EXPLORING RISK AND RESILIENCE RELATED TO HEALTH AND WELL-BEING AMONG YOUTH WHO LIVE IN RURAL AREAS: A RAPID EVIDENCE ASSESSMENT

by

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Abstract

Rural communities exist within uniquely complex social, economic and demographic contexts. Youth living in rural areas face higher rates of socio-contextual adversities and greater barriers to optimal health and well-being when compared to urban youth. Previous research indicates that resilience is protective against the risks associated with adversity. This Rapid Evidence Assessment (REA) explored how living in a rural context influences health and well-being related risk and resiliency for youth.

The analysis produced results within the following six themes: 1) resources for resilience processes, 2) support and connectedness, 3) positive cognitive patterns, 4) rural youth health perspectives, 5) age and gender and 6) the effect of resilience promoting service delivery. The findings confirm that living in a rural context yields a strong influence on the health and well-being outcomes in the lives of rural youth. The influences were sometimes identified as a risk factor, at other times such influences became protective. Resources that promote resilience were found to be individual and contextual forces that youth could access to cope with adversity and improve health and well-being outcomes. The uniquely interconnected relational networks that evolved in rural settings, coupled with the importance that youth placed on those networks for providing well-being, could be utilized to better promote resilience. Additionally, the cognitive patterns with which rural youth interpreted themselves and the world around them were important to the formation of resilience and were found to be positively associated with favourable relationships between youth and peers, family, community, and schools.

Based on the synthesis of evidence, I propose that there is merit in the provision of health promotion services for youth who live in rural areas that are: 1) resilience promoting, 2) contextually-specific, 3) empowering and respectful, 4) focused on fostering support and
connectedness, 5) endeavouring to strengthen positive cognitive patterns, 6) provided early and consistently over time. Services that use a resilience promoting approach for rural youth have the potential to foster the development of individual and contextual resources that will aid youth to achieve positive health and well-being outcomes, despite higher rates of exposure to significant socio-contextual adversities.
Lay Summary

This thesis used a Rapid Evidence Appraisal (REA) approach to analyze and synthesize current research to answer the research question, how does risk and resiliency influence the health and well-being of youth who live in rural areas? The results explored rural-specific risk factors that may place rural youth at higher risk for poorer health and well-being outcomes; as well as rural-specific resources that youth, health promoters, and communities can draw upon to increase resilience for rural youth. Improving youths’ resilience has the potential to increase positive health and well-being outcomes for rural youth.
Preface

This thesis is original, unpublished, independent work by the author, M. Bruner.
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Dedication

To the many, many strong women who were, and are, role models in my life; whom I so admire and consider myself fortunate to have as my friends and mentors. Your compassion, humour, drive, and intelligence inspire me to always put my best foot forward and to enjoy every step along the way. In particular, to the women whom I looked to as resources, for guidance and support, as I flailed ungracefully through adolescence. To name a few, my beautiful mother Barbara O’Connor, all three of my power-house grandmothers who rule their roosts, my plethora of lovely aunties, my aunties by choice, and my sisters by choice. To important adolescent role models, Julie Darwin, Deborah Howard, Andrea Dirom, among several others, many of whom unknowingly shaped my identity.

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Exploring Risk and Resilience Related to Health and Well-being Among Youth Who Live in Rural Areas: A Rapid Evidence Assessment

CHAPTER 1: Introduction and Research Questions

1.1 Introduction

This Rapid Evidence Assessment (REA) explored how living in a rural context influences health and well-being related risk\(^1\) and resiliency\(^2\) for youth. Eighteen research studies investigating the interconnections among risk, resilience, health and well-being for rural youth were analysed to provide a rapid evidence assessment (REA) of the available evidence. The REA methodology followed the Evidence for Policy and Practice Information (EPPI) Center’s guidelines. The research studies selected were identified through a systematic search using select scientific health literature databases. The process was guided by use of inclusion criteria that were established prior to conducting the literature search. As per the EPPI’s guidelines, following the study selection phase, each study was appraised for weight of Evidence (WOE) using the Government Social Research Service (GSRS) extraction tool. Additionally, where applicable, the Maryland Scientific Measurement Scale (MSMS), the Critical Appraisal Skills Programme (CASP) Qualitative Study Checklist, and/or the Cochrane Collection’s Risk for Bias Tool were used for further appraisal of quality. Research papers were then analysed and coded for a comprehensive synthesis of data.

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\(^{1}\) The term risk is often used to infer different meanings; for the purposes of this REA, it is important to distinguish between risk, and risk-taking behaviours. Risk is used broadly to identify an event, action, or condition that has a probability of resulting in a negative or adverse outcome. For example, growing up in poverty (Kelly, 2006). Alternatively, risk-taking behaviours are the individual actions that people engage in. Risk-taking behaviours have variable outcomes and engaging in them increases the probability that the outcome will be negative or harmful, although that is not always the case. For example, smoking or excessive drinking (Brown, Shoveller, Chabot, & LaMontagne, 2013; Figner & Weber, 2011).

\(^{2}\) As the topic of focus of this REA is risk and resilience, an in-depth discussion of risk and resilience will be forthcoming in chapters four and five.
The studies were analysed using a public health/health promotion lens, which specifically aimed to move away from an approach that focuses on individual behaviours as the cause of health disparity to shift the focus toward the socio-contextual factors that shape people’s lives that is also aligned with the social determinants of health framework. Six themes were identified and were used to outline the complex, interconnected forces that influence the lives of rural youth. The analysis produced results within the following six themes: 1) resources for resilience processes, 2) support and connectedness, 3) positive cognitive patterns, 4) rural youth health perspectives, 5) age and gender and 6) the effect of resilience promoting service delivery.

The background information was presented in the form of a brief literature review and illustrated that health disparities exist between urban and rural youth, and those differences warrant particular attention from health care providers and policy makers. The differences in health and well-being outcomes that negatively affect rural youth can be attributed to inequitable distribution and access to resources for a large proportion of Canadians who live in rural and remote locations. Due to social and geographic deprivation of resources, among other socio-contextual barriers, in many rural areas, youth are known to face greater adversities that can negatively affect health and well-being. Whilst adversity in childhood and adolescence is most often associated with poor health outcomes that can threaten well-being, research has also emphasized the protective nature of resiliency against the risks associated with adversity.

Youth living in rural areas face greater barriers to optimal health and well-being than their urban counterparts; these barriers manifest in part due to the unique contextual factors that limit access to the protective social determinants of health (SDOH). (Eacott, & Frydenberg, 2016).

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3 The term well-being is included alongside health to define a positive outcome that is not only the absence of physical and mental illness, but more broadly includes positive functioning, fulfillment and satisfaction with life. Well-being is a valid health measure because it conveys information about how people perceive the quality of their lives (Center for Disease Control and Prevention [CDC], 2016).
Rural settings are shaped by important contextual factors such as unique social, economic, and demographic conditions (Ungar, et al., 2007; World Health Organization [WHO], 2017b). Research focusing on the context of youths’ lives and health is necessary for the development of health promoting services and policy. It has been well established that, for all youth, healthy and positive experiences are critical for growth and development (Larkin, Felitti, & Anda, 2014), while negative experiences such as trauma and adversity are strongly linked to poor health and social outcomes (Finkelhor, Shattuck, Turner, & Hamby, 2013; Larkin, Felitti, & Anda, 2007). Youth living in rural communities face specific contextual challenges that are interconnected with the SDOH (i.e. rural geography, socio-economic status, etc), and these complex and intersecting factors contribute to health disparities between rural and urban populations. Researchers have attempted to disentangle how specific experiences are correlated with various adverse outcomes such as: higher rates of chronic health problems and mental health issues, lower education attainment, higher unemployment rates, aggression, anxiety, smoking, problematic alcohol and substance use (Eacott, & Frydenberg, 2009; Finkelhor et al., 2013; Jiang, Sun, & Marsiglia, 2016, Smokowski, Guo, Rose, Evans, Cotter & Bacallao, 2014). These contextual factors and their interrelationship with the SDOH warrant research focused on youth health promotion.

The differential health and social status between rural and urban youth emphasizes the critical importance of a health promotion approach designed to address the socio-contextual factors that frame this difference; health promotion aims to enable people to increase control over, and to improve their health by moving beyond individual behaviours and focusing on social and environmental influences (WHO, 2017a). Health promotion services and policies that
are oriented to reducing or eliminating health disparities and to promote well-being, are required to address barriers to health for rural youth (Frieden, 2010; WHO, 2017a). Accounting for the poor social and economic conditions within a population, has been shown to provide the greatest potential for impacting the overall health of a population (Frieden, 2010). To generate evidence for health promoting services and policy for rural youth, research must account for the social and environmental conditions that impact youths’ health and well-being, and how youth develop capacities and resilience to mitigate the risks of rural life that contribute to rural-urban health disparities (Ladson-Billings, 2006; Karairmak & Figley, 2017; Sanders, Munford, Thimasarn-Anwar, Leibenberg, & Ungar, 2015). Resilience is a process in which individuals utilize resources and traits to buffer against the negative effects of adversity and to have positive outcomes despite the risks associated with high levels of adversity (Ungar et al., 2007). Resilience is a complex concept that will be explored in depth throughout this REA.

The aim of this study was to undertake an REA to synthesize literature that examines how living in rural areas shapes health and well-being related risk and resilience for youth who face significant social and material adversity, in order to inform youth health promotion initiatives designed for youth who live in rural areas.

1.2 Research purpose and research question

Health inequities for rural youth cannot be addressed without a fuller understanding of how their everyday life context shapes their decisions, choices and experiences. There is a propensity for research and health promotion to focus on the individual behaviours that contribute to youth risk and resilience; I propose that there is a need to address and understand the broader social and structural contributors to risk and resilience in relation to health outcomes (Brown, Shoveller, Chabot, & LaMontagne, 2013; Ladson-Billings, 2006). While encouraging
youth to practice healthy behaviours, health care providers often target youth risk using a deficit perspective. This approach to health promotion may be more harmful to youth than it is effective for fostering resilience and reducing health risks (Ladson-Billings, 2006).

Approaches that favour resiliency as a protective factor against the disadvantage and higher rates of adversity faced by rural youth have been suggested to be more effective in promoting health and well-being (Smokowski, et al., 2014; Sanders et al., 2015). Currently, we do not fully understand the context in which risk and resilience evolve for youth who live in rural areas; however, given how research confirms that resilience in youth is heavily influenced by contextual factors, it is prudent to explore how rural contextual factors can promote resilience for youth who live in rural areas.

One way of gaining insight into the problem described above is to undertake a review and synthesis of the current evidence that exists related to risk, resilience, well-being and rural youths’ lives. Employing an REA methodology is an effective method of executing such a task. The purpose of this REA is to synthesize literature to generate knowledge about the context of the lives of youth who live in rural areas, and how risk and resilience is manifested for those youth who face significant social and material adversity. The question to be addressed in this Rapid Evidence Assessment (REA) is, how does living in a rural context influence health and well-being-related risk and resiliency for youth?
CHAPTER 2: Literature Review

In this chapter, I introduce pertinent background information and concepts in the form of a literature review that frames the aim of this REA.

2.1 Rural and remote populations

Embarking on this REA requires first defining the term “rural”. Rural and remote populations in Canada are comprised of those people living outside of census metropolitan areas (CMAs) or census agglomerations (CAs) (Statistics Canada, 2012). CMAs are areas with a population of at least 100,000 and with half of those people living in the core metropolitan area. CAs are areas with an urban core of at least 10,000 (Statistics Canada, 2012). Rural areas are often categorized based on the degree to which the area is influenced by an urban core (Canadian Institute for Health Information [CIHI], 2006). Rural populations include small towns, villages, and other places that have a population of less than 1,000. There is a continuum of rurality that spans remote wilderness to rural towns that are heavily influenced by nearby urban centers, as well as all the areas that fall between these two descriptors (Statistics Canada, 2012).

2.2 Social determinants of health and rural settings

Accounting for the SDOH is a critical component of health promotion, health and well-being for people around the globe. Worldwide, health disparities are strongly correlated with the SDOH and unequivocally influenced by the context in which individuals live. A public health approach emphasizes the important consideration that, for many people, the contexts and conditions that shape health and well-being exert a powerful influence (World Health Organization a [WHO], 2017b). Furthermore, for individuals who live in contexts wherein social resources are available (i.e social support, material resources), those contextual factors can be protective against poor outcomes. Studies confirm the integral influence between the SDOH and
positive health and well-being outcomes (McDonald, Ross & Thomas, 2013; WHO, 2017b). As many people and populations in Canada live in communities and contexts that may have limited availability of social resources that are protective, and are thus at risk of disadvantage, focusing on the strengths and capacities present within that community may be effective to provide protection against adversity (McDonald, Ross & Thomas, 2013).

Commonly identified SDOH include income and social status, social support networks, education and literacy, employment and working conditions, social environments, physical environments, personal health practices and coping skills, healthy child development, health services, gender, and culture (McDonald, Ross & Thomas, 2013; Public Health Agency of Canada, 2011). Though each SDOH has important and complex interactions with health, the list is broad, and it would be exhaustive to use each one to provide a discussion about rural-urban health disparities. Thus, for the purposes of this chapter and focus of this REA, I primarily draw upon research that helps us to understand how rural contexts may interact with social, economic, and geographic SDOH of health, to influence the health and well-being of people who live in rural areas; and ultimately how this contributes to a health disparity between rural and urban populations (McDonald, Ross & Thomas, 2013; Public Health Agency of Canada, 2011).

While rural-urban health disparities exist, it is important to note that there is diversity among rural and urban communities making up their unique descriptive characteristics and the availability of social resources that influence health and well-being (CIHI, 2006). Though many people in rural communities face contextual barriers that are associated with SDOH, many individuals are healthy, successful, and enjoy unique aspects of rural life that are not readily available to people who live in urban settings; highlighting the existence of socio-contextual strengths within rural communities that have the capacity to be positive resources for health and
well-being (Brown, Shoveller, Chabot, & LaMontagne, 2013; Shoveller, Johnson, Prkachin, & Patrick, 2007). This is important for many youth who live in rural areas since they may face particular risks associated with rural life, when compared to their urban counterparts (Pong, DesMeules, & Lagacé, 2009). The conditions in which peoples’ life context exist can be either a protective or a risk factor to health and well-being, depending on how those conditions and contexts interact and influence the protective resource associated with SDOH. Furthermore, given that many rural youth have positive and healthy outcomes, despite that risks associated with socially and contextually determined resources for health in rural areas, determining what factors contribute to protecting those youth to overcome those risks is essential to provide services that foster positive health and well-being outcomes in all rural youth. The risks associated with SDOH in rural areas and how those SDOH influence health and well-being are well-researched, and are discussed in more depth in the following.

