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## Bullying Experiences Among First Nations Youth: Identifying Effects on Mental Health and Potential Protective Factors

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Graduate Program in Education

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## Abstract

Bullying represents a substantial issue facing Canadian youth, and is associated with negative outcomes across domains of function throughout the lifespan. Despite significant literature examining bullying involvement among adolescents in Canada, a paucity of research explores the bullying experiences of First Nations, Metis and Inuit (FNMI) youth. This is particularly concerning, as these youth may be at higher risk for bullying and its related consequences due to the cultural marginalization and systemic inequalities experienced by Indigenous peoples nationwide. The present study aims to address this gap in the literature, examining the bullying experiences of FNMI youth, the effects of these experiences on mental health and well-being, and the potential moderating effect of three protective factors (cultural, school and peer connectedness), using longitudinal data collected from a cohort of FNMI adolescents in a large school district in southwestern Ontario. Findings indicated that FNMI youth in this sample experienced increased bullying victimization and perpetration as compared to national averages, and that greater cumulative bullying victimization was associated with more negative mental health. Further, despite no apparent moderating effect, all three of the identified protective factors predicted mental wellbeing independent of bullying victimization. Results support a tiered approach to intervention, confirming the merit of culturally relevant, school-based programming that incorporates these factors, as well as suggesting the need for targeted bullying interventions to promote resilience and well-being, and mitigate risk among FNMI youth experiencing bullying.

**Keywords:** Indigenous youth, Bullying, Mental Health, Protective Factors, Strengths-Based Approach, School-Based Interventions, Culturally-Relevant Programming

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## Introduction

Bullying is a significant problem facing youth in Canada, with over one third of students nationwide reporting bullying involvement in some capacity (Vaillancourt et al., 2010). The prevalence of this issue is particularly concerning considering the myriad of negative outcomes associated with bullying involvement. Although abundant research investigates bullying behavior in Canada, a significant gap in the literature exists regarding the bullying experiences of First Nations, Metis, Inuit (FNMI)<sup>1</sup> children and adolescents. FNMI youth may be especially vulnerable to bullying and its consequences, as a result of the socio-historical marginalization of Aboriginal cultures, and the resulting endemic disadvantage and disproportionate risk experienced by many Indigenous peoples across the country to this day. Despite the paucity of research in this specific area, substantial empirical inquiry has identified multiple protective factors with the potential to mitigate risk and promote positive outcomes among FNMI youth. In addition to cultural factors pertinent to Indigenous youth in particular, certain aspects associated with the school setting (which, importantly is also an environment consistently connected to bullying) may also reflect this protective influence, including connection to school, and school-based social support from peers.

### *Bullying: Definitions, Outcomes and the Canadian Context*

The Centre for Disease Control and Prevention (CDC) proposed a uniform definition of bullying as any *unwanted aggressive behavior(s)* by another youth or group of youths who are not siblings or current dating partners that involves an *observed or perceived power imbalance and is repeated multiple times or is highly likely to be repeated*. Bullying may inflict harm or

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<sup>1</sup> This term will be used in the remainder of this paper to refer collectively to Indigenous peoples, and encompasses the diverse terms attributed to them. For the purposes of the literature review, the term used by the original author is used when describing results.

distress on the targeted youth including physical, psychological, social, or educational *harm* (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014). This definition encompasses early work that identified bullying as a type of interpersonal aggression with three distinct characteristics (highlighted in the definition above): repeated, intentional attempts at inflicting harm, used to reinforce power imbalances in peer relationships through sustained acts of victimization enacted by a more powerful aggressor upon a less powerful victim (Olweus, 1993, 1999). Aggressors (i.e. the bullies) exploit and assert their position of power by systematically inflicting harm upon their less powerful victims (i.e. the bullied) in both individual and group contexts. Recent conceptions of bullying emphasize that this is achieved through multiple methods, both direct and indirect, and suggest a basic typography of multiple types of bullying, which reflect the experiences of both victims and perpetrators. Six main categories emerge:

**Physical Bullying-** Involves a perpetrator inflicting physical harm upon the victim's body or property, by kicking, punching, spitting or stealing from someone.

**Verbal Bullying-** Includes name calling, insults, hurtful teasing, and threats.

**Social Bullying-** Occurs in interpersonal or social situations, and includes behaviours such as gossiping, purposefully excluding someone from a group, and attempting to damage the reputations or friendships of others.

**Electronic Bullying (Cyberbullying)-** Encompasses any type of bullying that is carried out using technological means, including using texts, emails, instant messages or social media to threaten, harass or embarrass a victim.

**Ethnic Bullying-** Involves aggression or harassment directed at a person because of their racial or ethnic background, such as racial slurs, comments and jokes.

**Sexual Bullying-** Includes aggression or harassment based on someone's sex or sexual orientation, sexual comments or jokes (sexual harassment), touching someone in a sexual way (pinches, grabbing, etc.) and spreading rumours of a sexual nature. (Gladden et al., 2014; PREVNet, n.d.)

While these types differentiate bullying behaviours into separate categories, the categories are not mutually exclusive, and it is important to note that both perpetrators and victims can experience multiple types of bullying either concurrently, or at different points in their development (i.e. some forms, such as physical bullying may be more prevalent among younger children, whereas others, like social or electronic bullying, may become more frequent during adolescence) (PREVNet, n.d.).

The consequences associated with bullying have been extensively studied by researchers, and suggest increased risk for numerous negative outcomes across domains of functioning. Children and youth who are victims of peer aggression and bullying experience significant problems associated with physical, social and emotional well-being. Hemphill, Tollit, Kotevski and Florent (2015) synthesized the results of multiple longitudinal studies examining the impacts of bullying victimization, finding that victims were significantly more likely than non-victims to experience mental health problems such as depression, anxiety, self-harming behavior, somatic complaints and symptoms of psychosis. Victims of bullying were also more likely to experience externalizing problems including poor social functioning and decreased prosocial behaviour (Hemphill et al., 2015). Perpetrators were also at increased risk for a multitude of negative outcomes, including emotional and social adjustment difficulties and substance dependency and abuse. Although more prone to externalizing problems such as peer aggression and violent offending, perpetrators also experience higher rates of internalizing problems such as depression

and suicidal ideation, as compared to non-perpetrators (Hemphill et al., 2015). Although patterns suggest differential impacts based on an individual's role in the bullying experience, research suggests that bullying involvement in any capacity is associated with increases in suicidal ideation and behavior (Holt et al., 2015). In fact, findings indicate that children and youth who report being both victims and perpetrators of bullying (i.e. bully-victims) are also at increased risk for negative outcomes (Holt et al., 2015; Klomek, Sourander, & Elonheimo, 2015)

Not temporally relegated to childhood or adolescence, prolonged exposure to peer aggression and bullying can have lasting consequences for both victims and perpetrators throughout the lifespan. Indeed, bullying experiences in childhood and adolescence have been consistently linked with the adverse outcomes described above later in life (Hemphill et al., 2015). In their longitudinal study, Gibb, Horwood and Fergusson (2011) found that youth who were bullied between the ages of 13 and 15 experienced higher rates of suicidal ideation and attempts, alcohol and illicit drug dependence and mental health diagnoses, including major depression and anxiety, conduct and antisocial personality disorders between the ages of 16 and 30. Findings indicated similarly negative outcomes for perpetrators, who research suggests are increasingly likely to become involved in delinquency, criminality and conviction of both violent and property offenses, experience medically treated injuries, and be exposed to aggression and violence over time (Gibb et al., 2011; Hemphill et al., 2015). Klomek et al. (2015) echo these findings in a meta-analysis of longitudinal research in this area, and, importantly, highlight that a dosage effect exists, such that “greater involvement in bullying behavior during childhood is associated with greater risk of adverse outcomes” (p. 938).

These findings are particularly worrisome when considering the prevalence of bullying and peer aggression reported by children and youth in Canada. Prevalence rates reported by both

statisticians and researchers indicate prevalence rates of bullying victimization at approximately 36-37.7%, or just over one third of youth in Canada (Lemstra, Rogers, Redgate, Garner, & Moraros, 2011; MacCormack, 2014; Vaillancourt et al., 2010). Perpetration rates are somewhat more variable, but are reported between 31 and 37% (Vaillancourt et al., 2010). The Health Behaviour in School Aged Children: Trends Report 1990-2010 compiled by the Public Health Agency of Canada, which presents rates of a multitude of health related behaviours among students nationwide, found that with the exception of small areas of decline, rates of bullying have remained consistent over time (MacCormack, 2014). Of additional concern, the same study found that a significant percentage of students reported experiencing high levels of emotional problems, across types of bullying involvement (Freeman, King, Pickett, & Craig, n.d.). 18% of boys and 22% of girls identified as bullies, 30% of boys and 42% of girls classified as victims, and 34% of boys and 51% of girls deemed both reported emotional problems (Freeman et al., n.d.).

#### *Bullying Among FNMI Youth in Canada*

Despite considerable empirical inquiry examining bullying, and multiple attempts to assess the problem on a national scale, a significant gap in the literature involves the prevalence, experience, and impacts of bullying among First Nations youth in Canada. Very few studies examining these factors exist, and as such, it is extremely difficult to elucidate a true representation of bullying experiences among Indigenous youth, and how they may differ from experiences of their non-Indigenous peers. These limitations notwithstanding, the findings of existing research represent valuable contributions to this field, and are still important to consider moving forward.

In their study of 204 on-reserve youth in grades 5 through 8 (ages 10-16) in Saskatchewan, Lemstra et al. (2011) found that rates of bullying among First Nations youth were higher than the national average, for all bullying types, with 35.8% of youth reported being physically bullied, 59.3% verbally bullied, 47.5% socially bullied and 30.3% electronically bullied at least once or twice in the previous four weeks. Additionally, researchers found that regardless of type of bullying victimization experienced, victims of bullying were twice as likely to suffer from depressed mood as compared to participants who reported no peer victimization. Similarly, in her study of 8783 Canadian students (2% off-reserve Aboriginal youth), Do (2012) also found that Aboriginal youth were increasingly likely to experience both bullying victimization and perpetration as compared to both their ethnic and non-ethnic minority peers. Findings indicated gender differences, such that boys were more likely to be involved in physical bullying, whereas girls were more likely to participate in social bullying (Do, 2012). Conversely, in their study of elementary school students in Northern Ontario, Brownlee et al. (2014) reported no significant differences in bullying victimization or perpetration among Aboriginal students as compared to their non-Aboriginal peers, regardless of age or gender.

In addition to being at risk for the mental health concerns as a result of bullying and peer aggression similar to their peers described above, FNMI youth are likely to be at increased risk for a myriad of negative health outcomes. This high risk position has been well documented, confirming that First Nations youth experience higher than average rates of mental health problems, including alcohol and substance abuse disorders, psychiatric disorders and elevated risk of suicide (Whitbeck, Yu, Johnson, Hoyt & Walls, 2008). These risks are often exacerbated in remote and northern areas such as the Arctic, where Lehti, Niemala, Hoven, Mandell and

Sourander (2009) found suicide rates higher than those reported for other Aboriginal populations.

