentionally shape participant responses and subsequently data collection, interpretation and analysis. Again, advice and guidance from my advisory committee was invaluable. To aid me in examining and explicating my biases, I kept field notes which included my own reactions to the participants' responses and reviewed these notes throughout the data collection and analysis process. I also audio taped and then listened to pilot test interviews in order to identify any subtleties in the way I posed the interview questions that may have led to bias in the responses. Additionally my advisory committee, all of whom had different experiences with KT and networks, provided on-going support, advice and critiques. However, it must be acknowledged that my positive bias toward trust in networks may have influenced this work.

Summary

I have shown that trust underpinned the knowledge translation process in three ways: facilitation, time, and communication. Key players work to facilitate successful KT through their mobilization of explicit and tacit knowledge, their network of connections, and the establishment of trust. Trust is a salient factor in successful KT translation that is built over time via the establishment of interpersonal relationships, and is necessary for clear communication. While the importance of trust is discussed in the existing KT literature, KT models, such as PARIHs and Knowledge to Action, overlook its importance. These models fail to effectively outline the importance of trust as a factor in the interpersonal interactions of individuals within an

effective **KT** network. Subsequently, there is little offered in terms of how to build trust to make a **KT** network effective. In the following chapter, I discuss the limitations of the **PARiHs** and **Knowledge to Action** models. I then use **ACIP**, specifically the interpersonal interactions amongst and between members, to demonstrate how a high level of trust was built. I then argue that trust is a key component of an effective knowledge translation network, and that **KT** models ought to include trust in order to effectively achieve **KT**.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

This chapter is a summary of the findings related to the role of trust in an inter-organizational network that is effective for KT as experienced by participants of an injury-prevention collaborative. Research- and practice-related implications are presented along with recommendations for future research. This chapter concludes with reflections regarding my personal experiences, a description of my personal prejudices, and how the research process itself became a dynamic example of the role of trust in an effective network for KT.

Scholars argue that trust enables and determines the nature of interpersonal relationships (Blau 1964; Gefen 2000; Jarvenpaa et al. 1998). In a trusting environment, people are more inclined to help others, while in a less trusting environment people tend to shy away from providing help (Blau 1964; Luhmann 1979). When trust exists between individuals, they are more willing to invest in shared activities (Fukuyama 1995, Gametta 1988).

Trust in a network develops over time through interaction and communication. The capacity of a network to be effective for KT is influenced by the trust relationships within the network. For KT to be successful there has to be a change in beliefs, actions and behaviours. In other words, some learning has to occur. In the case of KT, this learning is both tacit and explicit in nature. Explicit knowledge is knowledge that has been or can be articulated, codified, and readily transmitted to others such as manuals, documents, and procedures (Nonaka, 2001). Tacit knowledge is highly personal and hard to codify or partly inexplicable, it is the knowledge of practice (Tsoukas, 2006; Collins, 2001). This form of knowledge is subtle and based on personal insights and intuitions. It has been suggested that tacit knowledge is the thing that we know but cannot tell (Tsoukas, 2006). Effective KT networks have the foundation of trust needed to move tacit knowledge forward through to explicit knowledge. In fact, some suggest that learning and KT, as a form of learning, occurs through the continuous and dynamic interaction between tacit knowledge and explicit knowledge and moving this knowledge from individuals to organizations (Nonaka and Takeuchi, 1995).

The role of trust in KT models discussed in this work is not as well documented as other aspects of the KT models such as the application of the knowledge. Although trust is viewed as an important factor for network effectiveness, it is often described in very little detail. The trust relationship between those promoting the use of a particular piece of knowledge and those who are being asked to use that knowledge is not well documented. Yet we know that the speed and extent by which knowledge translation happens is closely

related to the KT processes undertaken. For example, we know that passive dissemination of knowledge is generally ineffective in changing practices even if the issue is vitally important and the evidence is solid.

There is growing recognition of the vital role of personal interaction in the KT process. In the PARIHs model this is called facilitation, in the Knowledge to Action model this is talked about as knowledge brokering and in the Diffusion of Innovation model this is described in terms of the role of opinion leaders. This chapter will provide an overview of the role of personal interaction in these three models and then describe why trust is a vital component of personal interaction in order to be effective for knowledge translation. As in previous sections, I will illustrate the connection between trust and knowledge translation from my research findings.

PARIHs

Facilitation, as outlined in the PARIHs model, has three themes: purpose, roles and skills, and attributes. There is also recognition within this model of the importance of facilitation and the role of key player or project lead. Descriptors of this role range from champion to facilitator but what remains consistent is the need for someone with energy and motivation to undertake the day-to-day activities to achieve the goal of the project. The purpose of facilitation within the PARIHs model is about supporting people to change the practice. Therefore, the role of the facilitator is to enable others to change. The subsequent skills needed to achieve this goal of change of practice are varied. The skills and attributes required to be an effective facilitator range from supplying technical or clinical device to helping with group dynamics (Harvey et al. 2002).

Within the PARIHs model the role of facilitators is about enabling others as opposed to doing for others. This enabling function is really about developing the potential of individuals, partnerships and networks, in order to influence and support the knowledge transfer process. The skills and abilities needed to enable others are most often discussed in generalities such as flexibility, authenticity and critical reflection. There is recognition that there is a core set of skills required for facilitators to be effective, for example, interpersonal and communication skills. However, the reasons behind the need for these core skills are seldom discussed. I suggest that this is because trust is essential to effective KT and that this essential aspect has largely remained unspoken and unexamined until now.

Knowledge to Action

The knowledge to action (KTA) model identifies interpersonal relationships as one strategy for knowledge translation. This relationship is described as a linkage and exchange activity that is influenced by social structures. These social structures can be educational outreach, opinion leadership or knowledge brokering. All three of these structures rely on face-to-face communication and interaction. While there is recognition of the importance and nuance of interpersonal relations, there is little recognition or discussion of the need for trust within these interpersonal relationships.

Knowledge brokering has been defined by the Canadian Health Services Research Foundation as “all the activity that links decision-makers with researchers, facilitating their interaction so that they are able to better understand each other’s goals and professional cultures, influence each other’s work, forge new partnerships, and promote the use of research-based evidence in decision-making.” The ability to build and maintain effective relationships is implicit in this definition. As a result, the role of trust is also unstated. Building and maintaining effective relationships requires leaders to “establish trusting relationships that encourage conversations about the introduction of changes in frontline practices” (Conklin et al. 2013, p.2).

