

CONTRIBUTING TO THE DEVELOPMENT OF COMMUNITY-BASED
KNOWLEDGE TRANSLATION THROUGH THE CREATION,
IMPLEMENTATION, AND EVALUATION OF A YOUTH MENTAL HEALTH
PROMOTION INITIATIVE

by

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Abstract

Background: Mental health challenges have been identified as the most significant health issue facing young people. Leaders in the field have advocated for public health approaches to better address this issue. Some scholars have called for interventions informed by young people to enhance relevance and effectiveness of interventions. Knowledge translation (KT) has emerged in the health context as a strategy to promote the uptake of evidence to improve health outcomes; however, the majority of KT research to date has focused on clinical settings. The needs of researchers and practitioners working in community settings to address population-level health outcomes have not been adequately attended to, leading to calls for further development of community-based knowledge translation (CBKT), an approach underpinned by the tenets of participatory research and KT. Given these gaps, the purpose of this research was to contribute to the field of CBKT through the development, implementation and evaluation of a youth-driven mental health promotion initiative. **Methods:** This study utilized a case study design and was conducted in a rural community located in North-Central British Columbia, Canada. A mixed methods approach incorporating quantitative surveys, qualitative interviews and ethnographic field notes was used to examine the contextual factors associated with adolescent mental health, develop a CBKT framework to inform future work in this field, and assess the influence of a CBKT initiative on youth mental health. **Findings:** Findings demonstrate ways in which adolescent mental health may be influenced by contextual factors, evidence that can be used to inform change efforts to improve youth mental health. Further, a theoretically-driven and evidence-informed CBKT framework is introduced and used to illustrate how it can inform context-relevant,

youth-driven initiatives. The CBKT approach utilized was shown to make a contribution to enhancing positive aspects of mental health such as resilience and connectedness among young people. Further, this approach was linked by study participants to changes at a community-level that foster mental health outcomes such as civic engagement, shifting norms and empowerment. **Conclusions:** CBKT shows promise as an approach to addressing one of the leading public health issues facing young people today, mental health challenges.

Preface

The work contained in Chapter 3 of this dissertation is based on data collected for a project led by Dr. Joy L. Johnson. I was responsible for assisting in the conceptualization of this study, data collection, and conceiving and conducting the analysis for this chapter. Chapters 4 and 5 represent the original, independent work of the author, Emily K. Jenkins. All empirical research undertaken for the completion of this dissertation was approved by the University of British Columbia Behavioural Research Ethics Board (project title: “Fostering emotional resilience in youth”, certificate H12-00963; and project title: “Contributing to the development of community based knowledge translation through the creation, implementation, and evaluation of a youth mental health promotion initiative”, certificate H13-00733).

Chapters 3, 4 and 5 will be further developed and submitted for publication with the following authors: Emily K. Jenkins, Joy L. Johnson, Vicky Bungay, Anita Kothari and Elizabeth M. Saewyc. I was responsible for the data analysis and initial drafts of all chapters. My supervisory committee provided guidance on research question development, data analysis plans, and writing.

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List of Abbreviations

ANOVA	Analysis of Variance
BC	British Columbia
CBKT	Community-Based Knowledge Translation
CBPR	Community-Based Participatory Research
CIHR	Canadian Institutes of Health Research
CYRM	Child and Youth Resilience Measure
EBM	Evidence-based medicine
IKT	Integrated knowledge translation
KT	Knowledge translation
LGBT	Lesbian, Gay, Bisexual, and Transgender
OLS	Ordinary Least Squares Regression
PI-ED	Pediatric Index of Emotional Distress
RCT	Randomized-Controlled Trial
SES	Socioeconomic status
UBC	The University of British Columbia
YC	Youth Collaborator

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Chapter 1: Introduction

1.1 Introduction

Knowledge translation (KT) has emerged as a research and practice area aimed at bridging the “know-do” gap and is viewed as critical to improving health outcomes. However, the majority of KT research focuses on enhancing the use of research evidence among practitioners working in clinical settings. The needs of researchers and health professionals working in community-based settings to address population-level health outcomes are not adequately attended to by current KT approaches. While the notion of community-based knowledge translation (CBKT) has emerged in recent scholarly literature, this approach remains in its early stages of development. Through this dissertation research I sought to contribute to addressing this knowledge gap through research and theorizing aimed at articulating the unique characteristics of CBKT and establishing a theoretically-driven and evidence-informed CBKT framework to guide KT researchers and practitioners in the planning, implementation and evaluation of CBKT initiatives.

While one of my research aims was to contribute to addressing an important gap in KT science, the other was to apply this CBKT framework to establish and evaluate a community-based initiative targeting what the World Health Organization (2014) has identified as the most significant health issue facing young people today, mental illness and emotional distress. In this dissertation, emotional distress is conceptualized as encompassing a spectrum of mental health challenges from difficult thoughts and emotions such as stress and grief, through to clinically significant mental disorders, such as depression or schizophrenia. In Canada, more than 1.2 million Canadian youth (15% of the youth population) are formally diagnosed with a mental

disorder and an even greater segment of the adolescent population (20-30%) report having an “emotional or psychosomatic complaint”, a finding that has been shown to increase with age (Boyce, 2004). Research indicates that 70% of mental disorders first arise during adolescence, with high likelihood of chronicity (British Columbia Ministry of Health Services, 2002). Thus, this stage of development represents a crucial period for early detection and intervention in order to improve health, social, and economic outcomes throughout the life course (George, 1999; Kessler et al., 2005).

Of the various mental disorders, depression, suicidality (i.e., suicidal thoughts and/or attempts), and completed suicide represent a significant public health problem for Canadian youth. Population-based surveys indicate that the lifetime prevalence of depression among Canadian adolescents aged 15-18 years is 7.6% and the lifetime prevalence of suicidality is 13.5% (Cheung & Dewa, 2006). In recent years, strings of youth suicides have brought attention to the gravity of this problem – suicide is the second leading cause of death for Canadians between 10 and 24 years of age (Kutcher & Szumilas, 2008). In fact, while other developed countries have witnessed a decline in youth suicide over the last decade, Canada’s rates have remained stable (Cheung & Dewa, 2006; Navaneelan, 2012). In British Columbia (BC), depression and suicidality are overrepresented among our adolescent populations. In Canada, BC has the second highest proportion of youth having experienced at least one episode of depression during their lifetime (8.4% in BC vs the national average of 7.6%) and the highest proportion of youth having experienced suicidality during their lifetime (18.0% in BC vs the national average of 13.5%) (Cheung & Dewa, 2006).

Historically, research related to emotional distress has focused largely on clinical or biological dimensions of mental illness (Horwitz & Scheid, 1999). While this body of evidence has

informed clinical practice in important ways (e.g., advances in pharmacotherapy; development of “evidence-based” guidelines), it provides little guidance to researchers and practitioners working in community settings, targeting population-level mental health outcomes through public health approaches.

Public health involves the science and practice of protecting the health of populations and includes such strategies as health promotion and disease or illness prevention (further discussion of a public health approach and related concepts appears in Chapters 4 and 5). Evidence that speaks to the ways in which mental health is linked to contextual factors (i.e., social and structural elements that influence health) is needed to inform community-based, public health intervention. For example, it is well recognized that contextual factors such as gender, ethnicity, socioeconomic status (SES), sexual orientation and connectedness impact mental health. This type of evidence will help to produce interventions that are contextually relevant and responsive to community needs. Through this doctoral research I contribute to addressing these knowledge gaps while developing an approach to fostering the mental health outcomes of Canada’s youth populations.

Given the research needs and health issues identified, the purpose of this dissertation research was twofold: 1) to better understand the process of CBKT and to develop an evidence-informed CBKT framework and, 2) to utilize a CBKT approach in an initiative aimed at fostering positive mental health among youth in community-based settings. The research questions of interest include:

1. How does context influence young peoples’ experiences of emotional distress?
2. What are the key elements of CBKT and what does this process look like in context?

3. What contributions can a CBKT initiative make to the mental health of young people?

In what follows, a review of relevant literature is presented to situate the research questions of interest within the extant literature and provide further justification for this study. In Chapter 2, a brief overview of the theoretical and methodological approach taken in this research and an outline of the data collection and analysis procedures is provided. The main study findings are presented in Chapters 3, 4 and 5. Given the “manuscript-based” style of this dissertation, each of the findings chapters is organized as a stand-alone paper and includes an introduction with brief review of relevant literature, overview of methods, data analysis, findings and conclusions. This approach leads to some overlap between these chapters with regards to description of the study samples and purpose of the overall research. The dissertation concludes with a discussion chapter, which serves to situate study findings within the broader literature and present implications and recommendations for research, practice and education.

1.2 Review of the Literature

The approach adopted for this research with youth in the area of mental health promotion and prevention is CBKT, a strategy that is in the early stages of being articulated in the literature. To situate the research within the field, a brief overview of the KT literature is provided. Given the considerable volume of writing in the KT field and the varying terminology used, this review is not exhaustive; however, it contributes a brief description of the development of KT in the health care context, a discussion of a central critique of KT that has surfaced within the scholarly community, and an introduction to the notion of CBKT. Given the paucity of empirical CBKT literature, evidence from related and complimentary fields is drawn upon to inform the

development of a conceptual framework to portray the key components of CBKT and link these elements to anticipated outcomes.

In addition to situating CBKT within the broader KT literature, a brief review of relevant adolescent mental health literature is provided focusing on contextual factors associated with mental health and illness among young people as well as the characteristics of effective adolescent mental health promotion and illness prevention programs.

1.2.1 Knowledge Translation in the Health Care Context

Within the health research community, KT has become an increasingly popular concept; garnering significant attention and support from scholars, policy makers, and research funding agencies. The driving forces behind the rapid expansion of KT efforts in the health care context have been attributed to the quality improvement endeavours of the 1960s (Graham et al., 2006) and, subsequently, the evidence-based medicine (EBM) movement which gained momentum in the 1990s (Kothari & Armstrong, 2011; Rycroft-Malone et al., 2004), and remains dominant in the health care research and practice discourse. EBM entails efforts to bring rigour to clinical practice by promoting “methodological clinical decision-making based on examination of evidence derived from the latest clinical research” (Goldenberg, 2006, p. 2621). According to Dobbins et al. (2009), efforts to “bridge the gap” between research and practice have resulted in three widely utilized KT strategies intended to change clinicians’ practices including: web-based summaries of evidence; tailored messaging aimed at linking research to relevant stakeholders; and the use of knowledge brokers, individuals who facilitate the use of evidence in practice. Indeed, the vast majority of KT research and practice, to date, has focused on fostering change among practitioners working in clinical settings (Kothari & Armstrong, 2011). Thus, at times

throughout this review I refer to KT addressing issues in clinical settings as “traditional” KT to distinguish it from other KT practices and settings which are emerging.

KT is conceptualized in a variety of ways with Graham and colleagues (2006) having identified 29 different terms used to refer to some aspect of the process (e.g., knowledge transfer, dissemination and implementation, research utilization). The differing conceptualizations of KT and varied terminology employed has arisen, in part, from geographically-based language preferences (Wilson, Lavis, Travers, & Rourke, 2010) as well as the diverse research traditions from which scholars contributing to the development of the field originate (Greenhalgh et al., 2004). For example, in a review by Greenhalgh et al. (2004), the authors identify 13 distinct research traditions as having contributed to the KT field (e.g., EBM, marketing, communication studies, rural sociology, health promotion, complexity science). Greenhalgh and colleagues argue that the diversity within the KT research community has led to “heterogeneity of approaches and “contradictions” in the findings” (p. 586) as each research tradition privileges different questions, methods, and terminology. While this diversity of thought has, no doubt, contributed depth to the field, it has also led to confusion and lack of consistency in language (Graham et al., 2006). Further, because of the varied traditions informing KT science, there is significant overlap between KT concepts and other research and intervention approaches including public health practice, change management, and health literacy.

Within the KT field, Canadian researchers have emerged as leaders, making substantial contributions to the development of KT science and practice in the health care context (Goldner et al., 2011; Mitton et al., 2007). The Canadian Institutes of Health Research (CIHR), Canada’s federal health research funding body, has established a widely utilized definition of KT, describing the approach as:

...a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system. This process takes place within a complex system of interactions between researchers and knowledge users which may vary in intensity, complexity and level of engagement depending on the nature of the research and the findings as well as the needs of the particular knowledge user. (Canadian Institutes of Health Research, 2012)

In addition to providing a definition of KT, CIHR distinguishes between two forms of KT: end of grant KT and integrated KT (IKT). While end of grant KT entails efforts to disseminate findings following the conclusion of a study, IKT is a collaborative, action-oriented approach that involves the end-users of research from the outset and continuously throughout a study (Canadian Institutes of Health Research, 2012). IKT is positioned as operating from the participatory research paradigm (Tetroe, 2007).

1.2.2 Conceptualization of Evidence within the Knowledge Translation Literature

Although KT has gained significant popularity among health researchers and funding bodies over the last couple of decades, the approach has also been the focus of much reflection and critique particularly surrounding the nature of evidence driving the development of KT efforts. Mirroring trends within the scientific community at large, the conceptualization of valid and rigorous evidence within the KT field has been shaped by the politics of knowledge. The politics of knowledge involves various processes through which certain ways of knowing, or epistemologies (i.e., beliefs regarding the nature of valid knowledge), have achieved a privileged status, becoming the predominant type of knowledge sought and produced (Dickson, 1984; Kwa, 2011; Lagemann, 1989). Indeed, the conceptualization of valid evidence endorsed by a

substantial portion of KT scholars is largely restricted to that obtained through laboratory research in the “bench sciences” and experimental methods (e.g., randomized controlled trials [RCTs]) in the health sciences (Goldenberg, 2006; Greenhalgh & Wieringa, 2011; Rycroft-Malone et al., 2004). However, critiques have emerged, with some scholars arguing that this narrow conceptualization of evidence has limited the effectiveness of KT interventions (Goldenberg, 2006; Kitson, 2009; Kontos & Poland, 2009; Kothari & Armstrong, 2011; Rycroft-Malone et al., 2004). Specifically, evidence derived through the dominant methods of scientific inquiry is viewed as acontextual and, thus, argued by some researchers and practitioners to be lacking applicability to the diverse patient populations encountered in real world settings (Goldenberg, 2006). Given these concerns, Rycroft-Malone and colleagues (2004), who write from a nursing perspective, aim to “move the debate...about the nature of evidence, and consider how different sources of evidence might contribute to patient care” (p. 82). These scholars contend that four types of knowledge are necessary to inform practice: research evidence, practitioner expertise, patient experience, and knowledge from the local context. Rycroft-Malone et al. suggest that KT researchers can make a significant contribution to the field by working with stakeholders to bring rigour to these different forms of evidence.

Greenhalgh and Wieringa (2011) further contribute to the critique regarding the nature of knowledge that has been privileged in the KT field and argue that the KT metaphor of translating expertly packaged scientific facts to knowledge users is itself problematic as it limits how this approach or process is conceptualized. Greenhalgh and Wieringa suggest that the KT metaphor does not support the view that knowledge is “created, constructed, embodied, performed, and collectively negotiated” (p. 501) as well as value-laden. Out of the complexities encountered by KT researchers working in the policy context has emerged a newer knowledge nomenclature,

which draws on the work of Gibbons and colleagues (1994), and classifies knowledge into two categories, termed “Mode 1” and “Mode 2” (Greenhalgh & Wieringa, 2011). Mode 1 knowledge represents the traditional form of scientific inquiry and the evidence produced through this paradigm is touted as “objective” and “value-neutral”, despite contentions from other disciplines where scholars argue the epistemological position that “‘evidence’ is never just there, waiting for the researcher to find. Rather, it is always necessary to construct it in some way – a process that is inherently ideological and always contestable – not merely a technical ‘scientific’ task” (Learmouth, 2008, p. 95). Mode 2 knowledge represents the counter position to Mode 1 knowledge, conceptualized as knowledge that is co-created within the application context by various stakeholder groups; it is an inherently participatory process. However, as appealing as Mode 2 knowledge may be to those who do not subscribe to the notion of an objective, apolitical science, Greenhalgh and Wieringa caution that this form of knowledge can also be manipulated to serve the knowledge users’ agenda; a reality that the research community endorsing the creation of Mode 2 knowledge must remain cognizant of and continue to critically interrogate in an effort to avoid adverse consequences. While the position taken by Rycroft-Malone et al. and Greenhalgh and Wieringa is shared by others in the KT field (e.g., Kothari & Armstrong, 2011), widespread adoption of this stance has yet to be embraced, likely reflecting, in part, the power and influence of the politics of knowledge. Efforts to continue to move this debate by empirically demonstrating the value and benefit of KT interventions employing these broader forms of evidence, such as “lived experience” and practitioners’ tacit knowledge are needed.

1.2.3 Expanding the Target of Knowledge Translation Efforts: Calls for a Focus on Community-Based Knowledge Translation

While critiques have emerged regarding the nature of evidence valued and utilized in KT interventions, other scholars have identified the dominant focus on theorizing and researching KT in clinical settings as problematic. In 2010, Wilson et al. proposed a framework for conducting KT in community settings, recognizing that community-based organizations, which these authors identify as including such entities as non-governmental organizations, grassroots societies, and civil society groups, represent an important component of the health care system. In their work, the authors draw useful links between community-based participatory research (CBPR) approaches and KT, positioning participatory research as a platform for engaging in KT activities. While Wilson et al. acknowledge the multiple ways in which CBPR is conceptualized; they argue that three tenets of this approach can be drawn from across definitions: “full participation in research processes by community members; producing relevant research evidence; and ensuring action is spurred by study findings” (p. 3). Drawing on this notion of CBPR, Wilson et al. propose that participatory research and KT share a number of mutual methods and goals including: the central role of partnerships, strategies for moving evidence into action to create change, and supporting a culture that values research evidence. Wilson and colleagues’ CBKT framework includes four components: 1) the development of partnerships; 2) the production of systematic reviews addressing community relevant issues; 3) the creation of an online information portal to house evidence from systematic reviews (e.g., similar to the Canadian initiative McMaster PLUS which assimilates and disseminates lists of clinically relevant systematic reviews); and 4) utilization of “rigorous” evaluation approaches, such as RCTs augmented by supplementary qualitative data to explore the impact of CBKT efforts.

While the authors are among the first to identify the need for CBKT approaches and begin their paper by drawing a useful comparison between CBPR and KT, their framework overlooks the epistemological and practice differences between clinical and community-based settings, falling back on approaches that have historically been used in traditional KT efforts and failing to identify novel strategies that would support innovation in CBKT settings.

Research and theorizing that expands the conceptualization of CBKT in order to realise a fuller potential is needed. Specifically, broader notions regarding the stakeholders who are relevant to CBKT efforts are required to capitalize on the important opportunity that CBKT researchers and practitioners have to draw on public health approaches and target interventions upstream to reduce the incidence and burden of disease. Efforts such as these require interdisciplinary collaboration, the involvement of sectors outside of healthcare (e.g., educational institutions, employment and housing agencies), and communities themselves, to address the social determinants of health¹ and foster meaningful change.

In their discussion paper, Kothari and Armstrong (2011) extend the conceptualization of CBKT highlighting the importance of intersectoral collaboration and focus on health promotion and illness prevention that is often a feature of work in community settings. These authors argue that given the broad nature of health care, different approaches are required in order to have an impact at different levels of the system and, further, given the unique characteristics of community-based settings, new approaches to KT are needed. Kothari and Armstrong suggest

¹ The social determinants of health represent social factors or contextual conditions that influence the health of populations. The Public Health Agency of Canada identifies the following social determinants of health: “income and social status; social support networks; education; employment/working conditions; social environments; physical environments; personal health practices and coping skills; healthy child development; gender; and culture” (Public Health Agency of Canada, 2015, n.p.).

that, although diverse, community-based settings share a number of characteristics which make the KT needs in these environments unique: 1) they typically target networks of multiple organizations and stakeholder groups across sectors who work in collaboration, whereas clinically focused interventions are usually aimed at individuals or single organizations; 2) the types of knowledge valued by diverse groups of stakeholders involved in community settings (e.g., members of public health departments, non-governmental organizations, health authorities) are broad and include experiential and local knowledge, whereas in clinical settings, the types of knowledge utilized by KT researchers tends to come from controlled trials and is narrow and focused; and, 3) advocacy serves as a central KT activity in the community, a role that has not been proposed by traditional KT scholars. Additionally, CBKT tends to address issues using a population or public health approach (i.e., entailing health promotion and prevention efforts), as opposed to the curative approach typical of clinical settings. From this work, it is apparent that CBKT approaches are underpinned by tenets of CBPR. In this way, CBKT should be considered, by nature, to be an IKT process; one which is explicitly focused on using public health approaches to foster change in community settings. This position is further supported by the population-level focus of CBKT, which makes the collaborative, multidisciplinary IKT approach requisite.

In an effort to provide methodological guidance to the CBKT field, Campbell (2010) developed a CBKT framework informed by the participatory research paradigm and the Ottawa Model of Research Use. While an important step for the CBKT field, this framework is visually complex and the author does not provide the level of detailed explanation necessary to enact the process depicted in future research. While conducting this dissertation research, Kitson et al. (2013) also contributed a framework for CBKT. Their approach to CBKT, which they term, “co-KT”, is

presented as a collaborative process underpinned by the theoretical foundations of engaged scholarship (an approach that is informed by the participatory research paradigm) (Barker, 2004). The authors describe Co-KT as “a framework for actioning the intent of researchers and communities to co-create, refine, implement and evaluate the impact of new knowledge that is sensitive to the context (values, norms, and tacit knowledge) where it is generated and used” (p. 3). The co-KT framework provides needed guidance to researchers and practitioners working in CBKT, however, additional research detailing how this framework and the CBKT approach outlined is enacted in context is necessary and is the focus of Chapter 4.

1.2.4 Evidence and Methodological Considerations in Community-Based Knowledge Translation

While Kothari and Armstrong (2011) identify three characteristics of community-based settings that have implications for KT interventions (i.e., the target population, the nature of knowledge and evidence valued, and the role of advocacy), the issue of evidence again, warrants further discussion. The public health focus of CBKT, in which interventions are aimed upstream to address the root causes of health and illness, as well as the collaborative approach used to design and implement interventions in these settings, necessitates forms of evidence and KT strategies that differ from those typically utilized in clinical environments. Although Rycroft-Malone and colleagues’ (2004) argument for the need for diverse sources of knowledge to inform KT strategies is centered on nursing practice in clinical environments, their propositions surrounding the value of utilizing broad forms of evidence to inform practice are well-aligned with the varied perspectives and epistemological positions encountered in the practice of KT in community settings. Evidence that reflects diversity of experience rather than controlling for it is essential to informing initiatives that reflect the complex and unpredictable nature of community settings.

This stance is further supported by Greenhalgh and Wieringa's (2011) work highlighting the need for a broader conceptualization of KT, one which acknowledges the co-created nature of knowledge and incorporates Mode 2 approaches to knowledge creation and exchange. Further, as an IKT approach, CBKT is positioned to recognize the importance of stakeholder knowledge and community expertise to the KT process.

An important theme that is emerging in the KT literature pertains to the necessity of involving research users, including the lay public, in the KT process from knowledge creation through implementation. Miller and Shinn (2005) target this issue in their paper highlighting the importance of drawing on "indigenous" (i.e., locally developed) knowledge and programs when engaging in intervention activities. These authors argue that, historically, researchers and health professionals have developed and implemented programs in community settings with little regard for the knowledge, values, and perceived needs of these communities, which, in turn, has resulted in unsuccessful programs. One of the factors driving this practice has been the importance that researchers have tended to place on issues of internal validity (i.e., study design issues related to how a program performs in a controlled setting), which has come at the expense of external and ecological validity (i.e., study design issues related to the impact of a program in context). As such, interventions or ideas developed in and by communities are often dismissed because they are viewed as lacking an evidence-base. Miller and Shinn suggest that the logic behind this approach is flawed, stating that there exists a "deep skepticism of indigenous problem-solving approaches and community capacity, for if the efforts of these groups did indeed work, the social problem at issue would not remain so serious. [However], if we were to evaluate our own programs using the standard of elimination of the social problem that they address, we too would fail" (p. 174). Thus, Miller and Shinn advocate for the importance of

working with and learning from communities in developing and delivering interventions and for changing the way that we view and measure effectiveness, a position that is shared by other scholars (Gibbons et al., 1994) In fact, these authors contend that there is a need to, at times, “reverse the temporal sequence [of our research]...first conducting studies in which external validity is [the] utmost concern and then conducting studies that privilege concerns about internal validity” (p. 181); an epistemological stance on validity that is well-aligned with working in complex, highly contextual, and dynamic settings, such as the community.

This issue regarding the forms of research design and data required in community settings has also been highlighted by Green, Ottoson, Garcia, and Hiatt (2009) who write that while the processes of gathering and synthesizing specific forms of evidence may be an appropriate approach for strictly biomedical issues where the target of intervention is relatively consistent (e.g., a specific pathological mechanism),

for many primary care and most public health interventions ... the object of interventions is far more diverse in psychological processes, cultural contexts, and socioeconomic conditions that may mediate or moderate the relationship between the intervention and the outcomes. For these interventions, context, adaptability, and external validity become as important as experimental control, fidelity of implementation, and internal validity. (p. 156)

In response to the issues regarding research design and the nature of valid evidence in community settings, Miller and Shinn suggest an approach to developing and studying interventions which focuses on “powerful theoretical ideas” as opposed to attempting to create one-size-fits-all interventions. Identifying the core elements or “active ingredients” necessary for

successful interventions are identified as key because “the core principles underlying an intervention, the content of the intervention, and the procedures for implementation may be transferable, but that the totality of the program is an inherently local, unique, and immovable commodity” (p. 176). Given the rich and dynamic environments encountered in community settings, methodological developments are required to more appropriately represent the effectiveness of interventions in these settings (Kothari & Armstrong, 2011). As Miller and Shinn have proposed, this work will require a shift away from the esteemed notion of internal validity to an acknowledgement of the value of external and ecological validity and measures of success which are better suited to capturing the important outcomes in complex, community settings.

1.2.5 Informing a Framework for Community-Based Knowledge Translation

Having provided an overview of the health-related KT literature that illuminates the historical context in which this research and practice area has developed, highlights key critiques in the field, and identifies CBKT as an emerging concept and practice requiring significant development, I next provide a review of select literature which contributes a theoretical and evidentiary foundation to the development of a CBKT framework that informed my research approach. Given the paucity of empirical work in the CBKT field, this framework is informed by evidence drawn from the related and complimentary CBPR tradition.

1.2.6 Linking Community-Based Participatory Research and Knowledge Translation

The complementarity between the concepts of CBPR and CBKT has been noted by a number of KT scholars (e.g., Campbell, 2010; Lencucha, Kothari, & Hamel, 2010; Wallerstein & Duran, 2010; Wilson et al., 2010). In their paper on CBKT, Wilson and colleagues (2010) highlight the

ways in which the principles of CBPR are aligned with the goals of CBKT, while Wallerstein and Duran (2010) present CBPR as a research approach intended to link knowledge to action in community settings. Wallerstein and Duran argue that combining KT methods with CBPR helps to overcome some of the challenges encountered in “translational intervention research” including: issues of external validity, as CBPR actively involves community stakeholders in the development or adaptation of interventions in context; the relevance of evidence, as it endorses the use of community held knowledge and theories; the appropriateness of language, as it promotes the use of community-relevant terminology; the academic control of research by directing researchers to shift power and engage in collaborative decision making; the sustainability of interventions by promoting community ownership and capacity development; and issues of trust, as CBPR fosters the achievement of mutually identified benefits and promotes shared power. In these ways, CBPR emerges as an ideal approach to underpin the development of a CBKT framework that will inform researchers’ understandings of the processes involved in CBKT as well as anticipated outcomes.

In moving forward, it is pertinent to acknowledge the diverse definitions of CBPR and the varying degrees of partnership described as participatory. For example, the Kellogg Foundation Community Health Scholars Program defines CBPR as an approach which “equitably involves all partners...with a research topic of importance to the community with the aim of combining knowledge and action for social change to improve community health and eliminate health disparities” (Minkler & Wallerstein, 2008, p. 6). While the Kellogg Foundation’s definition of CBPR emphasizes the importance of community stakeholders’ needs, perspectives and shared power, the National Institute of Environmental Health Science’s definition is slightly more vague describing CBPR as “a methodology that promotes active community involvement in the

processes that shape research and intervention strategies, as well as in the conduct of research studies” (O’Fallon & Dearth, 2002, p. 155). Despite the varying conceptualizations, common themes of CBPR are presented by Viswanathan et al. (2004) in their review wherein CBPR is described as an approach which:

(a) recognizes the importance of social, political, cultural, and economic systems to health behaviours and outcomes; (b) engages community members in choosing research topics, developing projects, collecting data, and interpreting results; (c) emphasizes both qualitative and quantitative research methods; and (d) puts high priority on translation of the findings of basic, intervention, and applied research into changes in practice and policy. More difficult to prescribe, however, is the degree to which each of these criteria must be fulfilled to satisfy the elements of CBPR. (p. 2)

Given the realities and constraints of doctoral work, for the purposes of this research I drew on the conceptualization of CBPR provided by Green and colleagues (1995) in which participatory research is viewed as “systematic inquiry, with the collaboration of those affected by the issue being studied, for purposes of education and taking action or effecting social change” (p. 194). This definition is inclusive and allowed me to establish guiding questions for this collaborative work.

While the literature offers a plethora of commentary pieces which describe the principles of CBPR, speak to the health and social benefits of this approach, highlight a range in the level of engagement described as “participatory”, and present challenges and ethical issues encountered in the process of CBPR (e.g., Eng, Briscoe, & Cunningham, 1990; Green & Mercer, 2001; Isreal et al., 2001; Krieger et al., 2002; Metzler et al., 2003; Wallerstein & Duran, 2006), like the

CBKT literature, empirical studies describing the results of CBPR are more limited (Wallerstein & Duran, 2010). For the purposes of this literature review and to inform the development of a CBKT framework for this dissertation research, I drew on the results of three systematic reviews which examine the research literature related to participatory approaches and health. The evidence from these reviews was supplemented by research from a primary study that contributes additional depth to my analysis and with examples from a grey literature report on community-based collaborations with youth populations.

1.2.7 Participatory Research: Enhancing Health and Health Behaviour Change

In 2000, Roussos and Fawcett conducted a review of the evidence examining the impact of collaborative partnerships on community health outcomes, with a particular focus on community-influenced interventions. The authors define collaborative partnerships as “an alliance among people and organizations from multiple sectors, such as schools and businesses, working together to achieve a common purpose” (p. 369). Roussos and Fawcett contend that multidisciplinary engagement is necessary in order to effect environmental change and improve population health outcomes – a conceptualization of collaborative partnership that is aligned with my stance that CBKT approaches need to involve broad stakeholder representation, including individuals from beyond the traditional health sector, in order to optimize intervention success at a population level.

Roussos and Fawcett (2000) employed a strategy that included the online search of three databases, hand searches of relevant reference lists, and recommendations from experts in the field, to identify 34 distinct studies on collaborative partnerships and health. A significant limitation of their work was that the methodology is not well described; the search terms are not

presented and there is no indication of how many studies were initially identified and how decisions about inclusion and exclusion were made (e.g., no PRISMA flow chart or other form of search documentation is given). Of the 34 studies examined, the majority utilized some form of experimental or quasi-experimental design and incorporated mixed methods approaches to gather data on different components of collaborative partnership. Seventy-six percent of the studies included in the review (n=26) utilize a comparison group and two involved random assignment. Ninety-one percent of the studies (n=31) had an evaluation period of four years or less, while one study examined outcomes at five years and another at 10 years. Roussos and Fawcett note that empirical research in this area is limited by a number of factors including: the time that it takes for outcomes to be achieved (e.g., some outcomes, such as reducing health inequities may take generations to accomplish) and the absence of appropriate health indicators at the community level. Given these challenges, the authors distinguish between two types of outcomes reported in the literature: 1) a more limited literature examining the links between collaborative partnerships and improved population health outcomes, and 2) evidence of associations between collaborative partnerships and community-wide behaviour change, which has been demonstrated to influence changes in population health outcomes (e.g., Fawcett et al., 1997).

1.2.8 Collaborative Partnerships and Improved Population Health Outcomes

Despite the difficulties associated with assessing the contributions of community-level interventions, Roussos and Fawcett (2000) identified 10 studies that examined the population health outcomes associated with collaborative partnerships. While most of this literature represents the results of case studies, which are not considered a strong form of evidence by

traditional standards², the authors argue that taken together, “these results suggest that, at least under some conditions, implementation of collaborative partnerships is associated with improvements in population-level health outcomes” (p. 375).

A couple of examples of this work help to illustrate the types of interventions and outcomes studied. For example, in a case study undertaken in New York City, a collaborative partnership consisting of a local advocacy group, parents, health workers and policy makers was established with the aim of reducing the level of childhood lead poisoning in an area with a 10 year history of higher than average annual rates. Utilizing a range of approaches including health education, mass media campaigns and community organizing techniques, the partnership team reported a 43% reduction in lead poisoning among children in the community within the first four years of the project (Freudenberg & Golub, 1987). In another study, a South Carolina community drew on the theories of social learning and diffusion in an education campaign that initially targeted adult community members who then aimed to enhance knowledge, self-esteem, decision making skills, and shape the values of youth in their community. Within two years of initiating the intervention, the community showed a 52% reduction in the incidence of unintended teen pregnancy; a health outcome that was significant when compared with the observed adolescent pregnancy rates in three sociodemographically similar comparison communities (Vincent, Clearie, & Schluchter, 1987). In another case study undertaken in Boston, a partnership between the health department and community-based health and social service organizations was formed to address infant mortality rates, “a sensitive indicator of the social health of a community”

² The term “traditional standards” is being used to refer to the ways in which evidence has been positioned by widely used hierarchies of evidence. Hierarchies of evidence rank the strength of findings that can be achieved through various research designs, with randomized controlled trials typically being viewed as producing the highest quality of evidence (Evans, 2003).

(Plough & Olafson, 1994, p.222). Using a community empowerment approach, which was redefined throughout the engagement process due to the challenges experienced (e.g., lack of participation, difficulties accepting shifting power dynamics), researchers reported a 50% reduction in infant mortality among members of the African American community over a two-year period (Plough & Olafson). These studies and others included in Roussos and Fawcett's (2000) review help to demonstrate that interventions employing CBPR approaches contribute to meaningful population health benefits. Further research in this area is required to strengthen this claim and contribute to a better understanding of the specific mechanisms that lead to these community-level health changes.