Socioeconomic status is an important determinant of health. It reflects an individual or family’s social and economic position in society based on a combination of education level, income, and employment status (Boyce, 2008). Socioeconomic status tends to correlate with health and well-being. Those who have lower socioeconomic status often experience poorer availability of resources that are protective against poor health outcomes (WHO, 2017b). Unfortunately, the socio-contextual conditions of rural populations within Canada tend to influence the availability of resources that results in a trend of lower levels of education, income, and employment (ie: lower socioeconomic status) (CIHI, 2006; Greenberg & Normandin, 2011). It is estimated that only 10% of rural youth will obtain post-secondary degrees, while large urban centers have a post-secondary degree obtainment rate of 25% (Greenberg & Normandin, 2011). Individuals who have higher education are able to accrue higher incomes and are more likely to
be employed than those with less education. Moreover, median incomes in rural and remote areas are approximately $10,000 CAD less than the incomes in the three major Canadian cities. In turn, people with lower incomes have lower life expectancies than those with higher incomes (Greenberg & Normandin, 2011).

The geographic location of a community in relation to other communities and resources has many implications for health of people living in rural areas (Kulig & Williams, 2012). Rural land mass accounts for over 90% of Canada’s geography (CIHI, 2006), yet only 20% of Canadian citizens live in rural areas (Statistics Canada, 2011a). Thus, the majority of Canadians live in less than 10% of the land mass, and resources are easily allocated to this urban population. The disproportionate distribution of the Canadian population renders it difficult to provide quality health care, services, and resources to 20% of Canadians, many of whom live great distances away from a town center (Kulig & Williams, 2012). In this way, geographic influences may have both structural and social implications for the health and well-being of rural populations.

Canadians who live in rural areas are more likely to have decreased access to multiple forms of resources, activities, and services, as compared to urban centres. This may reduce access to health services to meet the needs of rural Canadians thereby contributing to inequities in health and well-being in rural communities. Typically, rural communities rely on small health centers which may serve more than one community within a region (Kulig & Williams, 2012; Shoveller, Johnson, Prkachin & Patrick, 2007). Individuals with unique or specialized health needs may not be well served by a small health center, and thus may have to travel to a major center. Transportation is influenced by geography in rural areas, individuals in rural areas who are without vehicles or who cannot drive, such as youth, often rely on public transit, however,
public transit is often lacking or non-existent in and between many rural Canadian communities (Transport Canada, 2010). Recreational activities may also be limited in many rural and remote communities, as a result of available support and resources (Jiang, Sun, & Marsiglia, 2016; Shoveller, Johnson, Prkachin & Patrick, 2007). As finding appropriate activities for exercise and entertainment may be difficult, youth may become more sedentary and more socially isolated, contributing to higher rates of poor mental and physical health (Shoveller, Johnson, Prkachin & Patrick, 2007).

Other barriers in accessing protective resources that influence SDOH that are associated with rural geography, are the costs of transporting goods long distances to rural communities. In turn this impacts the prices of many products in rural communities, thus costs are inflated far beyond the costs in most cities. For example, increasing prices of fresh produce creates barriers to a healthy diet (Dribe, Hacker, Scalone, 2014). Similarly, access to educational options for young people may be limited outside of urban Canada. Most often, pursuing post-secondary education requires individuals to relocate outside of their rural communities (CIHI, 2006). In turn, this affects educational levels of many people in rural communities. The costs and inconvenience of moving for higher education purposes may preclude this option for many youth who live in rural centers, providing an additional barrier to education. Additionally, as many young adults relocate for education or work opportunities, rural areas often begin to reflect a higher demographic of ageing adults and children, who tend to be more significant users of health and social resources (CIHI, 2006).

As demonstrated, the SDOH are complex and interrelated. Though they are impactful on health and well-being, youths’ ability to access and utilize the resources that contribute to SDOH is not related to their individual behaviours, but to the social and structural context to which they
exist (Rapheal, 2009). Importantly, individuals who have lower access to essential resources and services as described above, face barriers to protective SDOH. In turn, these barriers to accessing resources to meet basic needs disproportionately impacts health and well-being; translating to a measurable rural-urban health disparity (Raphael, 2009).

### 2.2.1 Rural-urban health disparity

Although Canadians on average enjoy one of the highest standards of living in the Western world, rural Canadians tend to fare worse in relation to health and well-being when compared to the general Canadian population; therefore, significant health disparities between urban and rural populations exist (CIHI, 2006). Higher rates of morbidity and mortality, and lower life expectancy are realities in rural Canadian communities as compared to urban populations (CIHI, 2006; Greenberg & Normandin, 2011; Kulig & Williams, 2012; Lavergne & Kephart, 2012; Shields, & Tremblay, 2002). These general health disparities, associated with barriers to health and well-being, translate into higher rates of poor health outcomes for many rural youth (Greenberg & Normandin, 2011).

Populations in rural settings have higher mortality rates, lower life expectancy, and are more likely to report low quality of life than their urban counterparts (CIHI 2006). Higher rates of obesity, smoking, alcohol misuse, circulatory disease, diabetes, teenage pregnancy, deaths due to accidents and suicide, mental illness, and poverty are evident in rural contexts (CIHI, 2006; Kulig & Williams, 2011; Pong, DesMeules & Lagacé, 2009). In summary, due to the effects of increased rates of chronic disease, mental illness, accidents, and substance misuse, people who live in rural settings are more likely to die sooner by suicide, accident, or illness (Kulig & Williams, 2012; Lavergne & Kephart, 2012; Pong, DesMeules, & Lagacé, 2009; Shields, & Tremblay, 2002). Additionally, research evidence indicates that the magnitude of a community’s
rurality has a direct inverse relationship with the health of its population (Lavergne & Kephart, 2012). Thus, disparities in health are multifactorial and highly complex. For youth, these health disparities manifest in increased risks for poor health and well-being outcomes, based not only on their rural status, but also the degree of rurality. The above mentioned health disparities, however, cannot be reduced to individual biology, genetics or lifestyle; rural health outcomes are strongly influenced by the SDOH. In rural contexts, these factors often interact and contribute to differences that manifest as inequities, leaving rural youth more likely to fall behind their urban counterparts whom are less likely to experience the same rates of vulnerability due to contextual and social factors (Jiang, Sun, & Marsiglia, 2016; Kulig, & Williams, 2012).

In summary, social, economic, geographic, and historical factors shape the disparity between rural and urban youth health. There is a pressing need for redressing the cumulating effects of health and social inequity for rural youth who face disadvantages for optimal health (CIHI, 2006; Lavergne & Kephart, 2012). The impacts of complex, intersecting adversities faced by many rural youth accumulate to create barriers for optimal health and wellbeing; therefore, exploring protective factors, such as those contextual dynamics that mitigate risks and foster resilience, can inform policy and health promotion strategies to positively influence health and well-being tailored to rural living (Lavergne & Kephart, 2012; Sanders et al., 2015).

2.3 **Indigenous populations in Canada**

Rural areas in Canada are home to approximately 40% of Canada’s Indigenous people (Aboriginal Affairs and Northern Development Canada [AAND], 2013). Prior to European colonization in Canada Indigenous communities were vast and healthy. Colonization was detrimental to the Indigenous people of Canada, primarily due to genocide, disease, and starvation that ensued as a result of European settlement (Adelson, 2005). In recent years the
Indigenous population is growing at a rapid rate. However, Indigenous people continue to battle with negative effects of colonial conquest and history (Adelson, 2005). As a large proportion of Indigenous populations live in rural areas and continue to endure the negative effects of colonization, one cannot understand the lives of rural people without acknowledging the impact of colonialism on Indigenous people (Adelson, 2005). Indigenous populations are now one of the fastest growing populations in Canada (AAND, 2013; CIHI, 2006; Kulig & Williams, 2012). Indigenous populations grew by 20.1%, between 2006 and 2011, while the non-Indigenous population grew by 5% (Statistics Canada, 2011b). As a result of the complex and intersecting adversities experienced by many Indigenous people, Indigenous populations face a disproportionate burden of poor health and lower life expectancy when compared to non-Indigenous Canadians (Lavergne & Kephart, 2012; Statistics Canada, 2015). As there is a higher percentage of youth in rural areas who have Indigenous ancestry, these youth face health inequities rooted in historical and ongoing colonialism.

2.4 Risk and resilience

As illustrated, youth living in rural contexts experience disproportionate barriers to health that are shaped by complex socio-contextual factors. Research on the risks associated with youth living in rural settings and health outcomes, has focused heavily on how specific risk-taking behaviours contribute to poorer outcomes (Brown, Shoveller, Chabot, & LaMontagne, 2013; Sanders et al, 2015). Both rural and urban youth commonly engage in behaviours that are classified as ‘risky’ based on societal norms (Sanders et al, 2015). As youth develop into adults, most will need some amount of adult guidance; adults often take the role of an authoritative figure and act by directing youth decision-making and defining certain behaviour as negative. This stands in contrast to supporting youth to make individual and informed decisions and to
cope with life challenges and adversities (Kelly, 2007; Sanders et al., 2015; Shoveller & Johnson, 2006). While rural youth face specific health risks related to their living environments, the ways such risks are currently conceptualized reflects a focus on individual behaviour without due account of how risk is shaped by the broader contexts of their life. Understanding how context shapes risk for rural youth is a critical step for informing effective health promotion services and policy that will help to redress current inequities and optimize health outcomes.

While evidence indicates that context may contribute to risk, there is less attention paid to the protective factors within that very same environment that can reduce negative health outcomes and promote positive ones (Ladson-Billings, 2006). Resilience research identifies the importance of socio-contextual resources paired alongside personal attributes to protect youth against adversity (Leitch, 2017, Sanders et al., 2015). Family, community, school, peer, and environmental contexts have all been identified as potential sources of protective factors that contribute to resilience for youth (Leitch, 2017). Because rural communities present unique socio-contextual conditions, and many rural youths have positive health outcomes despite the increased risks they may encounter, there is merit in exploring the broader rural socio-contextual conditions that can promote resilience, rather than focusing solely on those that are risk factors for adversity (Ladson-Billings, 2006; Karairmak & Figley, 2017). Resiliency is a key factor in the healthy development of youth who are exposed to contextual, individual, or family adversity (Sanders et al., 2015). The benefit of encouraging youth to use the resources available to them to cope with adverse experiences, may outweigh the risks of possible negative experiences associated with contextual risk and with risk-taking. This idea is aligned with theories of resiliency, which postulate that individuals who successfully use their adaptive resources to
overcome stressful or high-risk situations possess the trait of resilience as a protective factor against adversity (Karairmak & Figley, 2017).
CHAPTER 3: Theoretical Approach and REA Methodology

In this chapter I discuss the theoretical framework that guides this REA, the REA methods that were used to analyse and synthesize the literature, and a summary of findings.

3.1 Theoretical Approach

This REA draws on a public health perspective; specifically, health promotion and the SDOH as the theoretical orientation to the analysis. The WHO (2017c) states the vision of public health is to sustainably promote health and well-being as well as strengthen services and reduce inequities. In addition to identifying community health problems, monitoring community health, policy development, public health approaches incorporate prevention and health promotion to target the SDOH and improve health outcomes. Public health and health promotion are an appropriate methodological guide for this REA, as the framework offers a perspective that moves away from focus of health and well-being solely as the responsibility of the individual and their behaviours, and shifts the focus of analysis toward the structural and societal barriers that limit access to the health promoting SDOH (Frieden, 2010; WHO, 2017c). These conditions and contexts that contribute to health inequities, underscore the theoretical orientation to the REA (Frieden, 2010; Lavergne & Kephart, 2012; WHO, 2017b).

3.2 Methodology

REA is a rigorous and structured approach of synthesising data and assessing the quality of evidence. An REA is considered to be more rigorous than a literature review but does not require the extensive time commitment of a full systematic review, therefore it is a suitable option for a thesis (Varker, Forbes, Dell, Weston, Merlin, Hodson, & O’Donnell, 2015). REAs are a valuable method for synthesizing the available evidence on a specific topic in a timely manner for advancing practice and policy. REAs are useful when evidence in a topic area is
required to determine whether there is relevant existing evidence and how future research on that topic should be directed (Civil Service, 2014; Varker et al., 2015). Although REAs are more developed for use of impact questions, they are useful for answering non-impact questions about needs, processes, implementation, correlations, and attitudes (Civil Service, 2014). The question of this current REA is: how does risk and resiliency influence the health and well-being of youth who live in rural areas?

3.2.1 Search strategy.

The research search for this REA took place on September 13, 2017. The systematic search for research studies used the following scientific databases at the suggestion of the UBC Librarian: the Cumulative Index of Nursing and Allied Health Literature (CINAHL), Medline, and PubMed. The key terms that were used were:

1. Adolescen*: teen*, youth, young people
2. Resilien*
3. Risk, Advers*, context* risk, individual risk
4. Well-being: physical well-being, psychological well-being, psychosocial well-being, physiological well-being, positive outcome, health
5. Rural

3.2.2 Search process.

The search strategy used for this REA was developed utilizing the suggestions of the UBC Librarian, as well as my supervisory committee. First, the search was conducted using the items above but omitting the item of well-being and the item of rural. Following this search, a broad set of literature was obtained. This search was useful in yielding influential studies that broadly investigated youth risk and resilience in different contexts. Additionally, the qualifier
‘rural’ was included to narrow the search to include research that was specific to rural youth. The third strategy used the items of rural, adolescent, and well-being to include more research on protective and risk factor for promoting positive outcomes in rural youth.

1. (Adolescen* or teen* or youth or young people) and ((Resilien*) or (Risk or Advers* or context* risk or individual risk))

2. Rural and (Adolescen* or teen* or youth or young people) and ((Resilien*) or (Risk or Advers* or context* risk or individual risk))

3. Rural and (Adolescen* or teen* or youth or young people) and (well-being or physical well-being or psychological well-being or psychosocial well-being or physiological well-being, positive outcomes, health))

3.2.3 Inclusion criteria.

The literature search methods followed a predefined inclusion criteria to ensure a rigorous and relevant analysis of the available data to answer the REA question. Each piece of literature that was selected for inclusion after review maintained the inclusion criteria that follows. All literature included were research studies; thus, I excluded grey literature and theoretical literature. All were published in a scientific journal between 2007 and 2017. I included only studies that were written in English. Studies included had a research purpose aligned with at least one of the following aims: 1. Describes or analyses a health promotion program that uses a resiliency promoting framework for rural youth 2. Describes or analyses risk and/or resilience factors for youth, rural youth, or for vulnerable youth. Research studies were excluded from this REA if it did not fit these inclusion criteria.
3.2.4 Research study selection.

The initial search yielded 212 studies. After removing duplicates and checking inclusion criteria, 52 studies were maintained and the abstracts and titles carefully reviewed. Following this, 22 studies were maintained and were read in their entirety, four were excluded due to minimal relevance to the aim of this REA. In total 18 studies were selected to be included in this REA. Figure 3.1 illustrates the process of selecting studies for use in this REA. Details of the 18 studies selected for this REA are outlined in Appendix A.