Diffusion of Innovation

As stated by Rogers (1983, p.5), “diffusion is the process by which an innovation is communicated through certain channels over time among members of a social system.” Diffusion is most often described as a social process rather than a rational process, as it is described in PARIHS and KTA. It is described this way because the process is discussed in terms of individuals or groups, as opposed to evidence and practice. For example, the process of adoption of an innovation is characterized by the speed at which an individual adopts an innovation as opposed to the science behind the innovation. Therefore, within the diffusion literature individuals are discussed as innovators, early adopters, early majority, majority, and non-adopters. As a social process the role of opinion leaders in stimulating the process of innovation adoption is vital. “Opinion leaders are people who influence the opinions, attitudes, beliefs, motivations, and behaviours of others” (Valente & Pumpuang, 2007, p.881). Further, the central idea behind the value of opinion leaders is their role in communicating by influence and I believe that in order to have influence there needs to be trust. Diffusion of innovation is the one model discussed in this work that identifies interpersonal communication as a key component of KT. Further diffusion of innovation explores how interpersonal communication drives a knowledge translation process.

Conclusions from Research Question Findings

This study included two main questions. The first question was concerned with how individuals of an effective **KT** network construct and understand their experiences of trust within the network. As the participants addressed questions concerning the nature of trust and the role of trust within the network, it became clear to me that trust is constructed and experienced through our interactions and relationships.

The second research question concerned the role of trust in determining the effectiveness of a network for **KT**. All participants felt that trust was an important influencer of the effectiveness of networks for **KT**. While participants acknowledge the role of trust in network effectiveness, contextual factors such as beliefs and preferences, can and do effect the construction of trust.

In this work I have demonstrated the role that trust has played in an effective **KT** network in order to inform **KT** researchers and practitioners. Although themes that emerged from the interview data are minimally represented in the existing literature, this study has provided insight into how trust can be constructed in networks. This information thereby enhances the value of networks as a tool for **KT**.

While I had not posed a specific question about the role of a key player, or a facilitator like Alex, was highlighted throughout my interviews and my analysis. When **ACIP** began, the role of what has been called the “Alex factor” was very strong. However, she did leave the organization eventually. And when the organization brought on a new leader, it was not onerous. The group looked for a leader who had similar qualities to Alex. However, more importantly, my study showed the level of trust that had been built during Alex’s tenure provided the new leader the space and security to become accustomed to the group and the position and to make the role her own.

Even now the new **ED** has left and they had an interim leader for a year. At the same time they had other members come and go so the network was in a state of turmoil. This pointed them to the fact that they needed an orientation for new members. Now **ACIP** does have an orientation package for new members as well as a mentorship system whereby new members can ask questions that they would not ask in the whole group. A change in leadership can erode the trust in networks. We cannot expect networks to remain stable. We have to plan for new members and new leaders.

Specifically what emerged from my research was that trust between members and the facilitator and trust amongst member organizations was essential to the effective workings of **ACIP**. My analysis revealed that trust was composed of three components: effective facilitation, open and honest communication and time spent together. These are the major findings from this study that are also my major contribution to the literature. To reiterate: my study showed that trust is essential for building a network effective for **KT** and;

the three components of facilitation, communication and time are essential to building trust. These findings are of essential ingredients to building trust. I do not, however, suggest that these components are exhaustive of what is required to build trust, or an effective KT network.

Recommendations

This study found that trust is an essential element in an inter-organizational network that is effective for KT. Trust acts as a facilitator, making interactions between members easier and more fluid. When trust is robust the focus is on the goal of the network without concern for inequities and motivations. When trust is fragile the network becomes weighted down by the processes of operating the network taking the focus off the goal and objectives of the network.

Because of the strong implication for facilitation and key players, networks in particular need to ensure that facilitators have the skills necessary to build trust. Although the role of the facilitator is being broadened out in the new work by **Kitson, Harvey and Witney**, the role of trust is still not as developed as it needs to be and neither is the facilitator's role in developing trust. These new ideas only really talk around the idea. They talk about facilitator's developing relationships but the item of trust is not addressed specifically or highlight sufficiently. It's almost as though the trust for a facilitator is a given, presumed. Trust in the person cannot be presumed simply because a person occupies the role of facilitator.

For KT Practitioners - Focus on the Human Experience

The results of my study, although centered on the interpretation of the trust experiences of 19 participants, may have relevance for a larger social context. A better understanding of trust construction and experience may provide the potential for improved collaboration between individuals and thus organizations. As mentioned in the introduction, many KT networks struggle to meet their goals. If the results from this study enable researchers and practitioners to better understand the importance of the human experience in these networks, then valuable resources can be conserved.

In this study it became evident that participants that were part of the evolution of the network and had a shared history displayed a trust based on vulnerability rather than reciprocity. By this I mean that those members of ACIP who shared experiences beyond the mission of the network were more apt to risk vulnerability such as a loss of power, for larger broader gains for the network. It is crucial then to ensure adequate face-to-face interaction to enrol new members in not only the vision and mission but also the nuances of the network.

A facilitator of a network must set up opportunities for face-to-face engagement between members and the facilitator as well as members of the network. These opportunities must extend to occasions to meet socially or to spend extended periods of time together, or provide a unique and separate time. These are the experiences, which my results show, really provided the foundation for the development of trust.

The literature around facilitation focuses on the competencies of facilitators. Competencies are certainly one side of the coin. But interpersonal interactions are the other side of the coin. Networks that stand the test of time are those that don't focus as much on the competencies but are built on relationships first. Sometimes these two things are difficult to discern because in a social relationship the competencies might also be there. It is relatively easier to check for competencies. And so more energy ought to be spent developing the relationship side of the equation. The facilitator is responsible for ensuring that this side of the equation is taken care of.

Another aspect of building social relationships that facilitators are responsible for is introducing new members to the group. Facilitators are key in introducing new members and making them feel comfortable in order that those initial relationships can be established. This is especially important when networks are national or even regional and where members must meet and frequently communicate electronically. There are the formal terms of reference of any network. But there are also the social norms of the group, which new members will not know until they have spent some time in the group. A facilitator must ensure that the new member's entrance into these social situations, even or especially electronically, are managed successfully.

Further, this research has shown that much of KT work relies upon tacit knowledge of how to transfer research findings to a broader community. For example, midwives can learn the science of delivering a baby but the art of making a labouring mother comfortable, is tacit knowledge and the transfer of that knowledge is tacit knowledge. Significantly, of course, the transfer of tacit knowledge requires a degree of trust between the teacher and the learner. Again, therefore developing trust through the effective facilitation of communication and time together is essential to the very specific work of KT.