Although both alarming and quite serious, these epidemiological data are often presented without consideration of the historical, socio-cultural context that has had an enduring impact upon Indigenous peoples in Canada. The extent of this impact is articulated in the recent report put forth by the Truth and Reconciliation Commission of Canada, which asserts that for over a century, Canada's Aboriginal policies, which involved the colonization and forced assimilation of Indigenous peoples across the country, and of which the residential school system was an integral component, constituted cultural genocide (Truth and Reconciliation Commission, 2015).

The ongoing legacy of this history is highlighted in the opening line of the report:

The closing of residential schools did not bring their story to an end. The legacy of the schools continues to this day. It is reflected in the significant educational, income, and health disparities between Aboriginal people and other Canadians—disparities that condemn many Aboriginal people to shorter, poorer, and more troubled lives (Truth and Reconciliation Commission, 2015, p. 3).

Researchers and Indigenous leaders have long emphasized the importance of understanding the ramifications of these social and historical determinants on the endemic disadvantage and negative outcomes that continue to disproportionately effect this population. Influential determinants of these disparities span structural levels of society (including proximal factors such as the immediate physical environment and distal factors such as racism and social exclusion) and a vast history of cultural suppression and marginalization going back centuries (Reading & Wien, 2009).

Kirmayer and colleagues (2000; 2003) identify increased prevalence and risk of negative mental health as an effect of cultural discontinuity, a phenomenon perpetuated by the legacy of colonization, systematic cultural eradication (through residential schools, the Indian Act of 1876,

the “Sixties Scoop” of forced adoptions) and the resultant racism and discrimination Indigenous peoples face to this day. They posit that although epidemiological research is successful in identifying the magnitude of mental health problems in this population, the psychological, social and economic impacts of these legacies continue to directly interfere with the mental health and wellbeing of Indigenous people in Canada, and are essential to consider when addressing this problem (Kirmayer et al., 2000; 2003). To address this discrepancy, Reading and Wein (2009) suggest the use of The Integrated Life Course and Social Determinants Model of Aboriginal Health (ILCSDAH) as a holistic way of understanding the effects of the complex and interrelated determinants of health for Indigenous populations. This model situates physical, mental, emotional and spiritual health across the lifespan as nested within the spheres of socio-political context and social determinants, which interact and impact each other in a variety of ways, encouraging examination of the interrelations between these constructs and their impacts on Aboriginal health.

In terms of bullying, some researchers have posited that FNMI youth may be at increased risk for bullying victimization, due to discrimination based on their cultural background. Rigby (2004) theorized that bullying may be a socio-cultural phenomenon, and that peer victimization and aggression may result from the imbalance of power between social groups, which themselves are historically a function of differences in race, ethnicity, or social class. Rigby (2004) posits that ethnically dominant groups (i.e. Caucasians) may feel justified in asserting their superiority over less powerful groups (i.e. those exposed to colonialism, in this case Indigenous peoples). These longstanding beliefs may place FNMI students in a position of vulnerability, due to the aforementioned societal views that have long impacted Indigenous peoples in Canada. Although research exploring this potential theory of bullying is scarce, the

results previously reported by Do (2012) suggest initial support for these hypotheses. FNMI students in this study experienced more bullying as compared to both their ethnic majority (i.e. Caucasian) and ethnic minority (i.e. non-Caucasian) peers, which Do (2012) argues may be due to schools acting as a “microcosm” of larger society, such that “Aboriginal children’s and youth’s experiences in school seem to parallel the systemic oppression and violence that Aboriginal communities are struggling with, placing them at risk for being victimized by their peers” (Do, 2012, p. 14).

Moving forward with research in this area, it will be essential to remain cognizant of the context in which FNMI youth in Canada are situated. As such, the present research aims to maintain a strengths-based perspective when addressing the topic of bullying among a cohort of FNMI youth in Southwestern Ontario. A strengths based approach allows us to situate the statistical information regarding the high risks for FNMI adolescents within the appropriate socio-historical, socio-cultural context, thus shifting our focus from the deficits these youth are perceived to have, and to look instead at the assets they possess that promote resilience and positive functioning, and reduce unfavourable outcomes (Crooks, Chiodo, Thomas & Hughes, 2010). This approach is also indicative of recent shift from a deficit-based research focus on reporting the prevalence and risk factors for mental health problems among FNMI populations, and instead support a more holistic view, that explores the strengths and protective factors present in the lives of Indigenous youth that may promote mental health and well-being (Ames, Rawana, Gentile & Morgan, 2015).

#### *Opportunities for Prevention and Protection*

Although as previously mentioned, there is a dearth of research specific to bullying among FNMI youth in Canada, significant empirical inquiry with diverse Indigenous populations

across North America has identified multiple contributing factors related to negative mental health outcomes similar to those associated with bullying and peer aggression as described above (i.e. depression, suicidality, substance abuse, etc.). In fact, research in this area has consistently highlighted the potential contribution of variables at multiple ecological levels, and across various contexts (i.e. biological, familial, community, cultural, etc.), underscoring the importance of operationalizing these factors as part of effective prevention and intervention initiatives (Allen et al., 2014). Variables that are related to more positive outcomes are considered protective factors, due to their potential to both offset risk, and ameliorate or buffer against negative consequences. Researchers and Indigenous leaders consistently point to the importance of identifying and reinforcing factors that reflect the strengths in the lives of FNMI youth, in order to maximize their protective capacity and promote resilience (Wexler, Dam, Silvius, Mazziotti, & Bamikole, 2015). Encouragingly, some researchers theorize that these strengths may not simply operate in the face of risk, and may exert positive influence in the lives of Indigenous adolescents in their own right (Hawkins, Cummins, & Marlatt, 2004; Stiffman et al., 2007).

Increasingly, the school setting has been identified as an important environment for preventing negative mental health consequences, and promotion well-being among children and youth, and as a valuable context in which protective factors may operate (Freeman et al., n.d.; Morrison & Peterson, 2013). This is particularly relevant, as schools are also a well-documented setting in which bullying occurs (Olweus, 1993, 1999; Vaillancourt et al., 2010). As a result, legislation and policies have been implemented at the national, provincial and board levels in order to ensure the safety of students in schools across Canada (e.g. The Safe Schools Act 2000, The Accepting Schools Act 2012 in Ontario) (Ontario Ministry of Education, n.d.). Consequently, this shift in focus has prompted a call by researchers, educational professionals, and Indigenous

leaders and community members supporting the importance of school-based initiatives designed specifically for FNMI children and youth, as a means of mitigating risk and promoting a myriad of positive outcomes, including educational engagement and attainment and mental wellbeing (Crooks et al., 2010, 2015a; McIntosh, Moniz, Craft, Golby, & Steinwand-Deschambeault, 2014; Mykota & Schwean, 2007). This trend is encouraging, as potential protective factors associated with these programs (e.g. increased connection to school, social support of peers) have been identified in the literature as promising in promoting mental health and well-being.

The present literature review focuses on factors at the intersection of these concepts, by identifying potential mechanisms for preventing harm and promoting wellbeing and resilience among FNMI youth that either previously exist within, or could be incorporated into, the school setting. Specifically, connections to Indigenous culture, as well as positive connections to school, and school-based social support from classmates or peers are three variables suggested in the literature as potentially valuable predictors, and will be discussed below.

### Connection to Culture

Across contexts, one of the most well-documented protective factors associated with reducing risk and promoting resilience and well-being among Indigenous youth is culture. It has been suggested that a portion of the negative mental health experienced by FNMI adolescents can be attributed to the effects of acculturation, and historical, or intergenerational trauma, which refers to the complex trauma collectively felt by a group, and the legacy of multiple traumatic events a community experiences both socially and psychologically across generations (Gone, 2009; LaFromboise, Alright & Harris, 2010). In fact, the notion of “culture as treatment” (p. 688), in contrast to mainstream therapeutic approaches, has been suggested as a way to ameliorate the effects of this trauma in Indigenous settings, (Gone, 2009) and culture has also

been theorized as a valuable tool for prevention of negative outcomes with Indigenous youth (Penn, Doll, & Grandgenett, 2008). Moreover, a strongly held belief by researchers, community leaders and professionals working with Indigenous communities suggests that a better understanding of, respect for, and incorporation of Indigenous cultures (both the unique beliefs of individual communities, and the overarching commonalities that underlie specific traditions and practices) is essential to addressing the health inequalities and longstanding disadvantage experienced by Indigenous peoples across Canada (Anderson & Olson, 2013). Fostered and expressed in a variety of forms, including knowledge, sense of identity, and practice, the protective influence of cultural has been widely supported by researchers in this field as a crucial component of prevention and intervention initiatives for Indigenous children and adolescents in multiple settings.

In their hallmark paper examining cultural continuity and its effects on suicide rates across 80 bands in British Columbia, Chandler and Lalonde (1998) demonstrated that suicide rates were not uniform as previously thought, but extremely variable across communities, with some bands recording no suicides, and others suffering very high rates. In an attempt to understand this variability, they found that communities with high cultural continuity (i.e. communities where all 7 factors of cultural continuity were present: self-government, involvement in land claims, band control of education, health services, cultural facilities and police and fire services) had no suicides, whereas communities with none of the factors exhibited high suicide rates (Chandler & Lalonde, 1998). It appeared that there was a strong negative correlation between cultural continuity and suicide, a serious mental health concern. This study was one of the first of its kind to demonstrate a link between First Nations culture and mental health. Although cultural continuity refers to a group level process, in a later paper on personal

persistence, identity development and suicide ideation and risk, Chandler, Lalonde, Sokol and Hallett (2003) contend that cultural continuity is strongly linked to similar processes on an individual level, a connection that others have posited may be a result of a link between individual identity and collective processes and values central to First Nations culture (Kirmayer et al., 2000).

A strong cultural identity and sense of cultural pride has been demonstrated to be a protective factor influencing a multitude of positive outcomes for FNMI youth. Smokowski, Evans, Cotter and Webber (2014) found that ethnic identity enhanced mental health functioning, and that this relationship was mediated by increases in self-esteem and future optimism. Similarly, Flanagan et al. (2011) found that a strong Native identity and affiliation with their Native culture was associated with lower levels of reported physical and relational aggression in their study of Aboriginal students in grades 6 through 11, suggesting cultural identity as a potential protective factor against both types of aggression. Likewise, Jones and Gallier (2007) found that a strong sense of affirmation and belonging, as well as comfort and pride in ethnic identity was correlated with more positive psychosocial adjustment and functioning. Furthermore, in their study of 400 American Indian youth, Yu & Stiffman (2007) found that although participation in generic cultural activities did not have a positive effect on alcohol use and dependency, strong cultural pride and spirituality was associated with less alcohol abuse/dependency symptoms, particularly in the presence of risk factors such as problematic family and peer relationships. Mohatt, Fok, Burket, Henry and Allen (2011) found the concept of awareness of connectedness (which is measured by assessing an individual's awareness and understanding of their role in the broader human and natural eco-system, how these systems are interrelated- a concept common to Native American epistemologies) to be a measurable

construct positively related to “hypothesized suicide and substance abuse protective factors such as reasons for living and communal mastery among Alaska Native youth” (p. 451) in addition to well-being and recovery processes.