1.2.9 Collaborative Partnerships and Community-Wide Behaviour Change

In addition to documenting improvements in population health, Roussos and Fawcett (2000) reviewed outcomes related to community-level health behaviour change. The authors argued that because behaviour change often occurs well in advance of changes in population health, these outcomes provide researchers with a good indicator for the success of an intervention. Roussos and Fawcett identified 15 studies examining the impact of collaborative partnerships on community-level behaviour change. The authors report that “improved behavioural outcomes associated with partnership activity were reported for tobacco use...alcohol use...illicit drug use...physical activity...and safer sexual practices” (p. 376). Roussos and Fawcett provide an expanded discussion on two of the “methodologically stronger” studies which did not demonstrate as promising outcomes as studies utilizing designs viewed as less rigorous by traditional standards.

One of these studies, the COMMIT project, utilized 11 matched pairs of communities randomized to intervention and control conditions aimed to reduce tobacco use with a particular emphasis on heavy smokers (COMMIT Research Group, 1995). The COMMIT project engaged a range of partners, including research institutions and cancer control organizations to maximize the reach of their intervention. The researchers report that the mean cessation rate for heavy smokers was not statistically different between intervention and control communities (0.180 vs 0.187, CI= -0.031-0.019). More promising outcomes were achieved among light-to-moderate smokers where quit rates between intervention and control communities were statistically significant (0.306 vs 0.275, CI= 0.014-0.047). The COMMIT Research Group and Roussos and Fawcett draw somewhat different conclusions from these outcomes: while the COMMIT researchers suggest that these outcomes represent a modest outcome, which remains of public health importance, Roussos and Fawcett summarize that while “collaborative partnerships can contribute to widespread change in a variety of health behaviours...the magnitude of these effects may not be as great as intended” (p. 376). While both of these conclusions are valid, efforts to better interrogate the reasons for these smaller than expected outcomes is necessary to inform future community-based intervention work. For example, while the COMMIT study involved a diversity of stakeholder partners, the research team did not focus on ensuring representation from the lay public or community advocacy groups, as other studies identified by Roussos and Fawcett did. Research aimed at identifying how different levels of community engagement and organization strategies impact intervention outcomes would be valuable to informing future efforts.

1.2.10 Mechanisms for Achieving Community-Wide Behaviour Change through Collaborative Partnerships

Roussos and Fawcett (2000) identify community and systems change as the target of interventions to improve health behaviour and outcomes at a population level, as these changes have been hypothesized by others to be an “intermediate outcome in the long process of community health improvement” (p. 377). Community or systems change is viewed as being enacted through modifications to programs, policies and practices – a process which involves the collaborative efforts of broad stakeholders targeting change at multiple levels of the system through community organizing strategies. By altering structural factors in the community setting, norms can be shifted in ways that foster population-level health behaviour change and, ultimately, lead to improved population health. Examples of environmental and systems change are highlighted in Roussos and Fawcett’s review and comprise a variety of actions including: alterations to the built environment that facilitate physical activity, changes to school lunch programs to enhance nutrition and healthy eating habits, shifting of funds to secure space for new screening programs, policy changes to reduce the harms related to substance use, and enhancing access to health services, among others.

1.2.11 Participatory Research: Impacts on Research, Capacity and Community Health

In 2004, the Agency for Healthcare Research and Quality in the United States commissioned a report prepared by Viswanathan and colleagues on participatory research in health contexts. The aim of this report was to promote the success of CBPR and to assist funding agencies in identifying projects that offer the “best balance of rigorous research and optimal collaboration among communities and institutions” (p. vi). The project team referred to a number of

conceptual papers in the process of establishing a definition of CBPR. Ultimately, for the purposes of their review, CBPR was described as,

a collaborative research approach that is designed to ensure and establish structures for participation by communities affected by the issue being studied, representatives of organizations, and researchers in all aspects of the research process to improve health and well-being through taking action, including social change. (p.3)

While this review addresses four questions, the one of particular relevance to my dissertation topics focused on identifying the research implications, community capacity and health outcomes associated with CBPR.

Viswanathan and colleagues' search procedure was restricted to the peer-reviewed literature and included an electronic search of health-oriented online databases using keywords based on inclusion/exclusion criteria and recommendations from an expert panel. Hand searches of relevant reference lists were also undertaken. Just over 1400 references were initially identified, with 297 articles going through full review and 185 being retained for the study. Of the 185 included papers, 123 (representing 60 unique studies) addressed the impact of CBPR. Of these 60 studies, 30 described CBPR interventions and 12 of these studies included completed evaluations. Four of these 12 studies utilized RCT designs, 5 employed a quasi-experimental design and 3 used non-experimental methods. Given the heterogeneity of the studies, in terms of outcomes measured and interventions utilized, comparison across studies was not possible. General findings from the 60 studies examining the outcomes associated with CBPR can be classified in relation to two outcomes: enhanced community capacity (e.g., ability to secure further grant funding, job creation) and improved health outcomes. The health outcomes studied

included physiologic outcomes (n=2), engagement in cancer screening (n=3), health behaviour change (n=4) (e.g., substance use, immunization practices), and issues related to emotional wellbeing (n=3) (e.g., emotional support, empowerment).

1.2.12 Research Outcomes and Community-Based Participatory Research

One of the outcomes that Viswanathan and colleagues (2004) focused on in their review was the contribution that CBPR makes to research processes and outputs. While the links between CBPR and research outcomes is often overshadowed by the desire to highlight health or social outcomes, this element is of particular relevance to KT scholars. Specifically, the CBPR process is associated with enhanced dissemination and utilization of research evidence, one of the primary goals of KT. The Communities Mobilizing for Change on Alcohol (CMCA) project conducted by Wagenaar and colleagues from 1991-1997 (e.g., Wagenaar et al., 1999; Wagenaar et al., 2000) and identified in Viswanathan et al.'s review, captures important ways in which CBPR influences the dissemination and utilization of evidence. In this community randomized participatory research project targeting alcohol use among young people, substantial dissemination efforts were undertaken including 333 different presentations reaching over 2000 people as well as the generation of 101 news media articles. Further, the CMCA intervention demonstrated the uptake or utilization of evidence through changes in community policies and practices related to alcohol sales, enforcement, and treatment, among others. In addition to important KT-related outcomes, CBPR is also noted to strengthen recruitment, improve intervention quality, and support the development of appropriate measures and methods. While most of the studies in this review reported positive research outcomes related to the CBPR process, two studies identified potential adverse outcomes – possible recruitment bias and diminished opportunities for staff to be engaged in delivering the intervention.

1.2.13 Community-Based Participatory Research and Enhanced Community Capacity

One of the strengths of the Viswanathan et al. (2004) review is that it brings together empirical examples demonstrating links between CBPR approaches and enhanced community capacity, a result that is often referred to in discussion papers, but not as often captured in the research literature. Of the 60 articles included in the outcomes component of this review, 78% (n=47) reported heightened community capacity. A number of different outcomes indicative of this concept were reported by study communities including: strengthened aptitude for creating change, ability to obtain funding for further community work, development of new skills, organization of coalitions for change, creation of employment opportunities, and the development of research expertise.

1.2.14 Health Outcomes and Community-Based Participatory Research

The ultimate goal for many health-focused CBPR researchers is to improve population health. However, as described by Roussos and Fawcett (2000), there are a number of methodological and time-related challenges to capturing this outcome. Of the 12 evaluated intervention studies included in the Viswanathan et al. (2004) review, four used RCT designs and reported modest health gains, while the other eight studies, which utilized a variety of non-RCT designs, showed mixed results. Viswanathan and colleagues report that given the different methodologies employed, they were unable to establish whether the positive findings reported in these studies were a result of CBPR methods alone or whether other factors contributed.

While Viswanathan et al. (2004) could not, with certainty, link improved health outcomes with CBPR methods, a study by Eng, Briscoe and Cunningham (1990) provides a particularly powerful example demonstrating the impact that CBPR approaches can have on health behaviour

and, ultimately, population health outcomes. In their work in the field of global health and international development, Eng and colleagues highlight the health behaviour implications of participatory-driven intervention work. In their quasi-experimental study, the authors hypothesized that communities with participatory water supply projects would demonstrate greater engagement in primary health care activities than equivalent communities with non-participatory water supply projects or those without any water supply project. For the purposes of their study, participatory water projects were defined as those in which community members actively engaged in all stages of the project and received training to foster sustainability and community action. Non-participatory water projects were those in which external teams carried out the project activities. The study took place in two countries, Togo and Indonesia and included a stratified random sample of 10 villages with participatory water supply projects, 10 villages with non-participatory water supply projects, and 10 villages without a water supply project in each country. The investigators identified that childhood immunization rates, and specifically, immunization completion rates of the diphtheria-pertussis-tetanus (DPT) series would be an appropriate indicator of engagement in primary health care activities and, further, given that this vaccination series is given over three time points, completion of the series would provide some indication of the sustainability of health and social behaviour change. Aligned with their hypothesis, the authors found that in both countries, villages with participatory water projects had significantly greater completion rates of the DPT vaccination series than villages with non-participatory water projects (60% vs 49% in Indonesia, 55% vs 40% in Togo). Further, the immunization completion rates among non-participatory water project communities were on par with rates in the villages without any water project, providing further evidence for the health promoting benefits and shifting health norms associated with community

participation/engagement approaches to health and social intervention. Taken with the evidence presented by Roussos and Fawcett (2000), it would appear that CBPR approaches play an important role in enhancing health behaviours that contribute to improved population health.

1.2.15 Participatory Research: Realities of the Field

In a more recent review of the literature, Evans, Pilkington and McEachran (2010) examine evidence for the impact of participatory approaches implemented by public health units on health and social outcomes. The authors provide a vague definition of participatory approaches describing them as including, “the overlapping concepts of community development, engagement, involvement and participation” (p. 418). It is unclear from this description what degree of engagement is being examined, which limits the reader’s ability to interpret or judge the role that participation may have played in intervention outcomes. The search procedure and inclusion/exclusion criteria are clearly described and involved the electronic search of 17 databases using a variety of search terms (which were selected after pilot testing) as well as hand searches of four public health journals and the National Institute for Health and Clinical Excellence’s (NICE) documents and reviews pertaining to community engagement. The search was limited to the peer reviewed literature for financial feasibility. The initial search identified 5451 articles which were reduced to 2155 after duplicates were removed. From these references, 16 articles were independently identified by one or both of the two reviewers, with seven studies ultimately included in the review. Of the selected studies, four utilized qualitative methods while the other three took a mixed methods approach (with the quantitative component being either survey or administrative data analysis). Quality appraisal was conducted drawing on criteria utilized in other reviews. The authors conclude that the overall quality of the studies in their review was poor – only two of the studies met at least 7 out of the 10 quality criteria and none of

the mixed methods studies met more than two of the quantitative appraisal criteria. While the quality of included studies was described as low and the findings of limited value, what this review does provide is further evidence of the paucity of empirical research assessing the contributions of CBPR approaches to health and social outcomes and the need for further work in this area to document findings and inform future interventions. Additionally, the authors highlight what may be one of the greatest issues challenging scholars' understanding of the impact of participatory approaches on health – much of this type of work is undertaken by practitioners and community members and, therefore, may not result in peer-reviewed scholarly publications. Efforts to evaluate community-based interventions and document the results in a way that is accessible to researchers and communities engaging in this work is necessary to growing the evidence-base of this field and supporting the success of future work.

1.2.16 Young People and Participatory Research Approaches

While the three reviews presented thus far provide valuable information regarding the processes, contributions and challenges associated with participatory research, a report by Tolman and colleagues (2001) provides valuable insight into the realities of engaging in this type of work with youth populations – key collaborators in this dissertation research. In their report, “Youth Acts, Community Impacts”, Tolman et al. provide an overview of youth engagement and partnership in community change initiatives and identify that “[y]oung people have the capacity to be change agents. And they frequently have the motivation. But they often do not have the space – physical, political, social – or the resources – financial, technical, networking – needed to act” (p. 12). This grey literature report provides important case examples of successful youth-centered, community-based initiatives which have resulted in impressive results such as: community capacity development, reduced racism, decreased vandalism, and job creation,

amongst others. Eight case examples are provided to illustrate the types of activities and important successes of community-based collaborations with youth. While this report does not provide detailed empirical evaluations of this work, the descriptions of the types of collaborations and contributions achieved suggest that youth partnerships result in similar impacts on health and social outcomes as those involving adults. Following, is a brief description of one of the projects highlighted in the Tolman et al. report to showcase the types of initiatives undertaken and to illustrate what the CBPR process may look like with youth.

In Boston, Massachusetts The Food Project links youth and adults in an initiative which has successfully contributed to addressing food shortages among low income populations; connecting communities which have historically been divided by race, socioeconomic status and geography; and overcoming significant environmental and social challenges. The influence of The Food Project on racism in the community has been particularly profound:

The Food Project, of course, is also about bridging community and race. This was its starting place: youths and adults of diverse backgrounds working side by side, moving from suburb to city and back – a commitment that placed The Food Project among a hundred “promising practices” recognized by former President Clinton’s Initiative on Race. (p. 48)

Formed by a local farmer in the early 1990s, The Food Project engages local youth from diverse backgrounds in every aspect of the initiative. Each year, 60 youth aged 14-16 are hired by The Food Project to engage in sustainable agriculture practices, serve food at local shelters and collaborate in other community building activities – youth capacity and motivation are viewed as central to the success of this project. In fact, youth collaborators were responsible for action that

resulted in substantial portions of city land being “reclaimed” for agricultural purposes – land which not only serves to produce food, but strengthens community ties by providing a venue for gathering and sharing learning opportunities regarding organic farming. The Food Project has grown steadily since its creation and at the time of the report was producing over 150,000 pounds of organic produce annually for local shelters. The youth capacity building achieved through the project is also impressive. For example, many participants have gone on to pursue educational preparation related to community development and one participant has established a community-based program on diversity which seeks “to create a safer and more tolerant community” (p. 46). This case study demonstrates that collaborative partnerships with young people are linked to important social and health promoting achievements.

1.3 Drawing Together Evidence to Inform the Development of a Community-Based Knowledge Translation Framework

Based on the literature reviewed, particular approaches and findings emerge that can help to guide the process and expected outcomes of CBKT. From the KT literature, the importance of the co-creation and synthesis of both local and scientific evidence is identified as a key component of a KT process that is relevant and responsive to the needs of target communities. Further, the collaborative identification of needs and interventions as well as the inclusion of broad stakeholders representing multiple sectors including the lay public are recognized as important aspects of the success of community-based interventions. Together, these KT approaches are seen to enhance buy-in and promote the dissemination and utilization of evidence-based interventions by communities (O’Fallon & Dearry, 2002). Linking these KT approaches to the empirical literature from the CBPR paradigm, a number of expected outcomes can be identified including: enhanced community capacity, policy change, shifting norms, and

community-level health behaviour change – all of which have been demonstrated to contribute to improved population health outcomes (Roussos & Fawcett, 2000). Bringing this theoretical knowledge and empirical evidence together, I have constructed an evidence-informed CBKT framework which guided this dissertation work (see Figure 1). This framework is intentionally broad, drawing on Miller and Shinn’s (2005) advice to focus on “powerful theoretical ideas”, in order to remain applicable to diverse settings and contexts. This framework consists of four processes that, based on the evidence reviewed, are posited to contribute to enhanced KT outcomes. These processes, in turn, are linked to a number of community-level changes that would ultimately enhance population health outcomes.

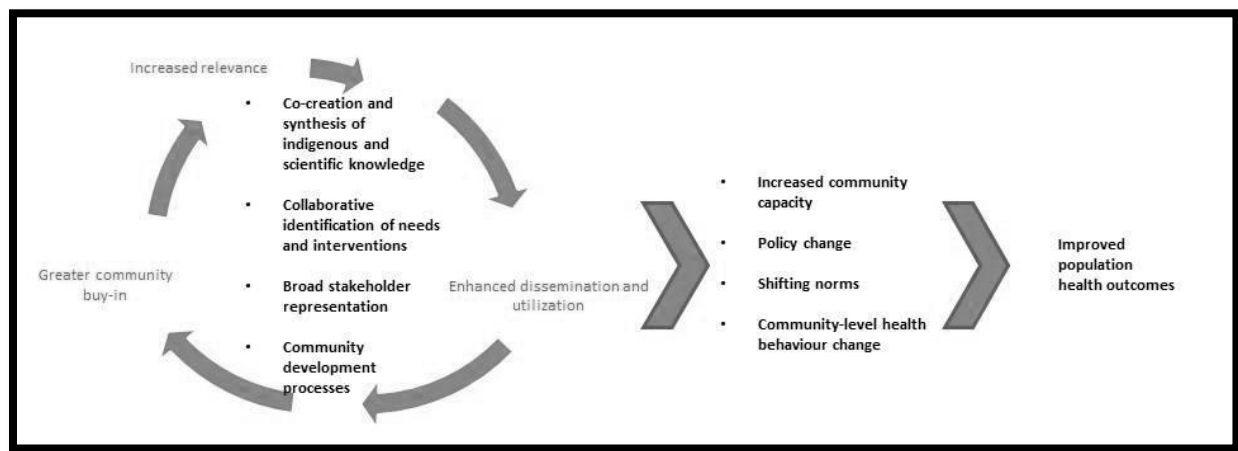


Figure 1: Initial Community-Based Knowledge Translation Framework

1.4 A Review of Pertinent Adolescent Mental Health Literature

Having reviewed the KT and related participatory research evidence informing the initial development of a CBKT framework, next I provide a brief overview of pertinent adolescent mental health literature. Specifically, common contextual factors associated with mental health and illness among young people are introduced and an overview of the characteristics of

effective mental health promotion and prevention strategies is presented. This evidence provided the initial structure for engaging my community partners and introducing them to relevant evidence from the scientific literature.

1.4.1 Factors Impacting Youth Mental Health

While population surveys provide data indicating that emotional distress represents a significant public health problem affecting youth populations, evidence from the social sciences and epidemiology literature contribute to researchers' understandings of the contextual elements that operate as risk or protective factors for adolescent mental health. This is important because underlying the statistics on mental health outcomes among young people are important contextual factors that place particular populations of youth at greater risk. The Centers for Disease Control and Prevention in the United States (2009) defines risk factors as the "individual or environmental characteristics, conditions, or behaviours that increase the likelihood that a negative outcome will occur" (p. 3), while protective factors are described as the "individual or environmental characteristics, conditions, or behaviours that reduce the effects of stressful life events; increase an individual's ability to avoid risks or hazards; and promote social and emotional competence to thrive in all aspects of life now and in the future" (p. 3). Awareness of the contextual factors that shape emotional distress in adolescent populations is important to designing more responsive and effective initiatives to improve mental health outcomes throughout the life course. To orient the reader to the types of risk and protective factors associated with adolescent mental health, I provide an overview of select, commonly cited factors from the scientific literature.

It is well recognized that contextual factors play a central role in shaping the mental health of young people with gender, ethnicity, SES, sexual orientation, and connectedness being particularly prominent factors identified in the literature. Gendered patterns of mental illness in youth are well documented (Landstedt et al., 2009; West & Sweeting, 2003), with differences in prevalence rates of mental illness, patterns of help seeking, and displays of emotional symptoms observed between boys and girls (Bennett et al., 2005; Hankin, Mermelstein, & Roesch, 2007; Landstedt et al., 2009; Smith et al., 2009). For example, adolescent girls report depression and anxiety at twice the rate of their male peers, while rates of suicide are significantly greater among boys (Hawton, 2000, Navaneelan, 2012). Social inequalities tied to “race” and ethnicity shape experiences of mental illness, symptom presentation, and experiences of the mental health system (Alegria et al., 2010; Anderson & Mayes, 2010; Brown et al., 1999; Cauce et al., 2002). Although the causal mechanisms have yet to be articulated, the impacts of racism (Williams, 2003), poverty, immigration and enculturation processes (Céspedes & Huey, 2008; Willgerodt & Thompson, 2005, 2006), parenting styles (Dearing, 2004), cultural isolation, and being disconnected from “home” (OliFFE et al., 2010) have all been suggested as explanations for racial/ethnic differences in experiences of mental illness among youth populations.

Another powerful set of contextual factors that shape youth mental health is tied to SES. Studies repeatedly show that youth from lower SES backgrounds are more likely than their higher SES counterparts to experience poor mental health (Due et al., 2009; Gilman et al., 2002; Meich et al., 1999). However, the relationship between SES and emotional distress is complex and varies among youth (Lorant et al., 2003). For example, Miech et al. (1999) observed that SES has a strong association with experiences of anxiety and attention deficit disorder, but not with depression (Meich et al., 1999), while Wang, Schmitz and Dewa’s (2010) research suggests that

the relationship between SES and depression varies according to gender. Additionally, Luthar's (2003) research highlights that emotional health issues are not confined to those from low socioeconomic backgrounds. In her work she found that some affluent youth populations have very high rates of depression and anxiety, prompting her to question the psychological costs of material wealth (Luthar, 2003; Luthar & Becker, 2002). Mental health initiatives need to address youth needs across the socioeconomic spectrum in order to acknowledge the diversity of experience. Given the shifting nature of social class in the current economic climate and the precarious nature of measuring SES among youth (Braveman et al., 2005; Shavers, 2007), it is valuable to begin with the perspectives of young people to inductively derive insights about their SES instead of using categories that may be outdated or irrelevant to their circumstances. This process of engaging youth to understand how they experience their circumstances is well-aligned with the centrality of seeking indigenous perspectives in the CBKT process. While the research on SES and adolescent mental health highlights the importance of involving adolescents in the research process, it also demonstrates how contextual factors interact to shape mental health; underscoring the importance of designing mental health promotion initiatives that address multiple determinants of mental wellbeing simultaneously.

Contextual norms related to sexual orientation have also been demonstrated to play a powerful role in influencing youth mental health outcomes. Same-sex attraction and minority sexual orientations have been pathologized in our society and made subordinate to heterosexuality (Herek & Garnets, 2007), with profound impacts on the health of lesbian, gay, bisexual and transgender (LGBT) youth (Silenzio et al., 2007). For example, LGBT youth suffer from mental illnesses at 1.9 to 6.2 times the rate of their heterosexual peers and are frequently overrepresented in data on adverse mental health outcomes (Saewyc, 2011). Sexual minority

youth populations also tend to have higher rates of suicidal ideation (Hegna & Wichstrøm, 2007; Marshal et al., 2011), depression, and alcohol and substance use (Marshal et al., 2008). These outcomes are related, in part, to the homophobia experienced by those with a minority sexual orientation. For example, research has demonstrated that LGBT youth often receive less support from their parents, experience more verbal and physical abuse (Friedman et al., 2011), undergo chronic stress in navigating adolescence, and deal with internalized homophobia that limits their self-esteem (Poteat et al., 2011; Wilson, Bushnell, & Caputi, 2011).

While the scientific literature highlights the ways in which gender, ethnicity, SES, and sexual orientation can negatively influence mental health outcomes among youth, the research on connectedness tends to focus on the protective nature of this factor. Connectedness is a term used to describe the emotional connection and commitment an individual makes to social relationships within a family, peer group, school, community, or culture (Markham et al., 2010), and has been shown to play a key role in the mental health of young people (Smith et al., 2009; Smith et al., 2014; Whitlock, 2007). Relationships between youth and adults, beyond parents and immediate family, are identified as a key component of connectedness for young people. In fact, positive relationships during adolescence have consistently been found to exert a greater influence on health outcomes than specific risk factors (Boyce, 2004, Resnick, Harris, & Blum, 1993; Saewyc & Tonkin, 2008; Sanders & Munford, 2008; Smith et al., 2014; Whitlock, 2007). Given the importance of connectedness for adolescent mental health, some researchers have focused on identifying the causes of disconnection in order to inform strategies to create and sustain meaningful relationships between youth and adults (Barber & Schluterman, 2008; Besharov & Gardiner, 1998; Hendry & Reid, 2000; Zeldin, 2002; Zeldin & Topitzes, 2002). While many factors are theorized to contribute to disconnection, generational differences in social values and

perspectives (Zeldin & Topitzes, 2002; Smith, 2005) and negative stereotypes and attitudes towards youth are identified as important contributors (Zeldin, 2002).

While the contextual factors presented thus far play an important role in shaping the mental health outcomes of young people, the concept of resilience is pertinent to the discussion because it helps to explain why some individuals and communities experience positive mental health despite experiencing great adversity (Masten, 2014). Resilience “represents the interaction between risk factors (vulnerability) and protective resources (protection)” (Rew & Horner, 2003, p. 379) and can be viewed as a process shaped by both external and internal factors such as the school environment, community support, self-confidence and optimism (Laye-Gindhu & Shonert-Reichl, 2005; Luthar, 2006). For the purposes of this doctoral research, I have drawn on the conceptualization of resilience offered by Ungar (2008):

...in the context of exposure to significant adversity, whether psychological, environmental, or both, resilience is both the capacity of individuals to navigate their way to health-sustaining resources...and a condition of the individual’s family, community, and culture to provide these health resources and experience in culturally meaningful ways. (p. 225)

Utilizing this definition, resilience is a product of interrelated individual, interpersonal and community-level factors.

Resilience can be considered a protective factor against emotional distress that, if fostered, can help to support mental health outcomes (Rutter, 1987). Resilience can also be considered as an indicator of positive mental health. While evidence indicates that expressions of resilience are shaped by contextual factors, much of the early resiliency research focused on individual-level

influences (Howard, Dryden, & Johnson, 1999; Tusaie & Dyer, 2004), failing to account for the role of culture and context (Masten, 2014). Further, although scholars researching resilience have made strides toward addressing this oversight (e.g., Ungar, 2011; Ungar, Ghazinour & Richter, 2013), there is concern regarding the omission of young people and their perspectives in the research process informing conceptualizations, measures, and interventions focused on resilience (Mohaupt, 2009). The development of community-based initiatives aimed at enhancing resilience and which account for young peoples' perspectives are needed. This dissertation research is geared toward addressing this gap.

1.4.2 Characteristics of Programs that Foster Mental Health

Following a review of some of the common contextual factors associated with mental health and illness in youth, I next consider the characteristics of effective population-level programs to address mental health outcomes in young people. I explored this topic with an examination of a review of reviews conducted by Canadian researchers, Browne and colleagues (2004), to identify common components of effective and efficient programs to promote the mental health outcomes of school-aged youth (the specific age range is not provided). This particular review was selected because of the strength of the methodology used in terms of compiling the results of a substantial number of studies as well as the focus on identifying the characteristics of effective mental health programming – findings that were valuable to my research process and which I shared with community partners.

In this review, Browne and colleagues (2004) assessed effectiveness by contrasting outcomes between young people who receive and young people who do not receive services. Efficiency was defined by the authors as the cost of providing services compared to the cost to the public of

not providing these services (e.g., future unemployment and social assistance rates, crime). This review included programs aimed at entire child and youth populations as well as programs targeting children or youth identified as “at-risk”, providing a comprehensive overview of the various types of initiatives in the field.

The methodology of Browne and colleagues’ (2004) review is well described and included a search for both published and unpublished English language research on evaluations of health promotion and early intervention initiatives for young people at risk due to various social and environmental factors. The authors acknowledge that the English language criterion represents a weakness of their review as important research may have been missed. The search was conducted using library databases, internet searches for grey literature, expert recommendations, and reviews of reference lists. Browne et al. (2004) do not provide the search terms used, limiting the ability of other researchers to replicate this review. The authors focused on studies that were multidisciplinary in nature and involved multiple agencies or service providers. The principal selection criterion were content and quality of the research (in terms of the evaluation approach and economic assessment strategy), with quality assessed using methods applied by other researchers in the field. An additional inclusion criterion was research design, with only RCTs and quasi-experimental studies included. In instances where a mixed design was used, descriptive, qualitative data were reviewed following the identification of key conclusions to better understand context. Twenty-three reviews were included in this study.

The authors provide a number of common findings from across reviews: primary prevention programs tend to be more effective than programs aiming to address existing mental health problems; younger children appear to benefit more from interventions than older children; initiatives aimed at addressing a specific problem or issue and which account for culture and

gender are more beneficial than untargeted programs; strategies in which multiple dimensions are addressed have greater impact than those that attend to a single factor in isolation (e.g., family or school-related issues); follow-up interventions are required in most cases to promote sustained effects; fear-based and didactic educational interventions have low effectiveness compared to interactive programs; interventions delivered over a long period of time are more beneficial than short, intensive programs; programs involving ongoing relationships or mentorship from adults tend to be more effective than peer-based supports; school-based interventions allow for widespread dissemination of an intervention, however, these environments hold risks for confidentiality and labelling; community-based interventions may address some of these issues, but access a much smaller audience; and finally, family involvement is an important success factor for interventions targeting children who are already displaying mental health symptoms.

Browne and colleagues (2004) conclude with a discussion regarding the importance of an ecological³ approach to promoting child and youth mental health, suggesting that this orientation represents an important factor for program success given that children typically experience a number of interrelated problems that influence mental health outcomes.

In another review of the literature, Wells, Barlow and Stewart-Brown (2003) look further upstream by focusing their review specifically on universal mental health promotion programs.

In their paper, the authors define universal programs as health promotion strategies aimed at enhancing the mental health outcomes of an entire population. Wells et al. suggest that in health

³ An ecological approach is based on the premise that health outcomes are shaped by the interaction of factors that occur at multiple levels. While these levels have been described in a variety of ways, the World health Organization provides a framework that describes these levels as consisting of the individual, interpersonal, community, and societal levels (World Health Organization, 2015).

promotion intervention studies, it is appropriate to measure gains in aspects of positive mental health (e.g., self-esteem), whereas in prevention intervention studies, mental health symptomology questionnaires are often employed to determine the impact of a program on mental illness outcomes. This is a helpful distinction to note and was valuable when reflecting on my approach to assessing the contributions of my CBKT initiative. For example, when analyzing my quantitative data in Chapter 5, I did not see changes in some of the measures that I was expecting to. Reflecting on the appropriateness of my included measures, I realized that given the health promotion orientation of the initiative, measures of positive mental health would be more appropriate than measures of distress.

The methodology of the systematic review is outlined in detail and included a multi-step search strategy (i.e., search of electronic library databases, institutional databases, expert recommendation, and reference list searches), independent identification of relevant articles by two members of the research team, and detailed inclusion and exclusion criteria. Quality appraisal was completed using criteria established by other researchers in the field. A weakness of the methodological overview is that, like Browne et al. (2004), the search terms utilized are not provided, limiting reproducibility and critique. Wells et al. (2003) report that 17 studies (describing 16 different interventions) met all of the inclusion criteria with the majority of schools in selected studies representing low socioeconomic areas with high ethnic minority populations. Twelve studies were undertaken in the United States and two in Israel. Seven of the included studies were done at the elementary school level, four at the junior high school level, and three at the high school level. Wells and colleagues provide a description of each of the studies included in the review, organized by their approach: whole school interventions (n=2) (which involved the entire school and aimed to change both aspects of the school setting and the

greater community), interventions involving a portion of the school and community (n=4), and classroom-based interventions (n=10).

The authors report that the inclusion of such a limited number of studies is related to the complexity of evaluating the effectiveness of multi-factor interventions (which were a target of this review), and thus, this area has a limited literature base. Given the diversity of studies included, the authors report that meta-analysis methods were not appropriate; however, a measure of heterogeneity is not included.

Common elements of successful programs are described using narrative synthesis methods. Specifically, Wells et al. report that mental health promotion appears to be more effective than prevention programs, especially those provided over an extended time period (i.e., at least one year). Further, although limited in number (n=2), whole school interventions appear to be particularly promising, targeting all students, teachers, administrators, and aiming to change the school environment and aspects of the greater community. Finally, the authors stress the importance of long-term strategies, reporting that those that are of short duration do not appear to significantly improve mental health outcomes.

While the reviews of Browne et al. (2004) and Wells et al. (2003) provided valuable scientific evidence regarding the characteristics of effective programs targeting youth mental health, a review of the childhood resilience literature by Howard, Dryden, and Johnson (1999) highlights a gap in the literature that continues to impact current adolescent mental health programming: the approaches utilized do not tend to account for the perspectives of children and youth.

Specifically, the Howard et al. (1999) state:

A major shortcoming of many studies in this area is the apparent disregard for viewpoints of children targeted in the research. There is a considerable body of literature in developmental psychology that illustrates that children do indeed interpret their worlds differently from adults; they have distinctly different perspectives, values and understandings about all sorts of things from death to politics ... A potential problem with research that assumes that all participants share the same definitions of risk and resilience is that policies and programmes will be developed that are based, with the best of intentions, on adult interpretations and perspectives. If children do indeed have different understandings, then the success of interventions designed to promote their resilient characteristics is likely to be compromised. (p. 318)

While there exists some more recent descriptions of varying degrees of youth-informed mental health interventions (e.g., Afifi et al., 2011; Graham et al., 2014; Hagen et al., 2012), examples of this type of research and programming remains an exception in the academic literature. The need for initiatives that are informed by the perspectives of their intended target audience, in this case, children and youth, adds further strength for my CBKT approach, in which youth voice was privileged through the key role that young people played as collaborators in this research process.

While not an extensive review of the literature, this examination of reviews covers a range of evidence from mental health promotion through prevention among youth populations and provided direction for this doctoral work. Specifically, this evidence offered support for a participatory approach to fostering youth mental health outcomes. Additionally, this evidence suggested that a health promotion orientation would be more effective than efforts aimed at addressing established mental health problems. This evidence informed my engagement with

community partners and was built upon as the focus of the initiative took shape. For example, this evidence was revisited and shared with study collaborators to inform initiative development (see Chapter 4 for further details regarding how this scientific evidence was used in the CBKT process).

Chapter 2: Study Approach

In this chapter the overarching approach to this dissertation research is described. Given the manuscript-based style of this dissertation, a more detailed discussion of the theoretical tenets and methodological approaches that informed each analysis is presented in Chapters 3, 4 and 5.

2.1 Situating Myself as a Researcher

My interests in conducting research to better address mental health issues arises from my experiences working as a nurse in acute adult psychiatry. In this setting, I witnessed the shortcomings of Canada's mental health care system as well as the limitations of current treatment approaches. During my graduate training, I was introduced to the concept of KT as well the public health approaches of health promotion and illness prevention. I decided to utilize these approaches in research with youth populations in an effort to contribute to healthier communities in which fewer people would end up requiring acute adult psychiatric services.