Setting up an effective network takes a good deal of time and effort. It is not a quick fix. A network will not thrive simply with the establishment of a listserv. Often, it seems, people think that simply setting up the network will ensure that people will share. In reality, setting up an effective network takes time and effort and resources. Even with ACIP, with all the trust between members already established, they needed

resources for Alex to work one day a week. Member organizations also needed to put in resources as well in terms of staff time required for ACIP's development. To make a new network effective, the organizations that come together to develop a network must make a commitment of time and resources beyond staff time. For example, the Red Cross must send someone to meetings, host a meeting and invest resources and personnel to the extent that is necessary. The partner organizations of any KT network need to provide the resources and time needed to make it successful. Networks can often seem like entities that do not require resources.

ACIP's struggles with leadership transitions teach us that a succession plan and a plan to orient new members can be beneficial. It is not only a matter of orienting the new members to the network structure, the terms of reference, and the bylaws. More important is to orient new members to the hidden norms of the group, the culture, the nuances of the group and its workings.

For Researchers – Future Research Possibilities

This study was undertaken to address the lack of knowledge regarding the role of trust within networks that are effective for KT. The role of trust in effective KT networks is a complex topic, but this study offers a beginning for understanding. Hopefully future researchers will discover other facets of the trust experience and how it relates to effectiveness with KT networks. Additional research is needed to understand the relationship between power and trust in effective KT networks. Whether we want to believe it or not, power is never equal. While not a major focus of my study, the perception of the unequal distribution of power within ACIP did have a detrimental effect on the trust within the network. This perception led to a decline in effectiveness.

Second, additional research is needed with groups in different situations and contexts from the one in this study, for example, KT networks in areas of health promotion outside of injury prevention and other areas of public health. This research can determine if and how experiences vary. Because injury prevention in Canada is such a small field, the experiences of ACIP may well differ from the experiences of KT networks in other fields. The participants within this study had many positive experiences of both personal interactions basis and as an effective network. It would be interesting to study networks in other professions outside of health promotion to determine if the experiences vary.

Finally, research is needed to more clearly identify and understand the factors that constrain or enable individuals to build effective trusting relationships through alternatives to face-to-face communication. As our global world shrinks and younger generations become more comfortable with

alternative communication tools, the need to be able to develop trusting relationships over distance will be paramount. Because of the ease with which these young people develop relationships via electronic communication, I suggest that researchers study how trust is built in these exclusively electronic relationships. Investigations into methods by which to build trust electronically are needed. Research has shown, for example, that once a group has gelled, electronic communication will suffice. For example, some task forces meet only semi-regularly and conduct the majority of their business electronically. Therefore, the question is how often groups need to meet in order to gel so that electronic communication will suffice.

Another site of potential research would be to examine the difference and delineation of tacit and explicit knowledge. It would be interesting to consider in more detail the transfer of tacit knowledge and the ways in which it occurs successfully.

Reflections on My Researcher Experience

As I conducted interviews with participants, I realized that at the same time that we were both interpreting trust in networks, we were also interpreting the role of trust between us. For the interviews I had ten questions to guide my interview. However, to help with my understanding, I used probes to elicit additional responses. My selection of questions, while not meant to bias the results, did affect the direction of the interviews. Throughout the interview process and analysis I noticed that the narrative of each participant had a slightly different tone and perspective. This led to a diversity of interpretations that I believe deepen the breath of my understanding. As noted by Hirsch “the more interpretations one knows, the fuller one’s understanding” (p. 128, 1967).

As I began my research journey the question of study population became a focus. I was fortunate that ACIP was open to the opportunity my research posed. Initially I was concerned that my prior collegial relationships with three members of ACIP would present problems for my research. However, as the interviews proceeded, I realized that our relationships enabled openness, especially about recent challenges, that may not have been shared with another researcher.

I find myself continuing to reflect on this research experience and the circularity of it: asking questions, listening to answers and interpreting, which led to more questions. This leads me to the relevance of my research. If networks are here to stay as a vehicle for KT, then the relationships within these networks are paramount. As a result, understanding the experience of trust is very important to ensuring that networks for KT are effective. The centrality of trust to all relationships, even between members in a

network, cannot be over stated. Trust is a product of human interaction and does not exist outside our interchanges (Webber & Carter, 2003). Trust and its dynamic nature make possible any action or change in our increasingly complex world.

References

- Abrams, L. C., Cross, R., Lesser, E., & Levin, D. Z. (2003). Nurturing interpersonal trust in knowledge-sharing networks. *Academy of Management Executive*, 17(4), 64-77.
- ACIP. (2007). *Business Case for the Establishment of a Secretariat for the Atlantic Collaborative on Injury Prevention*. Halifax: ACIP.
- ACIP. (2011). *Annual Report 2010/2011*. Halifax: ACIP.
- ACIP, (2015). www.acip.ca accessed 15/08/2015.
- Adler, P. S., & Kwon, S. (2002). Social capital: Prospects for a new concept. *The Academy of Management Review*, 27(1), 17-40.
- Ammeter, A. P. (2000). *Determinants of interpersonal trust in working relationships*. Unpublished Doctoral Dissertation, University of Texas at Austin.
- Andrews, K. M., & Delahay, B. L. (2000). Influences on knowledge processes in organizational learning: The psychosocial filter. *Journal of Management Studies*, 37(6), 797-810.
- Agranoff, R., & McGuire, M. (1999). Managing in network settings. *Review of Policy Research*, 16(1), 18-41.
- Axelrod, R. (1984). *The evolution of cooperation*. New York: Basic Books.
- Backer, T. E. (1991). Knowledge utilization: The third wave. *Science Communication*, 12(3), 225-240.
- Baier, A. (1986). Trust and antitrust. *Ethics*, 96(2), 231-260.
- Balas, E. A., & Boren, S. A. (2000). Managing clinical knowledge for health care improvement. *Yearbook of Medical Informatics*, 65-70.
- Barabási, A. L. (2002). *Linked: How everything is connected to everything else and what it means for business, science, and everyday life*. Cambridge: Perseus publishing.
- Bainbridge, L., & Wood, V. L. (2012). The power of prepositions: Learning with, from and about others in the context of interprofessional education. *Journal of Interprofessional Care*, 26(6), 452-458.
- Barnes, L. B. (1981). Managing the paradox of organizational trust. *Harvard Business Review*, 59(2), 107-