Engagement in cultural practices has also been linked to positive outcomes for Indigenous youth. Hallett, Chandler and Lalonde (2007) highlighted the benefits of Indigenous language knowledge, finding that proficiency in Indigenous language was inversely related to suicide rates, demonstrating that bands where a majority of members had conversational knowledge of an Indigenous language had low to absent suicide rates. In comparison, in bands where less than half of members had conversational language knowledge, suicide rates were six times greater (Hallett et al., 2007). Traditional practices have also been found to exert protective influences against discrimination. Whitbeck, McMorris, Hoyt, Stubben and Lafromboise (2002) found that although discrimination was strongly linked to depressive symptoms, American Indian participants who reported above average levels of engagement in traditional practices experienced the greatest level of protection against depressive symptoms.

Enculturation, which refers to the extent to which an individual is embedded within a culture, and is reflective of both cultural identity and practice, has also been identified as a protective facet of culture for Indigenous youth. In their study of fifth grade American Indian children, Whitbeck, Hoyt, Stubben and Lafromboise (2001) found that enculturation was positively associated with school success, independent of other contributing factors (in this case, self-esteem). Moreover, Lafromboise, Hoyt, Oliver and Whitbeck (2006) found enculturation to be a significant protective factor for resilience and pro-social outcomes among American Indian adolescents, as each unit of increase in enculturation resulted in a 1.8 times increase in the odds of displaying resiliency. Stumblingbear-Riddle and Romans (2012) found similar benefits of

enculturation on resilience in their study of urban American Indian youth, such that adolescents who reported higher enculturation also reported higher resilience. Similar positive effects have also been reported for bicultural competence, a concept which describes an individual's skill in two cultures, includes both enculturation with the individual's Native culture, as well as competence within the dominant culture has been linked to lower reports of hopelessness by American Indian adolescents (Lafromboise, Albright, & Harris, 2010). Hawkins et al. (2004) further emphasize the importance of cultural components to substance abuse prevention programming, supporting skills based bicultural competence as a valuable asset to meaningful programs for American Indian and Alaska Native youth.

Of particular importance to this review, it is worthwhile to note that a significant assertion within the literature is the importance of including relevant cultural components when implementing any type of prevention or intervention programming for Indigenous adolescents. Potvin-Boucher and Malone (2014) argue that facilitating mental health literacy through appropriate programming is beneficial to improving mental health, and that it is essential for programming for First Nations youth to include cultural components such as traditions, beliefs and practices. Similarly, Moran and Reaman (2002) assert that not only cultural material, but cultural content specifically tailored to the unique community or tribe is a key factor in designing substance abuse prevention programs for American Indian adolescents.

Despite significant support for cultural components exerting positive and protective influences for Indigenous youth, it is worthwhile to acknowledge that some results have been mixed in terms of its effectiveness at improving mental health outcomes. Although few contest the importance of culture in fostering mental health and wellbeing among Indigenous populations, empirical evidence does not always support this relationship. For example, in their

literature review of Indigenous spirituality and resilience, Fleming and Ledogar (2008) found mixed results for the support of cultural factors in promoting resilience among First Nations youth. These findings should not result in discounting cultural factors altogether however, as this concept represents a group of related, yet different components. This complexity has led to theoretical, methodological and measurement limitations that contribute to the confusion over the strength of the relationship between positive cultural identification and participation, and positive outcomes (Snowshoe, Crooks, Tremblay, Craig & Hinson, 2015).

### Connection to School

The relationship between Indigenous students and the education system is complex, and has often resulted in negative experiences for FNMI youth in Canada. Due in large part to the historical and intergenerational trauma associated with colonization, and in particular, the lasting legacy of residential schools, resistance to the education system is common among Indigenous peoples, and many youth may “view educational success in a Western context as oppressive of their Aboriginal identity” (Crooks et al., 2015a, p. 2). Oftentimes the mismatch between Indigenous student’s culture and the school environment can result in incongruent teacher expectations and student behaviours, and a significant gap remains in educational attainment and enjoyment outcomes between Indigenous students and their peers (McIntosh et al., 2014). Consequently, Hare and Pidgeon (2011) cite institutional and systemic racism (i.e. ethnocentric curriculum, pedagogies and policies that perpetuate poor academic outcomes and associated negative mental health consequences) as well as racism in school-based interpersonal relationships (i.e. stereotyping, negative attitudes and comments from peers and teachers) as common experiences among many FNMI students in Canada.

Although these negative experiences and poor outcomes are common among FNMI students, school has been identified as an important environmental protective factor in studies examining the strengths and positive aspects in Indigenous youth's lives. For example, in their study of 480 Aboriginal students in Grades 1-12 attending on-reserve schools, Mykota and Schwean (2007) found that academic performance was a strong predictor of psychosocial wellbeing among these students, asserting that schools may play an important ameliorative role in preventing negative psychosocial outcomes through promoting academic competence among students. Stiffman et al. (2007) also found benefits of school in their study of urban and reservation American Indian youth, such that participants who reported more school-related strengths also reported fewer conduct disorder, alcohol and substance abuse symptoms. Furthermore, school connectedness (i.e. positive perceptions of school) was found to be a significant protective factor in decreasing the likelihood of violence perpetration and extreme violent acts (i.e. shooting or stabbing someone) in Bearinger et al.'s (2005) study of 569 American Indian adolescents. Results from these studies suggest that despite the complex relationship many Indigenous students have with school, positive connections in this context may yield more positive outcomes.

Findings such as these support the need for making the most of the school context in order to bridge the gap in academic achievement and attainment for FNMI students. Schools may serve as an important environment for Indigenous students, however in order to maximize protective effects and promote more positive outcomes, research asserts the importance of infusing cultural elements into the school setting. In doing so, schools may be able to foster the development of both academic and cultural competencies. Crooks et al. (2015a) for example, argue that bicultural competence (i.e. Aboriginal youth's ability to alternate between cultural and

Western identities based on context) can be nurtured in school settings when culture is included as a complement, or point of convergence with Western pedagogy, thus offering an alternative to the aforementioned dichotomy between Aboriginal identity and Western education. Indeed, empirical investigation supports this assertion, suggesting that Indigenous youth experience increased engagement and school success, as well as reductions in negative and high-risk behaviours, when involved in culturally relevant education programs (Crooks et al., 2010, 2015a; Fleming & Ledogar, 2008; LaFromboise et al., 2006). Importantly, initial results from programming efforts in Canada have yielded encouraging results in line with these findings, using both targeted, and school-wide approaches (e.g. Crooks et al., 2015; McIntosh et al., 2014).

#### School-Based Social Support

In addition to their educational purpose, schools also provide an important context for socialization, affording multiple opportunities for social support from similarly aged peers. As a result, some of the aforementioned studies investigating school related- factors also investigated the potential protective influence of positive peer relationships. For example, Stiffman et al. (2007) asked 401 urban and on-reserve American Indian youth open-ended questions about the strengths they believed were present in their lives. Peers were a common strength mentioned by participants, who frequently cited communication, support, being accepting, and avoidance of illegal substances and activities as peer-related strengths. Wexler et al. (2015) reported similar findings in their investigation of the self-reported, perceived internal and external assets of Alaska Native youth. Peers/friends were identified as one of six protective factors extracted from participant's responses, with the majority of participants endorsing items such as "My friends show they care" and "If I need help, I have a friend I can talk to" (78% and 77%, respectively).

The protective influence exerted by positive connections to peers have also been documented by researchers. Importantly, Bearinger et al. (2005) found that positive prosocial peer behavior norms were one of the most protective factors against violence perpetration in a sample of 569 school-aged American Indian youth. Most noteworthy, perhaps are the findings of Stumblingbear-Riddle and Romans (2012), who explored the role of four factors, culture, self-esteem, subjective well-being, and social support in fostering resilience among a sample of 196 American Indian adolescents. Findings indicated that enculturation, self-esteem and social support accounted for 33% of the variance in resilience, while 34% was comprised of enculturation, subjective well-being and social support. Of all of these factors however, the strong predictor of resilience was social support from friends. This finding is particularly relevant, as resilience in this study was specifically defined in terms of school success (i.e. school engagement, grades and pursuit of higher education).

It is important to note that while some studies have supported the potential protective influence of peer-based social support, findings have not been uniformly positive. For example, in their study of 330 Canadian Aboriginal youth, Rawana and Ames (2012) found that higher levels of positive peer relationships predicted higher frequency of alcohol use, although this relationship was not found for heavy drinking. Despite this, the encouraging findings presented above support at minimum the further investigation of this factor and its potential protective influence, particularly in light of the role peer socialization plays in the school context.

### Current Study

The overarching purpose of this study is to address the gap in the literature regarding bullying experiences among FNMI youth. As such, the objectives of this research are threefold. Firstly, the present study aims to present a cross sectional snapshot of bullying among FNMI

youth, in order to elucidate the prevalence and experiences of this population as both victims and perpetrators of peer aggression. Further, the second objective of the current study is to investigate the effects of these bullying experiences on the mental health and well-being of FNMI youth in this sample. Finally, the third objective of this study is to investigate the impact of the protective factors identified in the literature above on this relationship.

It is worthwhile to note that the paucity of research in this area resulted in a lack of theoretical direction to inform hypotheses, and consequently, the aforementioned research questions were mainly exploratory in nature. However, some broad hypotheses were articulated for each research question. In regards to bullying experiences, it was hypothesized that gender differences would be present in relation to type of bullying experienced, such that girls would be more likely to experience different types of bullying as compared to boys (i.e. girls may be more likely to engage in social or verbal victimization, whereas boys may be more likely to participate in physical aggression). For the second research question, it was expected that bullying experiences would have negative effects on mental health and wellbeing. Conversely, it was hypothesized for the third research question that the protective factors identified above (which did have a significant empirical base) would moderate the relationship between bullying and mental health, such that these protective factors would positively predict mental wellbeing, with added benefits for students experiencing bullying.

## Method

### *Participants*

Participants in this study were a sample of 147 FNMI students from 37 schools within a large school district in Southwestern Ontario. These students were part of a longitudinal study that followed them through the transition from elementary to secondary school, in which data

was collected across three years. In the first year (Wave 1), participants ranged in age from 11 to 14 years ( $M= 12.62$ ,  $SD= 0.57$ ), and 38% of participants were in Grade 7, with the remaining 62% of students enrolled in Grade 8. Data was collected again in year two when students were in grades 8/9 (Wave 2) and a final time in year three when participants were in grades 9/10 (Wave 3). Gender was almost equally represented in the sample with 50.4% females (70 students). The vast majority of participants (90.6%) in the sample self-identified as having First Nation heritage. Four participants (2.9%) identified as Metis and two participants (1.4%) identified as having Inuit ancestry. A final two participants reported mixed ancestry (1.4%) and one participant (0.7%) did not self-identify as having FNMI heritage on the survey. Four participants did not identify their heritage. A subset of 18 youth in this sample participated in two years of a school-based, culturally relevant mentoring program specifically for FNMI youth, with the goal of improving mental wellbeing, building healthy relationship skills, and bolstering cultural connections and awareness. Due to missing data, the final sample used for analysis in this research consisted of 105 youth.