In the early stages of my doctoral training, I oversaw a qualitative study in the community of Lakeview examining young peoples' experiences of emotional distress (further discussion of this study appear in the following sections). Findings from this initial study provided data used to address my first research question – demonstrating how context contribute to young peoples' experiences of emotional distress. Furthermore, this research indicated the need for additional efforts in this study community aimed at promoting adolescent mental health – justifying the interventional components of my research and informing the next stages of my study, which came to be known as the Social Networking Action for Resilience (SONAR) initiative. Findings from this initial study served as an important source of local knowledge to inform the analyses conducted to address my second and third research questions.

2.2 Theoretical Positioning

This dissertation was grounded in the traditions of participatory research which, as described in my literature review, is a central tenet of CBKT. For the purposes of this dissertation research, I drew on the notion of participatory research offered by Green and colleagues (1995) in which this approach is described as, “systematic inquiry, with the collaboration of those affected by the issue being studied, for purposes of education and taking action or effecting social change” (p. 194). This work was also informed by critical inquiry. A critical lens was used to support the identification of contextual factors (e.g., socioeconomic characteristics, community dynamics and inequities, economic and human resources) in the study setting that influenced adolescent mental health and emotional distress as well as factors that helped or hindered the change process (Kincheloe & McLaren, 2005). This theoretical position and my interest in context are aligned with my focus on utilizing a public health perspective and targeting the social determinants of health, which cannot be meaningfully addressed without “recognizing that they reflect underlying social processes” (Reimer-Kirkham et al., 2009). As previously described, emotional distress was conceptualized in this study as encompassing a spectrum of mental health challenges from difficult thoughts and emotions such as stress and grief, through to clinically significant mental disorders. Emotional distress, conceptualized in this way, is aligned with the view that mental health challenges lie along a continuum, and may not always fit within established diagnostic categories (Williams, 2012).

2.3 Study Design and Overview of Study Site

This dissertation research was designed as a case study, a research methodology that can assist with gaining an in-depth understanding of the processes involved in community-based knowledge translation (CBKT) targeting adolescent mental health (Yin, 2014). Given the youth

focus of this study and evidence indicating that young people can provide valuable resources for creating change and enhancing the outcomes of youth-targeted interventions (Checkoway et al., 2003; Howard, Dryden, & Johnson, 1999; Thakeray & Hunter, 2010), young people were viewed as key partners for this collaborative study. To achieve a youth-driven initiative, youth collaborators (YCs) were hired to inform the development, implementation and evaluation of the mental health promotion initiative.

This case study was embedded within the community of Lakeview⁴. Lakeview is a small, resource-oriented (i.e., forestry and mining) town in North-Central British Columbia with a population of approximately 4700 people including the town population, more rural areas and surrounding three First Nations communities and respective reserves (Destination BC Corp., 2014). Young people from the outlying areas and reserves are bussed into Lakeview to attend school at Lakeview Secondary or its affiliated alternative school⁵. Lakeview Secondary serves the young people living in Lakeview proper as well as those from the surrounding First Nations communities, with 54% of students at the high school identifying as Aboriginal. During the 2013/2014 school year, Lakeview Secondary and its affiliated alternative school had 344 students enrolled.

Members of the Lakeview community were initially engaged with this research topic in 2012 when Dr. Johnson and colleagues were funded to conduct qualitative interviews exploring youth

⁴ Throughout this dissertation, the study community is referred to by the pseudonym, “Lakeview” to protect the identity of the study site and its residents.

⁵ The alternative school located in Lakeview provides a flexible learning environment for young people who experience challenges such as learning disabilities and circumstances impacting school attendance (e.g., family challenges, teen parenthood). The school also provides education to students who want to work at their own pace or take distance education courses. Some students attend classes at both Lakeview Secondary and the affiliated alternative school simultaneously.

experiences of emotional distress and resilience; a project focused on bringing youth voice to the mental health literature and seeking to better understand how contextual factors shape mental health outcomes in young people⁶. This study site was selected to gain an understanding of the ways in which context influences adolescent mental health in rural communities. Rural environments are frequently excluded from research, yet people living in these settings often experience greater mental health challenges related to contextual characteristics such as high poverty rates, geographic isolation, limited accessibility of mental health services, and greater levels of stigma (Benavides-Vaello, Strode & Sheeran, 2012; Eberhardt & Pamuk, 2004). Members of the community were enthusiastic about the opportunity to participate in research on adolescent mental health, viewing this health issue as a key priority requiring attention in their community.

Three members of this research team first travelled to Lakeview in September 2012. During this visit, 27 qualitative interviews were conducted with youth from Lakeview Secondary. The evidence from these qualitative interviews provided an important source of community-based knowledge and provided justification for moving forward with the interventional components of this dissertation (see chapters 4 and 5). A community report featuring the findings from this initial study (see Jenkins, Ng, & Hilario, 2013) were used to re-engage the study site and to inform the direction this dissertation research, which was eventually named the Social Networking Action for Resilience study (SONAR) by community collaborators.

⁶ Throughout the remainder of this dissertation, this study, for which I was the project manager, will be referred to as the “initial” study. Data collected during this initial study are analyzed and presented in Chapter 3. These data provided evidence of the need for mental health intervention in the community of Lakeview, providing justification for my CBKT research.

2.4 Recruitment and Engagement of Project Collaborators

The active recruitment and engagement process for this dissertation study began in April 2013. At this time, a community report highlighting findings from the initial study conducted in Lakeview was circulated to community stakeholders. After speaking to the Vice Principal at Lakeview Secondary, who provided approval to move forward with the dissertation research in the school setting, a “Youth Collaborator Job Description” poster was distributed to school administration. The job description was posted throughout the school and school staff also spoke directly with students about the opportunity. The application deadline was set for May 9th to allow interested youth time to apply prior to my arrival in the community on May 13th. The position was restricted to young people in grades 8-11 to ensure continuity throughout the year-long study period. As of May 10th, 10 applications had been received; however, 9 of these 10 applicants were girls. Contact was made with one of the school counselors at the high school as well as a community-based youth worker who had been involved during the initial study to ask for assistance in identifying boys who may be interested in participating in the project. We decided that it would be beneficial to extend the application deadline to allow for ongoing recruitment. Youth who emailed applications were contacted and interviews scheduled for the afternoons of May 13th and May 14th. The school staff provided significant assistance in identifying additional youth who would be a good fit for the project in terms of their interest in mental health and creating community change, and who represented diversity in age, gender, and ethnicity. While I was able to rule out some of these young people based on their applications (e.g., no expressed interest in topic area), the counseling staff indicated that they would appreciate me conducting interviews with all youth who applied for the positions as this served as good experience in terms of preparation for future job applications. A total of 25 youth were

interviewed. Initially, I planned to hire eight young people for the YC positions, however, while in the field, it became clear that there would be many benefits to increasing the number of YCs to 10 (i.e., achieving a more diverse group, planning for potential attrition). While more youth were hired than planned, the decisions regarding who to hire remained difficult. The youth who applied all brought unique skills, interests, and motivations. The YCs selected included a diverse representation of young people in terms of age, gender, and ethnicity (see Table 1), as well as the peer groups that each identified with at school. This diversity was anticipated to be beneficial in gaining access to and engaging different groups of young people in this community.

Table 1: Demographics of Youth Collaborators at Time of Hiring

	Count
<i>Grade</i>	
Grade 8	3
Grade 9	0
Grade 10	2
Grade 11	4
Mixed Grade	1
<i>Gender</i>	
Male	3
Female	7
<i>Self-Identified Ethnicity</i>	
“White”/Caucasian	4
First Nations:	
First Nations Community A	2
First Nations Community B	1
First Nations Community C	1
“Mixed” ethnicity	2

Following selection and hiring of the 10 YCs, I met with the group over three afternoons and engaged in activities aimed at fostering a team identity, introduced the process of asset mapping⁷ (a project that they would undertake during the study period), shared findings from the initial study conducted in Lakeview exploring young peoples' experiences of emotional distress and resilience, and discussed the group's initial ideas for a CBKT initiative aimed at promoting youth mental health outcomes. Given the rural nature of the Lakeview, each YC was provided with an iPad to use for weekly videoconferencing sessions, which served as our primary source of connection between my visits. One-hour videoconferencing sessions were scheduled on a weekly basis at a time that was convenient for the group. The YCs gathered for these sessions in the school video conferencing room.

In collaboration with the YCs, adult partners were identified and included city council members, local First Nations stakeholders (e.g., Band Manager, Health Director), school teachers and administrators, community-based youth workers, and interested members of the broader Lakeview community (e.g., members of Arts Council, parents, local media representatives). Between May 2013 and May 2014 I worked with these collaborators to develop, implement, and evaluate the youth-driven CBKT initiative that was referred to as the SONAR project. YCs were encouraged to utilize creative methodologies in the development of this initiative in order to best engage members of their communities in creating transformative change. In January 2014, five additional YCs were hired in an effort to enhance the reach of the initiative during the dissemination and implementation phase of the study (see Chapters 4 and 5 for further details).

⁷ Asset mapping is a strengths-based approach to community development in which participants identify assets or capacities that exist in their community. The asset mapping approach can be used as a foundation for planning community initiatives and can be a valuable strategy for building connections between participants and their community (Kretzmann & McKnight, 1993).

2.5 Methods

I drew on a variety of methods and data sources (i.e., field notes, qualitative interview data, survey data) to comprehensively address each research question and to enhance the depth of this exploration. In keeping with a participatory approach, the methods used throughout this study were emergent and informed by my research questions (outlined in Chapter 1) as well as the CBKT focus, community connectedness, which was identified in collaboration with community partners. In an effort to enhance community connectedness, a contextual factor that was identified as lacking in this community and which evidence demonstrates is a key contributor to positive mental health (e.g., Oberle, Schonert-Reichl, Guhn, Zumbo, & Hertzman, 2014; Whitlock, 2007), the YCs developed a web-app to foster engagement. In addition, collaborators undertook a variety of other activities to enhance the community's understanding of young people's needs and to create additional opportunities for young people to meaningfully engage in their community, and thus, enhance connectedness (see Chapters 4 and 5 for further details of the CBKT initiative). Data were collected over a two-year period, from September 2012-September 2014. Data collection for the initial study that our team conducted in Lakeview was collected in September 2012 and provided essential contextual data that informed all further study activities. I undertook additional data collection for my dissertation from April 2013-September 2014, during which time I travelled to Lakeview on six occasions for three-five days per trip, beginning in May 2013.

2.6 Data Collection and Analysis Approaches

To address the research questions of interest, three separate analyses were conducted. Following, I briefly describe the data collection approaches utilized in each of these analyses, with further details, including issues of scientific quality, contained in the relevant chapters.

2.6.1 Research Question #1

To address the first research question, “How does context influence young peoples’ experiences of emotional distress?”, I drew on the interpretive traditions of qualitative research and utilized qualitative interview data and extensive field notes from the initial study that I was involved in conducting in Lakeview. These data were collected through semi-structured interviews with 27 young people attending high school at Lakeview Secondary (see Chapter 3 for details of this analysis and Appendix A for interview guide) as well as community observations. Thematic analysis approaches were used to inductively identify patterns in these interviews to better understand the ways in which context influences young peoples’ everyday experiences with emotional distress (Boyatzis, 1998). Findings from this analysis provided justification for continued engagement with the study community through my dissertation research.

2.6.2 Research Question #2

To gain an understanding of the key elements of CBKT and capture what this process looks like in context I drew on ethnographic methods and utilized extensive field notes documenting my observations and interactions throughout the study period (see Chapter 4 for details of this analysis). Ethnographic methods capitalize on the extended relationship that I built with the study community and facilitated rich descriptions of the CBKT process (O’Reilly, 2005). In an effort to make a meaningful contribution to the CBKT literature and build on existing research, I used the CBKT framework devised by Kitson and colleagues (2013) as a coding structure for data analysis. This approach provided an opportunity to test the fit of this framework with empirical data capturing a CBKT process and contribute a revised framework driven by my dissertation research findings.

2.6.3 Research Question #3

A mixed methods approach involving a QUANT + QUAL design was used to comprehensively assess the influence of this CBKT initiative on factors associated with mental health among young people in the study community (Creswell, 2010) (see Chapter 5 for details of this analysis). A combination of quantitative surveys and qualitative interviews provided necessary data (see Appendix B for quantitative surveys and Appendix C for qualitative interview guide). Analysis of quantitative data included the use of statistical procedures (paired samples t-tests, ANOVA and regression) and social network analysis techniques. Qualitative data were analyzed using thematic analysis approaches.

2.7 Ethics

The integrity of this study relied on youth participants' rights to privacy and confidentiality, including privacy in the context of their families. For this reason, in my ethics application I made the case that young people (both YCs and participants in the quantitative survey) should be able to provide their own consent for participation in this study. In an effort to educate and inform the YCs about research ethics, I drew on the "Know Your Rights with Research" tool, which was created by Chabot and colleagues (2012) in collaboration with youth to better inform young people of their rights during the research process. As a courtesy, a letter was distributed to parents/guardians informing them of the research that I was engaging in.

All YCs signed a confidentiality and consent form when they were hired (see Appendix D for copy of Youth Collaborator consent form). Students who participated in the quantitative survey were provided with a letter describing the purpose of the study as well as their rights as a participant. This letter informed potential participants that returning their survey would be taken

to indicate informed consent (see Appendix B for details on consent appearing at beginning of quantitative survey). Qualitative interview participants provided written consent prior to the interview (see Appendix E for Key Informant consent form).

Given the sensitive nature of adolescent mental health, there existed the possibility that in the process of this study some youth would share upsetting or difficult experiences. Recognizing this, I remained attentive during all interactions to gauge participants' comfort and modify the approach, if necessary. I worked to create a research team atmosphere that was respectful of diversity and created a list of mental health resources should anyone wish to seek help for themselves or on behalf of others. Furthermore, if a young person were to have disclosed that he or she had an intention to harm him or herself, or others, I had established a process for contacting the Ministry of Children and Family Development (MCFD) or a school counsellor to develop an appropriate plan.

All sensitive project data and participant information were kept confidential. Participant transcripts were stored electronically on password-protected computers and participant identification numbers assigned to protect participants' identities. A file with participants' contact information, demographic information, and identification numbers was kept in a separate locked file at the University of British Columbia (UBC). The Behavioural Research Ethics Board at UBC granted ethical approval to conduct this study. Due to the nature of collaborative research, the approaches taken in this study were emergent and, thus, amendments to my ethics application were sought as warranted. Given the participatory nature of this work, I ensured that research procedures were aligned with the Tri Council Policy Statement on conducting collaborative research (Canadian Institutes of Health Research et al., 2010). Given my past involvement in qualitative data collection in the Lakeview community, I had already engaged

First Nations groups in this community to gain their support and guidance, and continued to do this throughout the study period.

Chapter 3: Divided and Disconnected: An Examination of Young People's Experiences of Emotional Distress within the Context of their Everyday Lives

3.1 Background

According to the World Health Organization, mental illness is the most significant health issue facing young people today (World Health Organization, 2005; World Health Organization, 2014) with more than 1.2 million Canadian youth (15% of the youth population) being formally diagnosed with a mental disorder. An even greater segment of the adolescent population (20-30%) reports an “emotional or psychosomatic complaint”, with rates shown to increase with age (Boyce, 2004). Research evidence indicates that 70% of mental disorders first arise during adolescence and many will become chronic conditions (Goldner & Bilsker, 2002; Kieling et al., 2011; Mental Health Commission of Canada, 2014). Of the various mental disorders, depression, suicidality (i.e., suicidal thoughts and/or attempts), and completed suicide related to depression represent significant public health problems for youth. Population-based surveys indicate that the lifetime prevalence of depression among Canadian adolescents aged 15-18 years is 7.6% and the lifetime prevalence of suicidality is 13.5% (Cheung & Dewa, 2006). Further, while other developed countries have witnessed a decline in youth suicide over the last decade, Canada's rates have remained stable (Navaneelan, 2012) and are the third highest in the Western world (Canadian Mental Health Association, 2014).

While population-based surveys provide estimates of clinically significant and diagnostically captured emotional distress (i.e., mental health challenges that have been identified as meeting established criteria for mental disorders according to widely used diagnostic criteria), there is a paucity of research focusing on the broader concept of emotional distress and experiences of

emotional health among the general teenage population. Emotional distress can be conceptualized as encompassing a spectrum of mental health challenges from difficult thoughts and emotions such as stress and grief, to clinically significant mental disorders, such as depression or schizophrenia. Existing research on emotional distress among young people has tended to use clinical, psychological and/or epidemiological perspectives to document rates and associated risk factors. Multiple authors have shown an association between stressful life events or adverse experiences (including loss, racism, low socioeconomic status) and depression (Brown, 2002; Cleary & Mechanic, 1983; Dohrenwend, 1990; Fernando, 1984; Folkman & Lazarus, 1986; George & Lynch, 2003), as well as schizophrenia, anxiety disorders and substance use disorders (Dohrenwend, 1990). Furthermore, emotional distress experienced in early life tends to persist throughout the life course, thus increasing vulnerability for mental illness in adulthood (Menaghan, 1999, Kessler et al., 2005).

In addition to quantitative research identifying risk factors and rates of emotional distress, there is a limited body of qualitative work that has focused on the role that emotional distress plays in relation to young peoples' experiences with specific mental disorders such as depression and conduct disorder (Kostiuk & Fouts, 2002; McCarthy, Downes, & Sherman, 2008). Lacking, however, is research that provides in-depth understandings of the everyday experiences or contributors to emotional distress from the perspectives of young people themselves. The impact of this omission is emphasized by Howard and colleagues (1999) who state:

A major shortcoming of many studies in this area [child and youth mental health] is the apparent disregard for viewpoints of children targeted in the research. There is a considerable body of literature in developmental psychology that illustrates that children do indeed interpret their worlds differently from adults; they have distinctly different

perspectives, values and understandings about all sorts of things from death to politics ...

A potential problem with research that assumes that all participants share the same definitions of risk and resilience is that policies and programmes will be developed that are based, with the best of intentions, on adult interpretations and perspectives. If children do indeed have different understandings, then the success of interventions designed to promote their resilient characteristics is likely to be compromised. (Howard, Dryden, & Johnson, 1999, p. 318)

Research that provides understandings of young peoples' experiences with emotional distress, from their perspectives, is needed to inform interventions that are responsive to and resonate with the needs of youth. Such knowledge can help to address the mental health challenges of young people across the spectrum of difficulty experienced and, ultimately, contribute to better mental health outcomes throughout the life course. In addition, research that situates emotional distress within the context of young peoples' everyday experiences is also required. While epidemiological evidence can demonstrate the magnitude of emotional distress among young people, it may conceal underlying risk factors and limit an understanding of the complex ways in which elements of context intersect to shape health and illness. Social scientists have long argued for the importance of exploring how aspects of context influence health outcomes. For example, as far back as the 1800s Durkheim demonstrated differences in suicide rates across diverse contexts (Simpson, 1951). In more recent years, scholars from fields such as health geography, sociology, anthropology and public health have argued that context must be viewed as more than simply a backdrop to social processes (Agnew, 1993).

In this paper, I draw on Poland and colleagues (2006) conceptualization of context as, "...the local configuration of social relations (comprising social structures such as class, race, and

gender; institutional practices, and collective and individual behaviour, and intersecting personal biographies)...” (p. 60). The breadth of this definition of context is well suited to understanding the varied ways and multiple levels at which contextual dynamics can impact experiences of emotional distress among youth.

There is mounting evidence to support the connection between social context, emotional distress and ultimately mental health. For example, North American women are three to four times more likely than men to attempt suicide (Navaneelan, 2012), however, suicidal behaviour is highly context dependent and shaped by cultural and gender norms (Canetto, 2008). Suicide rates are five to seven times higher for Aboriginal youth than for non-Aboriginal youth in Canada, with suicide rates for Inuit youth among the highest in the world at 11 times the national average (Health Canada, 2013). Scholars suggest that ongoing cultural oppression and marginalization of Aboriginal peoples and communities are important contributors to mental health challenges among First Nations populations (Kirmayer, Simpson, & Cargo, 2003). Young people from lower socioeconomic backgrounds and those living in communities with poor social cohesion report greater emotional distress compared to their peers growing up in more cohesive neighbourhoods (Aneshensel & Sucoff, 1996). Consistently, sexual minority youth are overrepresented in the data on emotional distress (Saewyc, 2011). These outcomes are related, in part, to the homophobia experienced by those with a minority sexual orientation. For example, research has demonstrated that sexual minority youth often receive less support from their parents, experience more verbal and physical abuse (Friedman et al., 2011), undergo chronic stress in navigating adolescence, and deal with internalized homophobia that limits their self-esteem (Wilson, Bushnell, & Caputi, 2011).

Poland and colleagues (2005) argue that social structures and socially constructed categories, such as those outlined above, shape, constrain, and reproduce human thought and behaviour, and the ways in which social structure and individual agency or action manifest are specific to neighbourhoods, towns or regions. Despite a growing interest in accounting for context in health research, much of the work in this area has focused on identifying health and social inequalities across geographies (i.e., locations, space) and at the level of individual characteristics and their associated health implications (Cummins, Curtis, Diez-Roux, & Macintyre, 2007; Frohlich, Corin, & Potvin, 2001; Kearns, 2012). The nuanced *relational* aspects of context, which help produce and maintain actions of populations and institutions and, in turn, influence health, remain largely unexplored (Cummins et al., 2007). Given the identified gaps, the purpose of this study was twofold: 1) to bring youth voice to the literature on emotional distress and, 2) to capture the ways in which context shapes young peoples' experiences of emotional distress within their everyday lives.

3.2 Methods

This qualitative study drew on data about emotional distress among young people living in a small, rural community in British Columbia (BC), Canada. Ethnographic methods were utilized because they facilitate in-depth, comprehensive insights into peoples' perspectives and behaviours, and the setting in which these are shaped (Reeves, Kuper, & Hodges, 2008). Adding a critical lens to this ethnographic approach pushed me to move beyond a description of "what is" to a more developed explanation of why things are (Cook, 2005). While there are a number of critical perspectives, for the purposes of this dissertation research I drew on the notion of an "evolving criticality" as put forth by Kincheloe and McLaren (2005). The basic assumptions guiding this critical perspective include: a concern with "issues of power and justice and the

ways that economy; matters of race, class, and gender; ideologies; discourses; education; religion and other social institutions; and cultural dynamics interact to construct a social system” (p. 306).

Detailed observations from the field and individual interviews provided rich sources of data.

These data allowed for an examination of the ways in which context shaped what young people shared about their experiences with emotional distress and provided insight into aspects of context that remained unspoken in formal interviews (Reeves et al., 2008).

3.2.1 Study Site

Lakeview⁸ is a small, resource-oriented (i.e., forestry and mining) town located in the North-Central region of BC, Canada with a population of approximately 4700 people including the town population, more rural areas and surrounding three First Nations communities and respective reserves (Destination BC Corp., 2014). This study site was selected because previous research conducted in this community by colleagues had provided an opportunity to develop relationships and rapport with key stakeholders who were concerned about the mental health of young people in their community.

The town is often described by locals as picturesque, and prized for its outdoor opportunities, including hiking, sailing, and mountain biking in the warmer months and dog sledding, ice fishing, and snowmobiling in the cooler seasons. Like many resource-based rural communities, Lakeview’s economic climate has fluctuated significantly over the years. Its lumber mills closed in 2007, creating higher unemployment rates than were typical for this community. The population also declined nearly 30% from 1996 to 2006. In 2009, the Provincial and Federal governments approved a new mining project in the Lakeview area. While Lakeview thus remains

⁸ Lakeview is a pseudonym used to protect the identity of this community and its residents.

a resource dependent community, some residents hope the mining industry will create jobs, allowing time to better diversify the local economy, with efforts currently focused on building the local tourism industry (Smith & Parkins, 2011).

Lakeview houses a small hospital which offers acute, emergency, and some maternity services; however, care is often referred to the larger hospitals in towns one to two hours' drive away, where there are more specialty health care providers and treatment resources. Despite the size of the town, Lakeview also has an emergency shelter for women and children, a local Ministry of Child and Family Development branch and an outreach clinic offering sexual health programs and needle exchange services. A local community services society provides counselling services and, historically, played a key role in caring for young people experiencing emotional distress. However, according to one of the society's staff, their budget has been cut to the point where a child has to be "visibly bleeding or bruised from abuse in order fit the [current] mandate" (Personal communication, May 15, 2013). In addition to the health and social services provided in Lakeview, the local First Nations leadership provides services to members living on reserve.

Health data from Lakeview suggest that, like other rural communities, there exist prominent disparities in adverse determinants of health and health outcomes among residents. For example, the life expectancy in Lakeview is shorter than that of BC residents as a whole (77.1 years vs 81.4 years), and while specific health and social indicators are unavailable for Lakeview itself, data for the local health area document some of these disparities. For example, young people in this health area demonstrate below standard achievement on the grades 4 and 7 Foundation Skills Assessment in reading, writing and math. A greater prevalence of youth aged 15-24 receive income assistance for a year or longer (2.0% vs 0.9%) and a higher proportion of families earn less than \$20,000 annually (11.4% vs 8.0%). Young women aged 15-19 years who live in this

health area have significantly higher incidence of pregnancy per 1000 young women (68.0 vs 26.3). In addition, there are greater numbers of children in care per 1000 children (19.5 vs 9.2) and higher levels of alcohol consumption. Depression is identified as the leading chronic health condition, both in incidence and prevalence (Northern Health, 2011). It is important to note that while these data demonstrate significant health and social disparities between residents of Lakeview and their BC-wide counterparts, they do not account for the experiences of First Nations people living on reserve, which would likely magnify these observed differences.

In 2011, 28.6% of Lakeview's population was 19 years of age and under (Northern Health, 2011). Lakeview is home to three elementary schools, one high school (grades 8-12) and one alternative school⁹. Many of the young people who attend the local high school are bussed in from the surrounding First Nations and rural communities. While graduating from elementary school to high school represents an important transition for all young people, this milestone includes additional challenges for many of the students who come to Lakeview Secondary from neighboring communities; this is often the first time that these students attend school outside of their home community and can be a significant adjustment in terms of relationships with peers, effort required to get to and from school, and responsibilities for other siblings, among others. During the 2013/2014 school year, Lakeview Secondary School and its affiliated alternative school had 344 enrollees.

⁹ The alternative school located in Lakeview provides a flexible learning environment for young people who experience challenges such as learning disabilities and circumstances impacting school attendance (e.g., family challenges, teen parenthood). The school also provides education to students who want to work at their own pace or take distance education courses. Some students attend classes at both Lakeview Secondary and the affiliated alternative school simultaneously.

3.3 Recruitment

Recruitment of young people attending Lakeview Secondary and its affiliated alternative school occurred in two ways. Information flyers posted in the school hallway described the study and invited students to contact me if interested in participating. As I wanted to explore a diverse array of young people's experiences, all who contacted me were invited and agreed to participate. I also worked with school counsellors who assisted me to purposefully recruit students experiencing emotional distress. Those recruited via counsellors were assured that their participation in no way was required or would affect their access to counselling services within the school. A total of 27 young people aged 13-18 were interviewed. The majority of participants self-identified as "Aboriginal" or "Native" (n=16), with the remainder reporting to be "mixed" or "half native" (n=5), "White" (n=4), or other (n=2). Just over half of participants identified as female (n=14).

3.4 Data Collection

The University of British Columbia, Behavioural Research Ethics Board provided ethical approval for this study. In preparing for this study, I engaged a variety of stakeholder groups in the community and received letters of support from the District of Lakeview and the local First Nations. Data were collected over a 20-month period from September 2012-May 2014 and included ethnographic field notes and in-depth interviews with young people. During the data collection period, I made seven visits to the community (3-6 days per trip) (1 trip for this initial study and 6 trips for the dissertation data collection). Interview participants provided written consent before the interview and a letter outlining the study objectives was given to these young people to share with their parents.

In-depth, semi-structured interviews were conducted in September 2012. To gain a sense of the social relationships of participants, interviews began with a social network mapping exercise. Young people were asked to diagram the meaningful relationships in their lives, whether positive or challenging; an appropriate ethnographic interviewing technique to help me understand the context of their everyday lives and the social and structural features as relevant for their mental health (Schensul, Schensul & LeCompte, 1999). Following, I asked participants to tell me about the people they included in their diagrams, which led to a discussion of the dynamics of these relationships, the norms related to interaction and elicited accounts of what it is like to live in Lakeview. While an interview guide was used, participants were encouraged to share their stories and expand on details they believed to be important.

Interviews ranged from 30-90 minutes and took place in a private room in the school setting. Confidentiality was ensured at the outset of the interview and participants were informed that all identifying information would be removed from the data. In instances where participants disclosed experiences in which they were at risk of harm, I sought the participant's permission and followed up with the school counsellors to ensure appropriate supports were in place. All interviews were audiotaped and transcribed. Participants were offered a \$20 CAN incentive as part of the recruitment process and, as per the conditions of the certificate of ethical approval and federal ethical research guidelines, were not required to complete the interview as a condition of the incentive (Canadian Institutes of Health Research et al., 2014). This strategy has been demonstrated as successful in other research with youth including youth's identification of such incentives as an acknowledgment of their position as expert knowers of their own lives (Bungay et al., 2006).

During fieldwork, I held many informal conversations with youth and adults in the community, which helped me to understand the social relations, attitudes and mores shaping emotional distress among young people in Lakeview. I also attended a number of formal functions identified as having cultural or social importance (e.g., Winter Festival, City Council meetings, Aboriginal Health Fair) and hosted a forum on adolescent mental health. I spoke to teachers, counsellors, business owners, parents, social service and health care providers, members of city council, youth and health workers from the First Nations communities, and police who worked with young people in Lakeview. Stakeholders were identified through discussions with school leadership and local youth, and through my observations of community dynamics. I spent time at places where teens hang out (e.g., on the streets, at after-hours events at the school). Extensive field notes taken throughout these interactions captured my reflections on observations, accounts of ways in which context influenced community dynamics, and questions to consider during analysis. For example, after attending the Winter Festival, I noted that while the event was advertised throughout the town, there was limited attendance by First Nations people, despite the event being co-sponsored by both the town and First Nations leadership. Like other events that I attended, I observed that even when an event was planned “in partnership”, one group tended to take the lead. These exchanges and related data provided me with community knowledge necessary to contextualize formal interviews.

3.5 Data Analysis

In this study, I drew on the interpretive conventions within qualitative research to develop rich descriptions of the ways in which young people experience emotional distress within the context of their community. This interpretive lens aligns with my conceptualization of context, allowing me to acknowledge “the constructed and contextual nature of much of the health-illness

experience, yet also allows for shared realities” (Thorne, Kirkham, & MacDonald-Emes, 1997, p. 172). Thematic analysis techniques provided flexibility compatible with my interest in context and emotional distress among adolescents (Braun & Clarke, 2006). Both interview and field note data were uploaded to NVivo to facilitate analysis. All data were subjected to the same coding scheme and organized into broad codes, then analyzed at the micro-level to inductively identify predominant patterns within the data (Boyatzis, 2008). Agreement on coding structure was reached through an iterative process of ongoing discussion with my committee and returning to the data. My analysis focuses on the ways in which Lakeview’s history, structures, norms, and interpersonal dynamics shaped the stories shared by youth participants and my observations in the field, supported by my use of a critical lens. During analysis, community reports highlighting key findings were circulated amongst community stakeholders and feedback sought (see Jenkins, Ng & Hilario, 2013). No changes to the study findings were necessary following the circulation of study reports.

3.6 Results

A central theme of *disconnection* became evident early on in the analysis. Disconnection is shaped by incidents such as loss, rejection and exclusion and is believed to be one of the most painful experiences that humans withstand (Eisenberger, 2012). Disconnection in Lakeview manifested in various ways and operated at community, interpersonal and individual levels. These multiple forms of disconnection included racialized geographies, fractured families, disconnection between young people and their community, and withdrawal from difficult emotions and are used to structure the report of my findings of the intersections between context and emotional distress.

3.6.1 A Disconnected Community: Racialized Geographies

As described above, the community of Lakeview includes the town and the surrounding First Nations reserves and more rural communities. Upon arriving in Lakeview, the municipal boundaries that create separation, distinguishing different areas of the community, are highly visible. The division between the First Nation reserve located nearest the town (henceforth referred to as Reserve A) and Lakeview can be identified by the gravel road on the reserve that becomes pavement in the town, effectively creating boundaries for land use as well as divisions between the people who call each area home. One young man who lived on this reserve described the division:

It's very depressing. Everyone looks so sad—a lot of people lost their voice...they lost their voice to talk and to stand up for themselves because they've been beaten down, they've been shut down, they've been brought into the wrong kind of things to do, like the alcohol and stuff, the alcoholics, there's plenty of them on the reservation. It's very sad. It's very depressing. Then walking onto the actual cement and stuff...it's like when you step off of the gravel, you get a tonne lifted off of you. It's like you're getting away from it. Everything just kind of brightens up because there's so much negativity there and it just brings you down...

The challenging circumstances experienced by young people living on the reserve shaped day-to-day interactions. During one of my field visits, I overheard a group of young people from Reserve A conversing. One young man made a joke, in which he changed the words of the popular children's nursery rhyme, *10 Little Monkeys*: "Ten little Indians jumping on the bed, one fell off and...he was alright because Indians don't have beds, just mattresses on the floor." One

young woman responded with laughter, followed by a disheartened, muttered, “fuck...” While this young man chose humour as a way to make light of the poverty and shared experiences of his community, the detrimental impact of this environment became increasingly evident as I spent time with people. For example, during a community meeting that I attended, young people and adults spoke about safety concerns on Reserve A. Many youth who lived in Lakeview proper were not allowed to visit friends or attend events held on the reserve due to concerns over safety. Stories of open drug use as well as physical and sexual assaults were common. Even residents of the reserve acknowledged it is not a safe place, particularly for visitors. Through these interactions, it becomes evident that while the impact of life on reserve and experiences of racism clearly influence the mental health of Aboriginal youth, this context also impacts the everyday experiences of young people throughout this community.