- Barringer, B. R., & Harrison, J. S. (2000). Walking a tightrope: Creating value through interorganizational networks. *Journal of Management*, 26(3), 367-403.
- Bate, S., & Robert, G. (2002). Knowledge management and communities of practice in the private sector: Lessons for modernizing the NHS in England and Wales. *Public Administration*, 80(4), 643-663.
- Bartol, K. M., & Srivastava, A. (2002). Encouraging knowledge sharing: The role of organizational reward systems. *Journal of Leadership & Organizational Studies*, 9(1), 64-76.
- Berg, B. L. (1998). *Qualitative research methods for the social sciences* (3rd Ed.). Boston, MA: Allyn & Bacon.
- Berger, R. (2015). Now I see it, now I don't: researcher's position and reflexivity in qualitative research. *Qualitative Research*, 15(2), 219-234.
- Bero, L. A., Grilli, R., Grimshaw, J. A., Harvey, E., Oxman, A. D., & Thomson, M. A. (1998). Closing the gap between research and practice: An overview of systematic reviews of interventions to promote the implementation of research findings. *British Medical Journal*, 317(7156), 465-469.
- Bigley, G. A., & Pearce, J. L. (1998). Straining for shared meaning in organizational science: Problems of trust and distrust. *Academy of Management Review*, 23(3), 405-421.
- Blatter, J., & Blume, T. (2008). In search of co-variance, causal mechanisms or congruence? Towards a plural understanding of case studies. *Swiss Political Science Review*, 14(2), 315-356.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- Bose, R. (2002). Customer relationship management: key components for IT success. *Industrial Management & Data Systems*, 102(2), 89-97.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Brush, B. L., Baiardi, J. M., & Lapidés, S. (2011). Moving toward synergy: Lessons learned in developing and sustaining community-academic partnerships. *Progress in Community Health Partnerships: Research, Education, and Action*, 5(1), 27-34.

- Buchel, B., & Raub, S. (2002). Building knowledge-creating value networks. *European Management Journal*, 20(6), 587-596.
- Butler, J. K. J. (1991). Toward understanding and measuring conditions of trust: Evolution of conditions of trust inventory. *Journal of Management*, 17(3), 643-663.
- Canadian Institutes of Health Research, National Scientific Advisory Committee. (2004). *Listening for direction on injury final report*. Ottawa: CIHR.
- Canadian Institutes of Health Research. (2004). *Knowledge translation strategy, 2004-2009*. Ottawa: CIHR.
- Canadian Health Services Research Foundation. (2003). *Theory and Practice of Knowledge Brokering in Canada: A Report based on a CHSRF national consultation and Literature Review*. Ottawa: Canadian Health Services Research Foundation.
- Chami, R., & Fullenkamp, C. (2002). Trust and efficiency. *Journal of Banking & Finance*, 26(9), 1785-1809.
- Chenail, R. J. (2011). Interviewing the investigator: Strategies for addressing instrumentation and researcher bias concerns in qualitative research. *The Qualitative Report*, 16(1), 255-262.
- Child, J., & Faulkner, D. (1998) *Strategies of co-operation: managing alliances, networks and joint ventures*. New York: Oxford University Press.
- Clark, M. C., & Payne, R. L. (1997). The nature and structure of workers' trust in management. *Journal of Organizational Behaviour*, 18(3), 205-224. DAC
- Coffey, A., & Atkinson, P. (1996) *Making sense of qualitative data: Complementary research strategies*. Thousand Oaks, CA: Sage Publications.
- Coleman, D. (1995). *Emotional intelligence*. New York: Bantam.
- Collins, H. M. (2001). Tacit knowledge, trust and the Q of sapphire. *Social Studies of Science* 31(1), 71-85.
- Conklin, J., Lusk, E., Harris, M. & Stolee, P. (2013). Knowledge brokers in a knowledge network: The case of seniors health research transfer network knowledge brokers. *Implementation Science*, 8(7). doi:10.1186/1748-5908-8-7.
- Costa, A. C. (2000). Work team trust and effectiveness. *Personnel Review*, 32(5), 605-622.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th Ed.).

Thousand Oaks, CA Sage.

- Dacin, T. M., Hitt, M. A. & Levitas, E. (1997). Selecting partners for successful International alliances: Examination of U.S. and Korean firms. *Journal of World Business*, 32 (1): 3-16.
- Davenport, T.H., & Prusak, L. (1998). *Working knowledge: how organisations manage what they know*. Boston, MA: Harvard Business School Press
- Davis, D. (2005). Quality, patient safety and the implementation of best evidence: Provinces in the country of knowledge translation. *Healthcare Quarterly*, 8(Special Issue), 128-131.
- Dearing, J. W. (2008). Evolution of diffusion and dissemination theory. *Journal of Public Health Management Practice*, 14(2), 99-108.
- De Gagne, J. C., & Walters, K. (2010). The lived experience of online educators: Hermeneutic phenomenology. *Journal of Online Learning and Teaching*, 6(2), 357-366.
- Dirks, K. T., & Ferrin, D. L. (2001). The role of trust in organizational settings. *Organization Science*, 12(4), 450-467.
- Dobbins, M., Robeson, P., Ciliska, D., Hanna, S., Cameron, R., O'Mara, L., ... Mercer, S. (2009). A description of a knowledge broker role implemented as part of a randomized controlled trial evaluating three knowledge translation strategies. *Implementation Science*, 4(23), 1-16.
- Ebert, T. A. E. (2007). *Interdisciplinary trust meta-analysis of high rank trust articles between 1966 to 2006*. No. Discussion Paper 2007-18. Munich: Ludwig-Maximilians Universitat Munchen, Munich School of Business.
- Ellison, N. B, Steinfield, C. & Lampe, C. (2007). The benefits of facebook 'friends': social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication* 12(4), 1143-1168.
- Erikson, E. (1963). *Childhood and society* (2nd Ed.). New York: Norton.
- Erikson, E. (1959). *Identity and the life cycle*. New York: International University Press.
- Estabrooks, C. A., Squires, J. E. Cummings, G. C. Birdsell, J. M., & Norton, P. G. (2009). Development and assessment of the Alberta context tool. *BMC Health Services Research*, 9(234), 1-12.