3.2.5 Rapid evidence critical appraisal.

All articles included in this REA were assigned a rating using the Weight of Evidence (WOE) criteria. To accomplish this the studies were appraised for reliability and relevance using the Government Social Research Service (GSRS) extraction tool (See Table 3.2 in Appendix B). The studies were categorized in one of three categories using this tool. The categories are high weight of evidence (score of 7-9), medium weight of evidence (score of 4-6), and low weight of evidence (score of 1-3) (Civil Service, 2014).

The methodological quality of quantitative studies was appraised using the Maryland Scientific Methods Scale (MSMS) (See Table 3.3 in Appendix B). This tool scores the strength
of research study methodology based on five levels; a score of five corresponds to the highest methodological strength, declining alongside level (Civil Service, 2014).

The quality of the qualitative studies was appraised using the Critical Appraisal Skills Programme (CASP) Qualitative Study Checklist (See Table 3.4 in Appendix B) (CASP, 2017). To score studies using this tool, a point of one was given for each screening question that was successfully addressed. Ten was the highest score a study could achieve using this scale, which corresponds to the highest possible research quality.

Additionally, each study was appraised for bias using the Cochrane Collection’s Risk for Bias Tool (See Table 3.5 in Appendix B) (The Cochrane Collaboration, 2018). To score each study using this tool, a score of one was given for each domain of bias that the study was at risk of acquiring, with the lowest possible risk for bias being zero, and the highest being seven.

The appraisal and scores from each tool informed the WOE for the study selected for the analysis and synthesis of this REA. The analysis and score appraisal for each study is presented in Table 3.6 in Appendix C. A matrix style format was used to organize the summaries, WOE scores, MSMS scores, CASP scores, and Bias scores. Data from each study was extracted and a detailed summary of each study’s research and findings were recorded for review, analysis, synthesis and finally for coding (Gough, 2007). Coding was used to find common themes and concepts, while taking into account the WOE. This process was used to analyse and synthesize the findings of this REA.

3.2.6 Research study designs.
The 18 research studies selected for this REA consisted of a variety of research designs. One study was a comprehensive meta-analysis⁴, eight studies used quantitative research designs 2, 3, 7, 8, 9, 10, 11, 15, five were mixed methods studies 5, 6, 12, 16, 18, and four used a qualitative design 1, 13, 14, 17. Three studies tested an intervention promoting resilience 5, 6, 16. Of the quantitative data collected, six studies were cross sectional 2, 3, 7, 12, 15, 18, two used a pre-post test design 6, 16, three used a time series design 5, 8, 11, and one study collected quantitative data using a longitudinal cohort sequential design 10. Qualitative data were collected in the form of interviews 1, 5, 6, 13, 14, 16, 17, 18, observational data 14, focus groups 13, 17, and open-ended written question 12. Four studies used secondary data collected from another study 2, 4, 9, 15. Table 3.7 provides a summary of the research designs of included studies.

Table 3.7
### REA Research Study Designs

<table>
<thead>
<tr>
<th>Study</th>
<th>Methodology</th>
<th>Data Collection Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Qualitative</td>
<td>Open ended interviews</td>
</tr>
<tr>
<td>2</td>
<td>Quantitative</td>
<td>Cross sectional secondary data</td>
</tr>
<tr>
<td>3</td>
<td>Quantitative</td>
<td>Cross sectional</td>
</tr>
<tr>
<td>4</td>
<td>Meta-analysis</td>
<td>Secondary data</td>
</tr>
<tr>
<td>5</td>
<td>Mixed methods</td>
<td>Time series and open-ended interviews</td>
</tr>
<tr>
<td>6</td>
<td>Mixed methods</td>
<td>Pre-post test and semi structured interviews</td>
</tr>
<tr>
<td>7</td>
<td>Quantitative</td>
<td>Cross sectional</td>
</tr>
<tr>
<td>8</td>
<td>Quantitative</td>
<td>Time series</td>
</tr>
<tr>
<td>9</td>
<td>Quantitative</td>
<td>Secondary data</td>
</tr>
<tr>
<td>10</td>
<td>Quantitative</td>
<td>Longitudinal cohort sequential</td>
</tr>
<tr>
<td>11</td>
<td>Quantitative</td>
<td>Longitudinal Time series</td>
</tr>
<tr>
<td>12</td>
<td>Mixed methods</td>
<td>Cross sectional and open ended written question</td>
</tr>
<tr>
<td>13</td>
<td>Qualitative</td>
<td>Focus group Interviews</td>
</tr>
<tr>
<td>14</td>
<td>Qualitative</td>
<td>Interviews and observational</td>
</tr>
<tr>
<td>15</td>
<td>Quantitative</td>
<td>Cross sectional secondary data</td>
</tr>
<tr>
<td>16</td>
<td>Mixed methods</td>
<td>Pre-post test and semi-structured interviews</td>
</tr>
<tr>
<td>17</td>
<td>Qualitative</td>
<td>Interviews and focus group interviews</td>
</tr>
<tr>
<td>18</td>
<td>Mixed methods</td>
<td>Cross sectional and interviews</td>
</tr>
</tbody>
</table>

#### 3.2.7 Research study aims.

All of the studies reviewed for this REA explored factors related to risk and/or resiliency in children or youth, a slightly smaller subset of this sample explored the same but were specific to youth who lived in rural areas. Six of the studies examined the influence of resilience on well-being. 15 of the studies aimed to explore specific factors that promote or impede resilience processes. Nine studies explored youths’ conceptualizations of risk, resiliency, and health and well-being. Three of the studies specifically tested a
program to promote resilience in rural youth. Table 3.8 provides a summary of the aims of included studies.

Table 3.8

*Research Study Aims*

<table>
<thead>
<tr>
<th>Research study number</th>
<th>Rural-specific content</th>
<th>Influence of resilience on well-being</th>
<th>Factors the influence resilience processes</th>
<th>Youths’ conceptualizations of risk, resilience, health, and well-being</th>
<th>Tested a resilience promoting program for rural youth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 3 5 6 7 8 9 10 11 12 13 15 16 17 18</td>
<td>1 3 4 6 13</td>
<td>1 2 4 6 7 8 9 10 11 12 13 14 15 16 18</td>
<td>1 3 7 8 11 12 13 14 17</td>
<td>5 6 16</td>
</tr>
</tbody>
</table>

3.2.8 Research study samples.

Inclusively, the studies collected data on youth and children between the ages of 4-24 years. Most studies however, sampled youth who were between 10-19 years of age. The studies focused on young people outside of this bracket were useful in providing insight into the changes children undergo as they transition into adolescence and again as adolescents transition into adults; those studies informed the analysis beyond age-related specific
findings to contribute to the synthesis. Some studies collected data from adults within rural communities in order to explore outside perceptions about youth risk and resilience. Fourteen of the studies collected data from youth who live in rural areas. Four of the studies included data that was collected from communities within Canada, while fifteen included data collected from communities outside of Canada.

3.2.9 Synthesis of evidence.

This REA focuses on evidence that explores how living in rural areas influences the health and well-being-related risk and resilience for youth. In order to generate themes that represent the findings of this REA, the following steps were taken:

1. All studies were summarized in exploration of youths’ risk and/or resilience, protective factors, risk factors, and well-being. Special notice was taken to identify factors and contexts that were specific to rural youth. The findings in the step contributed to key findings.

2. Studies that tested an intervention were summarized and outcomes, effectiveness, recommendations, were synthesised. This contributed to key findings.

3. Studies that discussed personal experiences, perspectives, and accounts about rural youths’ health were explored to find patterns and commonalities, contributing to key findings.

4. Last, all studies were analysed with a public health and health promotion lens to identify common themes. The thematic analysis acknowledges the social and contextual implications of factors that influence health and move beyond individual behaviours as the sole contributor for health outcomes. The themes are discussed at length in Chapter Four.
After reviewing each study and concluding a critical analysis for key findings, the studies were then coded for prominent categories and recurrent ideas. The categories and ideas were relevant to rural youth’s health and well-being related to risk and resilience. Six themes emerged after being combined, analysed and synthesised.

3.2.10 Communicating the findings.

In the final stage of the REA process, findings are communicated in a form that is quick and accessible. It is important to demonstrate that the research has been conducted in a robust and reliable manner (Civil Service, 2014). This study will follow the 1:3:25 format. This format recommends the use of one page to summarize and present results that provide high-level implications of the REA (Please see Chapter 5.2). Three pages or less may be used to provide a traditional executive summary with focus on the key findings synthesized and implications (see Chapter 3.3). A maximum of 25 pages is used to present the results, with focus on the research studies themselves (see Chapter 4) (Civil Service, 2014).

3.3 Key Findings Synthesized

All of the 18 studies synthesized for this REA were rated to have either high or medium WOE using the UK Civil Service Government Social Research Service (GSRS) criteria. There were no studies with a low WOE.
Figure 3.2. Weight of evidence (WOE) by study type.

Additional consideration was given to scores assigned to each study via the Maryland Scientific Methods Scale (MSMS), the Critical Appraisal Skills Programme (CASP), as well as the Cochrane Risk for Bias Score (Bias), as applicable. Using the weight and quality of each study, as well as a public health/health promotion perspective, my synthesis and appraisal resulted in the following key findings:

1. Resilience was a process that buffered against “risk” or adversity and improved well-being outcomes. Youth who had individual and contextual resources that acted as protective factors against adversity had better well-being outcomes and stronger resilience processes (1-10, 12-16, 18). Resilience processes were contingent on rural youths’ capacity to access, navigate, and negotiate the individual and contextual resources that were available to them (1-5, 7, 10, 13, 15, 16, 18).

2. Poorer resilience processes were associated with having more individual and contextual risks and youth did not have the availability or ability to avail themselves to protective resources (1-7, 9, 10, 16). Although youth needed to have some adversity to be able to develop
resiliency, with lower access to resources to combat adversity, youth became more vulnerable to poor outcomes 1-6,9,16.

3. Contextual factors that were commonly identified as important to promoting resilience in rural youth were family, community, peer, and school based resources 1,2,4,8,13. The support and connectedness within relationships were integral resources that enhanced access to essential material resources such as food and shelter, but also when providing for such needs as emotional support, trust, a sense of belonging, and personal responsibility 3,2,4,12,13.

4. Individual factors were important to building personal protective resources for resilience alongside contextual factors 1-7,16. These factors were commonly identified to be personal skills, or cognitive pattern; such as self-esteem, optimism and positive patterns of thought; often these factors provided the most protective capacity against adversity and were associated with well-being outcomes 1-3,6,7,9-12,16.

5. Individual resources for resilience were often found to be associated with access to contextual resources 1-12,16,18. Youth who had access to material resources, as well as strong relationships, support and trust within their communities, families, peers, and schools were more likely to develop strong individual level resources, ultimately becoming armed with strong sense of self and positive cognitive interpretations 9,10,12-14,16,18. Additionally, strong individual resources were often found to protect against affects of missing contextual resources 3,7,11,16,18.

6. Rural communities had unique contexts and cultures that impacted resources for resilience 5,8,11,13,16,17. As many rural areas have the tendency to be “close knit”, the structure of highly complex and interconnected relational and social contexts has
implications for rural youth in many aspects of their lives \textsuperscript{11, 13, 17}. For example, anonymity, confidentiality, impact of reputations, rumours, stigma, choices for support and social networks, may all be experienced differently for rural youth than for urban youth \textsuperscript{11, 13, 14, 17}.

7. There were some demographic based factors that placed some rural youth at higher risk. Female rural youth were at higher risk for poorer resilience and well-being than males; being more likely to have lower individual level resources such as self-esteem and optimism \textsuperscript{2, 5, 8, 9, 10, 12, 15}. As rural youth grew older, they were increasingly at higher risk for having poorer resilience processes \textsuperscript{2, 5, 8, 9}.

8. Rural youth perceived and expressed meanings of health and well-being differently than rural adults and compared to urban youth. Youth placed great emphasis on happiness, social support, and social positioning as a source of well-being \textsuperscript{10, 12, 14}. However, because of the importance youth placed on social resources, rural youth identified themselves as being at greater risk, due to lack of anonymity and limited availability of alternative social networks. Rural youth expressed desire for more opportunities to strengthen their social networks and more opportunity and choice for leisure \textsuperscript{12, 14, 17}.

9. Resilience promoting interventions were successful at improving well-being and health outcomes \textsuperscript{3-5, 16, 18}. Promoting resilience was found to be very impactful in improving wellbeing outcomes \textsuperscript{3-5, 10, 11, 16, 18}. Some studies suggested that promoting resilience was even more impactful the reducing risk. However, well-being scores tended to regress with time, unless a booster program that reinforced previously covered topics or initiatives was given \textsuperscript{4, 5, 16}. 
3.4  **Themes**

The six themes that emerged from the REA method discussed above, describe how personal resources influence the development of resilience processes and how rural context uniquely influences personal resources. Additionally, the themes constructed from this REA emphasize the positive impact that resiliency promoting services have on the positive health and well-being of youth who live in rural areas. The themes identified in the analysis of this REA are:

1. Resources for resilience processes
2. Support and connectedness
3. Positive cognitive patterns
4. Rural youth health perspectives
5. Age and gender
6. Resilience promoting service delivery

3.5  **Limitations**

Although REAs are an effective a rigorous method of analyzing and synthesising evidence, they are not without their limitations (Civil Service, 2014). Because the traditional systemic review process of collection, synthesis and appraisal is shortened and condensed in an REA approach, there is an increased risk of introducing some limitations in the form of selection and reporting bias. Selection bias could be present due to the exclusion of potentially important data that may have been present in the form of grey literature, theoretical literature, and unpublished literature, but could not be extracted due to the constraints of using the guidelines for REA inclusion criteria (Civil Service, 2014). Further selection bias may be present as literature that was written before 2007 was excluded from this study. This presents a limitation in
that it was not possible to include high quality evidence that may have contributed to this REA that was written before this time.

Additionally, the REA pointed to a negative association between female rural youth and high levels of resilience. However, the research studies did not delve into a deeper exploration of social forces that influence such a trend. Given that gender-based disparities are heavily influenced by social and structural inequity, and not on biological sex, there was a limitation in that the data had very little insight into the social and structural forces that influence such disparities. If studies that included a more socially responsible exploration into the context and influences of gender inequity for rural female youth were included in this REA, the data could provide a more in-depth account more for the disparity in observed resilience scores between males and females.