### *Recruitment*

Multiple strategies were used to recruit participants for this study. Prior to the commencement of research and Wave 1 data collection, research procedures were explained to all elementary school principals at a district-wide meeting. Information sheets and passive parental consent forms were given to principals to send home to the parents/guardians of students in grades 7 and 8 who had self-identified as First Nations in accordance with the school board's Self-Identification for Aboriginal Students Policy. Additionally, schools were encouraged to include First Nations students who had not completed the self-identification process, but who either lived on a First Nation reserve or actively participated in First Nations programming and

cultural events. Passive parental consent procedures required parents to contact the school only if they did not wish for their child to participate, by returning the consent form indicating this choice. In order to maximize the chances that parents would receive consent information, forms were distributed concurrently with all other school-related consent forms at the beginning of the school year. Youth assent was obtained at the beginning of each study wave, on the day of data collection. Total parental consent/youth assent rates were 76%, with 11% of parents and 13% of students opting not to participate in the study at wave 1 (Crooks et al., in press). Data collection at Wave 1 involved grade 7 and 8 students responding to a paper and pencil questionnaire during a 40-minute period outside of class time under the direction of research staff, who read survey questions aloud to maximize comprehension. For more information on recruitment and participants, see Crooks et al. (2015b).

### *Measures*

The following measures were used in the current study. It is worthwhile to note that variables were measured at different waves of data collection. Specifically, bullying experiences were measured at Wave 1, potential protective factors (i.e. cultural, school and peer connectedness) at Wave 2, and positive mental health at Wave 3. Descriptions of each measure are provided below.

**Bullying Victimization and Perpetration.** Experiences of both bullying victimization and perpetration were measured at Wave 1 of the study, using adapted questions from the PREVNet Bullying Evaluation and Solution (BEST) Tool (PREVNet, n.d.) survey developed for students in grades 7-12. Respondents were asked to report on their experiences with bullying as victims, perpetrators or both, and the frequency of these experiences as they occurred within the last month, across six types of bullying (verbal, social, electronic, race/ethnicity and sexual).

Where each type of bullying was mentioned on the survey, examples of that type of bullying were included to maximize comprehension and accuracy of reporting. For example, for the question “have you been bullied by others physically?” the description read: “Physical bullying includes: being hit, pushed, shoved, slapped, kicked, spit at or beaten up.” This wording was modified from the PREVNet survey, which indicated bullying experiences in the past 4 weeks. Students responded to questions related to both victimization and perpetration (e.g. “have you been bullied by others verbally?” and “have you bullied others verbally?”) using a 4-point scale (i.e. never in the last month, 1 time in the last month, 2 or 3 times in the last month, at least once a week in the last month).

**Positive Mental Health.** Positive mental health was assessed at Wave 3 using the Mental Health Continuum- Short Form (MHC-SF) (Keyes, 1998, 2002), a 14-item scale that assesses multiple facets of wellbeing, including 3 items for emotional wellbeing, 6 items for psychological wellbeing and 5 items represent social wellbeing. Participants were asked to indicate how often they felt a certain way during the past month on a 6-point Likert scale (i.e. 1=never; 6=everyday), in response to statements including “that you had something important to contribute to society” and “that you had warm and trusting relationships with others.” Higher scores on the MHC-SF indicate positive mental health and emotional wellbeing. Reliability at Wave 3 was .93.

**Adolescent Connectedness.** Positive connections in participant’s lives relevant to this study, specifically, school and peer connectedness, were assessed at Wave 2 using the school and peer subscales of the Hemingway Measure of Adolescent Connectedness (Karcher, 2003, 2012). The school subscale incorporates statements such as “I feel good about myself when I am at school” and “I work hard at school.” Sample statements from the peer subscale include “I get

along well with other students in my classes” and “I am well-liked by my classmates.”

Participants were asked to indicate how applicable each statement was to them, with four response options: “very true,” “true,” “not really true,” and “not true at all.” Reliability at Wave 2 was .88 for the school subscale, and .77 for the peer subscale.

**Cultural Connectedness.** Cultural connectedness was measured at Wave 2 using the Identity Subscale of the Cultural Connectedness Scale (CCS-Identity), which assesses youth’s connection to their cultural identity (Snowshoe et al., 2015). The 11-item CCS-Identity attempts to tap indicators of positive cultural identity specifically for First Nations youth, and includes statements such as “Being Native means I sometimes have a different way of looking at the world,” and “I have a strong sense of belonging to my Native Nation or tribe.” Respondents indicate their agreement with each of these statements using a 4-point Likert scale (1= strongly disagree; 4= strongly agree). At Wave 2, reliability for the CCS-Identity was .90.

**Mentoring Participation.** A subsample of students in this sample participated in a school-based, culturally relevant mentoring program. Participants met for one hour per week for 18 weeks with two FNMI facilitators (or mentors), where they participated in a variety of sessions incorporating specific cultural content (i.e. the Medicine Wheel, the Creation Story etc.) and designed to facilitate knowledge and skill development in the area of health relationships (i.e. communication, decision-making and conflict resolution skills). Participants were coded as having participated if they had attended 50% or more of mentoring sessions during the first two years of the study.

### *Data Analysis*

The present study used archival data from a previous longitudinal research initiative. The current research utilized multiple statistical methods to explore the research questions.

Descriptive statistics (frequencies) were used to present a cross-sectional snapshot of bullying experiences among FNMI youth. Bivariate analyses included chi-square tests of independence, and were conducted in order to determine the association between gender and bullying victimization and perpetration. Multivariate statistical tests were also used. A two-way, between subjects ANOVA was conducted to investigate the effect of cumulative bullying victimization on mental health. Three hierarchical multiple linear regressions were performed in order to determine whether the potential protective factors identified in this study would predict mental health outcomes by exerting both main and/or moderating effects on the relationship between bullying victimization and mental health suggested by earlier results.

Significant missing data was evident in the sample of 147 cases after all three waves of data collection. Given the small sample size in this study, every effort was made to include as many cases as possible in each analysis. Person-mean substitution was used on Likert-type measures where possible. Missing data analysis was conducted on all variables utilized in the present study, which yielded between 36 and 39 missing cases for each variable. These cases were excluded from analysis, yielding a final analytical sample of 105 youth. Additionally, Little's MCAR test was performed in order to ensure that there was no pattern to the missing data, and therefore would not bias results. Results from the Little's MCAR test for data on all variables resulted in a chi square= 8.23( $df= 10$ ;  $p= .61$ ), which indicates that the missing data is indeed random.

### *Defining Bullying Variables*

Bullying variables were categorized differently for specific statistical tests. The cross-sectional picture of bullying experiences reported by FNMI youth reflect the frequencies directly as they were reported. For bivariate analyses, in this case chi-square tests of independence, low

frequencies were evident at the higher end of the Likert scale in regards to how often participants experienced both bullying victimization and perpetration (i.e. significantly fewer participants reported experiences multiple times in the past month or once in the past week). In an attempt to maintain equal sample size between groups, the items were dichotomized into two categories: never/once in the last month and twice or three times per month/once per week. These categories were used for both bullying victimization and perpetration.

For multivariate analyses, in this case one-way between subjects ANOVAs and hierarchical multiple linear regressions, only bullying victimization was studied, due to higher sample sizes, as well as the well-documented detrimental effects of bullying victimization as described earlier in this paper. Four cumulative bullying victimization experiences variables were used in multivariate analyses: no bullying reported, one type experienced, two types experienced, three types experienced and 4+ types of bullying victimization experienced. Although participants reported on their experiences with six different types of bullying in the original questionnaire, once again frequencies of respondents indicating that they had experienced the highest cumulative types of bullying were significantly lower than the numbers in other categories (see Table 3). As a result, the highest three categories of cumulative types of bullying victimization experienced (i.e. four, five and six types experienced) were collapsed into a category called 4+ types. Participants in this category represent students who experience significant bullying victimization. This categorization is consistent with emerging research into polyvictimization, which suggests that children and youth who experience multiple, cumulative types of victimization are at increased risk for a myriad of negative outcomes (e.g. Turner, Finkelhor, & Omrod, 2010).

### *Ethical Considerations*

This study used archival data from a previous project for which ethical approval was obtained following appropriate institutional protocol. The original study was reviewed and approved by the CAMH Research Ethics Board, and approval was also obtained from the school board research office. Permission to use this data was obtained from the principal investigator.

Working with Indigenous youth requires special attention to other ethical considerations, including their designation as a high-risk population, and the importance of respecting certain cultural factors when carrying out certain research protocols. The research team was aware of these issues and addressed them in a culturally sensitive manner. For example, approval for this project was not only granted by the governing research body and the school board, but was also obtained from the First Nations Advisory Committee within the school board, and the Education Board of the local First Nations communities that were involved with the study. Additionally, by using passive consent procedures as described above, researchers attempted to get an accurate representation of a population that is often underrepresented using other consent methods. Finally, the research team endeavoured to operate using a strengths based perspective throughout the research process, in order to maintain the respect and dignity of all participants. The current study aims to continue use of this approach, as it provides a crucial lens through which to examine and understand this topic.

## Results

### *Gender Effects*

Chi-square tests of independence were conducted to determine whether there was an association between gender and bullying experiences. It was expected that girls would experience more bullying victimization, and in particular victimization of certain types (i.e. verbal, sexual etc.) as compared to boys. In total, 12 chi-square tests were performed, for each

type of bullying, for both victimization and perpetration. Contrary to expectations, 11 out of 12 tests found non-significant associations between gender and bullying experiences with victimization or perpetration. The exception to this result was the significant association found between gender and social victimization  $X^2(1, N= 130) = 4.43, p = .04, \text{Phi} = .19$ . The results of each chi-square test are presented in Table 1 below.