- Estabrooks, C. A., Thompson, D. S., Lovely, J. E., & Hofmeyer, A. (2006). A guide to knowledge translation theory. *Journal of Continuing Education in the Health Professions*, 26(1), 25-36.
- Field, B., Booth, A., Ilott, I. & Gerrish, K. (2014). Using the Knowledge to Action Framework in practice: a citation analysis and systematic review. *Implementation Science*, 9:172
- Fontana, A. & Frey, J. H. (1994). Interviewing: The art of science. *The Handbook of Qualitative Research*. Thousand Oaks: Sage Publications, 361-376.
- Frey, J. H., & Oishi, S. M. (1995). *How to conduct interviews by telephone and in person*. London: Sage.
- French, B. (2005). Contextual factors influencing research use in nursing. *Worldview on Evidence-Based Nursing*, 2(4), 172-183.
- Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. New York: Free Press.
- Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction*. White Plains, NY: Longman.
- Gambetta, D. (1988). *Can we trust trust? Trust: Making and breaking cooperative relations*. 13, 213-237. Department of Sociology, University of Oxford.
- Gabarro, J.J., & Athos, J. (1976). *Interpersonal relations and communications*. Englewood Cliffs, NJ: Prentice-Hall.
- Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.
- Gefen, D. (2000). E-Commerce: The Role of Familiarity and Trust. *Omega*, 28(6), 725-737.
- Getrich, C. M., Sussman, A. L., Campbell-Voytal, K., Tsoh, J. Y., Williams, R. L., Brown, A. E., ... Neale, A.V. (2013). Cultivating a cycle of trust with diverse communities in practice-based research: A report from prime net. *Annals of Family Medicine*, 11(6), 551-558. doi:10.1370/afm.1543.
- Gillespie, N. (2003). *Measuring trust in working relationships: The behavioural trust inventory*. Unpublished manuscript. Retrieved 3 June 2010 from <http://www.mbs.edu/index.cfm?objectid=951E38F4-123F-A0D8-42A4CE244A85F4BE>
- Grabher, G. (1993). *The embedded firm: On the socioeconomics of industrial networks*. London: Routledge.

- Graham, I. D., Logan, J., Harrison, M. B., Straus, S. E., Tetroe, J., Caswell, W., & Robinson N. (2006). Lost in knowledge translation: Time for a map? *Journal of Continuing Education in the Health Professions*, 26(1), 13-24.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 1360-1380.
- Grant, J., Green, L., & Mason, B. (2003). Basic research and health: A reassessment of the scientific basis for the support of biomedical science. *Research Evaluation*, 12(3), 217-224.
- Grimshaw, J. M., Eccles, M. P., Lavis, J.N., Hill, S. J. & Squires, J. E. (2012). Knowledge translation of research findings. *Implementation Science*, 7, 50.
- Grimshaw, J. M., Shirran, L., Thomas, R. M., G., Fraser, C., Bero, L. A., & O'Brien, M. A. (2001). Changing provider behaviour: An overview of systematic reviews of interventions. *Medical Care*, 39(8, Supplement 2), II2-II25.
- Groenewald, T. (2004). A phenomenological research design illustrated. *International Journal of Qualitative Methods*, 3(1), 42-55. Retrieved from http://www.ualberta.ca/~iiqm/backissues/3_1/pdf/groenewald.pdf.
- Guba, E. G., & Lincoln, Y. S. (1981). *Effective evaluation: Improving the usefulness of evaluation results through responsive and naturalistic approaches*. San Francisco, CA: Jossey-Bass.
- Gulati, R. (1995). Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances. *Academy of Management Journal*, 38(1), 85-112.
- Gurvitch, G. (1971). *The social frameworks of knowledge*. New York: Harper and Row.
- Haider, M., & Kreps, G. L. (2004). Forth years of diffusion of innovations: Utility and value in public health. *Journal of Health Communications*, 9(6), 3-11.
- Harvey, G., Loftus-Hills, A., Rycroft-Malone, J., Titchen, A., Kitson, A., McCormack, B., Seers, K. (2002). Getting evidence into practice: The role and function of facilitation. *Journal of Advanced Nursing*, 37(6), 577-588. doi: 10.1046/j.1365-2648.2002.02126.x.
- Hartley, J. & Allison, M. (2002). Good, better, best? Inter-organizational learning in a network of local

- authorities. *Public Management Review*, 4(1), 101-118.
- Hartley, J. & Benington, J. (2006). Copy and paste, or graft and transplant? Knowledge sharing through inter-organizational networks. *Public Money and Management*, 26(2), 101-108.
- Havelock, R. G. (1973). *Planning for innovation through dissemination and utilization of knowledge*. Ann Arbor: Centre for Research on Utilization of Scientific Knowledge.
- Health Canada (1999). *Toward a healthy future: Second report on the health of Canadians*. Retrieved from <http://publications.gc.ca/collections/Collection/H39-468-1999E.pdf>
- Helfrich, C. D., Damschroder, L. J., Hagedorn, H. J., Daggett, G. S., Sahay, A. Rithie, M., ... Stetler, C. B. (2010). A critical synthesis of literature on promotion action on research implementation in health services (PARIHS) framework. *Implementation Science*, 5(82), 1-20.
- Hirsch, E. D. (1967). *Validity in interpretation*. New Haven and London: Yale University Press.
- Holloway, I. (1997). *Basic concepts for qualitative research*. London: Blackwell Science.
- Holste, J. S., & Fields, D. (2010). Trust and tacit knowledge sharing and use. *Journal of Knowledge Management*, 14(1), 128-140.
- Hoy, W. K., & Tschannen-Moran, M. (1999). Five facets of trust: An empirical confirmation in urban elementary schools. *Journal of School Leadership*, 9, 184-208.
- Huerta, T. R., Casebeer, A., & Vanderplaat, M. (2006). Using networks to enhance health services delivery: Perspectives, paradoxes and propositions. *Healthcare Papers*, 7(2), 10-26.
- Jarvenpaa, S. L., & Leidner, D. E. (1999). Communication and trust in global virtual teams. *Organization Science*, 10, 791-815.
- Jones, G. M., & George, J. M. (1998). The experience and evolution of trust: Implications for cooperation and teamwork. *The Academy of Management Review*, 23(3), 531-546.
- Kitson, A., Ahmed, L. B., Harvey, G., Seers, K., & Thompson, D. S. (1996). From research to practice: One organizational model for promoting research-based practice. *Journal of Advanced Nursing*, 23, 430-440.
- Kitson, A., Harvey, G., & McCormack, B. (1998). Enabling the implementation of evidence based practice:

- A conceptual framework. *Quality Health Care*, 7, 149-158.
- Kitson, A., Rycroft-Malone, J., Harvey, G., McCormack, B., Seers, K., & Titchen, A. (2008). Evaluating the successful implementation of evidence into practice using the PARIHS framework: Theoretical and practical challenges. *Implementation Science*, 3(1), 1-37.
- Larzelere, R. E. & Huston, T. L. (1980). The dyadic trust scale toward understanding interpersonal trust in close relationships. *Journal of Marriage and the Family*, 42, 595-604.
- Lazzarini, S. G., Miller, G. J. & Zenger, T. R. (2008). Dealing with the paradox of embeddedness: The role of contracts and trust in facilitating movement out of committed relationships. *Organizational Science*, 1-20, doi 10.1287/orsc.1070.0336.
- Lee, P., Gillespie, N., Mann, L., & Wearing, A. (2010). Leadership and trust: Their effect of knowledge sharing and team performance. *Management Learning*, 41(4), 473-491.
- Lehman, A. F., Postrado, L. T., Roth, D., McNary, S. W., & Goldman, H. H. (1994). Continuity of care and client outcomes in the Robert Wood Johnson Foundation program on chronic mental illness. *Milbank Quarterly*, 72(1), 105-122.
- Levin, D. Z. (1997). Organizational learning and the transfer of knowledge: An investigation of quality improvement. *Organizational Science*, 11(6), 630-647.
- Levin, D. Z., & Cross, R. (2004). The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer. *Management Science*, 50, 1477-1490.
- Lewicki, R. J., & Bunker, B. B. (1995). Trust in relationships: A model of trust development and decline. In B. B. Bunker & J. Z. Rubin (Eds.), *Conflict, cooperation and justice* (pp. 133-173). San Francisco: Jossey-Bass.
- Lipson, J. G. (1991). The use of self in ethnographic research. In J. M. Morse (Ed.), *Qualitative Nursing Research*, (pp. 73-89) Newbury Park: Sage.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Long, J. C., Cunningham, F. C., & Braithwaite J. (2013). Bridges, brokers and boundary spanners in collaborative networks: a systematic review. *BMC Health Services Research*, 13(1), 158-

158. <http://dx.doi.org/10.1186/1472-6963-13-158>

- Luhmann, N. (1979). *Trust and power*. Chichester, England: Wiley.
- Marshall, C., & Rossman, G. B. (1995). *Designing qualitative research* (2nd Ed.). Thousand Oaks, CA: SAGE Publication, Inc.
- Marshall, R. S., Ngyuyen, T. V. Bryant, S. E. (2005). A dynamic model of trust development and knowledge sharing in strategic alliances. *Journal of General Management*, 31(1), 41-57.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709-734.
- McAllister, D. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38(1), 24-59.
- McCaffrey, L. (2006). Research Transfer Network of Alberta Evaluation Report. <http://www.assembly.ab.ca/lao/library/egovdocs/2006/alhfm/163518.pdf> accessed 5/31/16).
- McKnight, D. H., Cummings, L. L., & Chervany, N. L. (1998). Initial trust formation in new organizational relationships. *The Academy of Management Review*, 23(3), 473-489.
- McWilliam, C. L., Kothari, A., Ward-Griffin, C., Forbes, D., Liepert, B., & SW-CCAC Home Care Collaboration. (2009). Evolving the theory and praxis of knowledge translation through social interaction: A social phenomenological study. *Implementation Science*, 4(26), 1-14.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.
- Meyerson, D., Weick, K. E., & Kramer, R. M. (1996). *Swift trust and temporary groups*. Thousand Oaks, CA: Sage.
- Miles, M. B., & Huberman, A. M. 1994. *Qualitative data analysis: An expanded sourcebook* (2nd Ed.). Thousand Oaks, CA: Sage.
- Milgram, S. (1967). The small world problem. *Psychology Today*, 1(1), 61-67.
- Milward, H. B., Provan, K. G., & Else, B. A. (1993). What does the hollow state look like? In B. Bozeman (Ed.), *Public Management: The State of the Art* (pp. 309-322). San Francisco: Jossey-Bass.

- Mishra, A. K. (1996). Organizational responses to crisis: The centrality of trust. In R. M. Kramer, & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 260-287). London: Sage.
- Mold, J. W., & Peterson, K.A. (2005). Primary care practice-based research networks: working at the interface between research and quality improvement. *Annals of Family Medicine*, 3 (suppl 1), S12-20.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *The Journal of Marketing*, 58(3), 20-38.
- Morse, J. M., & Field, P. A. (1995). *Qualitative research methods for health professionals*. Thousand Oaks, CA: Sage.
- Morris, C., & Rodriguez, A. (2005). Towards an existential model of trust. *Peace Review: A Journal of Social Justice*, 17(1), 95-102.
- Nelson, K. M., & Coopridge, J. G. (1996). The contribution of shared knowledge to IT group performance. *MIS Quarterly: Management Information Systems*, 20(4), 409-432.
- Neuman, W. L. (2011). *Basics of social research: qualitative and quantitative approaches*. Toronto: Pearson.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company*. New York: Oxford University Press.
- Nonaka, I., Toyama, R., & Byosiere, P. (2001). A Theory of Organizational Knowledge Creation: Understanding the dynamic process of creating knowledge. In M. Dierkes, A. B. Antal, J. Child, & I. Nonaka (Eds.), *Handbook of organizational learning and knowledge* (pp. 491-517). New York: Oxford University Press.
- Norris, N. (2016). Error, bias and validity in qualitative research. *Educational Action Research*, 5(1), 172-176.
- Padgett, D. K. (2012). *Qualitative and mixed methods in public health*. Thousand Oaks: Sage publications.
- Parent, R., Roy, M., & St-Jacques, D. (2007). A systems-based dynamic knowledge transfer capacity model. *Journal of Knowledge Management*, 11(6), 81-93.

- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd Ed.). Thousand Oaks, CA: Sage Publications.
- Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd Ed.). Thousand Oaks, CA: Sage Publications.
- Polanyi, M. (1958). *Personal knowledge: Towards a post-critical philosophy*. University of Chicago Press.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24, 1-24.
- Provan, K. G., & Milward, H. B. (1995). A preliminary theory of interorganizational network effectiveness: A comparative study of four community mental health systems. *Administrative Science Quarterly*, 40, 1-33.
- Provan, K. G., & Milward, H. B. (2001). Do networks really work? A framework for evaluating public-sector organizational networks. *Public Administration Review*, 61(4), 414-423.
- Rempel, J. K., Holmes, J. G., & Zanna, M. P. (1985). Trust in close relationships. *Journal of Personality and Social Psychology*, 49, 95-112.
- Richards, L. (2005). *Handling qualitative data: A practical guide*. London: Sage Publications.
- Robeson, P. (2009). *Networking in public health: Exploring the value of networks to the national collaborating centres for public health*.
<http://www.nccmt.ca/uploads/media/media/0001/01/56143af45c22ac442a0af87ccbbf26e83af55b96.pdf>
accessed 3/10/2012.
- Roche, G. R. (1979). Much ado about mentors. *Harvard Business Review*, 57, 14-18.
- Rogers, E. M. (1983). *Diffusion of innovations* (3rd Ed.). New York: The Free Press.
- Rogers, E. M. (1995). *Diffusion of innovations* (4th Ed.). New York: The Free Press.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th Ed.). New York: The Free Press.
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review*, 23(3), 393-404.
- Rothe, J. P. (2000). *Undertaking qualitative research. Concepts and cases in injury, health and social life*.