Another limitation of this REA was the lack of Canadian studies on rural youth. The Pathways to Resilience Youth Measure (PRYM) (Resilience Research Center, 2017) is a reputable and well-established measure for assessing resilience of youth that was developed at Dalhousie University in Halifax, Canada, and was used or referenced in some of the studies. Yet only four of the studies in this REA actually sampled from Canadian youth. Given the large proportion of rural communities in Canada, and the health disparity within many rural communities, the relatively small quantity of available research specific to youth resilience in rural Canada, points to the need for more research with a focus on resilience of youth who live in rural areas of Canada.
 CHAPTER 4: Findings

In this chapter I discuss the six themes that emerged from the analysis of the 18 studies selected for this REA.

4.1 Resources for Resilience Processes

Across several studies was a focus on the protective factors that youth used as resources to foster resilience. The protective factors were individual and contextual resources that, if youth were able to access, utilize and employ, buffered the effects of adversity and increased well-being outcomes (Sanders, Munford, Thimasarn-Anwar, Liebenerg, & Ungar, 2015; Ungar, Brown, Liedenberg, Cheung, & Levine, 2008). Alternatively, youth who could not avail themselves to these resources, became more vulnerable, and faced greater risks of adverse outcomes⁴ (Sanders et al. 2015). The studies selected for this REA conceptualized resilience as not solely reducible to the ability of youth to do well despite adversity; rather the concept was viewed as related to the unique process in which individuals access, navigate, and negotiate the resources that are available to them to achieve positive well-being outcomes and to buffer adversity (Cortina, Alan, Kahn, Hlungwani, Holmes & Fazel; 2016; Sanders et al. 2015; Tusaie, Puskar, and Sereika, 2007; Ungar et al. 2008). Therefore, the first theme that emerged from the analysis of this REA was regarding personal resources and their impact on resilience processes to provide protection against adversity.

Sanders, Munford, Thimasarn-Anwar, Liebenerg, and Ungar (2015), who scored a high level WOE (GSRS-9, MSMS-1, Bias-1), examined resilience as a mediator to enhance well-being outcomes for vulnerable youth. These authors clearly suggest that resilience is not an

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⁴ The studies analysed for this REA collected data on many adverse outcomes, among them were behavioural problems, depression, anxiety, sleep disturbances, low self-esteem, mental health problems, dissatisfaction with life, low self-rated health, somatization disorders, and elevated cortisol levels.
outcome; rather, it is a process that involves utilizing resources to overcome adversity and improve well-being. The researchers found that youth who had higher rates of contextual risks (such as youth who live in rural areas), had poorer well-being outcomes, and were also more likely to have higher individual risks (for example: poor self-esteem and altercations with peers). The study found that guiding youth to use the personal resources available to them to boost resilience was protective against adversity and improved well-being outcomes. Sanders et al. concluded that youth who experience higher rates of adversity were at risk of poor resilience processes and poor outcomes; however, they also found that youth who draw on a repertoire of different types of positive resources to compensate and protect themselves against risk and adversity, have enhanced positive resilience processes and positive well-being outcomes. Ritchie, Wabano, Russel, Enosse, and Young (2014) (GSRS-8, MSMS-4, CASP-8, bias-3) similarly found that youth could draw on and enhance personal resources to improve resilience processes. They found that vulnerable rural youth’s well-being improved after promoting resilience processes through an outdoor leadership program. The program aimed to enhance the youths’ personal resources through empowerment and skill building.

Unfortunately, youth who experience more adversity are at risk for poor well-being outcomes; however, finding ways to boost resilience was protective in several studies against adversity and improved outcomes (Ritchie et al., 2014; Sanders et al, 2015). Tusaie, Puskar, and Sereika (2007) also scored a high WOE (GSRS-9, MSMS-2, Bias-2); they explored some of the factors that could moderate and predict resilience in rural youth. Results from this study indicated that while some factors in rural youths’ lives, such as increased exposure to adversity, family support, optimism, age and gender, directly impacted resilience processes, others could moderate the effects of risks. For example, although high rates of adversity among rural youth was
predictive of poorer resilience, optimism and support from peers moderated the risks of adversity, acting as a resource that increased resilience. Further, findings indicated that as resilience increased, depression, suicide, and substance use decreased. These results show how resilience is not a static trait but is a dynamic process that is in tension with adversities and personal resources that manifest in the lives of rural youth.

Similarly, Lavoie, Pereira and Talwar (2016) (GSRS-8, MSMS-5, Bias-1) further the discourse on the dynamic nature of resilience. They found that positive resources had the capacity to compensate for risks and adversity in the large meta-analysis undertaken to examine the influence of protective and vulnerability factors for child and youth health. This study found that although risks were influential on health and well-being, protective factors outweighed risks to promote resilience and healthy outcomes. These findings propose that positive resilience processes mediated adversity to improve well-being outcomes, despite high risk and vulnerability, and that resilience processes were associated with access to a collection of personal resources. This has important implications for the well-being of any youth who may have high rates of adversity or low levels of resilience.

Interestingly, Tusaie, Puskar, and Sereika (2007), indicate that the rural youth in their study indeed had poorer levels of resilience when compared to other youth. They found that while up to 33% of the general public had a high level of resilience, only 21.3% of the rural youth in this study had comparatively high levels of resilience; these authors highlight that differences between rural and urban contexts may be important to consider as conditions that foster, or create a deficit of resources that promote resilience. Ungar, Brown, Liebenberg, Cheung and Levine (2008), also studied the differences in processes that are associated with resilience among youth in different contexts in Canada, as part of a global study on contextually
and culturally-specific resilience. This study also scored a high WOE (GSRS-9, CASP-9, Bias-1) and further affirms the findings that the development and effectiveness of resilience processes are contingent upon accessing various personal resources. This study found that although youth across Canada, as well as globally, relied on overcoming several “tensions” using the resources and strengths available to them to have positive outcomes; the processes and experiences in which they did so were unique even within Canadian borders. The above studies contribute the understanding that rural context has a unique influence on access to and development of personal resources and resilience processes.

Findings regarding the resources that interact to promote resilience, or place individuals at risk of adversity, were common throughout the studies analysed. Cortina, Alan, Kahn, Hlungwani, Holmes and Fazel (2016) (GSRS-8, MSMS-2, bias-2) found that rural children who faced significant adversity but displayed positive cognitive interpretations, such as coping, self-esteem, and hope for the future, remained more resilient. Eriksson, Hochwader and Sellstrom (2011) (GSRS-7, MSMS-3, bias-1), found that rural youth who felt safe and had trust in their community had better well-being outcomes than those who did not. Rew, Grady, and Spoden, (2012) (GSRS-7, MSMS-2, bias-1) further those findings by adding that rural youth were more resilient if they had a sense of competence and self-worth. The researchers also indicated that gender, socioeconomic status, and ethnicity were factors that influenced self-worth and competence of youth, but resources could be bolstered to protect against potential risks. Optimism, coping skills, self-esteem, relationships with family and peers, support from school, community cohesion, perceived behaviour of members within youths’ social networks, and role models, were all identified as factors that were resources for resilience; alternatively, if youth were unable to address a deficit in access or availability to a resource, it became a risk factor for

4.2 Support and Connectedness.

Support and connectedness was the second theme that emerged from the REA analysis. Perceptions of support and connectedness that youth received from various relationships were highly associated with resilience processes and well-being outcomes ((Lavoie, Pereira, & Talwar, 2016; Smokowski et al., 2014; Tusaie, Puskar, and Sereika, 2007; Ungar et al., 2008). Correspondingly, adversity within those resources, was associated with poorer resilience and outcomes (Lavoie, Pereira, & Talwar, 2016; Tusaie, Puskar, and Sereika, 2007; Ungar et al, 2008). The emotional and material support as well as the sense of trust, security, purpose, cohesion, and identity that were foundational for rural youth to thrive came from relationships within their family, peer, community, and school contexts. Youth were able to utilize these resources to overcoming adversity (Lavoie, Pereira, & Talwar, 2016; Tusaie, Puskar, & Sereika, 2007, Theron, Liebenberg, & Malindi, 2014). Interestingly, many studies identified that social support, and relationship systems within rural communities were uniquely complex and interconnected, augmenting the potential of those systems to be both a resource for resilience and a risk for adversity (Eacott, & Frydenberg 2009; Okamoto, Helm, Po’a-kekuawela, Chin & Nebre, 2009).

The REA findings assert that the benefits resulting from positive social support systems were essential in providing resources that youth could rely on to promote resilience. Ungar et al. (2008) found that youths’ relationships facilitated access to an array of resources that promoted resilience. They found that it was through relationships with others that youth were able to find emotional support, physical support, comfort, trust, a sense of belonging, and compassion, which
were all resources that can be relied on to combat risks of adversity. These relationships were not limited to family, teachers and friends but extended to any strong positive relationship, such as mentors, community members, coaches and intimate partners. Lavoie, Pereira, and Talwar, (2016) concur with the findings of Ungar et al. (2008) on the important impact of relationships as a resource for resilience. Their meta-analysis revealed that social and support networks were important to the development of resilience and well-being for youth. From the 14 studies they analysed, they concluded that the emotional climate with children’s’ life contexts significantly contributed to resilience processes. Namely, this study identified social support, community connectedness, family connectedness, and stable parent relationships as having a moderating effect on the health outcomes in the results of their meta-analysis.

Additionally, the support and social membership that youth felt they received from interactions with peers, family, and community members was key for providing opportunities for positive relationships to impact resilience. Tusaie, Puskar, and Sereika (2007) concluded that the perceived social support that rural youth reported with peers and with family had a direct impact on resilience. Their study found that, for youth who had an increasing quantity of negative life events, those adversities were most effectively moderated by social support. Cotter, and Smokowski (2016) (GSRS-7, MSMS-3, bias-2) add to the importance of perceived social structures on well-being in their study of how rural youths’ perceptions of their peers’ behaviour influenced their own behaviours and mental health. Their results indicated that rural youth placed great importance on their social environments, and that perceiving disruptions to those structures was a serious potential threat to their well-being. Likewise, Olsson, Fahlen and Janson (2007) (GSRS-7, MSMS-2, CASP-6, Bias-2) found that the semi-rural youth participants in their study expressed concern about their social position and were worried about stresses to their personal
relationships. All participants expressed a desire for more opportunities in which they could foster relationships within their community. They often identified their communities as having a poor selection of leisure activities by which they could meet with friends, caring teachers, parents, and adults in the surrounding community. Results from these studies indicate rural youth view their relationships and social positions as central to their well-being and that in fact, there is truth in this assumption. Support and connectedness gained from their relationships was associated with positive resilience and well-being.

Even when youth had high rates of adversity, providing opportunities in which they could engage in positive interactions with adults and community members promoted their resilience. Theron, Liebenberg, and Malindi, (2014), who scored a medium WOE (GSRS-6, MSMS-1, CASP-9, bias-2) found that rural youth who reported experiencing respectful and supportive partnerships and interactions with adults in general, had higher resilience than those who did not. Results indicated that the resources gained from positive and encouraging relationships between teachers and youth, could compensate for deficits in other relationships, such as negative parent-child relationships. Sanders et al. (2015) also found that adversity could be buffered if youth were provided opportunities to have meaningful interactions that promoted support and connectedness. They found that youth who experienced higher rates of adversity, and had numerous contacts with support services, were more resilient if they felt service providers were respectful and viewed them as autonomous beings with strengths and capacities, as compared to youth who received multiple services that were not empowering and contextually-specific.
Whetstone, Gillmor and Schuster, (2015) (GSRS-8, MSMS-2, CASP-8, bias-2) evaluated a program for rural youth that was targeted at improving well-being, internalizing\(^5\) and externalizing\(^6\) problems. The program emphasised the importance of building attachment and engagement within relationships to improve well-being. Indeed, youth who completed the program felt they were able to bond, communicate, and build trust with peers, as well as with others in general more effectively; they felt a better sense of community cohesion. The program was successful at reducing the scores in anxiety levels, bullying behaviour, and conduct problems, as well as increasing the youth participants’ scores on adaptive skills to cope with change, when compared to baseline scores. These studies contribute to the assertion that positive relationships are invaluable for development of resilience and well-being.

Eriksson, Hochwader, and Sellstrom (2011) contribute to the assertion that support and connectedness is implicit in fostering resilience processes. Their findings showed that having a sense of trust and safety within their community was a protective resource that significantly impacted well-being for both rural and urban youth; importantly, they found that rural youth were more likely to have greater community trust and safety perceptions when compared to urban youth. Additionally, the researchers proposed that the propensity for rural youth to feel safe within their communities may have been the result of being acquainted with a considerable proportion of people with whom they encounter in their day to day lives. This unique contribution of rural life, generated a greater sense of trust and security and social cohesion within youths’ communities and acted as a resource for resilience.

\(^5\) Internalizing is characterized by problematic emotions or disorders that are directed inward towards oneself in ways that can be harmful to the individual. Examples of internalizing problems are anxiety, depression, or social withdrawal (Smokowski et al., 2014).

\(^6\) Externalizing is characterized by maladaptive behaviours or disorders that are directed outwards and may be harmful to others. Examples of externalizing problems are bullying or aggression (Cotter & Smokowski, 2016).
The unique experiences of rural community context were explored in an in-depth ethnographic study by Shoveller, Johnson, Prkachin, and Patrick (2007) (GSRS-6, CASP-9, bias-3); these researcher investigated the lives and perceptions of rural youth in a small northern British Columbian community. These authors found that the social contexts of this particular rural community were so complex that there was a marked influence on the well-being of the youth who lived there. They found that the unique social and geographic features within this community intersected as forces that affected rural youths’ lives. Social networks in the rural community contributed to deprivation of social capital, and as a result many youths were placed in undesirable and difficult to escape social positions. Because reputations were less amenable to change in a rural community, they lead to stigmatization, self-segregation and reduced community cohesion. Eacott and Frydenberg (2009) (GSRS-6, MSMS-3, CASP-7, bias-3) similarly reported that youth felt rumours spread more rapidly and were more virulent in rural towns. However, support systems were also felt to be more readily available in rural communities; contributing to positive support and connectedness resources.

Furthermore, Okamoto, Helm, Po’a-kekuawela, Chin, & Nebre, (2009) (GSRS-7, CASP-8, Bias-2) found that the relational systems within rural communities became an interconnected relational network that was uniquely influenced by culture, context and behaviour of the individuals and community at large. Family and community risk and resilience were seen as interconnected constructs for the rural youth in this study. It was noted that the context in which one relationship resided was not exclusive of other contexts. For example, it is more likely in a small rural community for cousins to be in the same class at school or for a family friend to be a service provider. This is reflected in the account of one youth participant who stated: “everybody I know, everybody I see, they know me for some reason” (p.170). The tendency for
social networks to be in greater proximity and highly related because of the context of rural communities was identified as a source of both risk and protection. For example, social pressure to engage in, or refrain from, certain behaviours could be more poignant in the interconnected social context of such communities. There was a lack of anonymity that forced youth to take responsibility for their actions, however, there was also a normalization of many behaviours within youth’s social groups; and pressure to adhere to group norms. If youths’ social positions, personal reputations, or the reputations of the social group to which they “belong” became tarnished, the effect was salient and difficult to remedy in a close knit community. Additionally, discussed by Eacott and Frydenberg (2009), the proximity of social support and guidance was a more easily accessed strength for the participants. Thus, social and support networks were unique for the rural youth in these communities.