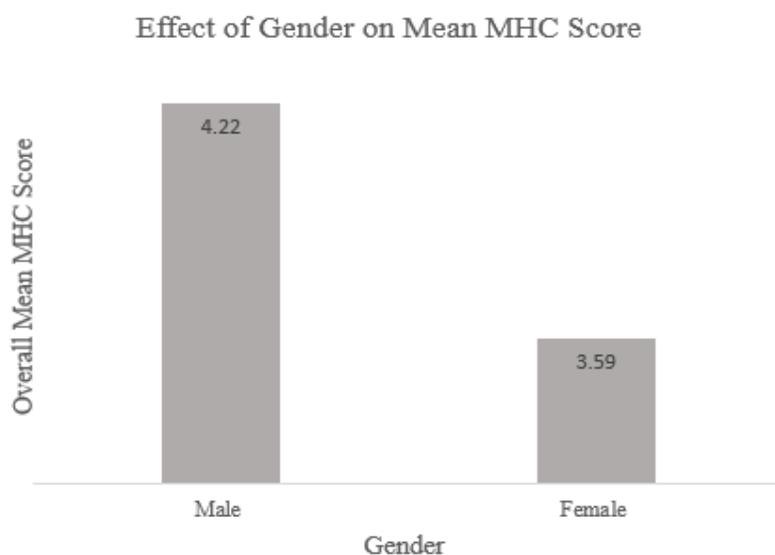
Table 1. Summary of Chi-Square Tests of Independence for Gender and Bullying Experiences

Bullying Experiences	Gender		$\chi^2$	<i>p</i>
	Male	Female		
Victimization				
Physical			2.8	.10
Never/ Once in the last month	53(40.5)	65(49.6)		
Twice or three times per month/ Once per week	9(6.9)	4(3.1)		
Social <sup>a</sup>			4.43*	.04
Never/ Once in the last month	56(43.1)	52(40.0)		
Twice or three times per month/ Once per week	6(4.6)	16(12.3)		
Verbal			.11	.75
Never/ Once in the last month	48(36.6)	55(42.0)		
Twice or three times per month/ Once per week	14(10.7)	14(10.7)		
Electronic			1.30	.25
Never/ Once in the last month	59(45.0)	62(47.3)		
Twice or three times per month/ Once per week	3(2.3)	7(5.3)		
Ethnic			1.98	.16
Never/ Once in the last month	54(41.2)	65(49.6)		
Twice or three times per month/ Once per week	8(6.1)	4(3.1)		
Sexual			2.54	.11
Never/ Once in the last month	52(39.7)	64(48.9)		
Twice or three times per month/ Once per week	10(7.6)	5(3.8)		
Perpetration				
Physical <sup>b</sup>			.79	.37
Never/ Once in the last month	54(41.9)	65(50.4)		
Twice or three times per month/ Once per week	6(4.7)	4(3.1)		
Social			.23	.63
Never/ Once in the last month	58(44.3)	63(48.1)		
Twice or three times per month/ Once per week	4(3.1)	6(4.6)		
Verbal			1.81	.18
Never/ Once in the last month	53(40.5)	64(48.9)		
Twice or three times per month/ Once per week	9(6.9)	5(3.8)		
Electronic			.01	.94
Never/ Once in the last month	61(46.6)	68(51.9)		
Twice or three times per month/ Once per week	1(0.8)	1(0.8)		
Ethnic <sup>a</sup>			2.23	.14
Never/ Once in the last month	60(46.2)	68(52.3)		
Twice or three times per month/ Once per week	2(1.5)	0(0.0)		
Sexual			1.27	.26
Never/ Once in the last month	59(45.0)	68(51.9)		
Twice or three times per month/ Once per week	3(2.3)	1(0.8)		

Note: *N* = 131 unless otherwise indicated. <sup>a</sup>*N* = 130. <sup>b</sup>*N* = 129; Statistical significance: \**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

The effect of gender on participant's mental health was also assessed, using a one-way, between-subjects ANOVA. Results indicated that there was a main effect of gender  $F(1,108) = 11.36, p = .001, \eta^2 = .095$ , such that boys had higher scores on the Mental Health Continuum (MHC), independent of bullying, in comparison to girls. The overall mean MHC scores for both genders are presented in Figure 1 below. Overall, boys scored higher on the MHC, indicating more positive mental health and wellbeing as compared to female peers.

Figure 1. Effect of Gender on Mental Health (MHC Score)



### *Research Question 1: Bullying Experiences*

Participants reported the frequency of their experiences with both bullying victimization and perpetration for each type of bullying studied, the results of which are summarized in Table 2.

Table 2. Frequencies of Reported Bullying Victimization and Perpetration Experiences.

Bullying Type	Victimization <i>N</i> (%)	Perpetration <i>N</i> (%)
<b>Physical</b>		
Never in the last month	104 (79.4) <sup>b</sup>	101 (78.3)
One time in the last month	14 (10.7)	18 (14.0)
Two or three times in the last month	8 (6.1)	7 (5.4)
At least once a week in the last month	5 (3.8)	3 (2.3)
<b>Verbal</b>		
Never in the last month	73 (55.7)	86 (65.6)
One time in the last month	30 (22.9)	31 (23.7)
Two or three times in the last month	13 (9.9)	8 (6.1)
At least once a week in the last month	15 (11.5)	6 (4.6)
<b>Social</b>		
Never in the last month	79 (60.8) <sup>a</sup>	103 (78.6)
One time in the last month	29 (22.3)	18 (13.7)
Two or three times in the last month	13 (10.0)	8 (6.1)
At least once a week in the last month	9 (6.9)	2 (1.5)
<b>Electronic</b>		
Never in the last month	107 (81.7)	114 (87.0)
One time in the last month	14 (10.7)	15 (11.5)
Two or three times in the last month	5 (3.8)	1 (0.8)
At least once a week in the last month	5 (3.8)	1 (0.8)
<b>Ethnic</b>		
Never in the last month	100 (76.3)	120 (92.3) <sup>a</sup>
One time in the last month	19 (14.5)	8 (6.2)
Two or three times in the last month	7 (5.3)	2 (1.5)
At least once a week in the last month	5 (3.8)	0 (0)
<b>Sexual</b>		
Never in the last month	105 (80.2)	124 (94.7)
One time in the last month	11 (8.4)	3 (2.3)
Two or three times in the last month	8 (6.1)	3 (2.3)
At least once a week in the last month	7 (5.3)	1 (0.8)

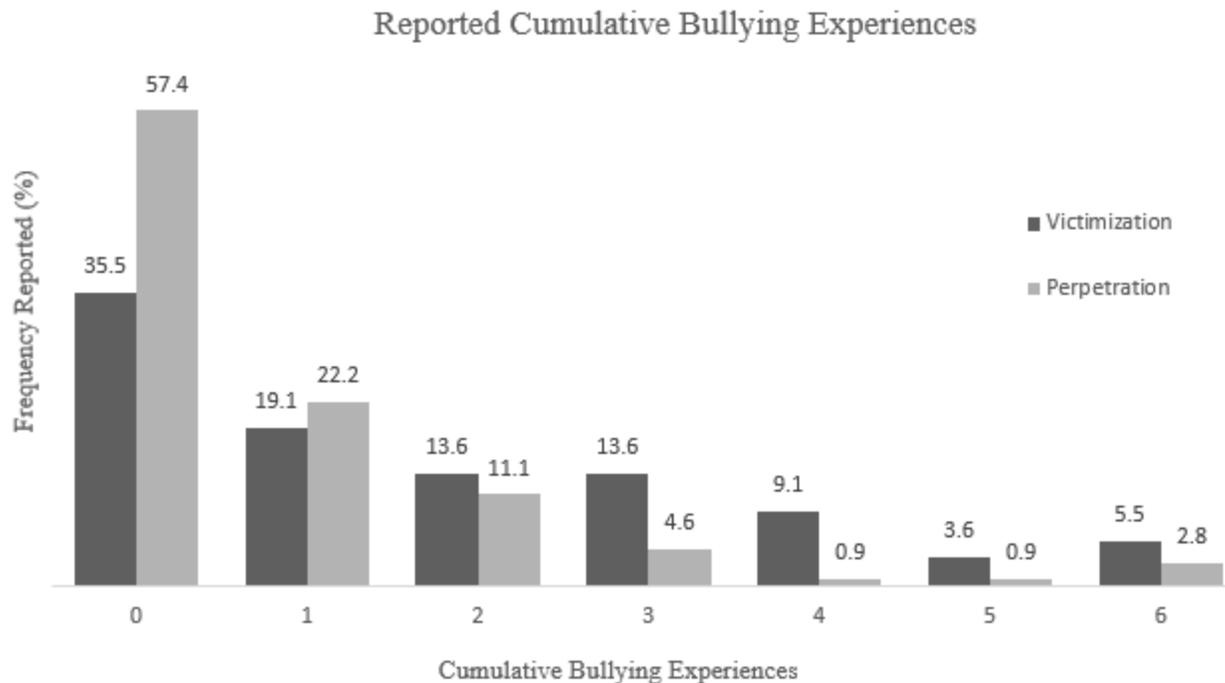
*N* = 131 unless otherwise indicated. <sup>a</sup>*N* = 130. <sup>b</sup>*N* = 129.

Participants reported higher frequencies of victimization as compared to perpetration across all bullying types. Verbal bullying was the most frequently reported type for both victimization and perpetration, with almost half (44.3%, 58 participants) of participants reporting experiencing verbal victimization in the past month. Social bullying victimization was also reported by a significant portion of the sample (39.2%, 51 participants), followed by ethnic victimization, which approximately one quarter of participants reported experiencing in the past month (24.7%, 31 participants). Perpetration rates were lowest for sexual bullying (94.7%

reported no perpetration in the past month), followed by ethnic bullying perpetration (92.3% reported no perpetration in the past month).

Frequencies of cumulative bullying experiences with both victimization and perpetration (i.e. the total number of types of bullying participants experienced) were also calculated, and are presented in Figure 2. It is important to note that although cumulative bullying experiences present as a score from 0-6, these values were treated as categorical data in subsequent analyses, as they are not true ratio data (Muijs, 2011).

Figure 2. Frequencies of Reported Cumulative Bullying Experiences



*Note.* Victimization,  $N=110$ ; Perpetration  $N=108$ .

Although the majority of participants reported no bullying experiences as perpetrators (57.4%, 62 participants), most respondents experienced at least one type of victimization (64.5%, 71 participants) in the past month.