- Edmonton, Canada: The University of Alberta Press.
- Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, 35(4), 651-665.
- Rotter, J. B. (1971). Generalized expectancies for interpersonal trust. *American Psychologist*, 26, 443-452.
- Rycroft-Malone, J. (2002). Getting evidence into practice: The meaning of 'context'. *Journal of Advanced Nursing*, 38(1), 94-104.
- Rycroft-Malone, J., Harvey, G., Seers, K., Kitson, A., McCormack, B., & Titchen, A. (2004). An exploration of the factors that influence the implementation of evidence into practice. *Journal of Clinical Nursing*, 13, 913-924.
- Sales, A. S., Estabrooks, C.A., & Valente, T. W. (2010). The impact of social networks on knowledge transfer in long-term care facilities: Protocol for a study. *Implementation Science*, 5(49), 1-10.
- Sanson-Fisher, R. W. (2004). Diffusion of innovation theory for clinical change. *Medical Journal of Australia*, 180(6 Suppl), S55-S56.
- Schein, E. (1990). Organizational culture. *American Psychologist*, 45(2), 109-119.
- Schutt, R. K. (2012). *Investigating the social world: The process and practice of research*. Thousand Oaks: Sage publications.
- Scott, J. (2000). *Social network analysis: A handbook* (2nd Ed.). London: Sage.
- Shaw, R. B. (1997). *Trust in balance: Building successful organizations on results, integrity and concern*. San Francisco: Jossey-Bass.
- Sheppard, B. H., & Sherman, D. M. (1998). The grammars of trust: A model and general implications. *Academy of Management Review*, 23(2), 422-437.
- Sheppard, B. H., & Tuchinsky, M. (1996). Micro OB and the network organization. In R. M. Kramer, & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 140-165). Newbury Park, CA: Sage.
- Simpson, J. A. (2007). Foundations of interpersonal trust. In A. W. Kruglanski & E. T. Higgins (Eds.) *Social Psychology Handbook of Basic Principles* (2nd ed.), (pp. 587-607). New York: Guilford.

- Stake, R. E. (2000). Case studies. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 435-453). Thousand Oaks: Sage.
- Stake, R. E. (1995). The art of case study research (pp. 49-68). Thousand Oaks, CA: Sage.
- Straus, S. E., Tetroe, J. M., & Graham, I.D. (2011). Knowledge translation in the use of knowledge in health care decision. *Journal of Clinical Epidemiology*, Jan 64(1):6-10.
- Sudsawad, P. (2007). *Knowledge translation: Introduction to models, strategies, and measures*. Madison: The National Center for the Dissemination of Disability Research.
- Sydow, J. (1998). Understanding the constitution of interorganizational trust. In C. Lane, & R. Bachmann (Eds.), *Trust within and between organizations*, (pp. 31-63). New York: Oxford University Press.
- Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, 17(Special Issue), 27-43.
- Szulanski, G., Cappetta, R., & Jenson, R. J. (2004). When and how trustworthiness matters: Knowledge transfer and the moderating effect of causal ambiguity. *Organization Science*, 15(5), 600-613.
- Teacy, W. T. L. (2005). *An investigation into trust & reputation for agent-based virtual organisations*. University of Southampton: Faculty of Engineering, Science and Mathematics, School of Electronic and Computer Science.
- Tesson, K. J. (2006). *Dynamic networks: An interdisciplinary study of network organization in biological and human social systems*. Unpublished PhD, Department of Psychology, University of Bath.
- Thorne, S. (2008). *Interpretive description*. Walnut Creek, CA: Left Coast Press.
- Thorne, S., Reimer Kirkham, S., & O'Flynn-Magee, K. (2004). The analytic challenge in interpretive description. *International Journal of Qualitative Methods*, 3(1), 1-11. Retrieved from http://www.ualberta.ca/~iiqm/backissues/3_1/pdf/thorneetal.pdf
- Towner, E., Carter, Y., & Hayes, M. (1998). Implementation of injury prevention for children and young people. *Injury Prevention*, 4(Supplement), S26-S33.
- Tschannen-Moran, M. (2001). Collaboration and the need for trust. *Journal of Educational Administration*,

39, 308-331.

- Tsoukas, H. (2006). Do we really understand tacit knowledge? In M. Easterby-Smith, M. A. Lyles, (Eds.), *Handbook of Organizational Learning and Knowledge Management* (pp. 411-427). Cambridge, MA: Blackwell Publishing.
- Uzzi, B. (1997). Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, 41(1), 35-67.
- Valente, T. W., & Pumpuang, P. (2007). Identifying opinion leaders to promote behaviour change. *Health Education & Behaviour*, 34(6); 881-889.
- Valente, T. W. (1996). Social network thresholds in the diffusion of innovations. *Social Networks*, 18, 69-89.
- Van Wijk, R., Jansen, J. J. P., & Lyles, M. A. (2008). Inter- and intra-organizational knowledge transfer: A meta-analytic review and assessment of its antecedents and consequences. *Journal of Management Studies*, 45(4), 830-853.
- VeneKlasen, L. & Miller, V. (2002). *A New Weave of Power, People & Politics: The action guide for advocacy and citizen participation*. Oklahoma City: World Neighbors.
- Wasserman, S., & Faust, K. (1994). *Social Network analysis*. Cambridge, MA: Cambridge University Press.
- Wathen, C. N., Sibbald, S. L., Jack, S. M., & MacMillan, H. L. (2011). Talk, trust and time: A longitudinal study evaluating knowledge translation and exchange process for research on violence against women. *Implementation Science*, 6(102), 1-15.
- Watts, D. J., & Strogatz, S. H. (1998). Collective dynamics of 'small-world' networks. *Nature*, 393, 440-442.
- Weber, L. R., & Carter, A. I. (2003). *The social construction of trust*. New York: Kluwer Academic / Plenum Publishers.
- Weiss, C. (1979). The many meanings of research utilization. *Public Administration Review*, 39(5), 426-431.
- Westfall, J. M., Mold, J., & Fagnan, L. (2007). Practice-based research—"Blue Highways" on the NIH roadmap. *Journal of the American Medical Association*, 297(4), 403-406.