While the separation of the First Nations land from that of the rest of the town is a result of historical, macro-level policies which determined land allocation, these racialised divisions continued to be reinforced at the community level, perpetuating a cycle of racism and related mental health outcomes for all young people. For example, during a town meeting that I hosted on adolescent mental health, a mother expressed her deep concern for the practices of her friends who were encouraging her to have her children bussed (on publically funded transit) out of their school catchment area to attend a “White school”. The racial divisions run deep in Lakeview. Young people growing up in this town are continuously reminded of their “position” in the community, as these dynamics play out. Some of the institutional practices from the District of Lakeview and Reserve A leadership also affected the social cohesion and mental health in the community. Lack of collaboration between these two prominent groups created further division. Locals said they would attend events based on the social or ethnic group they identify with. The

two institutions may co-sponsor an event, but attendance was often dominated by one group's members, and planning was typically not collaborative. Such racialised practices were taken up by children at a young age in this community, and they frequently engaged in race-related verbal and physical violence. The emotional distress this hostility evoked among youth was revealed during my interactions with young people, many of whom broke down in tears or became enraged when describing life in Lakeview and the relationships between different groups.

While the boundaries dividing the Lakeview community were clear within official town limits, there were less visible divisions created by the allocation of reserve land further away, in areas located over an hours' drive beyond town borders. First Nations youth from outlying areas (henceforth referred to as Reserve B and Reserve C) usually had attended primary schools located on their reserves. As these youth transitioned into high school, they were bussed from Reserves B and C into Lakeview. Being new to this part of the community, they were often targets of bullying, and were described in ways that "other" or vilify them, reinforcing their disconnection:

... not all of them are bad, but the [Reserve B] kids, they're just horrible, I don't like them. The in-town Natives are cool, like I get along with all them, but Reserve B kids are just, they come down and just think they run the place.

Differences based on "race" and location of residence was used to single out one group of First Nations youth as problematic. In other stories, Reserve B youth were described as "violent" and identified as having weapons hidden on school grounds, which were allegedly used to intimidate and sometimes physically harm others. The effects of being identified as a member of this particular group often manifest among the youth through hypervigilance – in the school hallways

they appeared tense and on guard, a state of arousal that was reported to result in physical altercations. Another young person identified the effects that location of residence had on friendships in the community:

...there are some natives that are, like, “Oh, I don’t want to hang around you, you’re White.” Or, like, it’s just different I guess, because some live on rez, like in Reserve B, Reserve C. They’re used to their group of friends that are from there. And they just hang out with their little group.

The racialised geographies of Lakeview have notable effects on social connection, friendship, and experiences with violence and bullying during the secondary school years and beyond.

3.6.2 Fractured Families: Loss, Trauma and Hopelessness

Disconnection within the family was also a common reality described in Lakeview. Many participants shared they were living without their parents. For some, this meant living with other family members (e.g., aunts and uncles, grandparents), while other young people lived alone. This interpersonal disconnection within the family was often associated with interrelated social, historical and economic contextual factors: 1) the local economy, which required parents to work outside of the community, often living for periods of time in work camps, 2) parental substance use, and 3) the experiences of First Nations residential school survivors and their children, who have been subjected to significant trauma. Often removed from their communities, First Nations residential school survivors frequently grew up without parental figures to role model healthy parenting practices. One young woman explained how she viewed opportunities as limited for First Nations people, sharing accounts of recurring trauma:

I don't want to sound racist or anything, but the most successful people are the White people in the high school and whatnot. There are quite a few less Aboriginal people that graduate on time... So, we're outnumbered by the Whites and Browns... Like, some kids from some communities [refers to Reserves A, B and C] come from hardcore, hard situations to live in. Like, some parents – most of the Aboriginal parents give their kids up. So most of them are living with their grandmas, their aunties or their uncles. And some of them are weirdos, creeps and, like, whatnot... So some kids would get molested through elementary or get raped through their high school years... So I'd say that's another big issue around here.

Youth identified the various social and historical factors which influenced the emotional distress of young people in Lakeview. Growing up in Lakeview as a First Nations person, there were few expectations for significant life achievement, which influenced young people's aspirations, self-concept, confidence and, ultimately, experiences of emotional distress. When asked about future goals, many young people had difficulty answering this question; they had not been exposed to, or brought up within a context where opportunities were apparent, or planning for the future was fostered and encouraged. In addition, as the young woman above described, many lacked home environments where they could develop secure attachments with a guardian. Abuse appeared to be commonplace, and was being perpetuated across generations. A 16 year-old young woman, who was pregnant at the time of our interview, expressed that she was excited to have a child so that someone would "always love [her]", a statement that was linked to the examples she shared of instability in her home life.

Another young woman shared her experiences of loss, trauma, and guilt. When asked about a particularly stressful time in her life, she responded:

That would be about almost losing my mom...She was drinking at home and she started feeling really weird. All of a sudden she just dropped. And then I ran upstairs and I had to phone an ambulance and they shipped her to [a hospital in a community two hours' drive away]. It turns out that her kidney and her liver was failing and the fact that she smokes so much when she drinks, her lungs almost gave out too, and she was in ICU for about two and a half weeks...

She went on to explain that her mom returned home after about a month and a half in hospital, but soon started to use drugs:

Um, everybody's saying it was my fault that she started doing drugs. Because, when I started doing crack and I was hiding it behind my mom I guess she found out about it. I think she just got fed up with all my partying and after she found out I was doing drugs she just started doing it and she hasn't stopped yet.

Parental substance use was a common topic, regardless of ethnic or cultural background. The effect of these unstable home environments manifested in a variety of ways, including the substance use described by this young woman.

Many of the participants spoke of being "bounced around" between family members due to a range of circumstances that left parents unable to provide appropriate care. In many of the interviews, young people described how they had to take on adult responsibilities. Their lives were filled with stressors related to self-parenting, parenting siblings, and not having the opportunity to form strong and secure family connections.

I had to take care of my little brother and stuff, so I was just had to mature really fast...I had buy food and get a job and do all this work for everything I wanted because they [parents] just spent all the money. I'm 17 but I'm basically 21 'cause ever since I was 13 I was working and living on my own. In and out. When I was 13, I was living on my own and then I went and lived with my uncle for a little bit and then tried living with my dad but it was stupid. So, I had to move back here, and then I started living on my own. I lived on my own for like a year and a half and then I just moved in with my grandpa.

A number of young people also shared stories about alcohol consumption from a young age. Many considered alcohol use socially acceptable, and it was often described as a coping mechanism for the distress that they were experiencing in their everyday lives. One young person noted many parents accept alcohol consumption among youth by 10th grade. In some households, where the adults are dealing with substance use disorders, the use of drugs and alcohol by young people was common at much younger ages. Some participants expressed concern about the extent of adolescent alcohol consumption in Lakeview. One young woman shared:

You could be so small and you could walk up to a person that's been sitting on our streets in town for the longest time and say, "Hey, can you go get me a bottle? I'll pay for your next bottle." And they don't care how small you are...this little kid will end up drunk by the end of the frickin' day. So that's one of the crappy parts about town. Like, 'cause no one cares.

3.6.3 Disconnection between Young People and their Community

In addition to disconnection from families, young people growing up in Lakeview demonstrated and expressed substantial disconnect from their community. One of the ways in which this community disconnection manifested was in profound boredom, which was attributed to limited opportunities to participate in community life and being excluded from activities and resources. Limited opportunities to connect in meaningful ways and build healthy relationships contributed to a number of unhealthy practices. Many young people spoke about how boredom influenced substance use in the community. One young man explained:

It's really pretty here, just, there's nothing for teenagers to do. All there is to do is get drunk, smoke pot, and party, that's all there is. And when you have someone like me who does none of those [laughs], I have nothing to do.

Another participant echoed these sentiments and explained how a lack of opportunities for young people in Lakeview was a significant contextual feature contributing to substance use. He explained, "if you have absolutely nothing to do, that's when you start experimenting with things, right? They're like, 'Okay, there's nothing to do. Might as well try weed, I might as well try drinking...'" Another young person's words highlight aspects of the context that contribute to adolescent drinking, "It's a really small town. I notice there's a lot more drinking and everything here, just 'cause it's so small. It gets kinda boring just 'cause there's really nothing to do".

One young woman identified other consequences of boredom: "Sometimes it's like really boring 'cause there's like barely anything to do. A lot of us get into like a lot of trouble. Like vandalizing things, just for fun, 'cause barely anything to actually do." In some of my discussions, young people identified particular sports, such as hockey, and outdoor hobbies such

as snowmobiling, as activities that some young people participate in. However, they made it clear that these opportunities were only accessible to those whose families had finances to pay for these interests. For the majority of young people we spoke with, the few opportunities that did exist for youth were beyond their means.

The local historical, social and economic contexts of this community contributed to the limited community resources and opportunities for young people in their daily lives. Clearly, context influenced young peoples' experiences of emotional distress as well as their access to resources that foster mental health.

3.6.4 Self-Preservation: Withdrawal from Difficult Emotions

In the face of disconnection at a community or interpersonal level, some young people also demonstrated internal disconnection. Emotional disconnection is common among people who have experienced significant trauma; it is a way of coping with an everyday reality that is too difficult to take on and in which the survivor no longer considers it safe to feel (Dyregrov & Mitchell, 1992). One young man who was interviewed spoke about his experiences with physical abuse. He shared: "...just get used to getting hurt a lot, so pretty much don't care...they kick me down, punch me, hit me with a rock on the side of the head or something. But I'm all good." When asked to talk about a time that was particularly stressful in his life, he responded, "I literally can't describe all of them..." To the follow-up request that he tell a story about a time in his life that was difficult, the young man unexpectedly responded, "all my life has been good." When reminded of the experiences that he had shared, this young man replied, "ya, that wasn't that challenging." He then went on to describe a violent act that he suffered at the hands of his cousin, but shrugged it off. When asked why he does not seem to care, he replied, "just didn't

want to...I don't know. I can't really tell...Caring about something, I never felt care before."

Connecting or caring would require that this young man feel the pain of ongoing abuse, a reality which appeared to be too much, resulting in his apparent retreat from his feelings.

Another young man shared his experiences with physical abuse at the hands of his father:

And basically he was physically abusing me and stuff and, like, hurting me and stuff. So I figured that he wasn't my dad and basically my whole entire life, my whole emotions, everything was based on my dad. Like, it's kind of hard because you kind of want a dad there, to teach me about things...Like, every time he kicks me, right here [in the chest]...ever since the first hit, I told him that I never, ever wanted to be here. I'd rather just, like, slit my throat and die right in front of you. Just, because it ain't worth being here, to be your son. Like, you don't really care. You don't do anything. You don't come by and see what I'm doing...

This young man went on to explain his strategies for coping with this abuse stating:

Just forgetting about him, really. Just avoid him. Avoid the family. Don't talk to any of their family, not my uncles or aunties...but I know he's still there. I just don't really care anymore because you can't really care if somebody really abuses you.

Like other young people we spoke with who experienced ongoing abuse, this participant coped by trying to withdraw from his family.

Another young man had developed extreme fear following repeated experiences with physical abuse. He shared:

I'm always wondering if somebody's going to come up and beat the shit out of me. I'm always worried about that kind of stuff because everybody just looks at me, just stares at me. Just waits for me, it gives me so much thoughts that I don't know what the fuck's going to happen really...Like, I'm just paranoid about everything. Can't really feel. I can't really do that.

He went on to describe that he could feel some physical sensations in his body: "I actually have a full-time job so I could eat. So I'm not really feeling much things, but I'm feeling my stomach physically growling and everything every day. And it just hurts because I don't have the money..." Through this account the intersections of experiences with abuse and poverty become apparent. In this young man's experience, these contextual realities were contributing to paranoia, hunger and a dissociation manifesting in an inability to feel. Furthermore, recent cutbacks in health and social services contributed to limited support for young people experiencing abuse. For example, in discussions with a local non-profit society, I was told that funding cuts had resulted in their mandate becoming extremely narrow, leaving many young people without the care and support that they need.

While the above three participants demonstrated strategies of disconnection to cope with their experiences of emotional distress, one young man described uncontrollable anger. He stated, "When I get mad it's just like, I just get really warm, and I just get hot. I don't know I just get like sweaty...and then I just, I don't know, I just black out. I just go nuts." When asked how often this happens, this participant responded, "not very often. Just like a volcano, I just build stuff up but once in a while just huge eruption." When asked what types of events or experiences cause this to happen, he responded, "I don't know," and was unable to elaborate. This

participant's lack of response suggests that he too is employing a coping mechanism in which he has become unable to fully connect to his feelings and experiences.

One young woman who I spoke with engaged in self-injury, cutting herself with a razor blade as a means to "just release the stress" of a sexual assault she had experienced. She was dealing with significant ongoing emotional distress from this traumatic event, and had been hospitalized at one point due to suicidality. What appeared to continue to distress her was that, given the small nature of this community, she continued to see and be in close proximity to her assailant, both at school and at home (he lived on the same street). Although there had been a restraining order in place at one point, it was not limiting her contact with her abuser at the time of our interview, and so she continued to relive her experience, with self-harm becoming her outlet for coping with this pain.

As these young people's words illustrated, the context in which they were growing up was one in which abuse and neglect was commonplace. In addition, resources to support young people living in unhealthy and dangerous settings were extremely limited, leaving most of them to cope with these realities on their own. The impact of abuse was clearly contributing to the manifestation of significant emotional distress.

3.7 Discussion

This analysis demonstrates the complex relationship between context and young people's experiences with emotional distress, while privileging youth voice. These data illustrate how contextual factors such as the local economy, geographical segregation, racism, ageism, and cutbacks in health and social service programming operate to create various forms of disconnection, and intersect in young people's lives to shape their experiences of emotional

distress. In particular, the findings suggest ways in which contextual factors become embodied – in effect, how context gets “under the skin” and impacts mental health experiences (Wilkinson & Pickett, 2010).

In conducting my dissertation research in Lakeview, I heard and observed a variety of contextual circumstances that are influencing experiences of emotional distress among young people in this community. Perhaps most striking were the stories about experiences of trauma, which were shared by participants across diverse social positions and ethnic identities – nobody was spared. The prevalence of trauma among young people growing up in Lakeview is worrisome, particularly in light of research indicating that childhood trauma affects healthy development and leaves survivors vulnerable to severe mental disorders throughout the life course (Steele & van der Hart, 2014). In some instances, I spoke with young people who expressed an inability to feel or care, likely a dissociative response to living within an unsafe and chaotic reality. Dissociation has been defined as the “lack of integration of thoughts, feelings, and experiences into the stream of consciousness and memory” (Bernstein & Putnam, 1986) and is viewed as having the potential to be either protective or dysfunctional (Ataria, 2014). Among the young people I spoke with, this coping mechanism did not appear protective, as many presented with symptomology indicative of clinically significant emotional distress. While these examples of dissociation or disconnection were worrisome, so too were the accounts of uncontrollable anger, self-harm, and substance use, which are also identified as pathological responses to trauma; ways to re-enact trauma, express needs, and dissociate (Connors, 1996). The context in which these young people are growing up is affecting their everyday lives in profound ways and shaping experiences with emotional distress that may persist throughout their lives.

While stories of traumatic experiences dominated the interview data, there were additional aspects of the Lakeview context that shaped young people's everyday experiences of emotional distress. Poverty was prevalent in Lakeview, in part because of the recent closures of the mills that employed a large portion of the town's population. Through the interviews, participants shared the implications of poverty; unstable home lives, significant responsibility at a young age, and the inability to participate in available opportunities, to name a few. The consequences of poverty for adolescent mental health have been reported by others, including Dashiff and colleagues (2009) who conducted a review identifying both direct and indirect effects of poverty on young people's experiences of emotional distress, highlighting the adverse impact that poverty has on family relationships, a finding that parallels the work of others in the field (Dashiff, DiMicco, Myers, & Sheppard, 2009; Wickrama & Bryant, 2003). In a recent study, McLaughlin and colleagues (2012) focused on identifying the pathways through which poverty influences adolescent mental health. The authors found that the association between mental disorders and poverty is most directly related to *perceived* social status (McLaughlin, Costello, Leblanc, Sampson, & Kessler, 2012). This finding is pertinent to consider in the Lakeview context, where young people's stories indicated that they grow up with clear notions and encounter everyday reminders of their social positions (which are influenced by age, socioeconomic status and ethnicity) and access to resources.

In addition to stories indicating a paucity of family resources, participants also shared examples of limited community resources. Young people in Lakeview had few opportunities to engage with others and build healthy relationships within their town. They encountered both subtle and highly visible reminders of their position within this community, one which is not highly valued. This is a concern, as research demonstrates that connectedness is one of the strongest protective

factors against a number of adverse mental health outcomes (Oberle, Schonert-Reichl, Guhn, Zumbo, & Hertzman, 2014; Whitlock, 2007).

Experiences of emotional distress were described by youth participants regardless of sociodemographic characteristics. However, it is important to acknowledge the distinct consequences of historical policies, current practices and normative beliefs and behaviours on young people in Lakeview who identify as “Native”. Experiences of racism, abuse and poverty were common features in First Nations participants’ stories, and in my community observations. Further, while abuse and poverty were experienced by non-First Nations participants, racism served as an additional contextual reality with substantial negative effects for First Nations youth. These contextual realities parallel experiences in other First Nations communities where the legacy of residential schools continues (Dionne & Nixon, 2014). The high prevalence of addiction and abuse that has followed residential school survivors, the consequences of which continue to be perpetuated across generations, has been documented widely (Dionne & Nixon, 2014; First Nations Studies Program at University of British Columbia, 2009; Fournier & Crey, 1998). Substance abuse and mental illness are over-represented among residential school survivors (Kirby & Keon, 2004), which, along with high degrees of family separation associated with the colonial legacy of child apprehension, has contributed to a high proportion of young First Nations people living in government care, with extended family, or independent of adult guardians (Fournier & Crey, 1998).

While the intergenerational trauma created by the residential school system continues to affect young First Nations people today, it manifests and is experienced in different ways. One of the themes identified in this data was a pattern of coping through dissociation, disconnection or denial. Stories of significant abuse paired with comments indicating that it is unsafe to care or

denial of the impact of this trauma were worrisome, as this can be an extreme self-preservation approach to escape memories that are too painful to cope with through other mechanisms (Foa & Hearst-Ikeda, 1996). Similar stories of disconnection have been documented in the experiences of residential school survivors. For example, Musqueam Nation former chief George Guerin is quoted as saying, “I tried very hard not to cry when I was being beaten and I can still just turn off my feelings...” (Fournier & Crey, 1998, p. 62).

These findings suggest that the everyday experiences of emotional distress among youth are highly linked to the contexts within which they grow and develop. More specifically, these data demonstrate the importance of understanding and attending to context when examining emotional distress. The context of Lakeview – the values, beliefs, norms, and practices of this place are serving to recreate injustice and inequities in this community that contribute to young peoples’ emotional distress.

Given the nuanced ways in which context shapes emotional distress, one-size-fits-all programs or interventions cannot be expected to adequately address the mental health needs of youth across all settings. Initiatives that are developed in context, in collaboration with the communities or target populations they are intended to serve, are a necessary future step. Such initiatives have the potential to produce programs and interventions more appropriately responsive to the needs of populations, contributing to improved outcomes. Young people have different values, beliefs and understandings from adults (Howard et al., 1999); thus, initiatives that are created in partnership with youth may support the design of contextually-informed, developmentally appropriate interventions. Such action represents a necessary step towards better addressing the mental health outcomes of young Canadians today and throughout their life course. Further work in this area is needed to document the processes through which context-

responsive interventions are developed in collaboration with communities, and to gain an understanding of the contribution that this work can make toward improved adolescent mental health outcomes.

Chapter 4: Building the Evidence-Base for Community-Based Knowledge Translation through the SONAR Study

4.1 Background

Within the health research community, knowledge translation (KT) has become an increasingly popular concept, garnering significant attention and support from scholars, policy makers and research funding agencies. The rapid expansion of KT efforts in the health care context has been attributed to the quality improvement endeavours of the 1960s (Graham et al., 2006) and, subsequently, the evidence-based medicine (EBM) movement that gained momentum in the 1990s, and remains dominant in the health care research and practice discourse (Kothari and Armstrong, 2011; Rycroft-Malone et al., 2004). While there are a number of definitions and terms used to describe KT or aspects of the process, The Canadian Institutes of Health Research (CIHR), Canada's federal health funding body, has established a widely utilized definition of KT, describing the approach as:

...a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge to improve [health], provide more effective health services and products and strengthen the health care system... (Canadian Institutes of Health Research, 2012)

In addition to providing a definition of KT, CIHR identifies two forms of KT: end of grant KT and integrated KT (IKT). While end of grant KT entails efforts to disseminate findings following the conclusion of a study, IKT is a collaborative, action-oriented approach that involves the end-users of research from the outset and continuously throughout a study (Canadian Institutes of

Health Research, 2012), and is positioned as operating from the participatory research paradigm (Tetroe, 2007).

Despite enthusiasm surrounding the science and practice of KT, critiques have emerged. One of the notable concerns pertains to the narrow focus of KT research and theorizing, which has predominantly centered on enhancing the use of scientific evidence among health practitioners in clinical settings. Little attention has been given to the study of KT approaches aimed at improving health outcomes beyond acute and primary care environments (Kothari & Armstrong, 2011). Recognizing this gap, a number of scholars (e.g., Wilson et al., 2010; Kothari & Armstrong, 2011, Kitson et al., 2013) have advocated for a broadened scope within KT science and practice – one that focuses on improving health outcomes within community settings or among populations through public health strategies such as health promotion and disease prevention. Health promotion focuses on positive health, as opposed to illness, and is aimed at enhancing individual and community capacity to optimize health outcomes, while prevention occurs at three levels: primary, secondary and tertiary, with the goal of reducing risk for and prevalence of illness and disease (Public Health Agency of Canada, 2013) (further discussion of the nuances of the public health approach can be found in Chapter 5).

4.1.1 Expanding the Target of Knowledge Translation Efforts: Calls for Community-Based Knowledge Translation

In 2010, Wilson et al. proposed a framework for conducting KT in community settings (henceforth referred to as Community-Based KT or CBKT), recognizing that community-based organizations, which these authors identify as including such entities as non-governmental organizations, grassroots societies, and civil society groups, represent an important component of

the health care system. The framework includes four components: 1) the development of partnerships; 2) the production of systematic reviews addressing community relevant issues; 3) the creation of an online information portal to house evidence from systematic reviews; and 4) utilization of “rigorous” evaluation approaches, such as RCTs augmented by supplementary qualitative data to explore the impact of CBKT efforts. While the authors are among the first to identify the need for CBKT approaches in order to more comprehensively address the health of populations, their article provides limited direction for those wanting to utilize the framework and could be strengthened by the identification of novel strategies that would support innovation in community settings.

Kothari and Armstrong (2011) extend the conceptualization of CBKT further by identifying the importance of intersectoral collaboration as well as highlighting the focus on health promotion and prevention that is often a feature of work in community settings. These authors argue that given the broad nature of health care, different approaches are required in order to have an impact at different levels of the system and, further, given the unique characteristics of community-based settings, new approaches to KT are needed. Kothari and Armstrong suggest that, although diverse, community-based settings share a number of characteristics which make the KT needs in these environments unique: 1) they typically target networks of multiple organizations and stakeholder groups across sectors who work in collaboration, whereas clinically focused interventions are usually aimed at individuals or single organizations; 2) the types of knowledge valued by the diverse groups of stakeholders involved in community settings (e.g., members of public health departments, non-governmental organizations, health authorities) are broad and include experiential and local knowledge, whereas in clinical settings the types of knowledge utilized by KT researchers tends to be drawn from controlled trials and is therefore

narrow and focused; and, 3) advocacy serves as a central KT activity in the community, a role that has not been proposed by traditional KT scholars. Additionally, CBKT holds the potential to address issues using a population or public health approach, as opposed to the curative approach typical of clinical settings.

While the work of Wilson and colleagues (2010) and Kothari and Armstrong (2011) initiated dialogue regarding the need for expanded goals, intervention targets and approaches to KT, there remained a considerable gap in this literature – a lack of guidance for conducting KT initiatives in these emerging, population focused settings. Responding to this need, a select group of scholars have put forth conceptual frameworks to inform the CBKT process. Campbell (2010) drew on the theoretical underpinnings of participatory action research as well as the Ottawa Model of Research Use to develop a conceptual framework for CBKT. While this represents an important step forward, Campbell's model is visually complicated and the related article does not contain the level of detailed explanation necessary to enact the process to inform future work. More recently, Kitson and colleagues (2013) outlined a framework for doing KT within a population health study using a process that the researchers term, "co-KT". Co-KT is presented as a collaborative process informed by the theoretical foundations of engaged scholarship, a practice involving academic-community partnerships that has strong participatory underpinnings (Barker, 2004). The authors describe Co-KT as "a framework for actioning the intent of researchers and communities to co-create, refine, implement and evaluate the impact of new knowledge that is sensitive to the context (values, norms, and tacit knowledge) where it is generated and used" (p. 3). The framework proposed involves five steps that are carried out while remaining cognizant of the "study context" (which Kitson and colleagues describe as including the study site or location, stakeholders, local information and expertise) and the

“researcher context” (which the authors describe as including researchers who facilitate the study and ensure scientific integrity throughout the co-KT process) (see Figure 2).

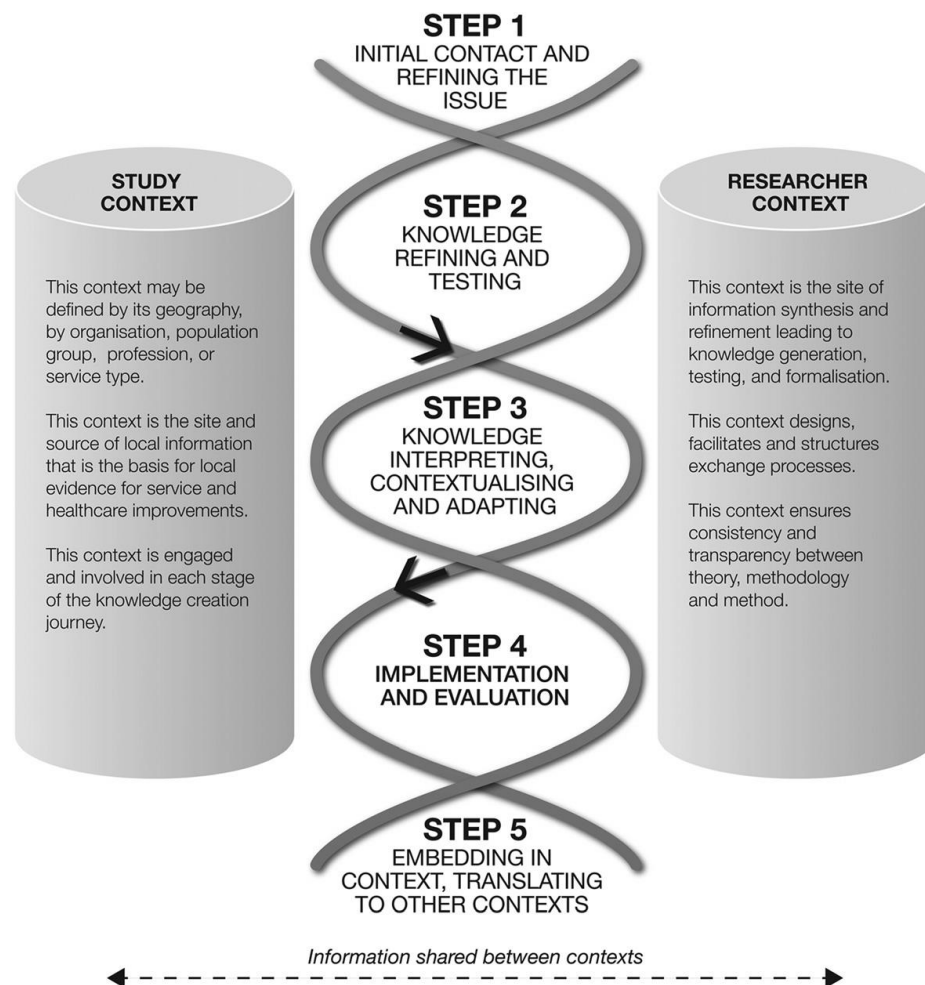


Figure 2: Co-KT Framework

***Source: Kitson et al. (2013)**

The co-KT framework presented by Kitson and colleagues (2013) makes an important contribution to the CBKT literature by providing theoretical and practical direction for engaging in population-focused KT. In addition, the authors raise an issue of critical importance to the

practice of CBKT – the nature of knowledge valued and utilized. Given the heterogeneous nature of community-based settings, Kitson et al. acknowledge that creating change to improve health within communities or among populations necessitates the incorporation of a diverse knowledge base; one that draws on a more universal knowledge that can be transferred between settings with little need for adaptation, as well as knowledge that builds on the various needs, expertise, and context of local stakeholders. While some researchers have varied concerns about the implications that these diverse forms of knowledge hold for internal validity and the ability to conduct highly controlled intervention trials, a number of scholars have argued for community-oriented research that attends to issues of external and ecological validity (e.g., Green et al., 2009; Miller & Shinn, 2005). Green and colleagues for example, write that while the processes of gathering and synthesizing specific forms of scientific evidence may be an appropriate approach for strictly biomedical issues where the target of intervention is relatively consistent (e.g., a specific pathological mechanism),

for many primary care and most public health interventions ... the object of interventions is far more diverse in psychological processes, cultural contexts, and socioeconomic conditions that may mediate or moderate the relationship between the intervention and the outcomes. For these interventions, context, adaptability, and external validity become as important as experimental control, fidelity of implementation, and internal validity. (p. 156)

The contributions made by these and other scholars in the emerging CBKT field have provided a necessary foundation upon which to build. From this literature, the unique nature of CBKT becomes more evident – the collaborative approach that is required in community-based work

indicates that CBKT is a form of IKT. Further, the population or public health focus and related approaches of health promotion and prevention distinguish CBKT within the broader KT field and highlight the need for the development of unique KT methods for community settings. While the proposed frameworks provide important guidance to scholars working in the field, there remains a shortage of literature detailing the use of these frameworks at a level necessary to fully appreciate and enact the processes involved in this type of work. There is also a need for empirically-based methodological guidance and the establishment of parameters for rigour in the field. Given these gaps and the broader focus of this dissertation research, the purpose of this analysis was to: 1) build on and further contribute to the CBKT evidence base by documenting and analyzing the processes used in applying the “co-KT” framework in context to data from my CBKT research focused on designing, implementing and evaluating a youth-driven mental health promotion initiative; and 2) contributing a revised, evidence-based CBKT framework that can be further tested and used to establish metrics to promote rigour in the field.

4.2 Methods

A case study design was utilized to uncover the processes involved in conducting a CBKT initiative focused on adolescent mental health promotion. This design was selected because it promotes rich comprehension of complex, socially situated phenomena, within real world settings (Yin, 2014). The site for this study was the community of Lakeview¹⁰, a rural, resource oriented town in North-Central, British Columbia, Canada (a more detailed description of this town can be found in Chapter 3). This study site was selected based on previous research conducted in the community which had provided the opportunity to build relationships, gain an

¹⁰ Lakeview is a pseudonym used to protect the identity of this community and its residents.

understanding of the contextual factors shaping mental health of young people in this community, and appreciate the profound need for initiatives targeting adolescent mental health in this town (See Chapter 3 for initial analysis informing the CBKT process).

From April 2013-September 2014 I worked with the community on the study that represents the “case” or focus of this paper, the Social Networking Action for Resilience (SONAR) initiative, which utilized a CBKT process to design, implement and evaluate a youth-driven mental health promotion initiative. Ethnographic methods were used to facilitate in-depth, comprehensive insights into the CBKT process while also gaining an understanding of the setting within which these processes were shaped (Reeves, Kuper, & Hodges, 2008). Study collaborators initially consisted of 10 youth (aged 13-18) who attended the local high school. These young people applied to become “youth collaborators” (YCs) for the study and were selected to ensure diversity in age, gender, and ethnicity to promote the reach of the initiative developed (see Chapter 2, Table 1: Demographics of Youth Collaborators at Time of Hiring). Given the health promotion focus of this work, the YCs had a range of experiences with mental health challenges; however, personal experience was not a prerequisite for involvement. Adult stakeholders included school administration and leadership, teachers and counselors, District of Lakeview staff, members of city council, stakeholders from one of the local First Nations communities (e.g., First Nations Band Manager, Health Director), and community youth workers. During the SONAR study period, I made six visits to the community, which ranged from three-five days in duration. In addition, I met with study collaborators on a weekly basis via videoconference to move the project forward.

4.3 Data Sources and Analysis

Data for this paper were derived from extensive field notes and email correspondence. These field notes, which consisted of 65 entries spanning 88 pages, documented observations and interactions within the field, detailed the steps undertaken during the project as well as their rationale, and described challenges encountered. Field notes were written in Microsoft Word, which facilitated analysis by allowing for easy grouping and coding of data. During the study development phase, I produced a conceptual framework to inform the project (see Chapter 1, Figure 1: Initial Community-Based Knowledge Translation Framework). This framework drew on the tenets of participatory research and KT and provided a guide informing study procedures and anticipated outcomes. While my dissertation research was underway, the co-KT framework proposed by Kitson and colleagues (2013) was published. This framework was aligned with my CBKT approach. Given my desire to build on existing literature and address gaps in describing the application of CBKT frameworks, I decided to apply the co-KT framework to the data I had collected. I used the five steps of this framework as the coding structure to inform this analysis. This approach was chosen because it 1) supported me in applying an existing CBKT framework to empirical data and, 2) provided an opportunity to contribute to the theoretical and practical gaps in the CBKT literature through an inductive example. Field notes were read several times and coded according to the co-KT step addressed. Data were then organized to provide a detailed description of the processes undertaken during each step of this CBKT process. Sub-codes were later established to highlight key elements of the process that occurred within each of the five steps. For example, data pertaining to the first step of the co-KT framework (Initial Contact and Refining the Issue) were grouped and organized to describe the processes undertaken during this step. These data were then analyzed further to identify sub-codes (themes), representing key

elements of the process, and used to further organize the data and provide more detailed direction for engaging in a CBKT process. Ethical approval for this project was obtained from the University of British Columbia, Behavioural Research Ethics Board.