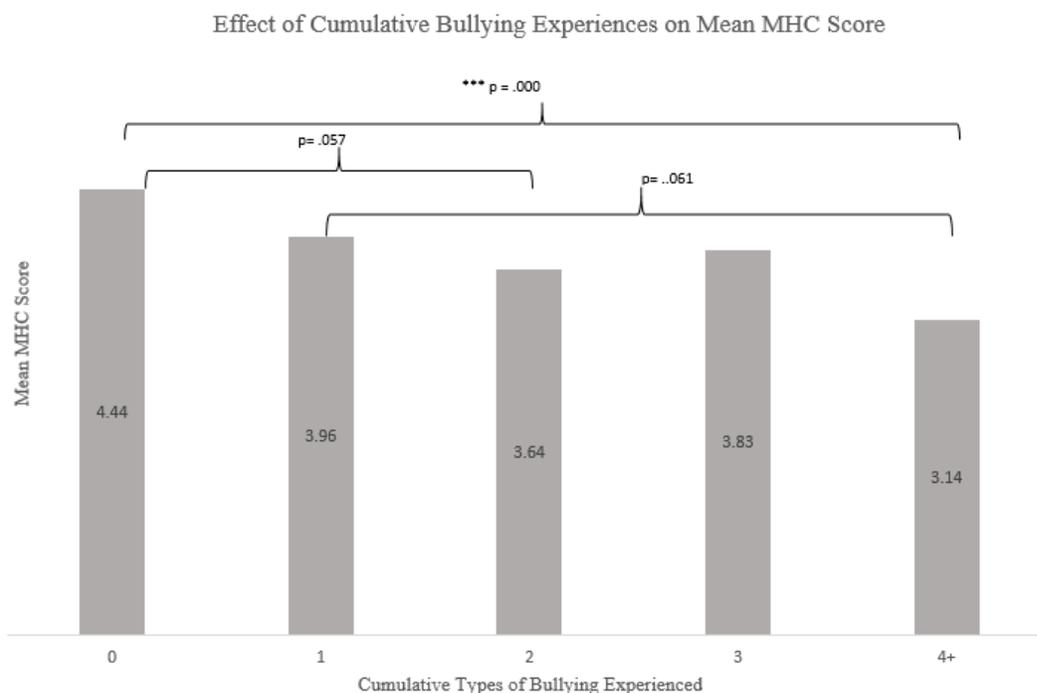
*Research Question 2- Effect of Bullying Victimization Experiences on Mental Health*

To investigate the effect of bullying victimization experiences on participants' mental health, a two-way, between-subjects ANOVA was conducted. In this test, cumulative bullying victimization experiences and gender were the independent variables, and mental health (measured by Mental Health Continuum score) was the dependent variable. The test for homogeneity of variance was not significant, (Levene's  $F(4, 105) = 1.77, ns$ ), indicating that this assumption underlying the application of ANOVA was met. Results from this test indicated that the two-way interaction between bullying victimization experiences and gender was not significant,  $F(4,100) = .176, ns, \eta^2 = .007$ . Two main effects emerged: the main effect of bullying victimization on mental health was statistically significant,  $F(4,100) = 5.25, p < .001, \eta^2 = .174$  and there was a main effect of gender  $F(1,100) = 5.61, p < .020, \eta^2 = .053$ .

Post-hoc comparisons using the Bonferroni test were conducted for cumulative types of bullying victimization reported, the results of which are presented in Figure 3. The no bullying reported group ( $M = 3.96, SD = 1.06$ ) was not significantly different from the one type reported group ( $M = 3.96, SD = 1.06, ns$ ) or the three types reported group ( $M = 3.83, SD = .65, ns$ ). Marginally significant differences were observed between the no bullying reported group and the two types reported group ( $M = 3.64, SD = .87, p = .057$ ), and the most significant difference was evident between the no bullying reported group and the four or more types reported group ( $M = 3.14, SD = 1.02, p = .000$ ). The one type of bullying victimization reported group ( $M = 3.96, SD = 1.06$ ) was not significantly different from the two types reported group ( $M = 3.64, SD = .87, ns$ ) or the three types reported group ( $M = 3.83, SD = .65, ns$ ). Marginally significant difference was assessed between the one type reported and the four or more types reported groups ( $M = 3.14, SD = 1.02, p = .061$ ). The two types reported group ( $M = 3.64, SD = .87$ ) was not significantly

different from the three types reported ( $M=3.83$ ,  $SD= .65$ ,  $ns$ ) or four or more types reported ( $M=3.14$ ,  $SD= 1.02$ ,  $ns$ ) groups. The three types of bullying victimization reported group ( $M=3.83$ ,  $SD= .65$ ) was also not significantly different from the four or more types reported group ( $M=3.14$ ,  $SD= 1.02$ ,  $ns$ ).

Figure 3. Effect of Cumulative Bullying Experiences on Mean MHC Score



Note. Statistical significance: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

These results indicate that participants who experienced four or more types of bullying victimization had lower reported scores of mental health and wellbeing. Although marginally significant differences were found for participants experiencing two types of bullying as opposed to no bullying, and between respondents who experienced one type of bullying compared to four plus types, the greatest difference was evident between no experiences of bullying victimization and 4+ types of bullying victimization experiences. In particular, participants who reported

experiencing 4+ types of bullying victimization had the lowest mean score on the Mental Health Continuum (MHC), indicating the lowest reported mental health and wellbeing.

### *Correlations Between Main Outcome Variables*

Correlations between the independent variables used in the hierarchical multiple linear regression analyses described below (positive mental health, school, cultural and peer connectedness) were calculated. The correlations between each of these variables are presented in Table 3.

Table 3. Correlations Between Variables Used in Hierarchical Multiple Linear Regression

Variable	M	SD	1	2	3
1. MHC Score <sup>a</sup>	3.92	1.04			
2. School Connectedness	2.93	.59	.29**		
3. Cultural Connectedness	3.01	.52	.18	.27**	
4. Peer Connectedness	2.91	.58	.26**	.61***	.14

Note. Statistical significance: \* $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$ ;  $N = 125$ , <sup>a</sup> $N = 107$ .

Results indicated significant correlations between mental health (measured using Mental Health Continuum score) and school (.29) and peer connectedness (.26). The correlation between mental health and cultural connectedness was not significant. Correlations were also significant between types of connectedness, as school and peer (.61) and school and cultural connectedness (.27) were strongly and modestly correlated, respectively. Analysis did not find a significant correlation between cultural and peer connectedness (.14).

### *Research Question 3: Protective Factors as Potential Moderators for Predicting Mental Health*

Hierarchical multiple linear regression was used to investigate how cumulative bullying experiences, as well as potential protective factors (school, cultural and peer connectedness) predicted mental health outcomes. Each of these potential protective factors were investigated as main effects as well as moderators. Cumulative bullying experiences were dummy coded so that each number of types of bullying victimization experienced (i.e. 1, 2, 3 and 4+) were compared against 0 types experienced, as a reference category. Each of the potential moderators was

centred before running multiple regression models. Preliminary analyses were conducted to ensure no violation of assumptions, identifying two outliers in the data. Although both cases had Studentized Deleted Residual and Cook's distance values that indicated that they were influential, once they were removed from analysis results were not affected. In addition, the outliers were present in two different moderators, and as they were not multivariate, both were included in subsequent analyses.

In total, three hierarchical multiple linear regressions were conducted for each of the three protective factors hypothesized to be potential moderators. The results of each are summarized in Table 5, and are described below. The first two steps of each regression were entered using the same method, and thus are the same across each regression listed (see Table 4). The results of Steps 3 and 4, where each protective factor was added, are presented for each regression immediately following this section. At Step 1, with gender as the independent variable, the model was significant  $R^2 = .09$ ,  $F(1, 106) = 10.17$ ,  $p = .002$ . At Step 2, cumulative bullying victimization experiences variables were entered in addition to gender, and the model remained significant  $R^2 = .24$ ,  $F(5, 106) = 6.47$ ,  $p < .001$ , accounting for an additional 15% of the variance. These findings indicate a main effect of both gender and cumulative victimization experiences on mental health, confirming results presented earlier in this thesis.

Table 4. Hierarchical Multiple Linear Regression Model for Gender, Cumulative Bullying Experiences and Protective Factors

	School Connectedness				Cultural Connectedness				Peer Connectedness			
	$\beta$	t	95% Confidence Interval		$\beta$	t	95% Confidence Interval		$\beta$	t	95% Confidence Interval	
			Lower	Upper			Lower	Upper			Lower	Upper
<b>Step1</b>												
Gender	-.30	-3.19**	-.99	-.23	-.30	-3.19**	-.99	-.23	-.30	-3.19**	-.99	-.23
$R^2$ Change		.09				.09				.09		
F Change		10.17				10.17				10.17		
df		1,105				1,105				1,105		
<b>Step2</b>												
Gender	-.22	-2.43*	-.81	-.08	-.22	-2.43*	-.81	-.08	-.22	-2.43*	-.81	-.08
Cumulative Bullying Experiences												
0 vs 1 Type	-.18	-1.89	-.98	-.03	-.18	-1.89	-.98	-.03	-.18	-1.89	-.98	-.03
0 vs 2 Types	-.24	-2.45*	-1.26	-.13	-.24	-2.45*	-1.26	-.13	-.24	-2.45*	-1.26	-.13
0 vs 3 Types	-.19	-2.01*	-1.13	-.01	-.19	-2.01*	-1.13	-.01	-.19	-2.01*	-1.13	-.01
0 vs 4+ Types	-.44	-4.40***	-1.67	-.63	-.44	-4.40***	-1.67	-.63	-.44	-4.40***	-1.67	-.63
$R^2$ Change		.15				.15				.15		
F Change		5.14				5.14				5.14		
df		4,101				4,101				4,101		
<b>Step3</b>												
Gender	-.19	-2.24*	-.75	-.05	-.20	-2.22*	-.77	-.04	-.19	-2.11*	-.75	-.02
Cumulative Bullying Experiences												
0 vs 1 Type	-.15	-1.52	-.87	.12	-.19	-2.00*	-1.00	-.01	-.18	-1.87	-.96	.03
0 vs 2 Types	-.22	-2.31*	-1.19	-.09	-.26	-2.73**	-1.34	-.21	-.25	-2.10*	-1.29	-.18
0 vs 3 Types	-.15	-1.64	-1.01	.10	-.20	-2.07*	-1.13	-.02	-.16	-1.63	-1.02	.10
0 vs 4+ Types	-.42	-4.39***	-1.62	-.61	-.44	-4.51***	-1.68	-.65	-.42	-4.27***	-1.61	-.59
Protective Factor		2.77**	.11	.68	.17	2.00*	.00	.67	.20	2.25*	.04	.63
$R^2$ Change	.24											
F Change		.05				.03				.04		
F Change		7.66				4.01				5.04		
df		1,100				1,100				1,100		
<b>Step4</b>												
Gender	-.19	-2.16*	-.76	-.03	-.19	-2.05*	-.75	-.01	-.16	-1.80	-.69	.03
Cumulative Bullying Experiences												
0 vs 1 Type	-.15	-1.51	-.89	.12	-.20	-2.02*	-1.01	-.01	-.19	-2.00*	-.99	-.00

0 vs 2 Types	-.22	-2.26*	-1.20	-.08	-.26	-2.62*	-1.37	-.19	-.26	-2.70**	-1.34	-.20
0 vs 3 Types	-.17	-1.81	-1.08	.05	-.20	-2.05*	-1.14	-.02	-.21	-2.15*	-1.21	-.05
0 vs 4+ Types	-.43	-4.33***	-1.64	-.61	-.45	-4.54***	-1.71	-.67	-.42	-4.34***	-1.63	-.61
Protective Factor	.21	1.24	-.21	.92	.34	1.78	-.08	1.41	.16	.77	-.44	.99
Cumulative Bullying Experiences vs												
Protective Factor												
1 Type Bullying vs Protective Factor	.02	.13	-.77	.88	-.11	-.93	-1.53	.56	.13	1.11	-.44	1.58
2 Types Bullying vs Protective Factor	.09	.91	-.58	1.58	-.07	-.61	-1.72	.91	.05	.42	-.81	1.24
3 Types Bullying vs Protective Factor	-.08	-.70	-1.31	.63	.03	-.30	-1.42	1.94	-.15	-1.17	-1.63	.42
4+ Types Bullying vs Protective Factor	.03	.27	-.68	.89	-.15	-1.00	-1.36	.45	.03	.21	-.78	.96
$R^2$ Change		.01				.01				.04		
$F$ Change		.49				.46				1.34		
$df$		4,96				4,96				4,96		

Note. Statistical significance: \* $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$

### School Connectedness

At Step 3 of the first regression analysis, school connectedness (i.e. the protective factor) was entered as an additional independent variable. The model remained significant, and a main effect of school connectedness on mental health was observed  $R^2=.30$ ,  $F(6,106)= 7.02$ ,  $p<.001$ . At Step 4, the cumulative bullying experiences vs school connectedness interaction terms were entered into the model. Although the model remained significant, and accounted for 22% more of the variance than at Step 1,  $R^2=.31$ ,  $F(10,106)= 4.33$ ,  $p<.001$ , no two-way interactions reached significance, suggesting no moderation effect of school connectedness on the relationship between cumulative bullying victimization and mental health.