Furthermore, research identified that deprivation in access to support and connectedness resources, was often associated with more risk factors, especially having to do with individual cognitive patterns. The protective strengths that rural youth gained from support and connectedness resources fostered youths’ proclivity to use more positive cognitive patterns of thought. Smokowski, Guo, Rose, Evans, Cotter and Bacallao (2014) (GSRS-7, MSMS-3, bias-2) studied the positive transactions that occur within youths’ relational networks. They found that support from family, support from friends, and optimism about the future, were associated with positive cognitive patterns such as lower levels of internalizing symptoms and higher self-esteem. Alternatively, Smokowski et al, (2014) discussed the risks associated with poor relational transactions. The researchers argued that the “risks for… problems may proliferate as

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7 Individual cognitive patterns are the ways in which youth perceived themselves and the world around them. These patterns were commonly composed the assets and traits of rural youth such their self perceptions, self-esteem, optimism, ability to problem solve, and sense of cohesion (Rew, Grady & Spoden, 2012; Tusaie, Puskar & Sereika, 2009; Ungar et al. 2008). Individual cognitive patterns will be discussed in depth in chapter 4.3.
youth encounter increasingly complex social challenges” (p.1497). The researchers found that rural youth who were bullied, rejected by peers, or in conflict with parents were had more anxiety, depression and lower self-esteem. Additional researchers’ findings also attested to the importance of support and connectedness for building positive cognitive patterns. Rew, Grady, and Spoden, (2012) highlight that those youth who experienced high social acceptance predictably had a higher sense of self-worth and competence. Cotter and Smokowski (2016) proposed that it is social relationships that are central to development identity among youth. Finally, Spencer (2012) (GSRS-7, CASP-8, bias-4) reported direct accounts from youth who discussed development of their own positive self-belief, as a result of fulfilling socially located prerequisites and relational components for promoting their health.

4.3 Positive Cognitive Patterns.

Cognitive patterns are the ways in which youth perceived themselves and their interactions with the world around them. The ways in which these cognitive patterns influenced the health and well-being of youth who live in rural areas, was the third theme from the data analysed in this REA. The individual cognitive patterns that each youth exhibited across the studies were regarded as a very important component of either resilience processes or as a risk factor for poorer well-being outcomes. Cognitive patterns commonly composed the assets and traits of rural youth, such their self perceptions, self-esteem, optimism, ability to problem solve, and sense of cohesion (Rew, Grady & Spoden, 2012; Tusaie, Puskar & Sereika, 2009; Ungar et al., 2008). Although, rural youths’ individual cognitive patterns were often found to be influenced by contextual resources, such as having positive relationships that promote self-esteem, they were also found to be protective in the case where contextual resources, such as poor parental support, were limited or absent. The resources youth gained from positive
cognitive patterns were identified by some researchers as potentially being the most influential resource for promoting resilience (Tusaie, Puskar & Sereika, 2009).

The conceptual world in which rural youth navigate their risks and resources while transitioning through the stages of adolescence and developing into autonomous, self-realized adults was determined to be a critical component to promote well-being outcomes (Olsson, Fahlen & Janson, 2007). Ungar et al. (2008) added to the importance of positive cognition on youth’s resilience processes. Ungar et al. claim that youth need to develop cognitive strengths such as a sense of identity, self-efficacy, and cohesion to develop protective resources and to cope with adverse experiences. The researchers proposed that as youth seek to experience themselves as healthy, in the context of their lives, despite exposure to risk they need to nourish and maintain these individual cognitive resources.

Ubiquitously, resilience processes were found to be strongly influenced by rural youths’ cognitive patterns (Cortina et al. 2016; Tusaie, Puskar, & Sereika 2007). Cortina et al. (2016) studied the role of cognitive interpretations in the resilience of rural children. This study found that the way rural youth interpreted the world around them influenced both resilience processes positive well-being outcomes. They found that children who had positively biased interpretations of themselves, their futures, and their interactions with people and the world around them had more pro-social tendencies, better coping skills, and were more optimistic; remaining resilient despite significant adversity. This suggested that positive cognitive patterns were key resources for fostering resilience. In addition to this suggestion, these researchers theorized that interventions can foster positive cognitive interpretations in rural youth to improve resilience processes and protect rural youth against risk.
Whetstone, Gillmor and Schuster, (2015) explored the impact of such an intervention. They studied a program that targets cognitive patterns of rural youth to improve resilience processes and well-being outcomes. The program was centered on improving social and emotional skills to provide better well-being outcomes for rural youth. Findings indicated that, in fact, facilitating positive cognitive interpretations, improved well-being outcomes for the rural youth participants. The researchers argued that, among other skills and behaviours, positive attitudes, self-awareness, and self-esteem have the potential to significantly improve outcomes for vulnerable youth.

Two other such programs that used resilience enhancing approaches to promote health for rural youth were evaluated in studies from this REA (Ritchie, Wabano, Russel, Enosse, and Young, 2014; Eacott, & Frydenberg, 2009). Ritchie et al. (2014) (GSRS-8, MSMS-4, CASP-8, bias-3) explored a resilience promoting program and its effectiveness on improving well-being outcomes for rural aboriginal youth. This program used capacity building techniques that strengthen self-esteem, emotional balance, and satisfaction with life, among other positive cognitive patterns, to target resilience promoting resource development. Participants scored higher on resilience and well-being measures after participating in the program, which indicated that promoting positive cognitive patterns was effective in improving resilience of the rural youth who participated in this study. Importantly, this indicates that cognitive patterns can be enhanced through health promotion activity and that this resource can be utilized by rural youth to improve resilience processes in the face of high rates of adversity.

Eacott, & Frydenberg, (2009) found and highlighted the pertinence of enhancing positive coping skills and reducing negative coping skills for rural youth, in order to contribute to well-being. This program focused on youths’ conceptualizations around coping styles and strategies.
It facilitated the use of positive thinking, and positive problem solving to help vulnerable rural youth to cope effectively with adversities. The data was aligned with previously mentioned results that indicated enhancing positive cognitive patterns was effective in promoting resilience. The study showed improvement in youths’ well-being after participating in the program.

Various components of cognitive patterns (such as self-worth, self-esteem, competence, and optimism) were commonly identified as being strong predictors and interactors in the outcomes of resilience processes throughout the studies analysed. Rew, Grady, and Spoden, (2012) studied self-worth and competence in rural youth, and found those resources protected against risk and promoted resilience. As well, self-worth and competence were predicted by task persistence, stress levels, social acceptance. Smokowski et al, (2014) found that optimism was associated with higher self-esteem and lower anxiety and depression and that improving cognitive patterns that affect optimism in rural youth promoted healthy outcomes. These findings indicate that there may be many complex interactions of personal resources that can act as an asset to influence youths’ cognitive patterns. This is important for health promotion to facilitate the development of more positive cognitive patterns for rural youth.

Puskar et al. (2010) focused on self-esteem and optimism in rural youth in their study. The researchers point to the necessity of developing these cognitive patterns as a strength for rural youth because both self-esteem and optimism are strongly associated with resiliency. Additionally, they stress that rural youth are in need of improved access, availability, and appropriateness of health promoting services. They argue that self-esteem and optimism are embedded within resilience processes and also within health practices, social interaction, attachment, and personal identity. This study recognized that self-esteem is associated with outcomes such as better mental health, and better coping ability. Whereas a deficit of self-esteem
is associated with poor mental health outcomes, aggression, antisocial behaviour, delinquency, poor physical health outcomes, worse economic prospects, higher criminal activity, self harm, and anger. Puskar et al, also noted that optimism is associated with ability to adapt to problems, and to use constructive emotional strategies, whereas low optimism is associated with self harm and anger. These associations, exemplify the complexity of the influence of youths’ cognitive patterns on health, well-being, and behaviours; as well, the importance for interventions to target self-esteem and optimism in rural youth. Puskar et al. indicate a benefit of this approach is the relative ease in which early identification of low self-esteem and optimism can occur, and thus early promotion of those cognitive patterns can take place.

Tusaie, Puskar, and Sereika (2007), agree and furthermore they postulate that cognitive patterns are the most effective resources to buffer against adversity. The researchers studied contextual and individual resources to determine their relationships to resilience processes. Included in this study were positive cognitive patterns such as ability to problem solve, optimism, and the ability to reframe. Optimism was the strongest predictor of resilience and had a directly positive impact. Furthermore, the researchers found that positive cognitive patterns had a large effect on resilience processes when compared to other contextual resources. Indicating that the way in which rural youth frame their outlook and perceptions of life is of the utmost importance in promoting resources to cope with adversity. The way in which youth perceive their own health and well-being is further explored in chapter 4.4.

4.4 Rural Youth Health Perspectives

The fourth theme of this REA surfaced from the varied perspectives and perceptions of rural youth health and how they shaped individual resilience processes. Studies identified that both adults and youth felt that there were risks associated with adolescence; however, both
populations perceived the risks as emerging from different sources. Adults tended to perceive rural youths’ health as precarious positions and, therefore, youth as inherently at risk (Olsson, Fahlen & Janson, 2007; Shoveller, Johnsons, Prkachin & Patrick, 2007). Conversely, youth had a more positive perspective where they saw themselves as active, engaging, participants in their own health and well-being. The way in which rural youth interpreted the world around them was found to be very influential to their well-being (Olsson, Fahlen & Janson, 2007; Spencer, 2015). The perceptions that adults had about youth also influenced the well-being reported by youth. Studies identified that rural youth and adults both felt that rural contexts and social norms defined health and well-being, in ways that were divergent from urban contexts (Olsson, Fahlen & Janson, 2007; Shoveller, Johnson, Prkachin & Patrick, 2007).

Olsson, Fahlen, and Janson, (2007) found that adolescence was perceived as risky and problematic by not only the adults but by the youth themselves. Adults worried about the onset of negative behaviours. They felt that as children became youth, they had not yet developed the capacity and maturity to deal with “adult” behaviours. Conversely, the youth participants felt “trapped” between childhood and adulthood. They felt they were mature beyond children but were not permitted to engage as adults, and as such they expressed concern about their social position and personal relationships. Unanimously the youth in Olsson, Fahlen, and Janson’s study explicitly requested desire for adults to treat them with respect and that their opinions to be taken seriously.

In fact, in another study youth urged adults to use a more positive frame when engaging in discourse about youth health and well-being. Spencer (2012) studied young peoples’ understandings of health, and factors that were important to their health. Spencer found that youth felt there was a need to distance themselves from traditional portrayals of youth health,
which tended to be negative. Youth emphasized the importance of the positive dimensions of their everyday lives. Spencer indicated that prioritizing risk rather than health for youth, was denying opportunities for youth, adults, and service providers to promote to a more positive discourse about youth health. The youths who participated in this study, indicated that health and well-being for them, was framed by aspects of being happy (aligning with ideals of well-being). Youth felt that doing well and feeling well, in various social situations, tasks, and abilities, were prerequisites for health (for example, feeling confident to have conversations with adults, doing well on a test, or receiving praise for an accomplishment). Particular social situations that may be deemed “risky” by adults, were considered liberating and confidence boosting, and facilitated self-discovery for youth.

Indeed, Shoveller, Johnson, Prkachin, and Patrick (2007) highlighted that adults within the rural community felt that youth were inherently “at-risk”. Moreover, adults often labelled some of the local youth as “bad kids”, and believed that those youth would inevitably obtain dismal outcomes. Likewise, youth often followed suit and accepted this to be true, lowering expectations of themselves or of their peers. One participant described reputations in a small town as “being branded” (p. 832). This implies that the implications of negative perceptions by others influenced cognitive pattern development in the youth themselves.

Community members also reported various contextually derived risks to rural youth that deprived youth of being able to access all the prerequisites for well-being and perpetuating their poor outcomes. For example, one adult reported instances of young girls getting into relationships with older boys in order to procure resources such as transportation or admission to more social opportunities (Shoveller, Johnson, Prkachin, & Patrick, 2007. While Eriksson, Hochwald, and Sellerstrom (2011) agreed that rural context and social norms within
communities were very influential on the well-being of youth. The researchers pointed to more positive aspects of rural context. They found that rural youth had a better sense of cohesion within their community and felt that they belonged. They perceived that they were safe within their communities because they were more connected and familiar with the people whom they encounter than urban youth may be. This study also proposed that the youth perceived the pressures of commercialism as less important than did urban youth, making it more important to “fit in” with the norms of their community, rather than those of a larger commercial and urban domain. This may be a strength as it indicates that health promotion may be able to influence community culture as a whole to create an impact on resilience processes for the youth who live in rural communities.

Cotter, and Smokowski, (2016), also found that social norms were very important for youth health. The researchers of this study found that youth who believed their peers were engaging in delinquent behaviour were more likely to engage in outward negative behaviour themselves. They stated that the risks of not adhering to social norms were more poignant to rural youth because the social consequences were more pronounced. Failing to meet expectations of friends could mean stigma and social isolation as there may not be another social circle in which rural youth can adjoin. Olsson, Fahlen, and Janson’s (2007) findings are similar in that they found that rural youth felt that social position and personal relationships to be central to their well-being. As such, the youth who participated in the study, asked for a richer selection of leisure time activities, a place where they could meet friends, caring teachers, parents, and adults in the surrounding community; indicating a desire from youth to engage and be active members within their community and context. Interviews with rural youth in a study by Shoveller, Johnson, Prkachin, and Patrick (2007) again indicated that rural youth longed for more options
for leisure activity to fill their free time. Youth indicated that often they engaged in more potentially dangerous behaviours because they were searching for an outlet for their social lives that was difficult to find in their rural community.

4.5 Age and gender

The fifth theme generated from the analysis was the relevance of age and gender on the health and well-being of rural youth. Data collected on girls and older youth often indicated differences in their support and connectedness networks, and cognitive patterns that may have impacted the observed trend in lower overall resilience outcomes when compared to boys and younger youth (Eriksson, Hochwader, and Sellstrom, 2011; Puskar et al, 2010; Tusae, Puskar, and Sereika, 2007). Although the studies did not directly explore causality of the trend for gender and age to be associated with poorer resilience processes, it is important because it illustrates that context and social influence have impacted inequity for rural female youth. Additionally, it illustrates that health promotion can begin to target this disparity by influencing support systems and cognitive patterns early in adolescence to reflect a resilience promoting approach. If female youth are experiencing greater barriers to resiliency, it is critical to examine how gender inequities influence access to the individual and social conditions and resources for resilience, and consider these barriers in the context of vulnerability to the effects of adversity.