4.4 Results

Drawing on the five steps of the co-KT framework, I present my results detailing the processes undertaken throughout this CBKT initiative, highlighting the strategies used and challenges experienced. The findings are organized using Kitson and colleagues' (2013) co-KT steps with sub-headings highlighting empirically derived elements of the CBKT process identified through this analysis.

4.4.1 Step 1 – Initial Contact and Refining the Issue

Each step of the CBKT process entails important elements that will influence success of the initiative, however; this first step is perhaps the most crucial. Initial contact and refining the issue involves establishing relationships with community partners and determining the nature of the health goal to be addressed. This process serves as the foundation upon which the possibility of achieving desired outcomes are built. In their paper, Kitson et al. (2013) describe this step as involving data being “conveyed from the study context to the researcher context in response to a query. The initial query may be generated by either context, but will be formally framed by the researcher context” (p. 4).

4.4.1.1 Building on Local Knowledge

Beginning relationships with the community of Lakeview were established through the initial study in this community that focused on gaining an understanding of how context influences

young peoples' everyday experiences of emotional distress (see Chapter 3 for details of this study and analysis). Through this work I gained meaningful insights into the challenges faced by young people in Lakeview and, also, established relationships with members of the community who wanted to work to improve adolescent mental health. This research culminated in a community report in which key findings were presented (see Jenkins, Ng & Hilario, 2013). Given the community's needs and interests, the query of this analysis became: how do you engage a community in developing an evidence-informed mental health promotion initiative to improve young people's mental health?

When reconnecting with the community to negotiate the process of embarking on the SONAR initiative, the community report was utilized as a way to engage stakeholders and demonstrate a desire for a partnership that, in Kitson and colleagues' (2013) words, would benefit both members of the "study context" and the "researcher context". This report also served as a valuable source of local knowledge upon which to build a CBKT initiative. Responses to this report were positive. I received emails from youth participants who were pleased to read how their stories had been highlighted and used to draw attention to the issues they were facing. One participant wrote, "Wow, it's nice hearing from you. I kind of forgot about this, but [the report] was so well done, I love it. Thank you for letting me be a part of it". Members of city council asked to share the report with their stakeholder groups and school administration indicated that the challenges they faced in addressing youth mental health were validated.

4.4.1.2 Establishing Partnerships

Given the paucity of youth-driven mental health interventions and the belief by scholars in the field that greater attention to collaborative youth program development is needed (Howard,

Dryden and Johnson, 1999; Larson, Walker & Pearce, 2005; Thackeray & Hunter, 2010), I determined early on in this dissertation research that young people would be central collaborators. I also decided to make the YC position a paid role, a gesture to demonstrate the meaningful contribution that young people would make to the project, as well as foster a sense of responsibility for the work that would need to be done. With the assistance of the local high school leadership, ads were posted in the school hallways for the position. Interested applicants were asked to apply for the job by describing why mental health is important to them and what they feel their community needs in order to enhance young peoples' mental health. In May 2013, I travelled to Lakeview for the initial SONAR initiative site visit. The goals of this visit were twofold: 1) to hire YCs and, 2) to engage members of the broader community through a forum on youth mental health.

4.4.1.3 Balancing Researcher and Community Contexts

During this initial visit, I interviewed 10 young people who had emailed applications for the YC position prior to my arrival and, in an effort to ensure diversity, I asked school leadership for assistance in recruiting additional applicants (nine of the 10 applicants were girls). Ultimately, I interviewed 25 young people and hired 10 as YCs. One of the reasons for the large number of interviews was that school counsellors expressed the benefits that they believed come from young people going through the interview process. These additional interviews served as an opportunity for me to provide a meaningful service to the community, while also working to ensure a group of YCs with a range of interests and experiences. However, because of the number of interviews conducted, the hiring process took much longer than anticipated. At this point, I documented, "I am a little worried that this is going to become a theme in this work –

things taking longer than expected”, a sentiment that proved true as I became further engaged within the community.

The young people who were hired were excited about the project, seeing it as an opportunity to gain new skills and make a difference in their community. One young man emailed to find out whether hiring decisions had been made and when told that he was a successful applicant he replied, “Yes, yes, yes! I am so excited to be a part of this project. I will be there tomorrow. You just made my day!” Following hiring decisions, I met with YCs for three in-person afternoon meetings. Given that Lakeview is located in a rural community that required air travel to visit, I also had to generate strategies for virtual engagement between site visits. To address this reality, each YC was given an iPad to use for weekly videoconference meetings and study activities.

During these first sessions, the group worked on establishing an identity, team building and visioning, and discussing the types of activities that they might be involved in throughout the project. Some of the youth asked if they would get to interview their peers like they had seen me do when conducting the initial study in the community. Discussions regarding what would be safe for the YCs and their peers in terms of sensitive topics and research ethics were had. For example, I spoke with the YCs about issues of confidentiality and the safety of young people disclosing sensitive information to their peers. Ultimately, we negotiated the possibility of the YCs serving as co-interviewers with me when collecting data from adult stakeholders (three YCs ultimately participated as co-interviewers with adult community stakeholders during the collection of data used in the Chapter 5 analysis). At this point, I noted that I would have to work on setting boundaries and expectations for what could realistically be accomplished while ensuring that the needs of both the “researcher context” and “study context” were met. This

boundary work was accomplished through open dialogue with the YCs who understood the ethical challenges that we were navigating.

4.4.1.4 Challenges in Building Group Cohesion

While the youth all expressed excitement and motivation to create change to improve mental health in their community, it took time for the group to function cohesively. For example, two of the girls in the group had a history of conflict, which became increasingly evident as the group began working together. At one point, members of the research team had to discuss the issue with each of the girls and encourage them to keep their personal differences outside of the work setting. One of the other primary challenges that I faced as the study progressed was attendance at weekly videoconference meetings. While the YC position was presented as a job and the youth compensated for their time, attendance at the meetings varied throughout the project from two to 10 YCs per session. Discussions about this issue occurred repeatedly with the YCs throughout the study period and changes to payment structure were made based on level of involvement. In addition, the YCs were asked to keep a log of their experiences and reflections throughout the study. The intention of collecting this data was to gain insights into the CBKT process from a community collaborator perspective. However, this was not an activity that took precedence among the YC's competing time demands and thus, was not completed.

4.4.1.5 Recognizing and Responding to Context

With ongoing reflection, it became clearer that the context within which these youth were living impacted their ability to commit to the project in the ways that I had not anticipated or expected prior to commencing the project. Young people growing up in Lakeview face some very challenging circumstances related to issues such as parental substance use, poverty, absence of

an adult guardian, and responsibilities for providing income towards their family's food and housing costs, amongst others (see Chapter 3 for further details). Factors in the study context influence engagement when working collaboratively in community settings, which contributed to my belief in the importance of building strong relationships during the initial contact stage of a CBKT process.

In addition to hiring and beginning to build relationships with YCs, I hosted a forum on youth mental health in an effort to share findings from the initial study and to engage potential adult stakeholders in the next stages of my work. This effort was also met with challenges. While I had corresponded with members of city council and school leadership to assist in advertising this event, the message did not go out as discussed. When I expressed concern about limited public awareness of the event, I was told, "sometimes short notice is better in this town". The result of this communication breakdown was a very small turnout to the forum (11 community members), however, it remained an important venue for communicating information about the project and making contact with key stakeholders who would prove to be instrumental in the study process as it continued. Experiences with lack of follow through were challenging and impacted the momentum of the initiative throughout the study period. Again, ongoing reflection revealed that the context of this town was contributing to the ways in which people engaged with the study. Repeatedly, I was told that the project was of great importance to the community; however, commitment was often lacking and communication slow. Eventually I identified that the people in Lakeview who have the motivation and resources to contribute to making a better community are overworked, overtaxed, and exhausted. One of the high school teachers expressed, "I would love to be involved, but my plate is already full". Another community member I spoke with shared: "As far as a mental health initiative, I am so very conscious of who I am, what I got to do

and how much I've got to give. And I just don't have it, but I'll still continue to cheerlead." Two of the youth workers in the community were taking time off because they felt "burned out" and another participant expressed, "absolutely everyone is spread too thin". It was described as all-consuming for these individuals to meet their daily obligations, let alone engage consistently in an additional project. This reality had a palpable impact on the ways in which this project developed with much less adult support than had been initially promised or expected by members of the community who I had spoken with when preparing to re-enter the field.

In addition to engaging stakeholders located within the community of Lakeview, considerable efforts were made to build relationships within the local health authority. The intention of this was to facilitate the exchange of information about health-related programming as well as create the potential for relevant policy change. I contacted a number of leaders within the local health authority and through a referral process, eventually identified a person responsible for a portfolio that aligned with this work. While the representative overseeing this portfolio was in the process of developing a task force to address mental health issues among youth in Lakeview and was very interested in this project, she experienced difficulties moving these efforts forward. In one email correspondence she wrote, "I have attempted a few emails to touch base with this [Lakeview Adolescent Mental Health and Addictions taskforce] group and have had minimal contact. I will keep trying and will keep you in the loop", however nothing ever came to fruition.

This first step of the co-KT process consisting of initial contact and refining the issue is critical to the success of a CBKT project. Reflecting on my data, I propose that this stage does not occur in isolation from the other stages, but rather, represents elements that continue to be revisited throughout the study process. For example, as new stakeholders become involved, the process of initial contact is revisited as the relationship is established. Further, given the iterative nature of

community work, there is some degree of adaptation or refining of the issue occurring throughout the project period.

4.4.2 Step 2 – Knowledge Refining and Testing

Once initial contact had been made with the study community, I prepared for the second step of the co-KT framework, knowledge refining and testing. It is pertinent to note that given my previous involvement in research in Lakeview and the community report that was produced from these data, I had engaged in activities of knowledge refining and testing as part of my initial contact process. Kitson and colleagues (2013) describe this step as the research team using their skillset to translate data and locally-derived evidence into an accessible product by “considering existing evidence, the perspectives of multiple stakeholders, and the ongoing input from the study context” (p. 4). While I began this process when initially re-connecting with the community, it continued for a period of approximately five months.

4.4.2.1 Gathering and Reviewing Diverse Sources of Knowledge and Building Capacity

During this five-month period, I met with the YCs via videoconference for 45-90 minutes on a weekly basis. Given the mental health promotion focus of this project, each meeting began with a relaxation exercise or stress management practice (e.g., mindfulness practice, breathing exercise, review of an online mental health resource). While I initially led these exercises, as the YCs became increasingly engaged, they took turns identifying useful practices and leading these session introductions. This process was intended as a way to provide YCs with concrete actions and skills that they could utilize to manage everyday stress as well as a set of mental health promoting tools that they could share with their peers. The youth enjoyed these activities, so much so that when we skipped these exercises for a couple of sessions due to time constraints,

the YCs asked to start including them again. Following these introductory exercises, the meetings during this co-KT step focused on reviewing and reflecting on a variety of sources of knowledge: data from the initial study on the contextual factors shaping youth mental health in Lakeview, results of an asset mapping exercise undertaken by the YCs identifying sources of strength for youth in the community, scientific evidence pertaining to mental health (e.g., evidence regarding the determinants of mental health and illness, mental health promotion strategies, effective approaches for improving mental health in community settings, research regarding mental health and illness among youth), experiential knowledge of the youth collaborators, and information gathered through discussion with adult stakeholders. The YCs assisted in identifying sources of knowledge or evidence for review. Through this process, the YCs gained experience and confidence in locating and reviewing various forms of evidence to inform project actions.

4.4.2.2 Deepening Understandings

Throughout the CBKT process, I disseminated identified sources of knowledge to the YCs to review. In instances where the original document was written at a level that was not accessible to a lay audience, I developed summaries of the material that were written in plain language and at a level appropriate for high school students. Readings were discussed and reflections encouraged during weekly videoconference meetings. However, the study context again influenced how this process unraveled. For example, a large portion of students who attend high school in Lakeview experience challenges with reading and reading comprehension. Late in the knowledge refining process, it came to my awareness that one of the YCs had very poor reading skills. At this point, the group was quite cohesive and supportive and the youth worked together to assist this individual in understanding the content that was being reviewed.

Through the process of knowledge refining and testing, the YCs developed a deeper understanding of key factors influencing the mental health of young people in their community. The identified issues included substance use, bullying, and racism. In addition, a concern that was repeatedly raised during the initial research study and by both YCs and adult stakeholders was an absence of opportunities for youth to be engaged within their community; to feel valued and to form meaningful relationships with adults and peers – otherwise put, a lack of community connectedness. Through continued discussion and review of scientific evidence on adolescent mental health, we determined that this issue was of central importance and likely influenced the mental health problems that the youth had identified.

4.4.3 Step 3 – Interpreting, Contextualising and Adapting the Knowledge Base

After engaging in a lengthy process of reviewing and interpreting evidence and identifying local challenges in light of this knowledge, the team moved to the third step of the co-KT framework. Kitson et al. (2013) describe this third step as the point at which “local evidence is refined and tested against the existing evidence to create intervention ‘prototypes’ to be introduced and tested in the study context” (p. 4). Based on the evidence review process undertaken during step two, community connectedness was identified as a central challenge in the Lakeview context, with detrimental effects for youth mental health. For example, in recent years, there has been a strong focus in the adolescent mental health literature on the central role that perceived sense of connectedness plays in mental health and illness (e.g., Markham et al., 2010; Oberle et al., 2014; Smith et al., 2014; Whitlock, 2007). Connectedness refers to a sense of belonging and attachment to others and has been identified by some researchers as the “strongest protective factor” against a number of mental health challenges and a key contributor to the development of resilience (e.g., Whitlock, 2007).

During this dissertation research, both youth and adults stakeholders repeatedly described a context where there is “nothing [for young people] to do”, which was used as an explanation for substance use, vandalism, violence, boredom and lack of ambition. It was further explained, “if you don’t play sports, then it sucks even more, too, ‘cause there’s not a lot of activities going around in this town”. Beyond an absence of formal activities for young people to engage in, there were frequent reminders in the community that young people were not valued. Signs were posted in some shops indicating only “two teenagers allowed at a time”. Young people did not feel that there were safe places for them to hang out, learn skills, or connect with mentors in the community.

4.4.3.1 Creating a Vision

To address poor community connectedness, the youth engaged in brain storming exercises and were encouraged to “think big” about the types of initiatives that could be developed to address this concern. This task turned out to be challenging. The YCs had great difficulty coming up with ideas, and when they did, they quickly identified reasons why they would be “impossible”. In an attempt to understand this experience, I returned to the data from the initial study. Reflecting on stories shared by youth participants, I was able to see how the context in which these young people were growing up was influencing their ability to imagine new solutions. In this community, young people were not routinely exposed to opportunities or engaged in discussion about possibilities for their future. When asked about life goals, many young people struggled to identify their ambitions. There were few examples within the community in which adults, let alone youth, had been successful in creating meaningful change to remedy a concern. In an attempt to address this challenge, I distributed a report by Tolman and colleagues (2001) entitled, “Youth Acts, Community Impacts: Stories of Youth Engagement with Real Results”. This

document detailed case examples from around the world where the actions of young people had resulted in community transformation; providing a source of inspiration for what could be achieved through the efforts of a group of dedicated youth. After engaging in this process of identifying a vision for a period of approximately three months, the YCs were able to build on existing evidence as well as their experiential knowledge to identify a focus for their initiative – they decided to develop and disseminate a smartphone/computer “web-app” which could be used to facilitate engagement in youth-relevant activities available in Lakeview, aiming to better address the issue of poor community connectedness.

4.4.3.2 Developing the “Formal Intervention”

The app proposed by the YCs would be aimed at fostering community connectedness and consist of three main components: a “real time” database of activities and opportunities for young people; a place for users to post ideas for positive change in their community, the details of which will be relayed to relevant stakeholders (e.g., city council, local First Nations stakeholders) to help shape policy and programs impacting youth; and links to online resources aimed at supporting adolescent mental health. By fostering engagement through the use of youth-relevant technology, these young people believed that community connectedness could be enhanced and that community factors contributing to mental health challenges among young people could be improved. This approach is aligned with research indicating that today’s youth generation tends to have advanced technological skills, which the vast majority use as a mechanism to engage with others, and when seeking health-related information (Gray et al., 2005). Further, although this project was carried out in a rural community with a high degree of poverty, I had data from a school survey indicating that the majority of youth had access to a smart phone or computer-based internet.

In addition to the functions of the app itself, this initiative was considered a platform upon which to spark dialogue about young peoples' needs in this community and work to develop additional opportunities for positive engagement. At this point in the process, the YCs arranged to share their work done to date with the Lakeview City Council. The intention of this presentation was to begin to disseminate the YCs' idea for an evidence-informed mental health promotion intervention, while also providing these young people with an opportunity to build capacity in the areas of presentation skills and civic engagement. Three of the YCs presented at the council meeting held in September 2013. The idea was so well received that the District of Lakeview offered to provide the funding necessary to hire a web developer to move the project forward and build the web-app.

Having received funding to move towards implementation, weekly meetings now focused on further solidifying a team identity, building the app, branding, and identifying a dissemination strategy; a process that took approximately four months. Given that the aims of the mental health promotion initiative had now been identified as enhancing community connectedness, the YCs now established SONAR (Social Networking Action for Resilience) as the CBKT project name and created related branding. A graphic designer was engaged to produce a project logo using the YCs' ideas and drawings. A web developer was hired and worked with the YCs via email and videoconference to develop the content and aesthetic of the app. In addition, the YCs received training from the web developer in managing the internet program so that they could continue to add content and make changes to the web-app as the project progressed. The intention of this training was to empower the YCs with the skills to manage their project and to provide them with experience in website management, an expertise that they could use for future projects or work that they may be involved in.

4.4.4 Step 4 – Implementing and Evaluating

Following the identification and design of the formal project initiative, the team worked for the following four months on a process of implementation and concurrent evaluation (assessment of the contribution of the SONAR initiative to youth mental health in Lakeview is the focus of Chapter 5). In the co-KT framework, this step is described as involving the community in implementing the intervention, assessing the impact, and making necessary modifications in order to enhance the intervention and support sustainability. With the web-app developed, the YCs and research team focused on dissemination and uptake of the intervention, which aimed to foster connectedness. In an effort to promote intervention uptake and sustainability of the project, five additional YCs were hired. The YCs arranged to make a presentation at a school-wide assembly to “unveil” their project to the school community. Each of the YCs spoke during this presentation sharing information about mental health and the mental health challenges they have witnessed in their community and discussing why it is important to address mental health. One YC shared her personal story about struggles with emotional distress. Against this backdrop, the youth presented their app, demonstrating the components and how to access it. The YCs expressed confidence in making this presentation and reflected that it felt validating to be able to share their knowledge and experience with their peers.

4.4.4.1 Planning for Dissemination and Promoting Uptake

In the weeks following this presentation, the YCs set up booths in the school hallway at lunch time and offered assistance in downloading the web-app to their peers’ smartphones. Prizes, which consisted of promotional materials that the youth had helped design (wristbands and beanies embroidered with the study logo), were used as an incentive to download the web-app

and to raise awareness about the SONAR initiative. The YCs were also invited by local community groups to set up booths and give presentations about SONAR at two community events: a winter festival and a career fair. The youth were provided with honoraria from event organizers for their participation, which was put into an account to support ongoing action. The local newspaper featured two stories about the project, further promoting the SONAR initiative. Between January 2014 and June 2014, activity on the web-app was monitored using Google Analytics, which identified 158 unique visitors and 280 sessions, with an average site viewing of approximately four minutes. Uptake did not occur as fast as the YCs had hoped for. While research indicates that adoption of new interventions can be a slow process that is dependent on a number of characteristics within the community context (Rogers, 1995), I was interested in engaging the YCs in discussing their interpretation of this challenge. At this point in the CBKT process, the youth were feeling defeated – their hard work had not resulted in the enthusiasm that they had hoped to see among their peers. The YCs mentioned difficulty convincing their peers to use the site, with many of their fellow students seeming uninterested in downloading and using the web-app. While the YCs were struggling to promote uptake of the web-app amongst their peers, I was challenged by a lack of commitment by the YCs to maintain the web-app. The real-time database of opportunities for young people, which was a primary feature of the web-app, required daily updating by the YCs who struggled throughout the project period to fulfill this need. In an attempt to address the feelings of defeat that the YCs were experiencing and re-motivate the group, I shared evidence about the potentially slow pace of innovation uptake (Rogers, 1995); however, the feelings of discouragement continued for a period of time.

4.4.4.2 Shifting Community Practices

Despite the challenges experienced, there were signs that positive shifts were occurring within the Lakeview community that enhanced connectedness among some youth. For example, young people started to be invited to participate on committees that shape the town's future. Two YCs joined the local Arts Council to focus on developing arts-based opportunities for young people. With the persistence of the YCs, new youth-focused opportunities were developed including a yoga class for youth and a First Nations' traditional arts and crafts program. Stakeholders shared stories with the research team about changing language amongst young people regarding contentious issues within the community such as sexual orientation. The YCs applied for and secured grant funding to support the creation of a youth-led documentary highlighting positive activities and opportunities for young people in Lakeview. The YCs demonstrated a sense of empowerment in their actions – speaking to local businesses and organizations about the SONAR initiative, presenting to peers and local leaders, and advocating for new programs and services for youth. Overall, there appeared to be a growing sense of ownership for the initiative amongst the YCs and the larger community (see Chapter 5 for further discussion of the links between the SONAR initiative and factors associated with mental health).

4.4.4.3 Supporting Continued Action

In the spring of 2014, I began working with YCs and adult stakeholders to establish a sustainability plan for the SONAR initiative. I reached out to key contacts seeking a new, community-based facilitator for the weekly meetings and offered mentorship to prepare the new facilitator. This task turned out to be challenging. One of the local youth workers and a contract employee from the city office volunteered; however, their availability was limited and did not

align with the YC's availability. Leadership for the SONAR team was inconsistent for the next several months and was further complicated by a lengthy, province-wide teachers' strike that delayed the start date of the 2014 school year. However, in the fall of 2014, one of the YCs advocated for the project and was able to get commitment from one of the school-based youth workers to help facilitate project meetings and activities. In addition, other adult stakeholders have continued to provide their support when available. SONAR activities have begun to move forward again with a number of new projects underway. Another challenge for sustainability was maintaining commitment from the YCs themselves, who, without research funds, would no longer be able to count on the position as a source of income. A number of the youth left the project when financial support for involvement was no longer available; however, the group has also engaged nine new YCs. As the project moves forward in the community, decisions will have to be made regarding recruitment of new YCs and adult stakeholders as well as future directions for the initiative. These decisions should be shaped by project evaluation data and considerations regarding feasibility, such as resources and commitment.

4.4.5 Step 5 – Embedding and Translating

Following collaborative implementation and evaluation of the evidence-informed mental health promotion initiative developed in partnership with the community of Lakeview, the SONAR project moved to the final step of the co-KT process. During this step, the study context internalizes the intervention to inform ongoing change and the research context translates evidence from the process back to the study and scientific communities (Kitson et al. 2013).

4.4.5.1 Period of Transition

At the time of writing my dissertation, this process remained underway. The SONAR team continues to make efforts to foster sustainability of the project following the transition from being part of a research study to being internalized as a community-developed initiative. The SONAR initiative has been featured in another news article in the local paper, the YCs have been interviewed by a national radio station, and the group has been invited to speak about their experiences and their initiative throughout their community. I have made presentations highlighting aspects of the study at a number of scientific conferences and professional symposia focusing on both KT and adolescent mental health. Brief reports of early findings have been compiled and shared with the Lakeview community. Several scholarly publications are underway to disseminate findings to strengthen the evidence base for CBKT research and to inform future CBKT efforts. This final step of the co-KT framework should be considered an ongoing process. Internalizing practices within a community setting can be slow and require ongoing efforts (Burnes, 2004; Roussos & Fawcett, 2000). The amount of time that this process takes will depend on a variety of characteristics within the study context such as perceived ease and benefit of the intervention, available resources, motivation and commitment to change (Rogers, 1995).

4.4.6 Development of a Revised Community-Based Knowledge Translation Framework

These findings demonstrate that the co-KT framework developed by Kitson and colleagues (2013) can provide valuable guidance to researchers and practitioners engaged in CBKT; the steps of the framework were well-aligned with the processes that occurred as this dissertation study unfolded. My analysis also provides evidence of key elements within each step (which I have presented as sub-headings within the findings section). These key elements can be viewed

as important considerations related to the CBKT process and have been incorporated into a revised CBKT framework (see Figure 3). The revised framework consists of the five steps of CBKT as outlined by Kitson and colleagues (2013) with the incorporation of the key elements identified through this analysis. In this revised framework, the five steps are portrayed as an iterative process as opposed to occurring in a linear sequence – a decision that was informed by my experiences of the CBKT process. In addition, the “researcher context” and “study context”, which were described by Kitson et al. and presented in their model as separate silos have been depicted as connected in this framework, acknowledging how these two contexts interact and shape each other through the collaborative study process. Key anticipated outcomes of a CBKT process are presented and are based on data from this dissertation study as well as theoretical and empirical literature from the participatory research and KT fields.

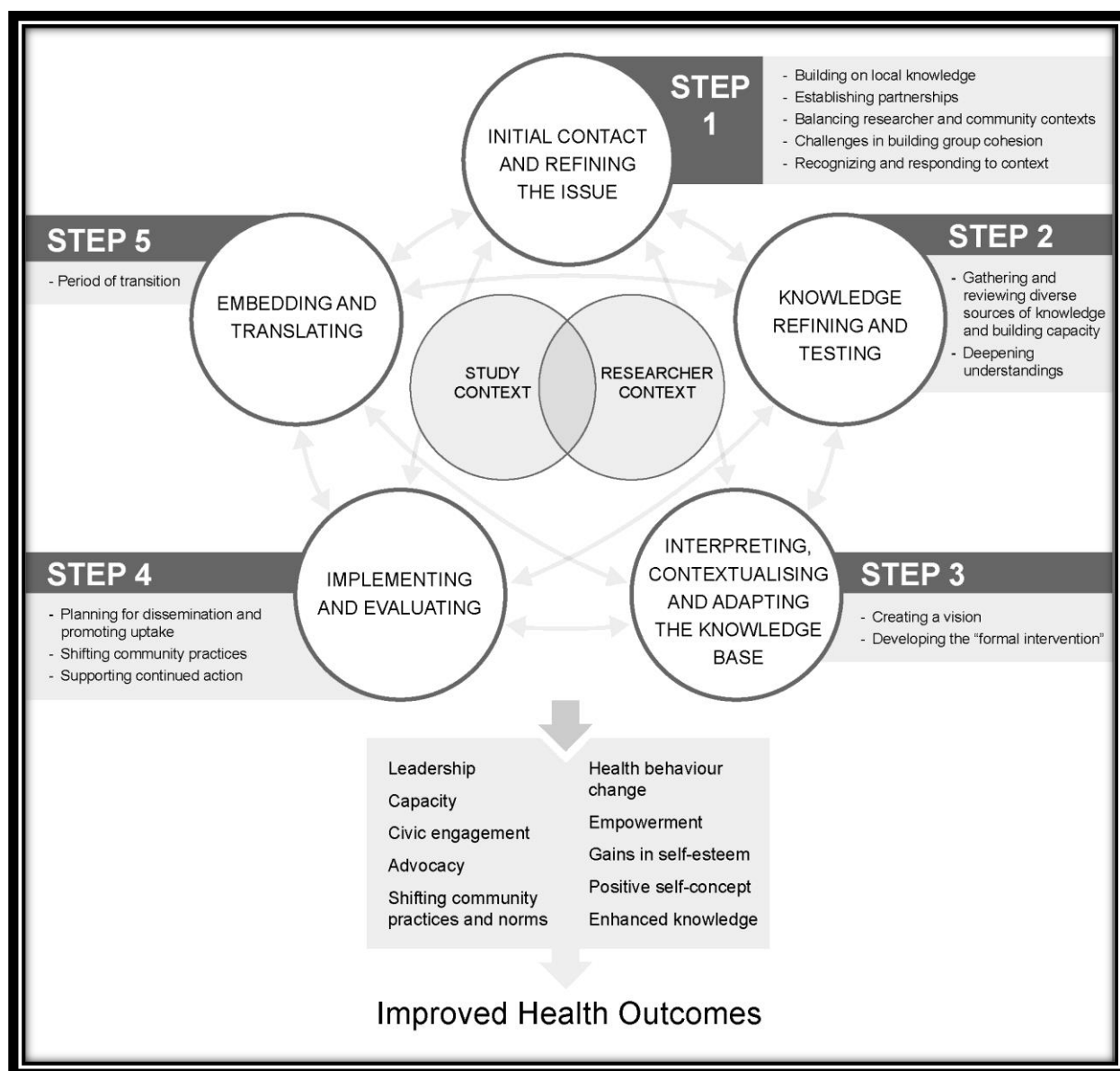


Figure 3: Revised Community-Based Knowledge Translation Framework

4.5 Discussion and Conclusions

CBKT is an emerging science and practice aimed at engaging populations in using knowledge to build capacity for optimizing health outcomes. In this chapter, I provide a detailed overview of the processes involved in conducting a CBKT initiative. In addition, I present a revised CBKT framework that is built upon Kitson and colleagues' (2013) co-KT framework, with the

incorporation of additional theoretical and empirically-derived elements and anticipated outcomes.

While the co-KT framework presented by Kitson et al. (2013) depicts CBKT as a linear process, my data suggest that this practice is iterative, with movement back and forth between the different “steps” throughout the process. The context within community settings is continually shifting and the emergent nature of collaborative work requires that the research team be able to adapt to circumstances encountered. Given this insight, I often had to revise my strategy and, at times, revisit steps in the CBKT process that had already been taken. For example, I found that I repeatedly returned to Step 1 – initial contact and refining the issue, as new stakeholders were engaged or changes occurred in the study setting. In addition, as new knowledge was identified, I would return to processes undertaken during Step 2 – refining and testing, ensuring that this information was translated to the community to inform the study focus and resulting formal initiative. The iterative nature of the process I undertook is aligned with prominent KT models used to inform evidence-based change in more traditional KT settings (e.g., the Knowledge to Action Process introduced by Graham et al., 2006).

The process of CBKT is complex and the emergent nature of the work can make the process feel “messy” to researchers who are used to working with more developed research plans. Soon after engaging the study context and beginning collaborative work, the importance of flexibility among researchers engaging in CBKT became clear; context plays an important role in shaping how the study unfolds. In the SONAR initiative, tasks took longer than I had anticipated, follow-through fluctuated, and both youth and adult stakeholders encountered competing demands for their time and energy resulting in poor or sporadic engagement at times. Reflecting on my data, I came to understand that these issues reflect a community in which resources (e.g., time, energy,

capacity) are limited and in which young people are required to take on significant family responsibilities, yet may not have had an opportunity to develop accountability within other aspects of their life (e.g., school work, employment). These realities required that I make adjustments to the study “plan” and come to terms with feelings of unease that can result from unanticipated challenges. In addressing these issues, I had frequent discussions with the YCs about expectations and required changes to the strategy. These experiences also served to demonstrate the interconnection between the two contexts outlined by Kitson et al. (2013) – each shaping and changing the other as the study progressed. While the initial study in Lakeview provided indications that the study context would influence the CBKT process and require changes to study strategies, it was not until encountering these challenges during this dissertation research and reflecting on the study context that the inevitability of these obstacles became clearer. This was a valuable lesson and demonstrated that during the planning stages of a CBKT initiative, drawing on knowledge of the study context could help CBKT researchers to anticipate potential barriers and facilitators and contribute to a smoother process.

One of the key differences between KT targeting change in clinical settings and CBKT is the nature of the outcomes sought. While KT in clinical environments is typically aimed at changing clinicians’ practices to better align them with an intervention or treatment based on scientific evidence (Kothari & Armstrong, 2011), my view of CBKT is that it should be less focused on enhancing uptake of a specific intervention and, instead, aim to change factors within the community setting that influence health outcomes. This approach is supported by evidence from the sustainability literature on large system transformation in which the intervention goal is to create a culture of continuous improvement or change, acknowledging that specific practices may need to continually shift in response to changes in context (Buchanan, Fitzgerald, & Ketley,

2007; Chambers, Glasgow & Stange, 2013). Miller and Shinn (2005) who write from a community psychology perspective also provide support for this approach. In response to the issues regarding research design and the nature of valid evidence in community settings, Miller and Shinn suggest developing and studying interventions while focusing on “powerful theoretical ideas” as opposed to attempting to create one-size-fits-all interventions. Identifying the core elements or “active ingredients” necessary for successful interventions are identified as key because “the core principles underlying an intervention, the content of the intervention, and the procedures for implementation may be transferable, but that the totality of the program is an inherently local, unique, and immovable commodity” (p. 176). With this in mind, instead of primarily focusing on web-app utilization, which was developed based on evidence and experiential knowledge of young peoples’ communication and help seeking strategies, the evidence-based change that the SONAR team sought to achieve and sustain was enhanced community connectedness, a key factor influencing adolescent mental health (Oberle, Schonert-Reichl, Guhn, Zumbo, & Hertzman, 2014; Resnick, Harris & Blum, 1993; Whitlock, 2007). Taking this approach to CBKT initiative development provides the SONAR team with the flexibility to continue to adapt their approaches to fostering connectedness and, ultimately, mental health, as their context shifts.

Additionally, through the CBKT process, I was interested in promoting and achieving sustainability in community capacity, empowerment, competence in utilizing different forms of knowledge to inform community practices, and shifting behaviour and community norms – all of which I expected could be achieved given theoretical and empirical literature from the KT and participatory research fields (Evans, Pilkington & McEachran, 2010; O’Fallon & Dearry, 2002; Roussos & Fawcett, 2000; Viswanathan et al., 2004; Wallerstein & Duran, 2010). It is pertinent

to note that although there are clear connections between participatory research approaches and CBKT, as evidenced by the use of participatory theories in the CBKT literature and proposed frameworks, the two concepts are distinct. While collaborative methods and community engagement are central to both participatory research and CBKT, the *emphasis* on the use of evidence to drive the process is unique to CBKT. The aim of CBKT, as I conceptualize it, is to utilize various sources of knowledge in order to support the development, implementation and evaluation of evidence-informed, context-relevant change to enhance the health of populations in community settings – a goal and approach that is not a requirement of participatory research.