- Williams, M. (2001). In whom we trust: Group membership as an affective context for trust development. *Academy of Management Review*, 26(3), 377-396.
- Yin, R. (2003). *Case study research: Design and methods* (3rd Ed.). Beverly Hills, CA: Sage Publishing.
- Yin, R. (2014). *Case study research: Design and methods* (5th Ed.). Thousand Oaks, CA: Sage Publications.
- Zaheer, A., McEvily, B., & Perrone, V. (1998). Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. *Organization Science*, 9(2), 141-159.
- Zand, D. E. (1972). Trust and managerial problem solving. *Administrative Science Quarterly*, 17(2), 229-239.
- Zucker, L. G. (1986). Production of trust: Institutional sources of economic structure, 1840-1920. In B. M. Staw, & L. L. Cummings (Eds.), *Research in Organizational Behaviour*. Greenwich, CT: JAI Press.

APPENDIX A - ETHICS CERTIFICATE



RESEARCH ETHICS OFFICE

308 Campus Tower
Edmonton, AB, Canada T6G 1K8
Tel: 780.492.0459
Fax: 780.492.9429
www.reo.ualberta.ca

Notification of Approval

Date: April 9, 2013
Study ID: Pro00036706
Principal Investigator: Linda Carroll
Study Title: Does trust have a role in knowledge translation networks?
Approval Expiry Date: April 8, 2014

Approved Consent Form:	Approval Date 4/9/2013 4/9/2013	Approved Document Consent form_qualitative.doc information sheet_qualitative3.doc
------------------------	---------------------------------------	---

Thank you for submitting the above study to the Research Ethics Board 1 . Your application has been reviewed and approved on behalf of the committee.

A renewal report must be submitted next year prior to the expiry of this approval if your study still requires ethics approval. If you do not renew on or before the renewal expiry date, you will have to re-submit an ethics application.

Approval by the Research Ethics Board does not encompass authorization to access the staff, students, facilities or resources of local institutions for the purposes of the research.

Sincerely,

William Dunn, PhD
Chair, Research Ethics Board 1

Note: This correspondence includes an electronic signature (validation and approval via an online system).

APPENDIX B - CONSENT FORM



UNIVERSITY OF
ALBERTA

**School of Public Health
Department of Public Health Sciences**

4075 RTF
Edmonton, Alberta, Canada

lcarroll@ualberta.ca

Title of Project: Does trust have a role in Knowledge Translation Networks?

Principal Investigator: Dr. Linda Carroll
PhD Candidate: Ms. Kathy L. Belton

Phone Number(s): 780-492-9767
Phone Number: 780-492-9762

Part 2 (to be completed by the research subject):

	<u>Yes</u>	<u>No</u>
Do you understand that you have been asked to be in a research study?	<input type="checkbox"/>	<input type="checkbox"/>
Have you read and received a copy of the attached Information Sheet?	<input type="checkbox"/>	<input type="checkbox"/>
Do you understand the benefits and risks involved in taking part in this research study?	<input type="checkbox"/>	<input type="checkbox"/>
Have you had an opportunity to ask questions and discuss this study?	<input type="checkbox"/>	<input type="checkbox"/>
Do you understand that you are free to withdraw from the study at any time, without having to give a reason?	<input type="checkbox"/>	<input type="checkbox"/>
Has the issue of confidentiality been explained to you?	<input type="checkbox"/>	<input type="checkbox"/>
Do you understand who will have access to the information you provide?	<input type="checkbox"/>	<input type="checkbox"/>

I agree to take part in this study: YES NO

I agree that the interview will be audiotaped: YES NO

Participant

(Printed Name)

(Signature)

(Date dd/mm/yy)

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee _____

Date _____

APPENDIX C - PROPOSED INTERVIEW GUIDE

I will be using a semi-structured interview in order to explore how trust is constructed by the members of the ACIP. This format is flexible allowing new questions to be brought up during the interview dependent upon what an interviewee says. The questions below are proposed but I anticipate several other questions, including probing questions, to be added during the course of each interview. I also anticipate that the interview guide will evolve throughout the course of the study.

Interview guides typically contain an introduction (including informed consent), a set of questions, and closing comments and these are provided below. In addition, I have provided examples of possible responses for each question.

Introduction - Key Components

- Thank you
- My name and affiliations
- Purpose
- Confidentiality
- Duration
- How interview will be conducted
- Opportunity for questions
- Signature of consent

Questions and Description of Possible Responses

1. Demographics

- Gender
- Age
- Education level
- Occupation

Preamble - The use of networks has increased substantially over the past 10 years as a tool for knowledge translation. ACIP is a prime example.

2. Do you think ACIP is an effective network for KT? Yes/No Why? Why not?

If no, after why not, ask about how ACIP would have to change to become an effective network for KT?

3. What do you think contributes to the effectiveness of ACIP as a network for knowledge translation? Why do you think these factors are important? (Ask for elaboration, examples)

If trust not mentioned probe and get respondents to elaborate to see whether trust is implied in their response.

If trust still not mentioned then probe with, some people think that trust has a role in how effective an organization like ACIP is. What do you think about that? Why, why not?

Possible responses include a mix of tangible things such as resources, common goals and intangible things such as values, beliefs and trust, reputation, reliable, other factors, yes important but not present in ACIP

4. What do you think trust is? Features and qualities.

Possible responses – a mix between loyalty, commitment, confidence, reliability, always there, support, other features and qualities

5. How do you know whether or not trust exists between members of ACIP?

Possible responses – work well together, common goal, loyalty, commitment of members, when you need support you get it, tension among coworkers (if trust not seen as part of ACIP), other responses

6. What is your own experience of trust within ACIP?

Possible responses – grew to trust other members because worked with them, got to know them personal and their credentials, experience and reliability; can't trust other members because of personal (or observed) experiences, Don't see it as an important factor in a work setting.

7. If respondent sees “trust” as an important aspect in ACIP - How do you think this trust was built in ACIP? If respondent thinks trust is important in organizations, but does not think trust is present in ACIP - What do you think has gotten in the way of trust in ACIP? If respondent does not think that trust is important - How do you think that ACIP operates in the absence of trust?

Possible responses - over time, worked on common projects, social events, getting to know people, working in teams, getting support and respect

8. How do you think trust (or lack of trust) influences ACIP?

Possible responses - makes it easier to work, generates pride in our work, makes quality of work higher

9. What do you think influences how people trust or don't trust in organizations?

Possible responses - values, beliefs, culture, up-bringing, respect received, how they work,

10. How do you get people to trust you?

Possible responses - letting them get to know me, my credentials, by being honest, reliable and supportive

Closing - Key Components

- Additional comments
- Next steps
- Thank you

Sample text - Is there anything more you would like to add? I'll be transcribing the information you gave me and if you like you can review and confirm the information before it is analyzed. A copy of my final report will be sent to ACIP. Thank you for your time.