Tusaie, Puskar, and Sereika (2007) tested predictive and moderating relationships of age and gender, among other variables, on resilience. Their results indicated that age and gender were direct predictors of resilience scores of their study sample. Despite any moderating influences such as support from peers or optimism, or exposure to adversity, more female participants had low scores in resilience compared to male participants. They also found that older adolescents participants had lower scores on resilience, when compared to younger
participants. The difference in resilience scores between males and females, and ages was also observed in a study by Eriksson, Hochwader, and Sellstrom (2011). They found rural girls had lower resilience scores than the boys in their study, as well the 14-15 year-old cohort had lower resilience scores than the 11-13 year-old cohort. Furthermore, though Tusaie, Puskar, and Sereika (2007) found that the cognitive pattern of optimism had the strongest direct influence on resilience (a positive influence), the second strongest direct influence was age. Although this study found both contextual and individual resources that were protective against the risks of age, there was no moderator within their study model that protected female participants. Because their study found no direct moderator that impacted resilience scores for females, it is important for health promoters to know that rural female youth may be at particular risk for poor resilience processes and poorer outcomes and that gender is relevant at both individual and social levels when considering risk. Support from friends was found to be a moderator for older aged youth, further confirming this REA’s previously discussed importance of social relationships and rural youths’ resilience.

Contradicting Tusaie, Puskar, and Sereika, Ritchie et al. (2014) found that in fact, resilience scores for rural female youth could be influenced. They studied a resilience promoting program that was successful at improving resilience and well-being outcomes for all rural youth; they found that girls and older youth represented the most sustainable effect after the intervention. In fact, despite the scores for boys and scores for younger youth regressing to baseline one year after the intervention, the scores of female youth and older youth continued to improve one year post-intervention. This encouraging result indicates that although older and female youth in rural communities may be more vulnerable, targeting resources for resilience may be highly effective for these populations.
Additionally, some suggested that the trend for rural girls and older youth to have lower scores in well-being than rural boys may be may represent a transition in which conceptual changes occur as children transition into adulthood and youth begin to rely on different resources to promote their well-being. Olsson, Fahlen, and Janson (2007), studied the conceptual changes in semi rural adolescents and found that girls had a more rapid onset of conceptual and behaviour changes when compared to boys. The conceptual changes represented the patterns of thought that changed as children became youth and the sources of which they place value and importance began to change. For example, younger girls placed more importance on their families as a resource and wanted to model the behaviours of their family, but as they got older this began to shift to friends. Furthermore, Puskar, et al, (2010) found that female rural youth scored lower in self-esteem and optimism. Smokowski et al.’s (2014) data collection showed low scores in self-esteem increased with age and that rural females scored higher in anxiety, depression, and lower self-esteem. Moreover, Olsson, Fahlen, and Janson found that though both males and females experienced stress within relationships, females expressed significantly poorer perceived emotional support. This is important because it illuminated the need to focus on the enhancement of support and connectedness resources for both males and females, but also that these resources may be particularly influential on the resilience processes of female rural youth.

4.6 Effects of Resilience Promoting Service Delivery

The sixth theme from this REA was regarding the effectiveness in resilience-promoting service delivery and their associating with improved well-being. Programs that used a resilience promoting approach were successful in improving well-being, and positive outcomes, in the studies that tested interventions synthesised for this REA (Ritchie et al, 2014; Whetsone, Gilmor
As well, many studies that did not directly evaluate a program, but studied risk and resilience in youth recommended that health promotion services for youth should follow a resilience promoting approach. Studies commonly recommended components that should be included in health promotion that uses a resilience promoting framework. Resilience promoting services were the most effective if they were culturally and contextually-specific, respectful, strength and capacity based, and provided a booster program or were ongoing (not just a one time intervention or program) (Cortina et al., 2016; Eacott & Frydenberg, 2009; Sanders et al., 2015; Tusaie, Puskar & Sereika, 2007). If rural health service delivery for youth aim at promoting resilience, the unique factors of rural life could be accounted for in the provision of effective, sustainable health promoting activity to provide rural youth with the resources they need, to protect against adversity, and to have better health and well-being outcomes.

Sanders et al. (2015) found that youth who experience higher rates of adversity were at risk of poor resilience processes and poor outcomes, however, they also found that youth who were given the opportunity to boost their individual resources through empowering and respectful service delivery were protected against adversity, and developed better resilience processes and better outcomes. This suggests that resilience promoting services can mediate the impact of risk on well-being outcomes, which is a particular concern in rural youth who experience higher contextual risks. Vulnerable youth who were given the opportunity to bolster their personal resources for resilience through empowering and respectful capacity building service delivery reported improved wellbeing and resilience outcomes.

Lavoie, Pereira, and Talwar, (2016) undertook a meta-analysis, which found that protective factors had bigger affects on health measures than did vulnerability factors. This is
important because it suggests that fostering protective resources to improve resilience may be a more effective approach to improving health outcomes then attempting to reduce risks exposure. Additionally, Lavoie, Pereira, and Talwar (2016) found that individual level resources such as cognitive patterns had the largest effect on health and wellbeing, indicating that a key entry point for promoting resilience in rural youth may be to target positive cognitive pattern development. This recommendation for cognitive patterns as an entry point for resilience promotion, was echoed by Cortina et al. (2016). Tusae, Puskar, and Sereika (2007) agree, stating that promoting positive coping patterns has the potential to buffer against adversity and promote resilience.

Ritchie et al. (2014) evaluated the impact of a resilience promoting program for rural indigenous youth. They found that the program was effective in increasing scores for resilience, mental health, self-esteem, emotional balance, and life satisfaction of the youth who participated. They did find however, that one year after the program many of the results had regressed to baseline; this suggests that to sustain the effects of such programs on resilience, promotional activity should be an ongoing practice.

Whetstone, Gillmor, and Schuster, (2015) also evaluated a resilience promoting intervention on rural youth, with similar results, that found the program to be effective for improving rural youths’ health and well-being outcomes. Findings showed an improvement in externalizing behaviour, self-esteem, confidence and self-awareness in youth participants. Scores were higher by questionnaire, teacher reports and self reports of well-being. One participant commented on his personal benefit from the program: “I was just one of the kids who wanted to blend into the background and not be seen. Now I actually go up front and make as many friends as possible” (p.32). This study highlights the importance of providing rural youth opportunities
to improve self-esteem, communication, and self-awareness to build resources that can counter the risks of adversity.

Eacott and Frydenberg, (2009) also tested the effectiveness of a resilience promoting program. This program was targeted at improving coping skills for high risk rural youth to contribute to well-being. They found that rural youth benefited from the program as illustrated by improved scores as well as self reports from face to face interviews. Similarly, Ritchie et al. (2014) found that a booster program was effective in maintaining the benefits of resilience. This study suggests that youth can be taught to effectively enhance their positive coping skills for the purpose of improving and sustaining resilience and wellbeing outcomes for youth who experience high rates of vulnerability.

Okamoto et al. (2009) concluded from the data collected, that rural communities were unique in their context, culture, and social behaviours. Social networks represented complex, interconnected relationships that could either protect or put youth at risk. Okamoto et al. submit that interventions that address social problems should be at the local level and needs to be constructed with culturally driven community principles in mind; they should involve family, community, and school level intervention.

Ungar et al. (2008) determined that no single resilience pattern exists among cultures and contexts and that significant differences among participants can be present even within shared geographical locations. Therefore, this study adds to such research findings that call for resilience promoting intervention as contextually and culturally-specific; this tailoring to culture and contexts can account for the unique contexts of youths’ lives and respects their individual processes to resilience. Theron, Liebenberg and Malindi (2014) agreed with the above and furthermore, they found that rural youth who experienced everyday services that were supportive
of their rights, individualized, and followed positive youth development\(^8\) approach (such as positive interactions with teachers, or other adults within the community) had stronger resilience processes and better well-being outcomes. Finally and importantly, Spencer (2012) deduced that if health promotion is to be respectful to youths’ complex experiences and perceptions of health and well-being, as health promoters, we must use service delivery and approaches that highlight the importance of youth as “social beings rather than social becomings” (p.128).

\(^8\) Positive Youth Development (PYD) is a pro-social approach to service delivery for youth that views all youth as resources to be developed. Youth are not thought of in terms of their exposure to risk. Components of PYD are encouragement of personal agency, respectful approaches to youth and their families, and a focus on young people’s strengths and competencies alongside the risks and challenges they may confront (Sanders et al. 2015).
CHAPTER 5: Summary and Recommendations

In this chapter I conclude this REA by answering the research question, providing recommendations, and summarizing the REA findings.

5.1 How Does Living in Rural Contexts Shape the Health and Well-being Related Risk and Resilience for Youth?

Living in rural areas increases the chances that youth will encounter higher rates of adversity compared to urban youth; these dynamics increase vulnerability to poorer health outcomes (CIHI, 2006; Cotter & Smokowski, 2016; Puskar et al. 2010). Rural life is highly influenced by socio-contextual forces that may be more salient for rural youth than for urban youth (CIHI, 2006; Sanders et al., 2015). Risks to social and relational systems may be more threatening due to context; alternatively, some socio-contextual factors may also be a protective strength in rural areas (Olsson, Fahlen, & Janson, 2007; Okamoto et al, 2009).

The research studies selected for this REA emphasized the importance of contextual and individual resources that each youth can utilise to combat adversity; specifically, the support and connectedness possible in rural contexts and the impact of positive cognitive patterns (Cotter & Smokowski, 2016; Lavoie, Pereira & Talwar, 2016; Rew, Grady & Spoden, 2012; Sanders et al., 2015). The social networks inherent in rural communities are uniquely interconnected and complex (Okamoto et al, 2009). The salience of social networks for rural youth has a strong influence on health and well-being outcomes. This influence can be both negative and positive. For example, for some youth, living in a rural context facilitates a strong sense of trust and safety; alternatively, youth living in rural areas often express concerns associated with limited options for support and peer networks (Okamoto et al, 2009; Olsson, Fahlen, & Janson, 2007; Shoveller, Johnson, Prkachin & Patrick, 2007). However, research identified that positive
cognitive patterns such as self-esteem, optimism, and self-awareness may be more influential on well-being outcomes than context and risks. As such, facilitating positive cognitive pattern development may be key to providing an effective and sustainable approach to promoting resilience for rural youth (Eacott and Frydenberg, 2009; Ritchie et al, 2014; Sanders et al. 2015; Whetstone, Gilmor & Schuster, 2015).

Many rural youth identify their own health concerns as relating to access to support and connectedness (Olsson, Fahlen, & Janson, 2007; Shoveller, Johnson, Prkachin & Patrick, 2007). Commonly, youth perceive that the social systems within their lives are the principal source of well-being (Spencer, 2015). Studies found that youth expressed a need for more opportunities to engage in activities that build their connectedness with peers, family members, community members, and people from their schools. Threats to their social networks were identified as the most crucial risks to their well-being (Olsson, Fahlen, & Janson, 2007; Spencer, 2015). Health promotion programs in rural areas ought to build on the unique strengths of rural social networks, facilitate the influence of cognitive patterns on resilience, and aid rural youth to access their personal resources to better arm young people to cope with the risks and adversities associated with rural life

5.2 Recommendations

There is an opportunity for rural health promotion services to provide resilience enhancing services that may contribute to well-being, and reduce the risks of adversity that are associated with the socio-contextual forces of rural life. Several recommendations for health promotion services to enhance rural youths’ health and well-being follow from this REA:

1. Health promotion services for rural youth should incorporate a resilience enhancing approach. Such a shift can be more effective for reducing risks associated with a vulnerability
inherent in living in rural contexts such as reducing trauma from adverse experiences and improving well-being and health outcomes. 1-5, 10, 17.

2. Health promotion services for rural youth would benefit from being contextually and culturally-specific. Health promotion services that are contextually and culturally-specific take into consideration that there are increased risks associated with rural life, but focus on the strengths within rural communities. These services that take into account how these contexts and cultures have both positive and negative impacts, are necessary for addressing the unique needs associated with rural youths’ health and well-being 1, 5, 13, 17.

3. Health promotion services should be empowering and respectful of youth. Youth should be engaged as autonomous beings capable of assent and for making effective decisions regarding their health that reflect their needs, desires, capacities, strengths and perspectives rather than passive recipients of health-promoting interventions 3, 4, 12, 14, 18.

4. Health promotion services should strengthen resources aligned with support and connectedness. Efforts to provide opportunities for youth to build their relational networks through positive interactions with adults and peers, in supportive environments is important and should be a priority 1-4, 8, 9, 11-14, 17, 18.

5. Health promotion programs are to enhance optimism, self-esteem, and other cognitive patterns. Although, modifying youths’ exposure to adverse events may not be feasible, interventions have the potential to modify the way youth interpret and cope with those events. Therefore, promoting positive cognitive patterns is key in promoting resilience in rural youth 2-4, 6, 12, 16, 17.

6. Health promotion services for rural youth should be initiated at a young age. Promoting resilience enhancing resource development before the critical transition to
adolescence and adulthood can have the most sustainable positive results. Rates of resilience decline as youth age and cognitive patterns change, as well youths’ rates of well-being decline with age. 5-8, 10-12, 15, 16.

7. Resilience promoting interventions need to be continuous and ongoing. Resilience promoting services were effective in increasing resilience, health and well-being; however, youth who experienced a one-time program, regressed to baseline as time passed. Those who received ongoing intervention or a booster program had more sustainable results. 5, 16.

5.3 Future Research

This REA revealed a gap in the evidence supporting resilience development and health promotion specific to youth who lives in rural areas, especially within Canada. It is clear that resilience is protective against adversity for rural youth, and that protective factors and risk factors exist differently in rural communities as compared to urban communities. However, more primary research needs to be undertaken to explore how those findings can be translated into health promotion and policy to inform service delivery for youth who live in rural areas. Specifically, research examining how providers and policy makers could design and implement contextually-specific services is needed for resilience promoting services for rural communities. Research exploring the practicality and applicability of using such an approach is needed to guide delivery. As well, research is needed that evaluates the potential effectiveness of programs that use a resilience promoting approach. There was commonly identified trend for girls to have poorer resilience scores and well-being outcomes, however, there was no research that delved deeper into exploring social forces that influence this trend. Importantly, there is a need for research that explores risk and resiliency that is specific to Canadian rural youth as this type of research is currently heavily underrepresented.
The evidence suggests that rural youth experience greater adversity and that the socio-contextual conditions in rural areas contribute differences in the ways youth are able to access resources for resilience. As such, there is a need for primary research that explores how services and interventions that promote resilience could be designed, deployed and implemented in a way that is sustainable and comprehensive for rural youth with poor access to services. Research such as this could answer questions such as: “What are the components of a resilience promotion health promotion for rural youth?”