### Cultural Connectedness

In the second regression, cultural connectedness was entered as the protective factor variable at Step 3. The model once again remained was significant at this step, and a main effect of cultural connectedness on mental health was evident  $R^2=.27$ ,  $F(6,106)= 6.22$ ,  $p<.001$ . At Step 4, cumulative bullying experiences vs cultural connectedness interaction terms were entered into the model, and once again the model remained significant, accounting for 20% more variance than at Step 1  $R^2=.29$ ,  $F(10, 106)= 3.83$ ,  $p<.001$ . No two-way interactions were significant in the final model, indicating no moderating effect of cultural connectedness.

### Peer Connectedness

Peer connectedness was entered as a predictor at Step 3 of the third regression analysis, and the model remained significant. A main effect of peer connectedness was observed  $R^2= .28$ ,  $F(6,106)= 6.45$ ,  $p<.001$ . Cumulative bullying victimization experiences vs peer connectedness interaction terms were added at Step 4, at which time the model remained significant, accounting for 23% more variance than at Step 1  $R^2=.32$ ,  $F(10,106)= 4.46$ ,  $p<.001$ . Similar to previous

regression analyses conducted for the other protective factors, no two-way interactions were significant at Step 4, suggesting no moderating effect of peer connectedness.

#### *Additional Analysis*

Additional analyses were conducted in order to investigate the application of these protective factors. As mentioned previously, a small subset of the sample ( $n= 19$ ) participated in an 18-week, school based, culturally relevant mentoring program. In order to ascertain whether participation in this program was associated with additional effects on participant's mental health, a fourth hierarchical multiple linear regression was conducted. In this analysis, mentoring participation, gender and cumulative bullying victimization experiences were entered into the model as independent variables, with mental health (measured by MHC score) as the dependent variable. As the mentoring group size was small, moderation effect of mentoring participation was not investigated.

The hierarchical multiple linear regression model for mentoring participation is summarized in Table 5. Mentoring participation was entered at Step 1, at which time the model was significant  $R^2=.06$ ,  $F(1,107)= 6.32$ ,  $p=.013$ . The model was again significant at Step 2, when gender was added as a predictor  $R^2=.16$ ,  $F(2,107)= 9.90$ ,  $p<.001$ , accounting for an additional 10% of the variance. The model remained significant at Step 3, when cumulative bullying victimization experiences were entered. A main effect of mentoring participation on mental health was observed,  $R^2=.30$ ,  $F(6,107)= 7.07$ ,  $p<.001$ . The final model predicted 24% more of the variance than the model at Step 1.

Table 5. Hierarchical Multiple Linear Regression Model for Mentoring Participation, Gender and Cumulative Bullying Experiences

	$\beta$	t	95% Confidence Interval	
			Lower Bound	Upper Bound
<b>Step 1</b>				
Mentoring Participation	.24	2.51*	.14	1.19
<b>Step 2</b>				
Mentoring Participation	.24	2.71**	.18	1.17
Gender	-.32	-3.57**	-1.04	-.30
<b>Step 3</b>				
Mentoring Participation	-.20	2.36*	.09	1.02
Gender	-.23	-2.68**	-.84	-.13
Cumulative Bullying Experiences				
0 vs 1 Type of Bullying	-.18	-1.90	-.96	.02
0 vs 2 Types of Bullying	-.23	-2.42*	-1.23	-.12
0 vs 3 Types of Bullying	-.20	-2.13*	-1.14	-.04
0 vs 4+ Types of Bullying	-.41	-4.28***	-1.62	-.60

Note. Statistical significance: \*p <.05, \*\* p< .01, \*\*\*p<.001

## Discussion

At present, there is a paucity of research investigating bullying experiences among FNMI youth in Canada. Extensive empirical inquiry suggests that bullying is a common experience among adolescents nationwide, which is particularly concerning, as engagement in bullying behaviour in any capacity has been linked with a multitude of psychological, socio-emotional and physical consequences across the lifespan. Furthermore, FNMI youth in Canada may be at increased risk for peer victimization, and its resultant consequences due to the historical context that has placed Indigenous peoples across Canada in a position of systemic disadvantage. Encouragingly however, potential variables have been identified as having a buffering effect on these negative outcomes for Aboriginal youth throughout North America. Appropriately, many of these factors are evident, or may be integrated into the school setting, where bullying often occurs. In light of this research, and to address this gap in the literature, the purpose of the present study was to examine the bullying experiences of FNMI youth, the effects of bullying victimization on mental health, and the potential role of cultural and school-based protective factors in moderating this relationship. This paper offers unique contributions to the literature

due to its longitudinal design, strengths-based approach, and investigation of an applied version of the protective factors of cultural, school and peer connectedness.

### *Relevance to Previous Research*

The results of the present study further existing findings exploring bullying experiences among FNMI youth. Descriptive results indicated that bullying is a common experience among FNMI youth, with more than half of respondents (65%) experiencing at least one type of bullying victimization in the past month, and almost half (43%) reporting bullying perpetration in the past month. These rates are significantly higher than those reported by youth nationwide (37% and 31-37%, respectively) (Vaillancourt et al., 2010). Regardless of type of bullying, participants reported experiencing more frequent victimization, as compared to perpetration. These findings are consistent with those of Lemstra et al. (2011) who found that on-reserve, First Nations adolescents were more likely to experience bullying as compared to Canadian youth as a whole.

Of particular importance to this population, ethnic bullying victimization was reported by a quarter of the sample (25%), and occurred more frequently than other types of bullying victimization (i.e. physical, cyber, etc.). Interestingly, this percentage is higher than rates of ethnic bullying reported by students in the greater school district (approximately 9%) (Thames Valley District School Board, 2012). This finding is consistent with previous studies that have found that Aboriginal youth are at increased risk for bullying involvement in schools as compared to their ethnic majority peers (Do, 2012; Eisler & Schissel, 2004), however contravene results described by Brownlee et al. (2014), who found no significant differences among bullying experiences between Aboriginal and non-Aboriginal students. On the whole, however, these findings in concert with those discussed above suggest that FNMI youth may be at increased risk

of peer victimization in comparison to their peers, potentially as a result of their ethnic and cultural background. As mentioned previously, this may be a result of systemic power differentials and resulting imbalances in social capital that place FNMI students in a lower position or status, and may result in increased risk of peer aggression (Rigby, 2004; Do, 2012).

Contrary to expectations, gender differences were not observed across types of bullying experienced, with only social bullying victimization resulting in a significant association. This is somewhat surprising as research regarding bullying among youth has identified some gender differences in types of bullying engagement (e.g. girls may be more likely to be involved in relational or social aggression as compared to boys) (Carbone-Lopez, Finn-Aage, & Brick, 2010; Ellis, Crooks, & Wolfe, 2009; MacCormack, 2014), however results from studies examining gender differences in peer victimization among Aboriginal youth have yielded mixed results. For example, while Do (2012) reported that Aboriginal boys were more likely to participate in physical bullying, and Aboriginal girls were more likely to engage in social bullying, Brownlee et al. (2014) found no gender differences in bullying behaviours in their examination of bullying behaviour among Aboriginal students. Gender differences were observed however, in terms of mental health and wellbeing among FNMI youth. Independent of bullying experiences, male participants reported higher mental wellbeing as compared to their female peers. This finding is consistent with longitudinal reports on the mental health and well-being of youth in Canada, as the Health Behaviour in School Aged Children Trends Report 1990-2010 found that adolescent girls consistently reported more negative mental health than their male counterparts across multiple indicators (MacCormack, 2014), suggesting the potential need for gender specific intervention in order to address the increased mental health risks girls face.

Cumulative bullying victimization experiences were found to have a significant main effect on wellbeing among FNMI youth in this sample, such that increases in cumulative bullying experiences were related to more negative reported mental health. Participants who experienced no bullying victimization in the past month reported the highest mental wellbeing, as compared to participants who experienced 4+ victimization experiences, who reported the lowest mental wellbeing of youth in the sample. In fact, while marginally significant differences were found for participants experiencing two types of bullying as compared to no bullying, and between respondents who experienced one type of bullying compared to four plus types, the greatest difference was evident between participants who reported no experiences of bullying victimization, and those who experienced 4+ types of bullying victimization. The negative effects of cumulative bullying experiences on mental health and wellbeing found in this study are consistent with extensive research supporting this relationship in large scale studies of children and adolescents (Hemphill et al., 2015; Holt et al., 2015; Klomek et al., 2015). Importantly, these findings are also in line with those of Lemstra et al. (2011), who reported that First Nations youth who were bullied were twice as likely as youth who were not bullied to suffer from depressed mood, regardless of bullying type. The findings from this study suggest that the negative impact of bullying on mental health outcomes is similarly damaging for FNMI youth.

These findings represent a particularly important contribution to the literature, as this study is one of the first to incorporate a longitudinal design when assessing bullying experiences among FNMI youth, and their effects of mental health. The longitudinal design employed here allows us to assess temporal ordering, thus lending further support to previous results that associate bullying experiences with poor mental health and wellbeing.

Contrary to the third hypothesis, regression analyses indicated that there was no moderation effect for any of the potential protective factors identified in this study (i.e. cultural, school and peer connectedness) on the relationship between bullying and mental health and wellbeing. As research investigating the effects of protective factors specifically related to bullying among FNMI youth is scarce, it is difficult to explain this finding. One possible explanation, however, may involve the small sample size of the present study, particularly when split into bullying categories. Importantly however, significant main effects were found for each protective factor, suggesting that these variables may predict positive mental health and wellbeing independent of bullying experiences. Consistent with findings in the literature described above that supported school-based protective factors in reducing negative outcomes and while increasing resilience, school engagement and achievement (e.g. Bearinger et al., 2005; Crooks et al., 2015, 2010; Mykota & Schwean, 2007; Stumblingbear & Romans, 2012; Wexler et al., 2015), the present study confirmed that both school and peer connectedness predicted positive mental wellbeing among FNMI youth in this sample. Perhaps most noteworthy however, was the finding that cultural connectedness also positively predicted mental wellbeing among FNMI youth. Indeed, this was the strongest predictor identified in this study, accounting for the most variance of the three protective factors in the final regression model. This finding lends additional support to the value of cultural connectedness in reducing risk and facilitating wellbeing and resilience among Indigenous youth suggested by a multitude of authors (e.g. Hallett et al., 2007; Lafromboise et al., 2010; Wexler et al., 2015; Whitbeck et al., 2001, 2002; Yu & Stiffman, 2007 etc.). Furthermore, these findings suggest support for researchers who have theorized culture as a critical element in addressing mental health challenges among Indigenous populations (e.g. Anderson & Olson, 2013; Gone, 2009; Penn et al., 2008).