It is important to comment on some of the limitations of this study. This analysis is based solely on data derived from the researcher perspective. While efforts were made to account for the perspectives of our YCs by requesting that they keep a log of their experiences and reflections throughout the study, this was not an activity that took precedence among competing time demands. Further, the timeline for this study was relatively short for a community-based study (Roussos & Fawcett, 2000). Additional time in the field to engage with the study context would have allowed greater opportunities for relationship building, a critical component to the success of CBKT. While the small size and rural nature of this community facilitated the study of the CBKT process and provided insights into the feasibility of conducting a collaborative project through a primarily virtual platform, having an adult stakeholder from the study context assisting with the weekly meetings and facilitating youth action would have benefited this initiative. Despite these limitations, the findings offer valuable insights and guidance for researchers and practitioners planning and undertaking CBKT initiatives.

The emerging field of CBKT will require careful consideration of the methodological requirements. Without this consideration, an “anything goes” approach will threaten serious

progress. While I am not calling for a methodological orthodoxy, the key parameters of a valid approach need to be articulated. Through this analysis, I have contributed to the methodological basis of CBKT by revising and creating a more robust, theoretically and empirically informed framework that offers practical, evidence-based guidance. Additional work is needed that demonstrates the application of this framework in different settings and identifies appropriate metrics to track and follow the key elements of this framework, bringing necessary rigour to the field and supporting comprehensive evaluation. This future research will contribute to refining this CBKT framework; enhancing the science and practice of this emerging KT area.

Chapter 5: Creating and Evaluating a Youth-Driven Mental Health

Promotion Initiative: A Mixed-Methods Assessment of the Contributions of the SONAR Study

5.1 Background

Mental health is a necessary component of overall health and wellbeing and is crucial to healthy adolescent development. Good mental health in adolescence provides the necessary foundation for “having a positive sense of identity, the ability to manage thoughts, emotions, as well as to build social relationships, and the aptitude to learn and to acquire an education, ultimately enabling...full active participation in society” (World Health Organization, 2013, p. 6). While positive mental health plays an important role in the health and development of young people, it is estimated that 20-25% of the adolescent population will experience at least one diagnosable mental disorder in any given year (Patel, Flisher, Hetrick, & McGorry, 2007), with high likelihood of chronicity (Kieling et al., 2011; Mental Health Commission of Canada, 2014). An even greater segment of the population will experience “emotional or psychomatic complaints” (Boyce, 2004). For the purposes of this dissertation, I use the term emotional distress when referring to mental health challenges. Emotional distress encompasses a spectrum of mental health challenges from difficult thoughts and emotions such as stress and grief, through to clinically significant mental disorders, such as depression or schizophrenia. Emotional distress, conceptualized in this way, is aligned with the view that mental health challenges lie along a continuum, and may not always fit within established diagnostic categories (Williams, 2012). The magnitude of emotional distress among adolescent populations has contributed to the World Health Organization (2014) identifying emotional distress as the most significant public health

issue facing young people. Given the prevalence and adverse outcomes related to emotional distress coupled with evidence indicating that 70% of mental disorders first arise during adolescence (Mental Health Commission of Canada, 2014), this period of development represents a particularly pertinent time for intervention aimed at improving mental health throughout the life course.

Public health represents the science and practice of protecting the health of populations through health promotion and disease prevention (CDC Foundation, 2015). Mental health promotion is an approach that focuses on enhancing positive mental health (Clarke, Kuosmanen, & Barry, 2015; Herrman & Llopis, 2012). Built from the tenets of health promotion theory, mental health promotion is conceptualized as involving strategies to strengthen individuals and communities and to reduce structural barriers (e.g., access to care, discrimination) so that populations have the capacity and resources to optimize their mental health (Barry & Jenkins, 2007; Tylee & Wallace, 2009). Prevention approaches are focused on illness and reducing risk and existing disease (Tylee & Wallace, 2009). Prevention efforts occur at multiple levels which are often referred to as primary, secondary and tertiary prevention. Primary prevention targets whole populations regardless of illness status to prevent illness; secondary prevention aims to reduce morbidity and mortality among populations identified as “at-risk” and involves early detection and intervention; and tertiary prevention aims to improve outcomes amongst groups who are already experiencing a particular illness or health challenge (Public Health Agency of Canada, 2013). The components of a public health approach are often referred to as “upstream” because they are aimed at altering

the social determinants of health¹¹ or the “causes of the causes” of adverse health outcomes (Marmot, 2005).

Within the adolescent mental health field, experts have advocated for the adoption of a public health approach to enhance mental health, to prevent mental illness, and to intervene among those experiencing mental illness (Bazyk, 2011; Canadian Institute for Health Information, 2008; World Health Organization, 2001). Systematic reviews of the mental health literature provide evidence about the types of health promotion and prevention interventions that show promise for improving child and adolescent mental health. Browne and colleagues (2004) for instance, through a systematic review of reviews, identified common components of effective and efficient programs to promote the mental health outcomes of school-aged youth. After identifying and evaluating the outcomes of 23 review articles that met their inclusion criteria, the authors cite a number of common findings from across studies: primary prevention programs tend to be more effective than programs aiming to address existing mental health problems; the younger the target population, the more effective the intervention; strategies in which multiple dimensions are addressed have greater impact than those that attend to a single factor in isolation; follow-up interventions are required in most cases to promote sustained effects; fear-based and didactic educational interventions have low effectiveness compared to interactive programs; interventions delivered over a long period of time are more beneficial than short, intensive programs; approaches involving ongoing relationships or mentorship from adults tend to be more effective than peer-based supports; school-based interventions allow for widespread dissemination of an

¹¹ The social determinants of health represent social factors or contextual conditions that influence the health of populations. The Public Health Agency of Canada identifies the following social determinants of health: “income and social status; social support networks; education; employment/working conditions; social environments; physical environments; personal health practices and coping skills; healthy child development; gender; and culture” (Public Health Agency of Canada, 2015, n.p.).

intervention, however, these environments hold risks for confidentiality and labelling; community-based interventions may address some of these issues, but access a much smaller audience; and finally, family involvement is an important success factor for interventions targeting children who are already displaying mental health symptoms.

In another systematic review, Wells, Barlow and Stewart-Brown (2003) focused specifically on mental health promotion programs and prevention efforts targeting entire populations, regardless of illness status. These researchers identified 17 studies meeting their inclusion criteria and utilize narrative synthesis methods to describe the common elements of successful programs. Wells and colleagues reported that mental health promotion appears to be more effective than mental illness prevention programs, especially those provided over an extended time period (i.e., at least one year); whole school interventions appear to be particularly promising, targeting all students, teachers, administrators, and aiming to change the school environment and aspects of the greater community; and long-term interventions are needed as those of short duration do not appear to significantly improve mental health outcomes.

In a more recent paper, Arbesman, Bazyk and Nochajski (2013), who write from an occupational therapy perspective, provide a review of mental health promotion and prevention strategies targeting children and youth. These authors found that at the primary prevention level, there was strong evidence for the effectiveness of interventions that engage young people in activities or recreational programming and that activity and social skills-based interventions are effective for young people who are already experiencing mental health challenges.

The systematic review literature draws together evidence from across primary studies providing useful insight into the types of health promotion and illness prevention approaches that have

shown a level of effectiveness. However, while this evidence provides one important source of direction to researchers and practitioners in the field, some scholars have highlighted a gap that continues to exist: health research and programming has not tended to account for the perspectives of children and youth (Howard, Dryden & Johnson, 1999; Thackeray & Hunter, 2010). Howard and colleagues (1999) argue that because of differences in values, understandings and interpretations of their worlds, the success of interventions developed without the collaboration or input from young people are “likely to be compromised” (p. 308). With this in mind, one of the components of my dissertation research was to conduct the Social Networking Action for Resilience (SONAR) study, a collaborative project which involved the development, implementation and evaluation of an evidence-informed, youth-driven mental health promotion initiative. The focus of this initiative was to enhance connectedness, a key factor impacting experiences of mental health and emotional distress, and a characteristic that was identified by study collaborators as lacking in their community. In this chapter, I draw on a variety of data sources to uncover the contributions of the SONAR initiative to the mental health of young people in Lakeview. Specifically, I address three questions: 1) does the SONAR initiative lead to changes in indicators of mental health?; 2) did young people who engaged with the initiative derive greater benefits than those who did not?; and 3) what are the community’s perceptions of the impact of this initiative?

5.2 Methods

5.2.1 Design

A pre- and post- community intervention design was used to capture changes influenced by the SONAR initiative and to address the research questions of interest. Drawing from the public health paradigm and related health promotion and illness prevention approaches, I was interested

in exploring the influence of the SONAR initiative on indicators of mental health both in terms of positive health (resilience and connectedness) and emotional distress. In addition, I wanted to understand the community's perceptions of the effects of this collaborative initiative. A mixed methods approach was utilized to comprehensively capture the influence of this initiative on the mental health concepts of interest and to enhance the depth of exploration (Creswell, 2009).

Mixed methods research has been described as: “an expansive and creative form of research...It is inclusive, pluralistic, and complementary, and it suggests that researchers take an eclectic approach to method selection and the thinking about and conduct of research (Johnson & Onwuegbuzie, 2004, p.17). In this study I employed a QUAN + QUAL approach; both quantitative and qualitative data were collected concurrently and considered of equal value to informing my understandings of the changes that occurred in the community during this initiative (Creswell, 2010). Data were collected through quantitative surveys and qualitative interviews with triangulation of the data sources used to gain a more thorough picture of the contributions of this initiative to youth mental health in the study community.

5.2.2 The SONAR Initiative

The SONAR initiative was informed by a community-based knowledge translation (CBKT) approach (see Chapter 4 for detailed overview of this approach) and involved the design, implementation and evaluation of an evidence-informed, youth-driven mental health promotion initiative aimed at enhancing youth connectedness. CBKT is based on the tenets of participatory research and KT and targets health outcomes at a community or population level (see Chapter 4 for a detailed overview of this approach). For the purposes of this paper, participatory research was conceptualized as “systematic inquiry, with the collaboration of those affected by the issue

being studied, for purposes of education and taking action or effecting social change” (Green et al., 1995, p. 194).

This CBKT initiative took place in Lakeview¹², a rural community located in North-Central British Columbia, Canada between April 2013 and September 2014 (see Chapter 3 for a detailed overview of study site). The community of Lakeview was selected as the study site following previous research I had conducted in this town, which had identified a strong need and desire for adolescent mental health intervention to reduce emotional distress and the related contextual factors influencing these experiences. The initiative was comprised of a number of processes that make up a CBKT approach. Community engagement strategies were used to identify stakeholders to inform the development and implementation of the initiative. Community stakeholders initially consisted of 10 youth collaborators (YCs) who were hired to drive the initiative as well as key adults in the community who were interested in enhancing adolescent mental health. Five additional YCs were hired during the implementation stage of the initiative to enhance reach and support sustainability of the initiative. YCs and adult stakeholders were engaged throughout the study processes and supported in using various forms of knowledge to identify the mental health needs of young people in this community and to contribute to the development, implementation and evaluation of an evidence-informed mental health promotion initiative.

Following a review of various forms of knowledge and evidence regarding adolescent mental health (i.e., community reports from the initial study exploring adolescent mental health in Lakeview – see Chapter 3, scientific literature on the determinants of youth mental health and the

¹² Lakeview is a pseudonym used to protect the identity of this community and its residents.

effectiveness of different mental health promotion and prevention approaches – see chapter 1, and experiential knowledge) (e.g., Goldner, Jenkins, Palma & Bilsker, 2011; Jenkins, Ng & Hilario, 2013; Wells, Barlow & Stewart-Brown; Whitlock, 2007), the YCs identified the main issues that they believed to be influencing the mental health of young people in Lakeview: substance use, bullying, and racism. An additional issue that was repeatedly raised in the initial study conducted in Lakeview (see Chapter 3) and by both YCs and adult stakeholders was an absence of opportunities for youth to be engaged within their community and, in turn, to feel valued and to form meaningful relationships with adults and peers. Through continued discussion and review of scientific evidence on adolescent mental health, it became clear that this issue of poor community connectedness was of central importance and likely influenced the other mental health problems that the youth had identified (Oberle et al., 2014; Smith et al., 2014; Whitlock, 2007). Building from research evidence (including evidence derived in the local context) and their personal experiences, the YCs decided to utilize youth-relevant technology, creating a web-app and focusing their initiative upstream to enhance connectedness. The web-app consisted of three components: 1) a “real time” database of activities and opportunities for youth; 2) a place for users to post ideas for positive change in their community to influence youth-relevant policy and programming; and 3) links to online resources aimed at supporting youth mental health. By fostering engagement through the use of youth-relevant technology, these young people believed that community connectedness could be enhanced and that community factors contributing to mental health challenges among young people could be improved.

This web-app centered approach was considered a platform upon which to spark dialogue about young peoples’ needs in this community and work to develop additional opportunities for

positive engagement. Dissemination and implementation strategies aimed at supporting and promoting broader community engagement with the SONAR initiative included a variety of outreach endeavours. I organized a forum on youth mental health to enhance the community's understanding of this issue and to develop collaborative relationships. The YCs made a presentation to their school community at an assembly to share information about the initiative; speaking about mental health, sharing personal experiences and presenting their web-app. The YCs also set up information booths in the school hallway during lunch to engage their peers, gave presentations to city council about their work, and were featured on two occasions in the local newspaper. The SONAR team participated in community events (e.g., Winter Festival, Career Fair) and shared information about the initiative with local businesses and organizations through informational materials. Concurrent assessment of the impact of this initiative was conducted and is a central component of a CBKT approach.

5.2.3 Samples

The SONAR study was situated within Lakeview Secondary, which provides education to young people in grades 8 through 12. All 344 students enrolled in the school were invited to participate in the quantitative survey portion of the study. Qualitative interviews were conducted with 10 community stakeholders who were purposefully selected based on their involvement with or knowledge of the project. These stakeholders included youth collaborators, teachers, counsellors, youth workers, District of Lakeview staff, and First Nations stakeholders who were interested in enhancing youth mental health and could provide insight into their perceptions regarding changes that resulted from the SONAR initiative.

5.2.4 Ethics

The University of British Columbia, Behavioural Research Ethics Board provided ethical approval for this project. All quantitative survey participants were provided with an ethics information document outlining the purpose of the initiative, details regarding involvement as a participant, and a statement indicating that only members of the research team would have access to study data. Potential participants were informed that returning their survey indicated that they were providing informed consent. After reviewing the study goals, the research process and their rights as research participants, the qualitative interview participants signed a consent form prior to data collection. Data were stored on a secure, password protected computer. All participants' names were removed during data entry and a participant identification number assigned.

5.3 Data Collection and Analysis

5.3.1 Survey Data Collection

Quantitative data were collected using a paper and pencil survey consisting of introductory questions, a standardized questionnaire assessing emotional distress (Paediatric Index of Emotional Distress [PI-ED]) (O'Connor et al., 2010), a standardized questionnaire assessing resilience (the Child and Youth Resilience Measure) (Leibenberg, Ungar & Van de Vijver, 2012), and an open-ended question assessing connectedness. Surveys were pilot tested by the YCs to obtain feedback on the concepts of interest, ensure appropriateness of questions, and to ascertain completion time. Survey data were collected at two time points: pre-initiative in

September 2013 (n=233 surveys received) and post-initiative in May 2014¹³ (n=190 surveys received). Surveys were delivered by teachers during class hours and self-administered by participants with assistance provided when requested. Participant codes were assigned to facilitate linkage of pre- and post-surveys. All completed surveys were collected from classrooms immediately by the research team. While the survey response rate is modest (68% pre-intervention, 55% post-intervention), it is pertinent to note that Lakeview Secondary has high rates of absenteeism (e.g., on one of the data collection days over half of the school population was absent) and has a large number of students who are classified as functioning at or below a grade one reading level (which influences ability to self-administer the survey). The sense from school leadership was that the majority of students who were regularly attending school and who had the cognitive capacity (or assistance) to complete the survey had done so. All participants were entered into a draw to win one of several gift cards as acknowledgement of their contribution to the study.

5.3.2 Introductory Questions

The pre-initiative survey began with three demographic questions (i.e., gender, ethnicity, and grade), which provided information necessary to characterize my sample. These questions were presented with a checklist of potential answers from which participants selected the option that best described them. The post-survey contained a single introductory question asking whether participants had heard of the SONAR initiative and whether they had accessed the SONAR web-

¹³ This second data collection point is referred to as “post-initiative”, however, it should be noted that this simply refers to the point at which my active involvement in the research process ended. The initiative continues to operate in the community and additional data collection could be conducted at a later point.

app. This question allowed me to gauge the level of engagement that participants had with the initiative.

5.3.3 Emotional Distress

Emotional distress was measured using the PI-ED, with permission granted by the publishers prior to administration (O'Connor et al., 2010). The PI-ED is a 14-item, self-report questionnaire suitable for screening children and youth aged 8-16 years for symptoms of emotional distress. The PI-ED was developed from the Hospital Anxiety and Depression Scale (HADS), which is considered a valid and reliable measure for detecting anxiety and depression in adult populations (Zigmond & Snaith, 1983). The focus on emotional distress of the PI-ED, as opposed to discrete diagnostic categories often used in other distress measures, fit well with my conceptualization of emotional distress as lying along a continuum. However, the PI-ED does include “cut-off” scores, above which the participant is considered to be experiencing clinically significant emotional distress (PI-ED score of ≥ 11 for girls; PI-ED score of ≥ 10 for boys). These cut-off scores are not without critique among those who take a more dimensional approach to mental health (i.e., the view that mental health and illness exist along a spectrum as opposed to the existence of a threshold, above which someone is experiencing a mental illness) (e.g., Williams, 2012). The cut-off points differ by gender to account for differences in sensitivity and specificity of the PI-ED for detecting clinically significant symptoms between boys and girls. The PI-ED is written at a level that is appropriate for a reading age of 7 years and older, again, making it a good fit for this student population. Reliability and validity testing of the PI-ED have been conducted with promising results (O'Connor et al., 2010). Reliability was assessed by the developers of the tool and in both school and clinical samples, the scale demonstrated cronbach alpha coefficient values above .70, indicating good reliability for “cothymia” (which is presented

by the authors of the scale as a construct representing the interrelatedness of anxiety and depression given that these “disorders” are often comorbid and viewed as arising in a consistent developmentally-related pattern), depression, and anxiety (O’Connor et al., 2010). Test-retest reliability also demonstrated stability of the measure over time. Validity of the scale was assessed using zero-order correlations and linear regression against the Beck Youth Inventories for anxiety and depression (Beck et al., 2005), demonstrating significant correlations between the PI-ED and both Beck scales, and significant intercorrelations between the Beck anxiety and depression scales, adding further support for the concept of cothymia (O’Connor et al., 2010). Age, gender and ethnicity bias were assessed with investigations of systematic variation showing no bias in terms of age and ethnicity, however, as is consistent with other literature in the area, girls reported higher levels of distress than boys (O’Connor et al., 2010).

5.3.4 Resilience

Resilience was measured using the Child and Youth Resilience Measure (CYRM), following permission from the publishers (Leibenberg, Ungar & Van de Vijver, 2012). The CYRM is a 28 item questionnaire appropriate for young people aged nine through 23 years of age. The scale was developed through a collaborative process with investigators from 11 countries who aimed to establish a culturally and contextually relevant measure of youth resilience. Ungar (2008), one of the authors of the tool stated:

In the context of exposure to significant adversity, whether psychological, environmental, or both, resilience is both the capacity of individuals to navigate their way to health-sustaining resources...and a condition of the individual’s family, community, and culture to provide these health resources and experience in culturally meaningful ways. (p. 225)

This definition was aligned with my conceptualization of resilience as a product of individual, interpersonal and community-level factors. The CYRM can be scored by examining responses to the full 28 items, with higher scores indicating greater levels of resilience, or it can be scored at the subscale level which further delineates resilience by individual, caregiver and community factors. Reliability testing of the CYRM and its subscales demonstrates good internal consistency, with Cronbach alpha coefficients ranging between .65 to .91 for the three subscales. Test-retest reliability has demonstrated temporal stability (Liebenberg, Ungar, & Van de Vijver, 2012). Mixed methods testing and development of the CYRM indicate high content validity across cultures and contexts (Ungar & Liebenberg, 2011). Validity testing of this measure against existing scales has not been conducted because the authors did not want to introduce biased notions of resilience. The authors acknowledge this as a limitation of their scale, but argue that their engagement with community collaborators and mixed methods tool development offsets this limitation (Ungar & Liebenberg, 2011).

5.3.5 Connectedness

Connectedness was measured through an open-ended question stating: “List all the people (fellow students, teachers, counselors, etc.) at [Lakeview Secondary] who you feel like you can go to if you need support (a trusted person to talk to)”. Connectedness has been found to be a key predictor of mental health among young people (Oberle, Schonert-Reichl, Guhn, Zumbo, & Hertzman, 2014; Whitlock, 2007). By asking this question, I sought to understand participants’ sense of connection and support within the school setting.

5.3.6 Survey Data Analysis

Analysis began with a thorough examination of the dataset for missing data. Of the initial 233 participants, 181 had partial or complete data for both pre- and post-surveys. Of these, only six were missing more than 20% of the pre-test or post-test items for either the emotional distress or resilience scales and were excluded from analysis. This left a total of 175 participants. In terms of the 28 item resilience measure, 36 participants were missing at least one item that was used to construct the resilience measure at the post-initiative collection point. Specifically, 28 participants were missing one item, six were missing two items, one was missing four items and a final was missing 7 items. In regards to the 14 item distress measure, six participants had a missing response to one item and three had a missing response to two of the items at the post-initiative data collection point. These missing data were assessed to be missing at random – no pattern to these missing data was detected (Tabachnick & Fidell, 2013). Ignoring the missing values, a mean score based on each of these participant's available data (and adjusting the denominator to reflect the number of questions answered) was calculated for the pre- and post-test scales. Data analysis was conducted on data from these 175 participants for whom I had matched pre- and post-survey data (as identified by study identification number).

All survey data were imported into R statistical package to facilitate analysis. Descriptive statistics were used to produce summaries of the demographic data to characterize the sample. Cronbach alpha coefficients were calculated for the standardized questionnaires using both pre- and post-test data (PI-ED .827 at pre-test, .812 at post-test; CYRM .932 at pre-test, .899 at post-test), demonstrating strong internal consistency of these scales with my data, and indicating that these measures were appropriate for this sample. A combination of t-tests, ANOVA and regression modeling were used to examine the questions of interest including whether the

SONAR initiative was associated with changes in indicators of mental health and determining whether youth who engaged with the initiative demonstrated greater levels of mental health promoting characteristics than those who did not. In addition, connectedness data were imported into Gephi, a software program used to facilitate social network analysis. Social network analysis is an approach to examining social relationships and the patterns and implications of these relationships (Wasserman & Faust, 1994). My connectedness data represent a “whole network” or sociocentric approach, in that the network was predefined as consisting of the entire school community (i.e., staff and students). The analysis was undirected, meaning that I was concerned with the presence of relationships, but not with who identified the relationship or whether these relationships were reciprocal (Chung, Hossain & Davis, 2005). Social network analysis has been used in the health context and has demonstrated that peoples’ relationships influence factors such as their ability to cope, access health services and information and shape norms and behaviour (Gage, 2013). Using Gephi, statistical tests of network cohesion were conducted including density and average degree. While both density and degree measure network cohesion, the concepts are slightly different. Density is a measure of the proportion of potential connections in a network that are actual connections and provides an indication of how connected participants are within a network or community. Degree provides an estimate of group-level cohesion, identifying the number of “ties” or connections each person in a network has with others in the network. Average degree, which was calculated for this study, measures the average number of connections that each member of the network has (Hanneman & Riddle, 2005; Scott, 2000).

5.3.7 Qualitative Interview Data

In-depth, semi-structured qualitative interviews were conducted post-initiative with key project stakeholders including YCs (n=2) and adults (n=8) from the community. An interview guide was

used to gain an understanding of participants' perceptions of the intervention and its impact in the community. The interview questions focused on identifying reported changes in behaviour and actions of young people throughout the project period as well as key outcomes that participants attribute to the initiative. Interviews ranged from 30-60 minutes and took place in a private room in the school setting or in an office located within the larger community.

Confidentiality was ensured at the outset of the interview and participants were informed that all identifying information would be removed from the data. All interviews were audiotaped and transcribed. Participants were offered a \$20 CAD incentive for participation and to acknowledge their time and contribution.

5.3.8 Qualitative Data Analysis

In this study, interpretive conventions within qualitative research were used to obtain detailed descriptions of the results that community members perceived to have been associated with the SONAR initiative. These data complement the quantitative data by accessing the more nuanced ways in which this project appeared to affect the community of Lakeview. Data triangulation approaches were utilized to examine the qualitative data in light of quantitative findings in order to identify regularities or areas of contradiction between these data sources and to enhance the depth of this inquiry (Denzin, 1970). Thematic analysis techniques were utilized because they provide a flexible approach to constructing rich accounts of the qualitative data (Braun & Clarke, 2006). All interview data were uploaded to NVivo, a software program that enables organization and coding of unstructured data, to facilitate analysis. Interview data were read several times and then organized into broad codes based on the inductive identification of predominant patterns or themes (e.g., positive outcomes influenced by the SONAR initiative; facilitators and barriers to the SONAR project). These broad codes were then further divided into sub-codes that focused on

particular types or categories of outcomes (e.g., enhanced self-concept, knowledge and empowerment; youth leadership, advocacy and shifting community practices), a process which was informed by theoretical concepts drawn from the participatory research literature (Boyatzis, 1998). Agreement regarding the predominant themes was reached through an iterative process of ongoing discussion with my doctoral committee and returning to the data. During analysis, key findings were circulated amongst community stakeholders and reviewed. No additional changes to the findings were required following this community review process.

5.4 Findings

5.4.1 Quantitative Survey Findings

Study participants included 175 Lakeview Secondary students for whom I had matched pre- and post-initiative survey data. Table 2 provides an overview of the study sample by demographic characteristics. While data on the demographics of non-participants is not available, school records indicate that 54% of students attending Lakeview Secondary identify as Aboriginal, thus indicating that the sample is not representative of the school population in terms of ethnic identity.

Table 2: Participant Demographics

	Count	Percent (%)
<i>Gender</i>		
Male	78	44.6
Female	96	54.9
Prefer not to say	1	0.6
<i>Ethnicity</i>		
Aboriginal or “Native”	51	29.1
“White” or European	78	44.6
“Mixed race”	30	17.1
Other	12	6.9
Missing	4	2.3
<i>Grade</i>		
Grade 8	40	22.9
Grade 9	38	21.7
Grade 10	38	21.7
Grade 11	29	16.6
Grade 12	29	16.6
Missing	1	0.6

To further characterize my sample, I examined the prevalence of clinically significant emotional distress. Table 3 shows that over half of the sample (61.1%) met the criteria for clinically significant emotional distress. In addition, ANOVA was used to identify whether levels of distress and resilience differed by demographic characteristics. Table 4 shows that among the demographic determinants of distress and resilience that I tested; only gender was associated with consistent, statistically significant differences between groups in relation to distress at both data collection periods. The data indicate that girls in the sample had a greater tendency towards clinically significant levels of distress compared to boys, a finding that is aligned with the

broader emotional distress literature (Bennett, Ambrosini, Kudes, Metz, & Rabinovich, 2005; Landstedt, Asplund, & Gådin, 2009; Smith et al., 2014).

Table 3: Proportion of Participants Meeting Criteria for Clinically Significant Emotional Distress

<i>Clinically Significant Distress</i>	<i>Yes (n)</i>	<i>No (n)</i>	<i>% Significant Emotional Distress</i>
Boys (Distress score ≥ 10)	44	34	56.4
Girls (Distress score ≥ 11)	63	34	64.9
Total	107 (61.1%)	68	

Table 4: Demographic Determinants of Emotional Distress and Resilience

	Pre-initiative Mean Item-wise Distress Score	<i>F</i>	<i>t</i>	Post-initiative Mean Item-wise Distress Score	<i>F</i>	<i>t</i>
<i>Emotional Distress</i>						
<i>Ethnicity</i>						
Aboriginal or “Native”	0.852	0.715		0.890	0.242	
“White” or European	0.814			0.856		
Mixed	0.913			0.814		
Other	0.990			0.881		
<i>Gender</i>						
Male	0.741		3.151**	0.748		3.415**
Female	0.950			0.905		
<i>Grade</i>						
8	0.695	2.970*		0.781	0.610	
9	0.929			0.892		
10	0.821			0.890		
11	1.049			0.914		
12	0.835			0.862		
<i>Resilience</i>						
<i>Ethnicity</i>						
Aboriginal or “Native”	3.842	0.501		3.722	0.244	
“White” or European	3.892			3.787		
Mixed	3.729			3.710		
Other	3.874			3.774		
<i>Gender</i>						
Male	3.747		2.198*	3.690		1.708
Female	3.956			3.826		
<i>Grade</i>						
8	3.746			3.670		
9	3.897			3.903		
10	4.003	1.698		3.730	1.682	
11	3.671			3.646		
12	3.943			3.857		

Note.* p < 0.05 ** p < 0.01

After exploring the characteristics of the sample, I moved to addressing the research questions of interest. A paired-sample t-test was used to compare indicators of mental health (i.e., emotional distress, resilience, connectedness) pre- and post-initiative to gain an indication of the change in scores over time (see Table 5). In addition to inferential statistics, I drew on social network analysis approaches to examine connectedness over time. Specifically, I was interested in determining whether there was greater levels of network cohesion (i.e., density, degree) following the initiative. In 2013, network density = 0.011 and in 2014 network density = 0.008 (network density as a measure has a maximum value of 1). Put in terms of average degree, 2013 average degree = 4.413 and 2014 average degree = 3.209. These data for density and average degree indicate a 27% reduction in network cohesion, or connectedness, post-initiative (Gephi does not provide an indication of statistical significance).

Table 5: Paired-Sample T-Tests for Individual (Person-Level) Change in Indicators of Mental Health

	<i>Pre-Test Mean</i>	<i>SD</i>	<i>Post-Test Mean</i>	<i>SD</i>	<i>T</i>	<i>Cohen's d</i>
Distress	0.853	0.458	0.863	0.404	-0.376	0.028
Resilience	3.858	0.621	3.763	0.519	2.616**	-0.198
Connectedness	4.549	4.545	4.162	3.566	1.232	-0.094

Note. * $p < 0.05$ ** $p < 0.01$

The results show that using a pre- and post-test design, resilience is the only mental health characteristic to have changed amongst participants from pre- to post-initiative, and it worsened on average. Reflecting on my study design, these findings may have been influenced by “contamination” at the pre-initiative data collection point. More specifically, while baseline or pre-initiative data were collected in September 2013, the participants do not actually reflect a pre-initiative sample. I first engaged with this community in September 2012 when involved in

conducting the initial study exploring emotional distress among youth in Lakeview (see Chapter 3) and re-engaged in April 2013 for the purposes of this CBKT study. From this point, I had significant interaction with study participants. This interaction included sharing findings from the initial study, hosting a forum on adolescent mental health, recruitment and initial work with YCs, and active engagement of adult stakeholders. These exchanges are all considered part of a CBKT approach and are components of the SONAR initiative – a reality that could affect results using a pre- and post-test design. Given this, I determined that it would be more relevant to conduct a post-test only analysis in which level of engagement with the intervention is considered. A post-test design using ANOVA and Ordinary Least Squares (OLS) regression was utilized to examine whether young people who engaged with the SONAR initiative were more likely to experience benefits to mental health compared to those who did not (see Tables 6 and 7, respectively). Engagement with the initiative was categorized at three levels: never heard of SONAR, heard of SONAR, and accessed SONAR web-app. This analysis was conducted using data from the same sample of 175 participants included in pre- and post-test analyses.

Table 6: Analysis of Variance (ANOVA) for Effects of SONAR Initiative on Indicators of Mental Health

	<i>SS</i>	<i>MS</i>	<i>F</i> (2, 172)
<i>Differences in Item-wise Post-Test Mean for Distress</i>			
Level of engagement with SONAR	0.433	0.217	1.330
<i>Differences in Item-wise Post-Test Mean for Resilience</i>			
Level of engagement with SONAR	2.770	1.383	5.400**
<i>Differences in Item-wise Post-Test Mean for Connectedness</i>			
Level of engagement with SONAR	77.100	38.560	3.107*

Note. * $p < 0.05$ ** $p < 0.01$

The post-test ANOVA analysis indicates there are differences in resilience and connectedness based on level of engagement with the intervention. To gain an estimate of the impact of these relationships, I conducted an OLS regression. Using regression, we see that levels of resilience and connectedness both were higher among those with a greater level of engagement; participants with the greatest level of engagement reported the highest levels of resilience and connectedness.

Table 7: OLS Regression to Detect Post-Test Mental Health Indicators Based on Level of Engagement

	<i>Estimate</i>	<i>p value</i>	<i>Pearson's r</i>
<i>Distress</i>			
Never heard of SONAR (reference)			
Heard of SONAR	0.091	0.162	
Accessed SONAR	0.123	0.241	0.119
<i>Resilience</i>			
Never heard of SONAR (reference)			
Heard of SONAR	0.242	0.003**	
Accessed SONAR	0.278	0.035*	0.227
<i>Connectedness</i>			
Never heard of SONAR (reference)			
Heard of SONAR	1.002	0.082	
Accessed SONAR	1.983	0.031*	0.188

Note. * $p < 0.05$ ** $p < 0.01$

In addition, this model shows that those with the greatest level of engagement (accessed SONAR web-app) had almost two additional people identified in their post-test social networks compared to those who had never heard of SONAR ($p < 0.05$). Further, an examination of the 2014

sociogram, or social network diagram produced through Gephi, reveals a network structure comprised of a central group of connected individuals, some of whom are hubs, or highly connected people who serve as links to others in the group (see Figure 4). These individuals are identified by their larger size representation in the sociogram. There are also a number of people located around the periphery who lack connectedness to this network. This information will be valuable to the community as they continue to create change – hubs can be targeted and used for their reach to enhance connectedness and efforts can be made to draw those who lack connectedness into the network.