More research is needed to determine the applicability and practicality of implementing such approaches in rural areas. Evaluation research needs to be undertaken within health promotion and resiliency based programs. This type of study could explore any barriers and evaluate how well programs were received in communities in which they were implemented. Research is needed to answer questions such as: “is it possible to use such a service approach that focuses on building resilience in rural youth?” Such research should be undertaken to provide more guidance for health care providers and policy makers who wish to implement resilience promoting health promotion.

Primary research that studies the potential effectiveness of promoting resilience in a sustainable and contextually relevant way is required to impact health policy and services that will improve outcome for rural youth. Such research would provide evidence based knowledge about the potential impact of resilience promoting services that could serve as a guide to policy and service development aimed at rural youth. The three evaluation studies included in this REA explored specific components of resilience. The results showed that those programs were effective in improving resilience and well-being outcomes for the youth who participated. However, more research should compare results of programs that use resilience promoting
approaches to programs that use more traditional approaches that focus on reducing risk. Such studies would answer a question such as: “Is a resiliency based health promotion program associated with better outcomes than a risk reducing health promotion program?”

This REA indicated that rural females were more vulnerable to low resilience and thus poorer health outcomes. However, health disparities that present through health and well-being differences between males and females are likely due to sociopolitical and structural inequity and warrant serious remediation. There was a missing component as none of the data delved into the sources of the observed disparity. Future research that focuses on describing the social and structural factors that create this health disparity for rural girls is important to provide improved resilience and better health and well-being outcomes for rural youth in general.

Lastly, there is an explicit gap in literature of this type that has been undertaken in Canadian rural communities. Given the proportion of Canadian communities that exist within rural and remote locations, along with the established differences in health outcomes between the rural and urban people, it is critical that more research is undertaken to address this disparity. Evidence generation can inform health policy and promotion that may address rural-urban health disparities. If we strive to create and implement health promotion and policy that encourages youth to engage in their health and to thrive in their environments, we must first accumulate evidence and knowledge to understand the necessary resources that youth require if they are to develop high levels of resilience that will protect them against adversity.

5.4 Summary

Resilience is not a simple independent outcome measure but a unique process that is dependant on the interaction of many personal individual and contextual resources, Ungar et al. (2007) poignantly state, “resilience is not only an individual’s capacity to overcome adversity but
the capacity of the individual’s environment to provide access to health-enhancing resources in culturally relevant ways” (p.288). The results from this REA indicate that although rural youth may be more vulnerable to adversity associated with socio-contextual factors related to geographic and social forces within rural communities; it may be within those very forces that young people might also develop personal resources to strengthen their own resiliency processes.

The REA results indicate that rural youth rely heavily on support and connectedness from within their communities, family, peers, and schools to promote positive resilience processes. Youth who had strong and positive interactions within those social systems were more likely to develop individual resources, such as self-esteem and optimism, that aided rural youth to cope more effectively with adversity. Interestingly, results suggested that it was also positive cognitive patterns, such as those mentioned above, that compensated for deficits within youths’ support systems, such as neglect or bullying. Comparatively, rural youth had different experiences and meanings of health and well-being than both urban youth and rural adults. Many of the differences that were reported were associated with the unique aspects of social and geographic forces that emerged in rural contexts. Rural youth perceived life differently when compared to urban youth. This perception was illustrated well with a statement from one rural youth study participant regarding sources of stress, “they have city problems, not country problems” (Eacott & Frydenberg, 2009, p. 343). For the reasons discussed above, health promotion services that are empowering, respectful, and contextually-specific have the potential to improve access to resilience promoting resources to mitigate adversity and improve health and well-being for rural youth.
References


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https://secure.cihi.ca/free_products/rural_canadians_2006_report_e.pdf


No. 89-645-X) Retrieved from Statistics Canada website


Ungar, M., Brown, M., Liebenberg, L., Othman, R., Kwong, W. M., Armstrong, M., &


Appendix A

Rapid Evidence Research Studies

Table 3.1

<table>
<thead>
<tr>
<th>Study</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Tusaie, Puskar, &amp; Sereika, (2007).</td>
<td>To identify prevalence of psychosocial resilience and to test predictive and moderating relationships of optimism, age, gender, perceived family and friend support, number of bad life events and resilience in rural adolescents.</td>
</tr>
<tr>
<td>3. Sanders, Munford, Thimasarn-Anwar, Liebenerg, &amp; Ungar, (2015).</td>
<td>To Examine the possible mediating influence of resilience on wellbeing outcomes and to examines youths’ perceptions of the risks they face in rural and urban centers.</td>
</tr>
<tr>
<td>4. Lavoie, Pereira, Talwar, (2016)</td>
<td>To determine the influence of protective and vulnerability factors in on children’s physical health in adverse experiences through a meta-analysis.</td>
</tr>
<tr>
<td>5. Ritchie, Wabano, Russel, Enosse, &amp; Young, (2014).</td>
<td>To evaluate the impact of an outdoor adventure leadership experience on the resilience and wellbeing of first nations adolescents from one reserve community. To explore whether the impact was sustainable, and whether any intervening factors may have influenced the impact.</td>
</tr>
<tr>
<td>7. Cortina, Alan, Kahn, Hlungwani, Holmes &amp; Fazel, (2016).</td>
<td>To explore how rural children aged 10-12 interpret their world and the world around them and the impact this might have on their current mental state, that puts them at risk for psychological problems. As well as elucidate the potential role of cognitive interpretations to understand the resilience of this population.</td>
</tr>
<tr>
<td></td>
<td>Authors and Year of Publication</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>9.</td>
<td>Smokowski, Guo, Rose, Evans, Cotter &amp; Bacallao, (2014).</td>
</tr>
<tr>
<td>11.</td>
<td>Cotter, Smokowski, (2016).</td>
</tr>
<tr>
<td>12.</td>
<td>Olsson, Fahlen, &amp; Janson, (2007).</td>
</tr>
<tr>
<td>13.</td>
<td>Okamoto, Helm, Po’a-kehuaewela, Chin, &amp; Nebre, (2009).</td>
</tr>
<tr>
<td>14.</td>
<td>Spencer, G. (2012).</td>
</tr>
<tr>
<td>17.</td>
<td>Shoveller Johnson, Prkachin, &amp;Patrick, (2007).</td>
</tr>
<tr>
<td>18.</td>
<td>Theron, Liebenberg, Malindi, (2014).</td>
</tr>
</tbody>
</table>
Appendix B

Rapid Evidence Appraisal Tools

Table 3.2

GSRS Weight of Evidence Assessment Criteria

<table>
<thead>
<tr>
<th>Weight of evidence</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Weight of evidence A: Taking account of all quality assessment issues, can the study findings be trusted in answering the study question(s)?</td>
<td></td>
</tr>
<tr>
<td>High Evidence</td>
<td>Score 3</td>
<td></td>
</tr>
<tr>
<td>Medium Evidence</td>
<td>Score 2</td>
<td></td>
</tr>
<tr>
<td>Low Evidence</td>
<td>Score 1</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Weight of evidence B: Appropriateness of research design and analysis for addressing the question, or sub-questions, of this specific systematic review</td>
<td></td>
</tr>
<tr>
<td>High Evidence</td>
<td>Score 3</td>
<td></td>
</tr>
<tr>
<td>Medium Evidence</td>
<td>Score 2</td>
<td></td>
</tr>
<tr>
<td>Low Evidence</td>
<td>Score 1</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Weight of evidence C: Relevance of particular focus of the study (including conceptual focus, context, sample and measures) for addressing the question, or sub-questions, of this specific systematic review</td>
<td></td>
</tr>
<tr>
<td>High Evidence</td>
<td>Score 3</td>
<td></td>
</tr>
<tr>
<td>Medium Evidence</td>
<td>Score 2</td>
<td></td>
</tr>
<tr>
<td>Low Evidence</td>
<td>Score 1</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Weight of evidence D: Combined overall weight of evidence (based on A-C)</td>
<td></td>
</tr>
<tr>
<td>High Evidence</td>
<td>Scores 7-9</td>
<td></td>
</tr>
<tr>
<td>Medium Evidence</td>
<td>Scores 4-6</td>
<td></td>
</tr>
<tr>
<td>Low Evidence</td>
<td>Scores 3</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.3

*The Maryland Scientific Methods Scale. Increasing Methodological Quality for Impact Studies*

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Observed correlation between an intervention and outcomes at a single point in time. A study that only measured the impact of the service using a questionnaire at the end of the intervention would fall into this level.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 2</td>
<td>Temporal sequence between the intervention and the outcome clearly observed; or the presence of a comparison group that cannot be demonstrated to be comparable. A study that measured the outcomes of people who used a service before it was set up and after it finished would fit into this level.</td>
</tr>
<tr>
<td>Level 3</td>
<td>A comparison between two or more comparable units of analysis, one with and one without the intervention. A matched-area design using two locations in the UK would fit into this category if the individuals in the research and the areas themselves were comparable.</td>
</tr>
<tr>
<td>Level 4</td>
<td>Comparison between multiple units with and without the intervention, controlling for other factors or using comparison units that evidence only minor differences. A method such as propensity score matching, that used statistical techniques to ensure that the programme and comparison groups were similar would fall into this category.</td>
</tr>
<tr>
<td>Level 5</td>
<td>Random assignment and analysis of comparable units to intervention and control groups. A well conducted Randomised Controlled Trial fits into this category.</td>
</tr>
</tbody>
</table>

Source: Sherman et al, 1997
Table 3.4

*The CASP Qualitative Research Checklist*

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Was there a clear statement of the aims of the research?</strong></td>
<td>HINT: Consider: What was the goal of the research? Why it was thought important? Its relevance</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes Can’t tell No</td>
</tr>
<tr>
<td><strong>2. Is a qualitative methodology appropriate?</strong></td>
<td>HINT: Consider: If the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants Is qualitative research the right methodology for addressing the research goal?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes Can’t tell No</td>
</tr>
<tr>
<td><strong>3. Was the research design appropriate to address the aims of the research?</strong></td>
<td>HINT: Consider: If the researcher has justified the research design (e.g. have they discussed how they decided which method to use)?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes Can’t tell No</td>
</tr>
<tr>
<td><strong>4. Was the recruitment strategy appropriate to the aims of the research?</strong></td>
<td>HINT: Consider: If the researcher has explained how the participants were selected If they explained why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study If there are any discussions around recruitment (e.g. why some people chose not to take part)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes Can’t tell No</td>
</tr>
<tr>
<td><strong>5. Was the data collected in a way that addressed the research issue?</strong></td>
<td>HINT: Consider: If the setting for data collection was justified If it is clear how data were collected (e.g. focus group, semi-structured interview etc.) If the researcher has justified the methods chosen If the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted, or did they use a topic guide)? If methods were modified during the study. If so, has the researcher explained how and why? If the form of data is clear (e.g. tape recordings, video material, notes etc) If the researcher has discussed saturation of data</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes Can’t tell No</td>
</tr>
<tr>
<td><strong>6. Has the relationship between researcher and participants been adequately considered?</strong></td>
<td>HINT: Consider: If the researcher critically examined their own role, potential bias and influence during (a) Formulation of the research questions (b) Data collection, including sample recruitment and choice of location How the researcher responded to events during the study and whether they considered the implications of any changes in the research design.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes Can’t tell No</td>
</tr>
<tr>
<td><strong>7. Have ethical issues been taken into consideration?</strong></td>
<td>HINT: Consider: If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study) If approval has been sought from the ethics committee.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes Can’t tell No</td>
</tr>
<tr>
<td><strong>8. Was the data analysis sufficiently rigorous?</strong></td>
<td>HINT: Consider: If there is an in-depth description of the analysis process If thematic analysis is used. If so, is it clear how the categories/themes were derived from the data? Whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process If sufficient data are presented to support the findings To what extent contradictory data are taken into account Whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes Can’t tell No</td>
</tr>
<tr>
<td><strong>9. Is there a clear statement of findings?</strong></td>
<td>HINT: Consider: If the findings are explicit If there is adequate discussion of the evidence both for and against the researcher's arguments If the researcher has discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst) If the findings are discussed in relation to the original research question</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes Can’t tell No</td>
</tr>
</tbody>
</table>
10. How valuable is the research?

| HINT: Consider If the researcher discusses the contribution the study makes to existing knowledge or understanding e.g. do they consider the findings in relation to current practice or policy?, or relevant research-based literature? If they identify new areas where research is necessary If the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used |


Table 3.5

The Cochrane Collaboration’s tool for assessing risk of bias.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Support for judgement</th>
<th>Review authors’ judgement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Selection bias.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Random sequence generation.</td>
<td>Describe the method used to generate the allocation sequence in sufficient detail to allow an assessment of whether it should produce comparable groups.</td>
<td>Selection bias (biased allocation to interventions) due to inadequate generation of a randomized sequence.</td>
</tr>
<tr>
<td>Allocation concealment.</td>
<td>Describe the method used to conceal the allocation sequence in sufficient detail to determine whether intervention allocations could have been foreseen in advance of, or during, enrolment.</td>
<td>Selection bias (biased allocation to interventions) due to inadequate concealment of allocations prior to assignment.</td>
</tr>
<tr>
<td><strong>Performance bias.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blinding of participants and personnel Assessments should be made for each main outcome (or class of outcomes).</td>
<td>Describe all measures used, if any, to blind study participants and personnel from knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective.</td>
<td>Performance bias due to knowledge of the allocated interventions by participants and personnel during the study.</td>
</tr>
<tr>
<td><strong>Detection bias.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blinding of outcome assessment Assessments should be made for each main outcome (or class of outcomes).</td>
<td>Describe all measures used, if any, to blind outcome assessors from knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective.</td>
<td>Detection bias due to knowledge of the allocated interventions by outcome assessors.</td>
</tr>
<tr>
<td><strong>Attrition bias.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incomplete outcome data Assessments should be made for each main outcome (or class of outcomes).</td>
<td>Describe the completeness of outcome data for each main outcome, including attrition and exclusions from the analysis. State whether attrition and exclusions were reported, the numbers in each intervention group (compared with total randomized participants), reasons for attrition/exclusions where reported, and any re-inclusions in analyses performed by the review authors.</td>
<td>Attrition bias due to amount, nature or handling of incomplete outcome data.</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td><strong>Reporting bias.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Selective reporting.</strong></td>
<td>State how the possibility of selective outcome reporting was examined by the review authors, and what was found.</td>
<td>Reporting bias due to selective outcome reporting.</td>
</tr>
<tr>
<td><strong>Other bias.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other sources of bias.</strong></td>
<td>State any important concerns about bias not addressed in the other domains in the tool. If particular questions/entries were pre-specified in the review’s protocol, responses should be provided for each question/entry.</td>
<td>Bias due to problems not covered elsewhere in the table.</td>
</tr>
</tbody>
</table>