It is worthwhile to note that cultural connectedness was not correlated with mental health, however became significant when entered into the regression model with bullying experiences. In fact, when cultural connectedness was entered into the model, all types of bullying became significant (see Table 4). This finding suggests that culture may be somehow interacting with bullying due to an unknown third variable. It may also suggest that culture may provide a unique contribution to the relationship between bullying and mental health, as this finding was only indicated for this protective factor, but neither of the other two studied.

Additional findings regarding participation in mentoring also represent an important advancement of the current literature in this area. Results indicated that participation in mentoring was found to predict positive mental health among FNMI youth. This finding is particularly valuable, as investigating the outcomes associated with mentoring participation provided an opportunity to assess the application of the protective factors, as opposed to exploring them conceptually. The mentoring program incorporated cultural, school and peer connectedness in the context of a school-based, culturally relevant intervention program designed to promote health relationships and cultural identity specifically for FNMI youth. The program is led by FNMI young adults, who facilitate sessions and act as mentors, providing social support to groups of Indigenous students (i.e. fostering peer connectedness). Program organization and content is based on the Medicine Wheel life cycles, and incorporate both specific cultural components as well as knowledge and skill building activities (i.e. bolstering cultural connectedness and identity) (Crooks et al., 2015a). For example, in the Spring (East/Emotional quadrant), sessions cover bullying, healthy eating and representations of FNMI people in the media. In the Summer (South/Mental quadrant), sessions address topics such as communication skills and handling peer conflicts, peer pressure and personal strengths. The 18,

one-hour sessions are spread over the course of the school year, and take place in the schools themselves, offering students an opportunity to engage in school-based programming (i.e. school connectedness). These findings therefore, lend further support to the value of these protective factors when operationalized in the context of intervention efforts.

### *Implications*

Findings from this study suggest multiple implications for practice. As mentioned above, the protective factors explored in this research predicted positive mental wellbeing independent of cumulative bullying victimization experiences. However, neither cultural, school, nor peer connectedness interacted with participant's wellbeing in the context of bullying experiences over and above the general positive effects on mental health (i.e. the protective factors had no greater impact for youth who experience greater bullying victimization as compared to those who experience less). Thus, these findings suggest two implications, supporting the merit of culturally relevant programming schools, while also representing a call to action for developing programs that specifically target bullying behaviours in this population.

All three of the protective factors explored in this study (cultural, school and peer connectedness) predicted more positive mental health among FNMI youth. Furthermore, a positive association was found between participation in an intervention program that represented an application of these protective factors, mental health and wellbeing. These findings support the importance of including these protective factors in future prevention and intervention efforts for FNMI youth in Canada. Of particular importance, these findings add to the growing body of evidence supporting the benefits of integrating culturally relevant, strengths-based programming for Indigenous students into the school setting as a means of facilitating positive outcomes across

domains of functioning as well as reducing risk for Indigenous youth in Canada (e.g. Crooks et al., 2010, 2015a; McIntosh et al., 2014).

Even with improvements to mental health however, the protective factors identified in this study did not exert additional protective influence for youth experiencing increased bullying victimization. Although this finding may be related to the small sample size, identifying and implementing effective prevention and intervention strategies for bullying is still one of the greatest challenges for educators today (Evans, Fraser, & Cotter, 2014). In fact, researchers assert that bullying is a complex relationship problem that requires targeted, intensive intervention (Ttofi & Harrington, 2011). Encouragingly, however, some researchers are reporting positive initial results from innovative bullying intervention programming for Aboriginal students, such as Rawana et al. (2010), who employed a strengths-based, whole-school approach to bullying intervention, in which fostering a more accepting environment reflective of the strengths of Aboriginal students increased the positive environment within the school and may lower incidence of bullying among Aboriginal students. Taken together, these findings suggest the need for a tiered approach, that incorporates both universal prevention and promotion of strengths (e.g. Fallon, O'Keeffe, & Sugai, 2012; Sugai & Horner, 2009), as well as targeted, bullying-specific interventions, as a potential means of promoting positive outcomes while mitigating risk. Programs specifically for FNMI youth may incorporate a similar structure as the mentoring program studied here as a means of facilitating positive overall improvements to mental well-being, with additional bullying-specific components to address this problem.

### *Limitations*

The findings of the present study should be considered in the context of certain limitations. Firstly, data was collected solely through the use of self-report questionnaires.

Concerns about response biases inherent with self-report measures may influence results, particularly in regards to reported bullying experiences. As this study was part of a larger, longitudinal evaluation in which bullying was not the specific focus, the questionnaire regarding bullying experiences was relatively brief. Moreover, Vaillancourt et al. (2008; 2010b) conducted multiple studies assessing the validity of measures of bullying experiences, finding inconsistencies between children and youth's definitions of bullying, and those of researchers, which may lead to inaccuracies in reporting, and thus inaccurate prevalence rates. Although the questionnaire used in the present study followed Vaillancourt et al.'s (2010b) recommendations, including a definition for each type of bullying, it is still possible that student's understanding of bullying was different than that intended by the research team. In order to clarify whether this was the case, and to strengthen the validity of these results, making use of peer, teacher or parent reports would provide a means of corroborating self-reported ratings of both engagement in bullying behaviour and scores of mental health and well-being.

Perhaps the greatest limitation in the present study however is the small sample size. Although research staff made a concentrated and extended effort to follow the cohort of FNMI youth in this study throughout the three-year period, the small sample size limited the power and sophistication of statistical analyses that could be used in this research, thus limiting our ability to assess differences between groups. This may have resulted in severity and chronicity of bullying victimization being subsumed by type. For example, although it is likely that significant differences would be exhibited among youth who experience substantial victimization experiences (i.e. 4, 5, or 6 types), the small number of participants within these groups made statistical comparisons impossible, and participants who experienced the greatest peer victimization were collapsed into one group, which potentially masked differences that may be

evident when victimization increases. Additionally, type of bullying may not be the best proxy for severity of bullying. For example, being called a mean name (verbal victimization) as well as being pushed once (physical victimization) would be classified as two cumulative types of bullying victimization, whereas a single, yet severe physical assault (i.e. getting beaten up) would only be classified as one type of victimization, and would be represented as less experienced cumulative victimization. Furthermore, due to the small sample size, cumulative bullying experiences were calculated irrespective of type of bullying. Thus, it was impossible to elucidate the potentially different impact of each type of bullying on mental health outcomes. A larger sample size would have allowed for more specific differentiation between groups in all of these situations, highlighting further potential differences across incidence, severity and type of bullying. Finally, the small sample size may have impeded moderation (interaction) analyses, thus underestimating or misrepresenting the true interaction between the protective factors and bullying experiences and their effects on mental health and wellbeing.

#### *Future Directions*

Although the findings of the present study are encouraging, additional inquiry in this area is needed to further clarify these findings. First and foremost, future research replicating these results with a larger and more diverse sample is essential. In order to better understand group differences in bullying victimization, future initiatives utilizing a similar longitudinal design with a larger sample are needed in order to meaningfully assess differences in severity, chronicity, cumulative bullying experiences, and outcomes associated with different types of bullying.

In addition, while bullying perpetration was examined in the first research question in order to provide a cross-sectional picture of bullying experiences among FNMI youth across roles and types of involvement, the focus of this thesis was on victimization. Future research is

needed to gain a better understanding of who is doing the bullying, particularly for this population. For example lateral violence (i.e. FNMI youth bullying other FNMI youth) may have different outcomes and implications as compared to bullying perpetration enacted by non-FNMI youth. Further investigation is necessary to explore these differential impacts.

Moreover, although cultural connectedness was not in and of itself correlated with positive mental health, it strongly predicted mental wellbeing when entered into the model alongside bullying victimization experiences. These results suggest a possible interaction between these three variables that requires additional empirical inquiry in order to be better understood.

Finally, future studies may choose to incorporate a qualitative or mixed-methods design in order to better understand bullying experiences among FNMI adolescents. As a relatively new field of inquiry, and in light of the aforementioned weaknesses associated with measuring bullying behaviours, qualitative methods may facilitate a more holistic understanding, and a more accurate reflection of the mechanism that underlie bullying experiences among FNMI youth. This type of analysis may be particularly valuable due to the heterogeneity and diversity of Indigenous peoples throughout Canada, and may offer a more in depth perspective of the unique experiences of FNMI youth.

### *Summary*

The current study presents valuable information that furthers knowledge regarding bullying among FNMI youth, by utilizing longitudinal data from a cohort of Indigenous adolescents from a large schoolboard in southwestern Ontario. Findings from this study indicated that FNMI youth in this sample reported more frequent bullying experiences as both victims and perpetrators as compared to national averages. Further, a significant percentage of participants

reported experiencing bullying victimization as a result of their ethnic/cultural background. These findings are particularly worrisome, as increases in cumulative bullying experiences were related to more poor mental health. Moreover, although the protective factors identified in this study did not have a moderating effect on the relationship between bullying and mental health among youth in the sample, all three factors (cultural, school and peer connectedness) positively predicted mental wellbeing, independent of bullying victimization. Importantly, participation in a mentoring program that applied each of these protective factors in the context of an intervention was also associated with increased positive mental health. Taken together, these findings support the merit of school-based, culturally relevant initiatives that operationalize these protective factors in the form of applied interventions, while also suggesting the need for targeted bullying interventions (i.e. a tiered approach) as a means of mitigating risks and bolstering mental wellbeing among FNMI youth who experience bullying.

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## Curriculum Vitae

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**Master of Arts (MA) Applied Psychology-  
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*Western University, London ON*

**Bachelor of Arts (BA Hons.)- Psychology** **June 2014**  
*Wilfrid Laurier University, Waterloo ON*

### RELEVANT WORK EXPERIENCE

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**Research Assistant** **2014- present**  
*Dr. Claire Crooks, Centre for School Mental Health  
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**Residential Youth Counsellor** **2015- present**  
*Pine River Institute, Shelburne ON*

### PUBLICATIONS

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Crooks, C.V., Jaffe, P.G., & **Dunlop, C.** (In Press). Intervening with children exposed to domestic violence: Multiple opportunities to prevent harm and promote resilience. In C. Renzetti, R. Bergen, & J. Edleson (Eds.), *Sourcebook on Violence Against Women, 3<sup>rd</sup> Edition*. New York: Sage.

### AWARDS AND SCHOLARSHIPS

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Park Davidson Prize for Best Student Poster **2016**  
*Banff Behavioural Sciences Conference XLVIII*

Western Graduate Research Scholarship (WGRS) **2014-2016**

Dean's Honour List, Wilfrid Laurier University **2012-2014**