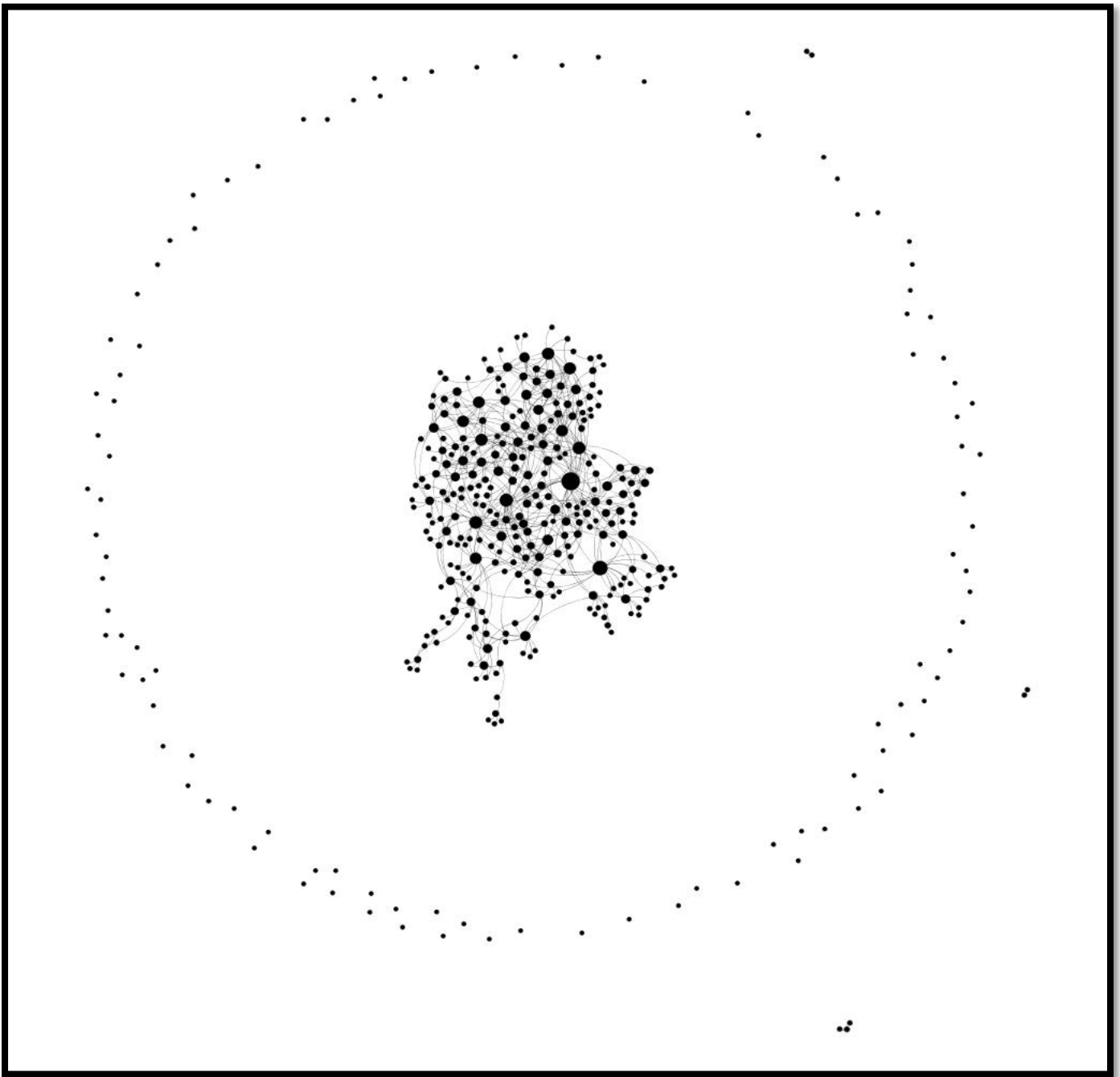


Figure 4: Sociogram of Participant Connectedness

5.4.2 Qualitative Findings

To gain further insight into the quantitative findings and to address the third research question regarding the key contributions of SONAR as perceived by the community, I analyzed the qualitative interviews with the 10 community stakeholders. The qualitative findings indicated that in addition to greater levels of resilience and connectedness among participants, the SONAR initiative supported a number of individual and community-level mental health promoting outcomes that foster community capacity to build connectedness. These include: enhanced self-concept, knowledge, empowerment, changes to community practices, and advocacy, to name a few. These changes form the structure of the findings presented below.

5.4.2.1 Enhanced Self-Concept, Knowledge and Empowerment.

During interviews with community collaborators I heard descriptions of how young people in Lakeview were gaining self-esteem and becoming empowered through their involvement with the SONAR initiative. One participant from the school setting described a shift in how one of the YCs viewed himself and his potential. This participant explained that one of the YCs had previously been disengaged at school, impacting his attendance and the effort he put into his work. She contrasted this with another YC who had always been a “good student”. She shared:

...Now I've got two people who see themselves not only as students, but see each other as students. I've got two leaders, not just one. I've got conversation happening between [these youth collaborators] and grade eight and nine students...I love that. That's humanity. That makes me weepy.

In experiencing changes in his self-concept, this young person was now positioning himself in new ways in terms of his education and as a leader in his school community. Other participants also shared accounts of empowerment among YCs that they viewed were a result of these young people's involvement with the SONAR initiative. A participant from the community setting shared:

There are a few youth that I have seen really come out of their shell and start to believe in themselves more. Like their self-esteem has really increased, their self-awareness and wanting to make healthier choices in their day-to-day lives. And also on weekends, be more of a role model. I've definitely seen that come out of some of the youth in SONAR.

Another participant expressed similar observations stating, "the core group of kids who are a part of [SONAR] are impacted and feel empowered by it". Along with being empowered, the youth were seen as taking ownership of the project and their mission: "You had this little group of students and all of a sudden they've blossomed and they're definitely – they have taken ownership, right. It's not just, oh, this little project. It's, like, my project."

While I heard many stories about benefits of involvement with the SONAR initiative on YCs, I was also told of ways in which stakeholders perceived the larger community was impacted by the initiative and these young people's actions:

Also, the assembly was fabulous. And [name of YC] talking about her experiences. I don't think that ever would have happened if [SONAR] hadn't happened... People came and kids talked. Like, how brave. I don't think people talked about things, right? People were amazed. Kids were amazed. It was very powerful, that whole presentation. And

certainly the teachers didn't realize, I think, how capable they were. And that's what we need to demonstrate.

The presentation that the YCs made about the initiative during a school assembly was described repeatedly by interview participants as having a meaningful impact within the school community, both for adults and students. The YCs were identified as having gained self-esteem, capacity in public speaking and leadership skills, while the broader school community was described as benefiting from increased knowledge and awareness about mental health, which inspired needed dialogue about this health issue. Another participant explained that the assembly presentation had motivated other young people to seek help for their own experiences of emotional distress, indicating increasing connectedness:

Like, with the presentation on that bigger scale, right. It has gotten people to talk about [mental health and illness]...People definitely came and talked a little bit about their own struggles and stuff like that. But definitely, I've talked to maybe three students that came in and we talked about what was going on for them. So that would have been a positive effect of that presentation.

Other participants shared observations about enhanced knowledge and appreciation of mental health in the school setting. One participant explained that conducting a school-wide survey was an indication of new awareness regarding the importance of youth mental health:

The survey stuff, I don't know how many times we do a whole school survey. It really says this is important when we take the time out to do the entire school all at once. We don't do that. So I think that reinforces that we think it's valuable...I'm amazed at the

number of kids that participated. Let me tell you, we get more pushback from the reading assessment than we do from this. So that's positive.

The project was also identified as having prompted a more nuanced understanding of mental health: "they have a whole definition now...a more proactive one...it's not that it's a problem and you deal with it because you got it, sort of thing, right? There's ways of trying to prevent it." The SONAR initiative and YCs were viewed as having had the "courage to address something that is really big. It doesn't just affect our young people, it's everyone."

5.4.2.2 Youth Leadership, Advocacy and Shifting Community Practices.

Participants all spoke about how they perceived the SONAR initiative to have affected the school community; however, I also heard a number of descriptions of important changes within the broader Lakeview community. Young people were described as being more active within the community and youth visibility was increasing. Young people were described as, "more likely to be present at community meetings". In fact, participation in community advocacy was made more accessible to young people through shifts in how community meetings were now being planned:

Having more of a youth presence on our local committees, having their input. I mean, we're planning our community centre right now, so having youth around the table while we are talking about what to include there, that's huge...and in fact, we deliberately plan our meetings at the high school so youth can attend.

This change in community practice demonstrates a greater appreciation and valuing of youth voice, a community characteristic that was said to have been lacking prior to the initiative.

Another participant shared experiences of enhanced youth visibility within community life:

What I do see is a physical presence of the SONAR group at different community events.

It gives us a means as local leaders to actually get in contact with the youth who would want to be participating on different committees or projects...so it helps give us an avenue for engagement.

Another participant spoke in more detail about changes in adults' perceptions of young people:

Adults talk about teenagers a little bit differently right now. 'Oh, I see them out doing this' or 'what's that thing they're doing? What do you call that, SONAR?' They are seeing [the youth] do things and be active and I think that's actually becoming very positive.

5.4.2.3 Blurring Boundaries.

The community collaborators who I interviewed described a number of important changes in the relationship between young people and the larger community. Youth were being viewed as making important contributions to the community, an outcome that was perceived to have resulted from the SONAR initiative. In addition to changes in community practices and perceptions of youth, participants also described changes in interactions among different "groups" within the community. One participant shared an account of how the SONAR project had supported diverse groups of people coming together:

...bringing together groups of people that seem dissimilar at first. That conversation is the most important element of this project. Different kids talking to different kids about the same thing...All different grade levels, different genders, different socioeconomic groups, different cultural groups, different academic levels, that conversation...I see all these [youth collaborators] talking to each other and the other kids notice.

In a community in which perceived “difference” and related experiences of discrimination, bullying, abuse and disconnection were identified as a key contextual factors contributing to experiences of emotional distress among young people (see Chapter 3), this change in the ways youth are described as interacting is powerful. Another participant shared a similar story:

It’s about building strong connections with other people that can get you through...I’ve seen some friendships built out of it. And from a wide range, right. Not just, like, someone from the grade eight to grade eleven, which before, like I had said, people are really stuck in their groups. But the project has allowed them to get together and see each other differently and make those connections.

Stories of young people uniting across previously held boundaries were shared by other participants, an important shift for creating a healthier, more connected community and, ultimately fostering mental health. In addition, I also heard about ways in which the initiative was perceived to be uniting the school and broader community to create change. One participant shared her perspective on the importance of the mixing of these communities:

I want school to be more of a two-way street, things from the community coming in and things from the school going out. So what I really liked about SONAR was that it took

kids and you met here but you were actually talking about community things that were relevant outside...It's so cool to have kids bringing some of that community stuff into the school. I want us to be more open...mixing in the community and youth and involving the school. Bringing people from outside to get different perspectives and different thoughts. It really made our teachers and students think differently. Making connections with other people and looking at people differently...

5.4.2.4 Supporting Buy-In: Youth Voice.

While the focus of the interviews was to understand the impact of the SONAR initiative from the community's perspective, a prominent theme that emerged alongside these details was the value that stakeholders placed on the project being youth-driven. A number of participants shared that their willingness to invest in the initiative was directly related to the prominence of youth voice in shaping the development and implementation of SONAR. One participant who worked for a community organization expressed, "I think that it's really essential that when people are developing youth programs, that the youth themselves are taking a lead on what those look like." This participant was impressed by the leadership role that youth were taking with the initiative and saw this as a key contributor to its success. Another participant from the community shared that her involvement was influenced by the opportunity that the initiative provided for young people to express their needs and contribute to a better community:

The effort that the kids put into what they were doing...I see a potential of so much leadership development in our kids. You know, a way to be able to help create the community that [Lakeview] could become if our kids had the support in a meaningful way to help shape some of the things that are happening in our community, if not all

things. So, ultimately, I guess it was the potential of the [youth] voice that the voice is already starting to be heard. What they've created and where they want it to go. They genuinely care about our community.

Another participant expressed that the reason that she was involved with SONAR is “because it is youth driven...It was something that they had come up with, with the supports of you, right”. This participant elaborated that the initiative was addressing key issues that were repeatedly raised in the community – boredom, substance use and unhealthy lifestyles and providing a “more holistic look on the health of the community”. While opportunities for meaningful youth engagement were identified as being limited in the community prior to the SONAR initiative, the potential for young people to take a leadership role in creating needed change was highly valued and a key factor influencing the support provided by adults in the community.

5.4.3 Analysis across Data Sources

After analyzing both the quantitative and qualitative data sources, I used data triangulation approaches to further examine the data. This process involved returning to the data to explore consistencies and potential discontinuities across quantitative survey and qualitative interview findings. Specifically, the quantitative data indicated that young people who had greater levels of engagement with the SONAR initiative demonstrated higher levels of resilience and connectedness post-initiative. The qualitative data support this finding and provide greater insight into the nature of these findings. For example, the resilience measure used includes questions regarding young peoples' ability to talk about their feelings, the availability of opportunities to demonstrate responsibility, the importance they place on serving their community, their perception of whether they are treated fairly in their community and the

presence of opportunities to build skills, amongst many others. Through the qualitative data, we gain a sense of how these qualities of resilience were fostered in the community throughout the initiative. Interview participants spoke about young people seeking help to cope with their feelings following initiative outreach efforts. In other interviews examples of shifting community practices aimed at supporting youth engagement in civic projects and accounts of young people taking on leadership and advocacy roles within the school and community settings were shared.

In addition to supporting the quantitative findings pertaining to resilience, the qualitative interviews also provided examples of enhanced community connectedness. While the regression analysis indicated that participants who utilized the app identified approximately two additional supports within their school setting as compared to participants who did not identify engagement with the SONAR initiative, the interview data provided further depth to this finding. The qualitative data highlight how the initiative contributed to the breakdown of barriers between different groups in the community. Young people were described as coming together over a shared vision with friendships developing between youth from diverse backgrounds.

Descriptions of youth taking on mentorship roles and becoming role models within the community were shared. In addition, young people appeared to feel a greater sense of connection with their community – participating in planning for the future of Lakeview and having a positive presence in the town.

While there was congruence between the quantitative and qualitative findings related to resilience and connectedness, I also examined the data on emotional distress. The quantitative data indicated that there were no changes to level of emotional distress based on level of engagement with the intervention, and while the qualitative data do not support or discredit this finding, they do provide further detail regarding emotional distress and the SONAR initiative.

For example, one interview participant shared that she believed that the SONAR initiative had contributed to greater levels of help seeking among some young people attending Lakeview Secondary. In addition, the school community was described as having a greater understanding regarding the concept of emotional distress as well as strategies for addressing this health issue. Utilizing a mixed methods approach and data triangulation I was able to gain a more comprehensive understanding of the contribution of the SONAR initiative to youth mental health in Lakeview. The congruence between some of the data sources strengthens my confidence in the findings.

5.5 Discussion and Conclusions

Good mental health is a necessary component of overall health and wellbeing, however, evidence suggests that a large portion of the global population experiences significant emotional distress (World Health Organization, 2014). Given that the majority of adverse mental health outcomes first arise during adolescence, this age group represents an important target for interventions to foster mental health throughout the life course (Mental Health Commission of Canada, 2014; Patel et al., 2007). Leaders in the mental health field have advocated for public health approaches to better address adolescent mental health (Bazyk, 2011; Canadian Institute for Health Information, 2008; World Health Organization, 2001). Mental health promotion and illness prevention initiatives have demonstrated some effectiveness in improving youth mental health at a community or population level, however, some researchers suggest that impact has been hindered by the absence of young people from the initiative development process (e.g., Howard et al., 1999; Thackeray and Hunter, 2010).

These findings indicate that a CBKT approach can facilitate the development, implementation and evaluation of a youth-driven mental health promotion initiative. The results show that this approach can contribute to positive characteristics associated with mental health while creating a healthier, more connected community in which young people have opportunities to develop resources for mental health. Further, this study illustrates the importance of initiatives that are informed by a public health perspective – the impacts are far-reaching. In this study, young people involved directly in the SONAR initiative experienced particular mental health promoting benefits including capacity building and improved self-esteem, while the broader community of youth and adults were also exposed to community-level changes that support positive mental health.

While this study provides evidence of the positive contribution that a CBKT approach can make towards adolescent mental health, it also highlights the important role that young people can play in designing initiatives targeting their peers. These findings help to address the gap in youth-informed health programming (Howard et al., 1999; Jacquez, Vaughn & Wagner, 2013; Thackeray & Hunter, 2010). The SONAR initiative demonstrates the feasibility of engaging youth in mental health intervention development while also demonstrating a variety of positive effects that appear to be linked to this collaborative approach. In this study, the youth-driven nature of the initiative was seen to enhance relevance of the initiative and stakeholder buy-in, while also fostering leadership, self-confidence, knowledge development, capacity and health promoting community change – findings which are aligned with the outcomes of other research in the adolescent mental health promotion field (Browne et al., 2004; Wells et al., 2003) as well as with research on the benefits of “youth-driven” versus “adult-driven” approaches to youth programming (Larson, Walker & Pearce, 2005).

However, while this study indicates the positive potential that youth-driven community intervention holds for fostering health promoting environments, approaches involving young people in meaningful ways to create community change remain an exception (Checkoway et al., 2003; Finn & Checkoway, 1998; Jacquez, Vaughn & Wagner, 2013; Thackeray & Hunter, 2010). In their review of child and youth engagement in participatory research, Jacquez, Vaughn and Wagner (2013) report that collaborative research involving youth remains an exception. Thackeray and Hunter (2010) argue that young people have “been handed a second-class ticket in democracy – they are not allowed to vote, yet pertinent policies and legislation are made that directly affect their health” (p. 576). Further, these authors contend that “[a]dolescents ages 12-17 are a largely untapped resource within communities; they are part of the community and can become part of the solution to its problems” (p. 578). Similarly, Checkoway et al. (2003) highlight the dominant view that persists in our society of young people as vulnerable, troubled and incapable. This perception has been perpetuated by media, research and practice. Further research is necessary to build the evidence base related to the results that can be achieved through youth-driven mental health program development.

There are important limitations to acknowledge within this study. While the findings indicate that exposure to the SONAR initiative was associated with higher levels of positive mental health characteristics (i.e., resilience and connectedness), we do not see decreases in emotional distress. Further, the effects of the initiative on resilience and connectedness were small. While this is discouraging, it is not surprising. Creating community change and enhancing population-level health is acknowledged to be a slow process under most circumstances (Burnes, 2004; Roussos & Fawcett, 2000). However, given limited resources, my study duration was restricted, and represented a very short time within which to achieve and measure outcomes (Wells et al.,

2003) – particularly in a community where the prevalence of emotional distress is so high. In other words, the “dose” of the initiative was small, and may have affected the strength of findings.

In addition to issues of dose, the choice of outcome measures may also have been problematic. The adolescent mental health literature indicates that health promotion programs appear to be more effective than programs targeting existing illness (Browne et al., 2004; Wells, Barlow, & Stewart-Brown, 2003). Given the upstream focus of the SONAR initiative on connectedness paired with the limited duration of the study, emotional distress may not have been the most appropriate measure of initiative success. The more positively framed mental health outcomes are better aligned with the orientation of the SONAR initiative and also happen to be the areas within which youth and community stakeholders reported changes. These challenges highlight the complexity of assessing the influence of initiatives in community settings where traditional outcome measures, which tend to focus on individual level change, can be problematic and not accurately account for the change that is achieved through intervention. Community level indicators are needed to more appropriately capture the impact of CBKT. In addition, recognition of and appreciation for the differences in the types of outcomes sought in community-based research is important (Miller & Shinn, 2005).

As discussed briefly in the findings section, there are also issues of design validity that need to be considered. Specifically, the timing of the baseline data collection was not aligned with a pre-initiative sample. While this influenced the types of statistical procedures that I could utilize in the analysis, this early engagement was critical to my ability to move through the steps of the CBKT process and design and implement this youth-driven initiative.

In addition to issues with the timing of data collection, the sample may not have been representative of the school population. For example, while I lack details of the demographic composition of the school population, I do know that 54% of students attending Lakeview Secondary identify as Aboriginal, whereas only 29% of my sample indicated that they were Aboriginal. Without further data, I cannot make claims regarding the representativeness of my sample; however, as noted in the data collection section, school leadership was of the view that I had captured the student population who was currently attending school on a regular basis. Finally, missing data among participants of the quantitative survey represents a limitation. While I believe this data to be missing at random, and an appropriate strategy was employed to account for missing emotional distress and resilience scale data, one cannot know what impact this issue had on the results. In addition, the findings of the social network analysis likely underrepresent level of connectedness within the school setting, given that not every student provided data on their connections, which would lead to decreased estimates of density and degree.

These limitations help to illustrate a central challenge of assessment and measurement in community-based research – tensions arise between internal validity and external and ecological validity. In this dissertation study, the challenges that I experienced in capturing the contributions associated with the SONAR initiative demonstrate the “messiness” that is often encountered when conducting this type of research, and the threats that arise in relation to internal validity. However, as indicated by scholars working in the community-based research field, there is sound justification for privileging external and ecological validity in these environments, where process and contextual fit are of particular interest and importance (Green et al., 2009; Miller & Shinn, 2005). Efforts to maintain clarity regarding the research purpose and the ways in which different forms of validity will be impacted by study aims will help

researchers working in community settings to select appropriate methods and justify study decisions.

Despite the limitations, this study makes an important contribution to the adolescent mental health literature. The quantity and quality of research on collaborative, adolescent mental health promotion initiatives is limited, in part because of the complexity of assessing complex, community-based interventions (Roussos & Fawcett, 2000; Wells et al., 2003). The mixed method design utilized in this study allowed for the examination of data using a variety of approaches and, ultimately, enhanced the rigour of this research. For example, while the quantitative findings were not as strong as I had hoped, the qualitative data provide further details regarding the contributions of the initiative. The qualitative interviews suggested that the changes to resilience and connectedness that were observed in the quantitative data were indeed meaningful and, also, provided further depth to my understanding of the influence of the SONAR initiative within the community. The use of a mixed methods design was a strength of this study and a key methodological approach to consider when assessing complex interventions.

Additional research is much needed in the area of community-based, youth-driven mental health promotion. Studies with greater initiative dose and duration will provide stronger evidence of the results that can be achieved through these approaches. Studies employing longitudinal designs will provide more robust evidence to inform future research and practice and be better suited to capturing community-level change over time. In addition, research on the sustainability of CBKT initiatives is required. Evidence documenting the influence of these collaborative projects after the study team leaves the community will provide important insights into the stability of change achieved through these initiatives.

Chapter 6: Conclusion

6.1 Summary of Findings

In this dissertation I tackled identified gaps within two broad subject areas: adolescent mental health and community-based knowledge translation (CBKT). In Chapter 1, I situated my research interests within the extant literature, highlighting areas requiring further development which include: bringing youth voice to the mental health literature, exploring the contextual influences of adolescent mental health in community settings, contributing to the development of the emerging field of CBKT, and identifying approaches to better addressing youth mental health through public health strategies. The literature reviewed in this chapter provided justification for my research as well as evidence informing an initial CBKT approach, which guided my research process.

In Chapter 2, the study approach was briefly outlined. Given the emergent nature of this dissertation research, the study approach was iterative and based on my research questions of interest as well as the focus of the CBKT initiative, which was developed in collaboration with community partners. While the findings chapters provide much greater detail regarding the theoretical and methodological underpinnings of each analysis, this chapter provides an introduction to the approaches utilized.

Chapter 3 is the first findings chapter and focused on identifying the ways in which context influenced young peoples' everyday experiences of emotional distress. The results demonstrate how contextual factors at both the community (e.g., racism, exclusion, poverty) and individual levels (e.g., experiences with bullying, family disconnection) come together and impact experiences of emotional distress in ways that are shared amongst members of specific

communities, towns or neighbourhoods. These findings demonstrated the need for mental health interventions that are developed in collaboration with the populations that they are expected to serve in an effort to enhance relevance and, ultimately, improve effectiveness of these approaches.

In Chapter 4, I built on insights from Chapter 3 and articulated the processes involved in conducting a youth-driven CBKT initiative aimed at fostering adolescent mental health. In this chapter, I expanded on an existing CBKT framework and provided further empirical evidence to inform a revised CBKT framework. In addition, I provided a detailed overview of what this CBKT process looked like in context. These findings suggest that CBKT involves an iterative process consisting of five overarching steps, which were originally proposed by Kitson and colleagues (2013), as well as several key elements to consider within each step. In addition, I drew on my assessment data described in Chapter 5 as well as evidence from the participatory research and KT fields to identify key outcomes that can be achieved through a CBKT process. These outcomes are believed to operate at both the individual and community-level to create healthier environments contributing to improved population health outcomes.

Chapter 5 provided an overview of the influence of my CBKT initiative on youth mental health. In this chapter I demonstrated that a mixed methods approach is well-suited to examining the influence of complex, community-based initiatives and can facilitate a more nuanced and comprehensive understanding of such initiatives than a single-method study design. I also showed that a youth-driven CBKT initiative aimed at promoting mental health can contribute to enhanced resilience and connectedness, two key factors that are associated with positive mental health outcomes. No changes were observed in relation to this initiative and level of emotional distress. The findings do support the conclusion that the initiative contributed to a number of

additional factors that promote health including: enhanced self-esteem, advocacy and leadership skills, empowerment, enhanced capacity for creating change, and shifting community practices, norms and health behaviours. Again, this illustrates the need to move beyond traditional metrics of success and identify more nuanced measures for community research that account for context and capture the complexity of population-level changes that contribute to improved health outcomes. Additionally, my findings contribute further support for utilizing CBKT to produce evidence-informed, collaborative approaches to improving population health outcomes.

6.1.1 Postscript to Findings

Following the completion of formal data collection in Lakeview, I have continued to engage with the community in an effort to support sustainability of the initiative and to track longer term changes. Through informal interviews, conversations and email correspondence, I have gained insight into the current status of the initiative as well as some of the group's more recent accomplishments.

While leadership of the SONAR initiative was lacking from May-October 2014, one of the YCs advocated for the project and convinced the youth worker from Lakeview Secondary and a member of the broader community to assume the role of project facilitators (providing school resources such as space as well as structure and adult mentorship for the group). Since this time, additional adult collaborators have come on board including teachers and counselling staff from the school and nine additional YCs have joined the team. In early 2015, one of the YCs and the school youth worker travelled to Vancouver to attend a youth mental health summit at which they were acknowledged for the achievements that they were making in promoting youth mental health within their community. At this event, they established important connections for the

SONAR initiative with leaders in adolescent mental health (e.g., community advocacy groups, professionals from the health authority who oversee province-wide youth mental health programming). The SONAR team has been invited to share their experiences at an annual school-based mental health conference which will be held in summer 2015 and have recently had their story featured on a national radio program as well as in their local newspaper.

In addition to building connections and raising awareness about SONAR and the importance of better addressing adolescent mental health, the team has made impressive achievements in continuing to foster community change and create opportunities for youth engagement and the development of community connectedness in Lakeview. Specifically, the SONAR team has recently received two additional grants to support ongoing work. The first grant provides funds to purchase and install four light boxes, an intervention that has shown effectiveness in the treatment of Seasonal Affective Disorder, a form of depression that is associated with changes in season. Three light boxes will be located within the school and one at the public library. This particular project will provide access to an evidence-informed treatment for those experiencing Seasonal Affective Disorder in this community and will also provide an opportunity to spark further dialogue about mental health and emotional distress.

The second grant is for the amount of \$50,000 and will support the creation of a theatre program for young people in Lakeview. This project involves collaboration between SONAR, members of a professional theatre company from another northern community, and the Lakeview Arts Council. Young people will have the opportunity to develop skills in all aspects of theatre production including: lighting, sound, set construction, script writing, costume design and make-up and will be eligible to receive school credit for this experience. This project will provide a way to engage a large number of young people, providing needed opportunities for youth in this

community to develop meaningful connections with adults and peers. The SONAR team is planning to produce a play focusing on reducing the stigma that is associated with emotional distress.

In addition to the new projects that the SONAR group has underway, the web-app is gaining users. Drawing on data from Google Analytics, activity on the web-app has continued. Between January 2014 (when the web-app was first released) and June 2015, there have been 1,552 unique visitors and 1,744 sessions, with an average site viewing of just over one minute. While I have continued to offer assistance and expertise to the community of Lakeview, SONAR is well on its way to working independently. Indeed, it appears that the SONAR team has established momentum in their efforts and have come to view this initiative as their own – a result that represents a key goal amongst community-based researchers.

6.2 Key Contributions

The analyses that were conducted for this dissertation research provide important contributions to the adolescent mental health and KT fields. While these findings are described within the dissertation chapters, there are five particularly important contributions worth revisiting.

To begin, this research addresses an important gap in the youth mental health literature by bringing youth voice to this health issue and demonstrating the ways in which context influences young peoples' experiences of emotional distress. For example, most research related to emotional distress has focused on clinical or biological dimensions of mental illness (Cannon et al., 2008; Gladstone & Beardslee, 2009; Hammen et al., 2008; Horowitz & Scheid, 1999), leaving a paucity of research that explores emotional distress within community contexts. In particular, we lack an understanding of how social and structural environments shape youths' experiences

of emotional distress (Cummins et al., 2007; Wheaton & Clarke, 2003). The findings from this research contribute important understandings of the ways in which context influences emotional distress from young people's perspectives, evidence which can be used to target change efforts or interventions to improve adolescent mental health outcomes.

In addition, the findings from this study help to demonstrate that while context plays an important role in influencing youths' experiences of emotional distress, this relationship is recursive. That is, young peoples' experiences of emotional distress also influence the context within which they live. This finding is aligned with research from a systems thinking perspective, which identifies the interrelatedness of individuals and their environments (through mechanisms such as feedback loops, open systems and emergence) (Flood, 2010). For example, one of the YCs struggled with severe emotional distress that she described as being influenced by contextual factors including challenging family dynamics, poverty and bullying. This young person chose to share her experiences during the SONAR school assembly presentation; a decision that was described by qualitative interview participants as having a profound role in shifting how emotional distress was viewed within the context of this community (e.g., increased help-seeking, expanded dialogue, changing notions of what it means to experience emotional distress). Future research examining the contextual nature of young peoples' experiences of emotional distress may benefit from the incorporation of a systems perspective, which would provide an additional lens through which the interplay between young peoples' experiences of emotional distress and the context within which they grow could be identified.

In addition to contributing to the evidence on contextual influences of emotional distress among young people in community settings, this research has provided necessary evidence to strengthen the emerging field of CBKT through a revised and more robust framework. While the co-KT

framework proposed by Kitson and colleagues (2013) offered an important starting point, the field was lacking detailed examples of how this framework can be enacted. This study contributed needed empirical data to inform an updated framework that provides greater detail and identifies theoretically-informed and empirically-based outcomes.

While youth voice has been largely absent from the literature in the areas of health program development and community change (Checkoway et al., 2003; Howard et al., 1999; Jacquez et al., 2013; Larson, Walker & Pearce, 2005; Thackeray & Hunter, 2010) this research contributes to addressing this gap by demonstrating the feasibility of youth-driven work and identifying important outcomes that can be achieved. Specifically, the findings show that engaging youth in the development, implementation and evaluation of a mental health promotion program in their community can contribute to enhanced leadership, empowerment, civic engagement, and self-esteem, amongst others – findings which are aligned with the limited available literature on the youth engagement (Checkoway et al., 2003; Thackeray & Hunter, 2010). Additionally, this research helps to shift away from the dominant discourse portraying adolescents as vulnerable and troubled (Finn & Checkoway, 1998; Thackeray & Hunter, 2010) and brings attention to the positive attributes that young people offer such as creativity, energy, enthusiasm and perseverance. In this study, youth were viewed as a resource. Youth engagement was highly valued by community stakeholders and perceived as a key contributor to the success of the SONAR initiative.

Youth-driven, community-based mental health interventions have been identified as an area requiring significant development (Howard et al., 1999), a need which has also been acknowledged within the broader literature on youth engagement in health programming (Jacquez et al., 2013). In this dissertation, I detail an approach to achieving this type of

collaborative intervention development and, also, show that this type of initiative is linked to health promoting outcomes. Further, the CBKT approach applied represents a novel strategy for creating collaborative, context-relevant interventions that are evidence-informed. This finding provides guidance to both the mental health and KT research communities in terms of promising approaches to engaging young people in developing interventions to improve population-level adolescent mental health.

Finally, while not a formal assessment; ongoing engagement with the study community has indicated that the CBKT approach to initiative development can influence sustainable action and change. Future research exploring the sustainability of CBKT initiatives and identifying the factors that contribute to community ownership will provide valuable guidance to this emerging field.

6.3 Limitations

Within this dissertation study, there are limitations which are detailed in the findings chapters as well as two overarching limitations that span the entire dissertation and warrant additional discussion.

First, given that this research was conducted for a dissertation, the duration of the study was restricted and represents a short time period within which to conduct collaborative, community-based research (Roussos & Fawcett, 2000; Wells, Barlow, & Stewart-Brown, 2003). The limited time period for this study likely influenced the quality of relationships that could be made with community collaborators as well as the strength of quantitative study findings. Greater time in the field, allowing for additional data collection periods, would provide much needed evidence on the influence of youth-driven CBKT initiatives over time. Additionally, more time in the field

would have allowed for more in-depth reflection and, perhaps, the identification of additional measures of initiative success as the study unfolded.

The issue of study duration was further impacted by the rural nature of the study community. Conducting research in a community that required air travel to access contributed challenges to engagement. For example, limited in-person contact posed challenges for the strength of collaborative relationships that could be developed, particularly in the context of the short study duration. Further, as a researcher, this distance between me and the study community impacted how I could respond to issues that arose as the study progressed (e.g., fluctuating levels of engagement). I could not, for example, be present within the school setting on meeting days to promote YC attendance, nor was I always aware of issues that were impacting engagement.

Second, this research highlights the tensions that arise between internal, external and ecological validity when seeking to assess the contributions of an initiative in context. While community-based researchers have advocated for a shift away from the value placed on internal validity in exchange for the privileging of external and ecological validity (Green et al., 2009; Miller and Shinn, 2005), this is not without challenge. To contribute to addressing this tension, the inclusion of an additional theoretical lens would have been useful to my research. Specifically, the incorporation of a developmental evaluation framework, as described by Patton (2011), would have provided useful guidance regarding the assessment focus and approach. Developmental evaluation is described as supporting “innovation development to guide adaptation to emergent and dynamic realities in complex environments” (Patton, 2011, p. 1) and is informed by systems thinking and complexity theory. While there are a variety of definitions of systems thinking and complexity theory, at the core of these perspectives is a focus on the interrelatedness between individuals and their environments (Flood, 2010; Patton, 2011). Patton further describes

developmental evaluation as positioned to capture “linear and nonlinear relationships, both intended and unintended interactions and outcomes, and both hypothesized and unpredicted results” (p. 119), with a focus on the central role of context in the intervention and change process. Clearly, there is a strong fit between the theoretical underpinnings and orientation of developmental evaluation and my research approach, in which I aim to acknowledge and attend to the importance of context, emergence, local knowledge, and collaboration throughout a community change process. The inclusion of this theoretical approach may have provided valuable guidance when struggling with tensions that arose between internal, external and ecological validity during the process of assessing the contributions of the SONAR initiative.