## Appendix C

### Rapid Evidence Appraisal Summary

**Table 3.6**

<table>
<thead>
<tr>
<th>Study</th>
<th>Purpose</th>
<th>Methodology / Measurement</th>
<th>Participants / location</th>
<th>Main Finding</th>
<th>GSRS</th>
<th>MSMS</th>
<th>CASP</th>
<th>Bias</th>
<th>Inclusion criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ungar, Brown, Liebenberg, Cheung &amp; Levine, (2008).</td>
<td>To determine what unique processes are associated with resilience in specific contexts within Canada. Part of a larger cross-national study that explores the unique pathways to resilience across cultures.</td>
<td>Qualitative. Open ended interviews.</td>
<td>19 youth Three communities within Canada</td>
<td>Differences between resiliency of youth in a single country can be large and assumptions of sameness based on geographic borders theoretically unsound. Trans-border themes common to a multi-site study may remain relevant to a specific national group, though the specificity of participants’ social ecologies will influence how themes identified internationally are experienced locally.</td>
<td>9</td>
<td>N/A</td>
<td>9</td>
<td>1</td>
<td>Risk and resilience in differing contexts within Canadian youth.</td>
</tr>
<tr>
<td>2. Tusaie, Puskar, &amp; Sereika, (2007).</td>
<td>To identify prevalence of psychosocial resilience and to test predictive and moderating relationships of optimism, age, gender, perceived family and friend support, number of bad life events and resilience in rural adolescents.</td>
<td>Quantitative Cross-sectional. Reynolds adolescent depression scale, Drug use screening inventory, coping response inventory-youth form, life orientation test revised (LOT-R), Perceived social support scale (PSS), life event checklist (LEC).</td>
<td>624 Rural adolescents 14-18 years Eastern United States</td>
<td>Resilience can be strongly impacted by cognitive patterns. Rural youth were less resilient when compared to urban youth. Rural girls had lower resilience. Older youth had lower resilience. Optimism had the largest effect on resilience. Perceived family support with optimism had the largest moderating effect on resilience. As resilience increased, suicide attempts, depression, and substance use decreased.</td>
<td>9</td>
<td>2</td>
<td>N/A</td>
<td>2</td>
<td>Resilience and risk in rural youth.</td>
</tr>
<tr>
<td>3. Sanders, Munford,</td>
<td>To Examine the possible mediating influence of resilience</td>
<td>Quantitative cross-sectional.</td>
<td>605 Rural and Urban adolescents</td>
<td>Individual risk had a negative</td>
<td>9</td>
<td>1</td>
<td>N/A</td>
<td>1</td>
<td>Resilience and risk</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Methodology</th>
<th>Participants</th>
<th>Study Design</th>
<th>Findings</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Thimasam-Anwar, Liebenerg, &amp; Ungar, (2015).</td>
<td>on wellbeing outcomes and to examines youths' perceptions of the risks they face in rural and urban centers.</td>
<td>The pathways to resilience measure score (PRYM).</td>
<td>12-17 year old New Zealand</td>
<td>relationship with resilience. Contextual risk had a strong negative relationship with resilience. Youth with higher contextual and individual risk had less empowering and respectful experiences with service delivery. Contextually specific, respectful, empowering service delivery resulted in higher resilience. Resiliency had a positive impact on the capacity of young people to achieve positive wellbeing outcomes.</td>
<td>factors in vulnerable youth.</td>
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<tr>
<td>4. Lavoie, Pereira, Talwar, (2016)</td>
<td>To determine the influence of protective and vulnerability factors in on children’s physical health in adverse experiences through a meta-analysis.</td>
<td>Quantitative Meta-analysis.</td>
<td>12,772 children and adolescents 4-18 years old 14 studies in five different countries. (includes Canada)</td>
<td>Environmental protective factors had a moderating effect on resilience. Individual protective factors had a strong effect on resilience. Vulnerability factors had a smaller moderating effect.</td>
<td>8 5 N/A 1 Resiliency and risk for youths’ health outcomes</td>
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<tr>
<td>5. Ritchie, Wabano, Russel, Enosse, &amp; Young, (2014).</td>
<td>To evaluate the impact of an outdoor adventure leadership experience on the resilience and wellbeing of first nations adolescents from one reserve community. To explore whether the impact was sustainable, and whether any intervening factors may have influenced the impact.</td>
<td>Mixed Methods. Time series with control and open ended questions. Resiliency scale (RS-14), the Mental Component Score (MCS) of the SF-12v2 , and</td>
<td>73 adolescents 12-18 years old Canada</td>
<td>The resilience promoting program improved scores on resilience and well-being between the control and experimental group. One year after intervention, many scores regressed to baseline. Girls and older youth had more sustainable results.</td>
<td>8 4 8 3 Risk and resilience in vulnerable rural youth</td>
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<tr>
<td>6. Whetstone, Gillmor, Schuster, (2015).</td>
<td>To evaluate the effectiveness of a metacognitive social skills program on rural youths’ well-being.</td>
<td>Mixed methods Pre-post test Semi structures interviews Behavior Assessment Scale for</td>
<td>10 rural adolescents and their teachers United States</td>
<td>The program focused on self-esteem, communication, and self-awareness and was successful in improving scores in all the measures of well-being, internalizing, and</td>
<td>8 2 8 2 Resiliency promoting program for rural youth</td>
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<td>Study</td>
<td>Authors</td>
<td>Research Question</td>
<td>Methodology</td>
<td>Sample Size</td>
<td>Findings</td>
<td>Risk and Resilience in Rural Youth</td>
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<td>7.</td>
<td>Cortina, Alan, Kahn, Hlungwani, Holmes &amp; Fazel, (2016).</td>
<td>To explore how rural children aged 10-12 interpret their world and the world around them and the impact this might have on their current mental state, that puts them at risk for psychological problems. As well as elucidate the potential role of cognitive interpretations to understand the resilience of this population.</td>
<td>Quantitative Cross sectional questionnaire. Cognitive Triad Inventory for Children (CTI-C), Child Behaviour Checklist Youth Self-Report (CBCL-YSR), Trauma Symptom Checklist for Children (TSCC-A), anger and post-traumatic stress scales (PTS), prosocial behaviour scale of the Strength and Difficulties Questionnaire (SDQ).</td>
<td>1228 rural adolescents in 10 different schools. 10-12 years old South Africa</td>
<td>Youth with more positive cognitive interpretations had better scores on psychological functioning, depression, anxiety, somatization, and sequelae of potentially traumatic events.</td>
<td>Risk and resilience of rural youth.</td>
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<tr>
<td>8.</td>
<td>Eriksson, Hochwander, &amp; Sellstrom, (2011).</td>
<td>To explore the associations between subjective well-being and perceptions of community trust and safety amongst children in rural and urban areas.</td>
<td>Quantitative cross-sectional. Well-being Cantril ladder (21).</td>
<td>3852 rural and urban adolescents 11-15 years old Sweden</td>
<td>Rural youth had larger perceptions of community trust and safety when compared with urban youth. Percieved community trust and safety larger impacted well-being in rural and urban youth. Rural girls had lower well-being. Older youth had lower well-being. Youth who reported lower support had lower well-being.</td>
<td>Resilience and wellbeing in rural youth.</td>
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<td>9.</td>
<td>Smokowski, Guo, Rose, Evans, Cotter &amp;</td>
<td>To explore whether positive microsystem transactions are associated with self esteem, and if negative microsystem transactions increased</td>
<td>Quantitative time series. Secondary data from the rural</td>
<td>&gt;5000 rural adolescents from 28 different schools</td>
<td>Internalizing problems were associated with externalizing problems as well as being victims of externalizing</td>
<td>Resilience and risk for rural youth.</td>
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<tr>
<td>Author(s)</td>
<td>Title and Research Question</td>
<td>Design and Methodology</td>
<td>Sample Size</td>
<td>Years Followed</td>
<td>Country</td>
<td>Key Findings</td>
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<td>Bacallao, (2014).</td>
<td>the chances of internalizing systems in rural youth.</td>
<td>adaptation project, United States</td>
<td>less internalizing problems was associated with supportive environments and optimism. Older rural youth had lower self-esteem but less internalizing problems. Rural girls had lower self-esteem and more internalizing problems. Youth with lower socioeconomic status had more internalizing problems.</td>
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<td>Rew, Grady, Spoden, (2012).</td>
<td>To identify protective and resilience factors in rural children that improve self worth and competence in adolescence.</td>
<td>Quantitative Longitudinal cohort sequential, United States</td>
<td>605 rural adolescents in grade 5, then again in grade 9 &amp; 10 United States</td>
<td>Gender and task persistence, predicted competence and self worth. Rural girls had lower competence and self worth. Social connectedness predicted athletic competence and behaviour conduct.</td>
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<tr>
<td>Cotter, Smokowski, (2016).</td>
<td>To examine how peer behaviour influences externalizing behaviour among male and female rural adolescents. To explore internalizing symptoms as a mediator between descriptive norms (perceived delinquent behaviour among peers) and</td>
<td>Quantitative 3 year longitudinal, time series, United States</td>
<td>3489 rural adolescents Grades 6-10 United States</td>
<td>Perceived peer delinquency was positively and significantly associated with externalizing behaviour. There was no difference for male or females. Internalizing was a mediator between perceived peer delinquency and</td>
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Resilience and well-being in rural youth.
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<tr>
<th>Study</th>
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<th>Data</th>
<th>Participants</th>
<th>Findings</th>
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</thead>
<tbody>
<tr>
<td>12. Olsson, Fahlen, &amp; Janson, (2007).</td>
<td>To describe how various behaviours, complaints, and conceptual changes come into play and to discuss the factors that might support or hamper happiness and well-being, of semi-rural children growing into adolescence. To discuss implications for future prevention programming.</td>
<td>Mixed methods Cross-sectional. Open ended written question.</td>
<td>71 item structured questionnaire drawn from the Swedish Questionnaire 90, the Swedish Council for Information on Alcohol and other Drugs Study, and the WHO study of ‘Health Behavior of School-Aged Children (HBSC).</td>
<td>2181 semi rural adolescents 7-19 years old Sweden</td>
<td>Changes in behaviour began between 11-14 years of age. Females had a more rapid onset (10-14 years old) than males (11-14 years). Both genders experienced stress in their relationships. Females perceived less emotional support than males. All participants asked for more leisure activity and more opportunities to connect with peers, family, community members, and teachers. Adults saw adolescence as risky. Youth saw risks to their social status and relationships. Youth asked to be treated with respect and taken seriously. Youth asked for teachers to take more action against bullies and pay attention to those who were unhappy. Youth felt trapped in between childhood and adulthood. Half of boys felt that they had no one to confide in.</td>
</tr>
<tr>
<td>13. Okamoto, Helin, Po‘a-kekuwela, Chin, &amp; Nebre, (2009).</td>
<td>To determine what are the operative risk and protective factors of Hawaiian youth residing in rural communities on the Big Island of Hawai‘i. To explore what the implications of these factors for the development of culturally-specific drug prevention</td>
<td>Qualitative. Focus group interviews.</td>
<td>47 rural adolescents Grades 6-8, 14 focus groups, 5 rural communities Hawaii</td>
<td>Rural context influenced social networks to become large, extended, interconnected networks that intensified both risk and protective factors.</td>
<td>Risk, resilience, and well-being of semi rural youth and children.</td>
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<td>No.</td>
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<td>14</td>
<td>Spencer, G. (2012)</td>
<td>To identify young peoples' understanding of health more broadly or the potential areas young people identify as pertinent to their health. To explore what some of the possibilities and limitations of empowerment are.</td>
<td>Qualitative. Interviews, group discussions and observational data</td>
<td>56 adolescents 15-16 years old United Kingdom</td>
<td>Youth’s ideas of being healthy highlighted relational components of developing positive self-belief, pointing to a number of socially located pre-requisites for promoting their health. Youth talked about being happy and having fun. Having fun was related to potentially liberating self discovery. Being happy was related to having confidence in themselves and being able to have positive interactions with others, as well as receiving positive feedback. Youth felt that traditional ideals of refraining from risk were denying youth opportunities to engage in and promote positive discourse about their own health.</td>
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<tr>
<td>15</td>
<td>Puskar, Bernardo, Ren, Haley, Hetager, Switala, &amp; Siemon (2010)</td>
<td>To identify and describe gender related difference in levels of self-esteem and optimism of rural adolescents.</td>
<td>Quantitative randomised Cross sectional Collected as part of a larger RCT study. Rosenberg Self-Esteem Scale and the Optimism Scale-Life Orientation TestRevised</td>
<td>193 rural adolescents Three different schools. 14-18 years old United States</td>
<td>Females had lower self-esteem and optimism. There was a positive correlation between optimism, self-esteem, helpfulness and coping to positive health practices. There was a moderate correlation between optimism and self-esteem. Positive parent interactions with children increased self-esteem.</td>
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<tr>
<td>16</td>
<td>Eacott, &amp; Frydenberg (2009)</td>
<td>To explore the effects of a coping skills program, long term and to assess the utility of providing booster intervention for young rural people.</td>
<td>Mixed methods. Randomised Pre-post test 12 month. Semi structured interviews.</td>
<td>159 rural adolescents Grade 10 Australia</td>
<td>The program was effective in improving positive coping skills and reduce negative coping skills for rural youth. The largest effect of the program was</td>
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<tr>
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<td>Shoveller Johnson, Prkachin, &amp; Patrick (2007)</td>
<td>Coping Scale and the Kessler Psychological Distress Scale</td>
<td>Youth’s social action coping, they learned to reach out for support. The participants identified that rural youth had their own unique issues that were specific to rural life.</td>
<td>Qualitative ethnographic and grounded theory. In depth open ended 1:1 interviews and focus groups</td>
<td>15 rural adults and 17 rural adolescents 12-14 years old Northern British Columbia, Canada</td>
<td>Contextual forces from geography and social features of a rural community intersected to create a community culture that impacted everyday life for rural youth. Those forces contribute to deprivation of various forms of social capital to contribute to some rural youth being located in socially undesirable positions.</td>
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<td>Theron, Liebenberg, &amp; Malindi (2014)</td>
<td>Pathways to resilience youth measure (PRYM)</td>
<td>Youth who experienced services that were supportive of their rights and used positive youth development had stronger resilience processes. Youth reported appreciating and appropriating teachers’ counsel and emulated teachers’ examples if those teacher’s used positive respectful approaches. Teachers promoted dreams for youth. Teacher-youth partnerships addressed cruelty and neglect. Youth reported they could turn to teachers to compensate for poor parent partnerships.</td>
<td>Mixed methods Cross-sectional. In depth interviews</td>
<td>951 rural adolescents 13-19 years old Africa</td>
<td>Resilience processes of rural youth</td>
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