6.4 Recommendations for Research, Public Health Practice and Education

Throughout this dissertation, recommendations for research, public health practice and education have been outlined in the findings chapters. Following, I provide an overview of recommendations that are of particular importance.

This research represents an early step in documenting the contextual influences of young peoples’ experiences of emotional distress in community settings. Future research in this area is much needed. This research should aim to capture evidence of the contextual nature of emotional distress across diverse contexts (e.g., in terms of geographies, economies, developed environment type). Analyses that are structured to identify similarities and differences across settings will help to build a more comprehensive knowledge base that can be utilized to create interventions that are responsive to young people’s everyday realities.

The field of CBKT is in its infancy and requires significant development. While this dissertation has provided for the creation of a theoretically-driven, evidence-informed CBKT framework,

research examining the utilization of this framework and testing it in diverse settings is needed. In addition, future research in CBKT is needed to establish metrics to bring rigour to the field. These metrics will help researchers and practitioners to identify whether they have met necessary criteria for the CBKT process, leading to a better understanding of how this approach operates and the mechanisms through which outcomes are achieved. Additionally, given the inherently collaborative nature of CBKT, research exploring the implications of the co-generation of interventions, methodologies and theories will bring needed depth to the field. While this research provides process guidance for researchers and practitioners engaging in CBKT, further exploration into the diverse and far-reaching contributions of this approach, which represents a significant shift away from traditional program development, implementation and evaluation, is needed.

As highlighted in my contributions section, there is great need for the inclusion of youth voice in the academic literature pertaining to the development of adolescent health programming.

Research documenting strategies utilized in youth engagement efforts as well as associated results will strengthen the evidence informing future initiatives and will help to better demonstrate the importance of this type of work for enhancing the relevance and effectiveness of collaboratively-designed youth programming. Further, additional research incorporating a strengths-based approach to explore the conditions that contribute to the sustainability of youth-driven initiatives would make an important contribution to this research area.

In addition to identifying future research directions, this research provides evidence that can inform public health policy and practice. For example, while the public health paradigm has been acknowledged to provide valuable approaches to enhancing health and reducing the burden of illness and disease at a population level, the public health system in Canada remains grossly

underfunded, receiving approximately 2% of the overall health budget (Health Canada, 2003).

While there have been a number of barriers to investment in public health identified (e.g., long timeframe required to achieve results, the influence of industry groups) (Richardson, 2012), continued efforts to engage policy makers and use evidence to demonstrate the impact of public health approaches in an effort to achieve stronger investment in the public health system are needed. Further, given the growing emphasis on evidence-based policy making (Howlett, 2009), CBKT could be well-positioned as a public health approach to fostering evidence-based population health.

Further, this research demonstrates ways in which the social determinants of health impact and contribute to young peoples' experiences of emotional distress. Efforts to advocate for macro-level policy changes are needed to address the determinants of health that contribute to complex problems such as poor population-level mental health. For example, my research demonstrated that contextual factors including racism and limited access to support services contributed to inequities in the rural community of Lakeview that effect young peoples' mental health.

Mandatory school curricula in the BC School system that targets the legacy of colonialism, addresses racism, and teaches anti-racism approaches is one example of a policy change that could help address inequities at a provincial level.

Upstream action aimed at changing policy to improve social conditions and related health issues are considered "best addressed through government action" (Carey & Crammond, 2015, p. 6).

Efforts to inform policies and advocate for conditions that reduce inequities and injustice are necessary next steps. For example, advocating for rural access to programs such as "Healthy From the Start", which provides services to enhance women and babies' health, can contribute supports needed to foster healthy child development – ultimately improving health, educational

outcomes, and employment opportunities. In addition, political action aimed at addressing racism, discrimination and exclusion that continue to contribute to poor health outcomes for Canada's First Nations communities is needed. Economic policies that help to ensure a living wage, employment and housing are needed to eliminate the disparities that prevent First Nations people from achieving optimal health. Improved access to trauma informed mental health and addiction treatment services is an example of another key approach to addressing health inequities in communities such as Lakeview.

While changes to policy pertaining to public health funding are needed to better support public health practice, so too is optimal utilization of Canada's public health practitioners. Public health nurses represent the largest professional group within the public health workforce in Canada, however, continued challenges regarding the role and scope of public health nursing practice hinders their fullest contribution (Meagher-Stewart et al., 2009). Public health nurses have identified the creation and maintenance of stakeholder partnerships and community capacity building as key components of their skillset; however, these actions are not always supported within current funding models and role definitions (Meagher-Stewart et al., 2009). These practices; however, are well-aligned with the processes and goals of a CBKT approach and position public health nurses to make a meaningful contribution to CBKT practice. For example, public health nurses could work with communities to initiate CBKT programs, creating evidence-informed initiatives addressing locally identified health needs. Ongoing support could be provided, as needed, to support sustainability of efforts.

In an effort to better prepare researchers and practitioners to utilize CBKT approaches, changes to education are required. Specifically, the incorporation of broader notions of KT into curriculum will help to ensure the development of KT practitioners (e.g., clinicians, policy

makers) who have the education and skills to best incorporate CBKT into their practices.

Understandings of the roles of different forms of knowledge in CBKT practice, training in public health approaches, and instruction in community development techniques will help to establish competent CBKT researchers and practitioners who have the educational preparation necessary to make valuable contributions to the field and population health.

6.5 Conclusion

Adolescent mental health challenges represent an important public health issue requiring action. The findings of this dissertation research provide evidence that CBKT represents a promising approach for developing responsive, context-relevant mental health interventions that can contribute to improved youth mental health outcomes at a population level. The findings also indicate the need for further research to test the revised CBKT framework in diverse settings and to establish metrics for rigour in the field. I am hopeful that continued work in this area will contribute to improved adolescent mental health outcomes for young Canadians, now and throughout their life course.

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Appendices

Appendix A Emotional Distress Interview Guide



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

THE UNIVERSITY OF BRITISH COLUMBIA

Community-based approaches to fostering emotional resilience in youth:

Building relational connectedness

Our Research Objectives are to:

1. Investigate youths' perspectives (e.g., experiences and perceptions) regarding emotional distress, emotional resilience, and the contextual factors that enhance or detract from their mental health;
2. Describe youths' experiences with accessing supports for managing emotional distress and fostering emotional resilience;
3. Identify and develop promising strategies to enhance the capacity of local communities to foster the emotional resilience of youth;
4. Assess community-based approaches aimed at building relational connectedness between youth and adults.

Introduction

The purpose of this research project is to learn how teenagers deal with difficult emotions, tough experiences, and issues like stress, so this interview will begin by asking you some general questions about your life and what it's like to live here, and then we'll talk about any challenges you face and how you look after your mental health. The interview will take about an hour. While you can see that I have a bunch of questions that I want to make sure to ask you, this interview is meant to be a casual conversation, so please interject and feel free to talk about what you think is important on the topic of youth and emotional wellbeing – don't worry about talking too much! I will jump in if you get off-track but it's hard to get off-track because we really want to hear about your experiences and thoughts. Because this is about what you think and your experiences, there are no right or wrong answers to any of these questions.

I also want to let you know that our project is committed to ‘positive space’ values where you will not be judged based on anything you share today. Positive space is a campaign at UBC where all forms of visible and invisible diversity, including sexual and gender diversity, are supported and valued. Also, this interview is completely confidential, so we will never use your name in any publications or reports or link your name with what you say today or share research data with anyone other than the team members here. The things you say today will remain confidential. The one exception is if you share issues of abuse or self-harm with me, because I then have a legal obligation to tell someone to make sure that you, or the person being abused, is safe. Okay? Any questions before we start?

For interviewers:

-Remember that empathizing too much can shut people down. Say things like
“Mmm that sounds tough, what was going on there?” or “Can you tell me what that

Main Questions

1. SOCIAL CONTEXT (Warm up, grand tour question).

To start, I’m wondering if you could draw a social network diagram of the most important people in your life. This might be a friend, family member, teacher, neighbour, whoever is important to you. (show example diagram).

Probes:

- a. Can you tell me about the people you’ve listed?
- b. Why are they important to you?
- c. What do you guys talk about/do together?
- d. What about your family members? Do you talk to your parents/siblings/[people missing if there are any on social diagram]?
- e. Can you describe what it’s like to live here?
- f. What’s good and bad about living here?
- g. Have you always lived here?
- h. Who do you live with?
- i. What’s life like here? In this town? At this school? In this neighbourhood?
- j. Can you describe a typical day at this school?
- k. What does a typical Friday night look like for you?

2. PEERS AND SOCIAL CONNECTIONS

What is the social scene like here, in your school?

Probes:

- a. Can you tell me about the groups at this school/this community?
- b. Who's in and out?
- c. Who gets bullied here?
- d. What are the students like at your school/in this community?
- e. What are the teachers like?
- f. What's it like to part of your social group?
- g. What kinds of things do you do with your friends at school?
- a. Are there other friends or people you hang out with, aside from school friends?
- b. A lot of schools we've seen so far have gay-straight alliances. Is there something like that here?
- c. What about cultural diversity, how are people from different backgrounds or cultures treated here?
- d. What about Facebook – is Facebook something that brings people at your school together or not?

3. DATING CULTURE AND DATING PARTNERS

Probes:

- a. What's the dating culture here like? [I'm old, what words would you use?]
- b. What about a [boyfriend/girlfriend]? Or what word would you use? How do they impact how you feel day to day? **OR**
- c. I noticed there is/isn't a 'special friend', like a boyfriend/girlfriend. [I'm old, what word would you use?]
- d. [IF PARTNER] Can you talk about that/that relationship a little bit?
 - i. How long have you been together?
 - ii. How does that person make you feel?
 - iii. What do you do together?
 - iv. What do you like about your partner?
 - v. What does your partner like about you?
- e. What's the difference between short and long term relationships?
- f. How would you define a "healthy relationship"?
- g. Have you ever been in a relationship that was unhealthy? How did you know it was unhealthy?
- h. How did this relationship affect your health? (Mental, physical, etc.)
- i. What did you do/what are you doing to address these relationship issues?
- j. What would you say to a friend if he/she shared similar issues with you?
- k. Do you think lots of people your age deal with relationship issues? Why is that?
- l. Are relationship issues different for boys and girls?

- m. Are relationship issues different for youth with different cultural backgrounds, or same-sex relationships?
- n. How are youths' dating relationships portrayed by the media?
- o. How do adults in this community view youth dating relationships?
- p. What should adults do to help youth who are having issues in their relationships?

4. EMOTIONAL DISTRESS/RESILIENCE

We know from other research we've done that youth often times have a lot of difficult experiences they have to deal with. It seems everyone has good days and bad days, too. Can you tell me about a time when you were stressed, worried, or particularly "emotional." Can you start from the very beginning and tell me as much about the experience as possible.

Probes:

- a. What was going on in your head at that time?
- b. When did those feelings/[x] start?
- c. Why do you think you have those feelings/[x]?
 - i. What aspects of your life/circumstances contributed to your distressing experiences?
- d. How did you cope?
- e. How does this distress affect you (physically, mentally/cognitively, socially, sexually)?
- f. Who did you talk to? Parents? Siblings? Extended family? Friends? Any teachers/counselors? Boyfriend/girlfriend?
- g. How did you decide who to tell about these experiences?
- h. Did you see a doctor or a counselor of any kind? Why did you go? Why haven't you gone?
- i. What helped you cope best? Why?
- j. What do you need when you tell someone about your difficult feelings/experiences?
- k. Are there services here for teens when they have tough days?
- l. What do you need to feel better?
- m. How does this distress affect your communication? Do you communicate more/less, informally/formally with others?
- n. What would help to facilitate connections with others to talk about these issues?
- o. What could this city/town do to a better job of helping teens when they have tough days?
- p. Have you ever hidden your experiences from anyone? Why?
 - i. Do people understand what you're going through generally?
 - ii. Do you feel judgment from others?
- q. In what ways do you think who you are shaped this experience (e.g., as a girl, newcomer to the region, member of a minority group)? Do you think other kids have similar experiences?
- r. What, if anything, do you engage in to learn more about these issues and ways to support yourself?

5. PROMOTING MENTAL HEALTH

Can you tell me about a time that you were feeling particularly good about yourself?

Probes:

- a. What was going on?
- b. What makes this experience stand out?
- c. Did anything or anyone prompt this experience (if so, who/how?)
- d. What helps you to feel good about yourself?

6. KNOWLEDGE TRANSLATION

Do you think youth's experiences can be shared with the public to help inform people about these issues? If so, what's the best way to do this?

Probes:

- a. How do you think people here generally talk about distress/mental health issues?
- b. Where do young people here get information about mental health issues?
- c. What's good/bad about this info?
- d. Do you think sharing youth's experiences with members of the community would lead to better understanding and support for youth?

Is there anything else you would like to say?

Are there questions we should have asked? What else is important?

Appendix B SONAR Youth Participant Surveys



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Pre-Initiative Survey

This survey has been developed to capture the presence of factors that support your mental health. This is NOT a test. There are NO right or wrong answers.

Information from this survey will be used in an effort to design approaches to better respond to the mental health needs of teens in your community. For this project to be successful it is important for you to be honest and provide your true feelings and opinions. With your help, we will be able to create youth-centered policies and programs that will benefit you as well as the next generation of young people.

All names will be removed by the research team during the analysis. Only members of the research team will have access to your survey data. No information that discloses your identity will be released or published.

Participation in this study involves completing this questionnaire, which should take between 10 to 25 minutes. You will be asked to complete a similar questionnaire again next spring. Your participation in this study is entirely voluntary. You may decide not to participate or you may withdraw from the study at any time. If you choose to participate and do not want to answer a particular question, just leave it blank. **Your completion of this survey indicates that you are consenting to participate.**

Thank you very much for your help!

A. Getting to Know You

A1. Grade:

8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐

A2. Gender:

Female ☐ Male ☐ Other ☐ Prefer not to say ☐

A3. People are often described as belonging to a particular racial group. To which of the following group(s) do you belong? (Check the one(s) that best describe(s) you.)

☐ Aboriginal or Native

☐ White or European

☐ South Asian (e.g., East Indian, Pakistani, Punjabi, Sri Lankan)

☐ Asian (e.g., Korean, Chinese, Japanese)

☐ Black (e.g., African or Caribbean descent)

☐ Other

☐ Mixed race (please list all groups that apply):

B. Describing Your Feelings

Feelings are really important.

Your answers to the following questions will help us understand how you feel.

Please read each of the sentences and **check the answer** ✓ inside the circle that describes you best.

Think about how you have been feeling **over the last week (including today)** when you read each sentence.

There are no right or wrong answers but it is important for you to let us know how you feel.

	Always	A lot of the time	Sometimes	Not at all
1. I feel shaky or 'wound up':	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I get sort of frightened feeling as if something bad is about to happen:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I worry about things:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I feel happy:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Always	A lot of the time	Sometimes	Not at all
5. I can chill out and feel relaxed:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I feel sluggish/slowed down:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I get a sort of frightened feeling like 'butterflies' in my tummy:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I feel restless/fidgety as if I have to be on the move:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I look forward to fun things:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I cry/feel like crying:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I get annoyed easily:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I feel good about myself:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Always	A lot of the time	Sometimes	Not at all
13. I get panicky:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I am lonely:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C. Sources of Strength

To what extent do the sentences below describe you? Circle one answer for each statement.

	Not at All	A Little	Some- what	Quite a Bit	A Lot
1. I have people to look up to	1	2	3	4	5
2. I cooperate with people around me	1	2	3	4	5
3. Getting an education is important to me	1	2	3	4	5
4. I know how to behave in different social situations	1	2	3	4	5
5. My parent(s)/caregiver(s) watch me closely	1	2	3	4	5
6. My parent(s)/caregiver(s) know a lot about me	1	2	3	4	5
7. If I am hungry, there is enough to eat	1	2	3	4	5
8. I try to finish what I start	1	2	3	4	5
9. Spiritual beliefs are a source of strength for me	1	2	3	4	5

	Not at All	A Little	Some- what	Quite a Bit	A Lot
10. I am proud of my ethnic background	1	2	3	4	5
11. People think that I am fun to be with	1	2	3	4	5
12. I talk to my family/caregiver(s) about how I feel	1	2	3	4	5
13. I am able to solve problems without harming myself or others (for example by using drugs and/or being violent)	1	2	3	4	5
14. I feel supported by my friends	1	2	3	4	5
15. I know where to go in my community to get help	1	2	3	4	5
16. I feel I belong at my school	1	2	3	4	5
17. My family stands by me during difficult times	1	2	3	4	5
18. My friends stand by me during difficult times	1	2	3	4	5
19. I am treated fairly in my community	1	2	3	4	5

	Not at All	A Little	Some- what	Quite a Bit	A Lot
20. I have opportunities to show others that I am becoming an adult and can act responsibly	1	2	3	4	5
21. I am aware of my own strengths	1	2	3	4	5
22. I participate in organized religious activities	1	2	3	4	5
23. I think it is important to serve my community	1	2	3	4	5
24. I feel safe when I am with my family/caregiver(s)	1	2	3	4	5
25. I have opportunities to develop skills that will be useful later in life (like job skills and skills to care for others)	1	2	3	4	5
26. I enjoy my family's/caregiver's cultural and family traditions	1	2	3	4	5
27. I enjoy my community's traditions	1	2	3	4	5
28. I am proud to be a citizen of Canada	1	2	3	4	5

D. Important Relationships

Please provide your FIRST and LAST name:_____

The following question helps us to understand the important relationships in your life. Please include FIRST and LAST names and indicate with an X whether the individual is a student (and their grade) or an adult. Names will be removed during data analysis to ensure you and the people you list will remain anonymous.

FIRST Name	LAST Name	STUDENT	GRADE	ADULT
Patricia	Rogers	X	10	
Sam	Sutherland			X

Please list all of the people (fellow students, teachers, counselors, etc.) at Lakeview Secondary who you feel like you can go to if you need support (a trusted person to talk to).

FIRST Name	LAST Name	STUDENT	GRADE	ADULT

FIRST Name	LAST Name	STUDENT	GRADE	ADULT

Please go through the survey again and check that you have answered all of the questions in the following sections:

A: ☐ Getting to Know You

B: ☐ Describing Your Feelings

C: ☐ Sources of Strength

D: ☐ Important Relationships

May we contact you at a later date to follow up with you regarding this project? If so, please provide your contact information below.

Email: _____

Phone number: _____

We would appreciate receiving any comments you have about this survey. Please let us know how you found the survey. Also, if you have any questions about the survey, please write them below.

Congratulations, you are done!



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Post-Initiative Survey

This survey has been developed to capture the presence of factors that support your mental health. This is NOT a test. There are NO right or wrong answers.

Information from this survey will be used in an effort to design approaches to better respond to the mental health needs of teens in your community. For this project to be successful it is important for you to be honest and provide your true feelings and opinions. With your help, we will be able to create youth-centered policies and programs that will benefit you as well as the next generation of young people.

All names will be removed by the research team during the analysis. Only members of the research team will have access to your survey data. No information that discloses your identity will be released or published.

Participation in this study involves completing this questionnaire, which should take between 15 to 25 minutes. Your participation in this study is entirely voluntary. You may decide not to participate or you may withdraw from the study at any time. If you choose to participate and do not want to answer a particular question, just leave it blank. **Your completion of this survey indicates that you are consenting to participate.**

Thank you very much for your help! To acknowledge your time, you will be entered to win an iTunes or Subway gift card.

Use of SONAR

The Social Networking App for Resilience (SONAR) project is an initiative developed by students at your school to help promote youth involvement in the community and to create further opportunities for you and your friends.

Have you heard of the SONAR project? Yes ☐ No ☐

Have you accessed the SONAR site online? Yes ☐ No ☐



A. Describing Your Feelings

Feelings are really important.

Your answers to the following questions will help us understand how you feel.

Please read each of the sentences and **check the answer** ✓ inside the circle that describes you best.

Think about how you have been feeling **over the last week (including today)** when you read each sentence.

There are no right or wrong answers but it is important for you to let us know how you feel.

	Always	A lot of the time	Sometimes	Not at all
7. I feel shaky or 'wound up':	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I get sort of frightened feeling as if something bad is about to happen:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I worry about things:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I feel happy:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Always	A lot of the time	Sometimes	Not at all
11. I can chill out and feel relaxed:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I feel sluggish/slowed down:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I get a sort of frightened feeling like 'butterflies' in my tummy:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I feel restless/fidgety as if I have to be on the move:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I look forward to fun things:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I cry/feel like crying:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I get annoyed easily:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I feel good about myself:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Always	A lot of the time	Sometimes	Not at all
13. I get panicky:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I am lonely:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B. Sources of Strength

To what extent do the sentences below describe you? Circle one answer for each statement.

	Not at All	A Little	Some- what	Quite a Bit	A Lot
3. I have people to look up to	1	2	3	4	5
4. I cooperate with people around me	1	2	3	4	5
3. Getting an education is important to me	1	2	3	4	5
4. I know how to behave in different social situations	1	2	3	4	5
5. My parent(s)/caregiver(s) watch me closely	1	2	3	4	5
6. My parent(s)/caregiver(s) know a lot about me	1	2	3	4	5
7. If I am hungry, there is enough to eat	1	2	3	4	5
8. I try to finish what I start	1	2	3	4	5
9. Spiritual beliefs are a source of strength	1	2	3	4	5

	Not at All	A Little	Some- what	Quite a Bit	A Lot
for me					
10. I am proud of my ethnic background	1	2	3	4	5
11. People think that I am fun to be with	1	2	3	4	5
12. I talk to my family/caregiver(s) about how I feel	1	2	3	4	5
13. I am able to solve problems without harming myself or others (for example by using drugs and/or being violent)	1	2	3	4	5
14. I feel supported by my friends	1	2	3	4	5
15. I know where to go in my community to get help	1	2	3	4	5
16. I feel I belong at my school	1	2	3	4	5
17. My family stands by me during difficult times	1	2	3	4	5
18. My friends stand by me during difficult	1	2	3	4	5

	Not at All	A Little	Some- what	Quite a Bit	A Lot
times					
19. I am treated fairly in my community	1	2	3	4	5
20. I have opportunities to show others that I am becoming an adult and can act responsibly	1	2	3	4	5
21. I am aware of my own strengths	1	2	3	4	5
22. I participate in organized religious activities	1	2	3	4	5
23. I think it is important to serve my community	1	2	3	4	5
24. I feel safe when I am with my family/caregiver(s)	1	2	3	4	5
25. I have opportunities to develop skills that will be useful later in life (like job skills and skills to care for others)	1	2	3	4	5
26. I enjoy my family's/caregiver's cultural and family traditions	1	2	3	4	5
27. I enjoy my community's traditions	1	2	3	4	5

	Not at All	A Little	Some- what	Quite a Bit	A Lot
28. I am proud to be a citizen of Canada	1	2	3	4	5

C. Important Relationships

Please provide your FIRST and LAST name: _____

The following question helps us to understand the important relationships in your life. Please include FIRST and LAST names and indicate with an X whether the individual is a student (and their grade) or an adult. Names will be removed during data analysis to ensure you and the people you list will remain anonymous.

FIRST Name	LAST Name	STUDENT	GRADE	ADULT
Patricia	Rogers	X	10	
Sam	Sutherland			X

Please list all of the people (fellow students, teachers, counselors, etc.) at Lakeview Secondary who you feel like you can go to if you need support (a trusted person to talk to).

FIRST Name	LAST Name	STUDENT	GRADE	ADULT

FIRST Name	LAST Name	STUDENT	GRADE	ADULT

Please go through the survey again and check that you have answered all of the questions in the following sections:

A: ☐ Describing Your Feelings

B: ☐ Sources of Strength

C: ☐ Important Relationships

May we contact you at a later date to follow up with you regarding this project? If so, please provide your contact information below.

Email: _____

Phone number: _____

We would appreciate receiving any comments you have about this survey. Please let us know how you found the survey. Also, if you have any questions about the survey, please write them below.

Congratulations, you are done!

Appendix C SONAR Qualitative Interview Guide

SONAR Key Informant Interview Guide

As we hit the one year mark of the launch of the SONAR study, we are taking the opportunity to gather some detailed descriptions about the impact of the study, if any, from the perspectives of key stakeholders in the community.

1. Could you start by telling me a little bit about yourself and your role with young people in the community?
2. Could you describe your involvement with the SONAR project?

Probes:

- When did you become involved?
- How did you become involved?
- What has been your role with the SONAR project? (e.g., facilitating youth's use of space in the school, providing financial support, etc.)
- What do you think are the main challenges facing young people today?

3. What processes or aspects of the study supported your buy-in with the project?

Probes:

- Tell me about the factors that made you decide to become a part of the SONAR project?
- Are there aspects of the project that you think could be improved?

4. If you were to describe the SONAR project to somebody, what would you tell them?

Probes:

- What do you see as important components of the initiative?
- How have you seen the project impact your community?

5. Have you experienced or witnessed any changes amongst the young people of the community that you would attribute to the SONAR project?

Probes:

- Amongst the SONAR youth collaborators?
 - Amongst the larger community of young people?
6. From your perspective, what are the key outcomes that you have seen in your community as a result of the SONAR project?
 7. Do you have any ideas for enhancing the use of the app?

Probes:

- Are there ways to get the community better aware of the app?
 - Are there ways to make it easier for the community to contribute to the app?
8. What are your ideas for what the SONAR project should become as it moves forward?
 9. Is there anything else you would like to add?

Concluding remarks.

Appendix D Youth Collaborator Consent Form



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The University of British Columbia

School of Nursing

Vancouver Campus

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Vancouver, BC Canada V6T 2B5

Phone 604 822 7417

Fax 604 822 7466

www.nursing.ubc.ca

CONSENT FORM

Youth Research Collaborator

Title of Study: Contributing to the Development of Community-Based Knowledge Translation through the Creation, Implementation, and Evaluation of a Youth Mental Health Promotion Initiative

Principal Investigator: Joy L. Johnson, Professor, School of Nursing, University of British Columbia

Graduate Student Researcher: Emily Jenkins, Doctoral Candidate, School of Nursing, University of British Columbia

Co-Investigators:

Elizabeth Saewyc, Professor, School of Nursing, University of British Columbia

Vicky Bungay, Associate Professor, School of Nursing, University of British Columbia

Anita Kothari, Associate Professor, School of Health Studies, Western University

Purpose

The purpose of this graduate student study is to better understand how communities can use knowledge to create change and increase health. To achieve this research goal we are engaging a team of youth as research collaborators in a 1 year-long research project (which will run from June 2013-June 2014) focused on supporting adolescent mental health. Participating in this

research project will provide opportunities for team building, skill development, critical thinking, knowledge development, and understanding of approaches to creating community change. Ultimately, insights gained through this study will contribute to understandings of the process of collaborating with young people about issues pertinent to their health and well-being. You are being asked to participate as a Co-Researcher in this project because you are in Grade 8 – Grade 11 at Lakeview Secondary and were successful in your application for this position. Your participation in this study is entirely voluntary. You may decide not to participate or you may withdraw from the study at any time.

Study Procedures

If you consent to participate in this study, you will be asked to attend in-person sessions from Monday-Friday after school on four separate occasions throughout the year. These sessions will be held at a time and location that works for the group and may be recorded. You will also be asked to participate in 1-hour videoconferencing sessions weekly and to assist in other study-related assignments for an average of 1-hour per week. You will be given an iPad (which is yours to keep), to use for these activities. As a co-researcher, you will be involved in determining the focus of the study and will assist in a variety of data collection procedures. You will also help to identify other key members of the community who should be involved in this initiative. You will be provided with appropriate training to undertake these activities. You may also be asked to participate in interviews or to keep a research log to capture your experiences of the study process. The time required for all of these research activities is included in the time commitments outlined above. I will ask for your written permission to obtain copies of your project work for the purpose of publications and presentations.

Risks

No risks are expected from participation in this study.

Benefits

Your participation in this study will help increase understanding of how to engage youth in community change activities. It is anticipated that by participating in this study you will gain research and presentation skills and be involved in making a significant contribution to promoting the health of young people in your community.

Confidentiality

All participants will be asked to keep the information shared in the group confidential. No information that discloses your identity will be released or published without your specific consent. No records which identify you by name or initials will be allowed to leave the Investigators' offices. Your name will not be associated with the information collected during the research project without your permission. The information will be stored in a locked file cabinet and computer files will be password protected. You will not be identified in any reports of this research. The only time we will need to share information relating to your participation in this study is if you disclose any reports of abuse to a minor (a young person under 18 years of age) or harm, to yourself or others, in which case we are required by law to tell the Ministry of Child and

Family Development or your school counsellor. Let the interviewer know if you have any questions about this.

Remuneration

In recognition for your participation in this study you will receive three installments of \$500.00 over the course of the study period. Payment is contingent upon active participation and completion of project tasks.

For More Information

If you have any questions or desire further information, please contact Co-Investigator, Emily Jenkins at XXX-XXX-XXXX. *If you have any concerns about your rights as a research subject and/or your experiences while participating in this study, you may contact the Research Subject Information Line in the UBC Office of Research Services at XXX-XXX-XXXX or if long distance e-mail XXXXX or call toll free X-XXX-XXX-XXXX.*

Consent

- I have read and understood the consent form.
- I have been given a copy of this consent form.
- I have had sufficient time to consider the information provided and to ask questions, and have received satisfactory responses to my questions.
- I understand that all of the information will be kept confidential and will only be used for scientific purposes.
- I understand that my participation is voluntary and that I am completely free to refuse to participate or to withdraw from this study at any time.
- I recognize that I must participate as outlined in order to receive my honorarium.
- I understand that this study may not provide any direct benefits to me.
- I understand that I am not waiving any of my legal rights as a result of signing this consent form.
- I have read this form and freely consent to participate in this study.

Printed Name of Participant

Signature

Date

In addition, I give the research team permission to use the following materials that I have produced. Please check:

- a) ☐ Media (e.g., photographs , videos, artwork) created for the project
- b) ☐ My research log

Please check one:

☐ Please identify me by the following nickname as the creator of these materials

OR,

☐ Please identify me as the creator of these materials by my own first name in project reports or publications.

Photos may be taken during the project that will be used for the purpose of presentations. I have been asked to provide consent to release pictures taken of myself.

- ☐ I give consent to release these pictures.
- ☐ I do **not** give consent to release these pictures.

Appendix E Key Informant Consent Form



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

Title of Study:

Contributing to the Development of Community-Based Knowledge Translation through the Creation, Implementation, and Evaluation of a Youth Mental Health Promotion Initiative

Principal Investigator: Joy L. Johnson, Professor, School of Nursing, University of British Columbia

Graduate Student Researcher: Emily Jenkins, Doctoral Candidate, School of Nursing, University of British Columbia

Co-Investigators

Elizabeth Saewyc, Professor, School of Nursing, University of British Columbia

Vicky Bungay, Assistant Professor, School of Nursing, University of British Columbia

Anita Kothari, Associate Professor, School of Health Studies, Western University

Purpose

The purpose of this graduate student study is to better understand how communities can use knowledge to create change and increase health. To achieve this research goal we are engaging a team of youth as collaborators in a 1 year-long research project focused on supporting adolescent mental health. We are interested in hearing about your insights related to this project and any impact you may have observed. Ultimately we hope that this research study will provide information for effectively working with communities to improve the mental health of Canadian teenagers.

Study Procedures

We are asking you to participate in this interview because you have been identified by members of this research partnership as a community member of Lakeview and your perspective is respected. Participation in this study is entirely voluntary, which means it is up to you whether you want to take part or not. If you choose to participate, you can also withdraw from the study at any time and it will not impact you in any way.

If you consent to participate in this study you will be asked to participate in a one-hour interview facilitated by a UBC researcher. Interviews will be scheduled at a time and place that is convenient for you. You will be asked to share your perspectives about this community research project and discuss any impacts that you may have observed.

Risks

There are no anticipated risks of participating in this study.

Benefits

Although you may not receive any direct benefits from participating in this study, your participation will help increase our understanding of how to involve youth in creating change to improve the health of their community. With this knowledge we can develop better programs to address the health needs of Canadian teenagers.

Confidentiality

No information that discloses your identity will be released or published without your specific consent. No records which identify you by name or initials will be allowed to leave the Investigators' offices. All computer files will be password protected. Your name will not be associated with the information collected during the research project without your permission. The information will be stored in a locked file cabinet and computer files will be password protected. You will not be identified in any reports of this research without your consent.

Remuneration

In recognition for your participation in this study, you will receive an honorarium of \$20.00

For more information

If you have any questions or desire further information, please contact Graduate Student Researcher, Emily Jenkins at XXX-XXX-XXXX. *If you have any concerns about your rights as a research subject and/or your experiences while participating in this study, you may contact the*

Research Subject Information Line in the UBC Office of Research Services at XXX-XXX-XXXX or if long distance e-mail XXXXXXX or call toll free X-XXX-XXX-XXXX.

Consent

- I have read and understood the consent form.
- I have been given a copy of this consent form.
- I have had sufficient time to consider the information provided and to ask questions, and have received satisfactory responses to my questions.
- I understand that all of the information will be kept confidential and will only be used for scientific purposes.
- I understand that my participation is voluntary and that I am completely free to refuse to participate or to withdraw from this study at any time without repercussions.
- I understand that this study will not provide any direct benefits to me.
- I understand that I am not waiving any of my legal rights as a result of signing this consent form.
- I have read this form or it has been explained to me and I freely consent to participate in this study.

_____	_____	_____
Printed Name of Participant	Signature	Date

☐ Check this box if you consent to have your identity included in reports prepared about this study.

☐ Check this box if you would like to receive a summary of the study findings (and please print your contact information in the space below).

E-mail Address (please print): _____

Mailing Address: _____

Telephone # (or where we can leave a message): _____