Academic achievement and cultural identity in First Nations youth:

Where does self-determination come into play?

Johanna Querengesser

School/Applied Child Psychology

McGill University, Montreal

August 2014

A thesis submitted to McGill University

in partial fulfillment of the requirements of the degree of

Master of Arts in Educational Psychology, School/Applied Child Psychology

Table of Contents

Abstract

The present study is an examination of the relations between how First Nations youth identify with their culture of heritage, their academic achievement, and their perceived capacities and opportunities to be self-determined as factors that promote resilience. Thirty-nine First Nations students from a remote community in northern Quebec participated in the study. The results of the correlational analysis support the importance of perceived opportunities in promoting self-determination and suggest a disconnect between the opportunities available in the home and school environment. Based on additional statistical analyses, having a stronger identification with one's culture of heritage is associated with having stronger capacities and opportunities to be self-determined. Contrastingly, neither levels of self-determination or cultural identity were associated with academic outcomes. The findings support the growing literature on cultural identity as a resilience-promoting factor and point towards the importance of culturally relevant curriculum for First Nations students. Future research should focus on redefining and examining markers of success in Indigenous learning in order to contribute to developing identity safe schools.

Résumé

La présente étude examine les relations entre la manière qu'ont les jeunes des Premières Nations de s'identifier à leur culture d'héritage, leur réussite académique et leurs capacités et opportunités à être autodéterminés, en tant que facteur promouvant leur résilience. Trente-neuf étudiants des Premières Nations issus d'une communauté du Nord du Québec ont participé à cette étude. Les résultats de l'analyse corrélationnelle appuient l'importance de la perception des opportunités dans la promotion de l'autodétermination et suggère une coupure entre les opportunités disponibles à la maison et l'environnement scolaire. D'après d'autres analyses statistiques, une identification forte à sa propre culture d'héritage est liée au fait d'avoir une plus forte capacité et de plus grande opportunités à s'autodéterminer. Par contre, ni le niveau d'autodétermination, ni le niveau d'identité culturelle n'ont été associés avec les résultats académiques. Les résultats de cette étude corroborent ceux de la littérature sur l'identité culturelle en tant que facteur promouvant la résilience et soulignent l'importance de programmes culturellement pertinents pour les étudiants des Première nations. Les recherches futures devraient se concentrer sur la redéfinition et l'examen des marqueurs de réussite dans l'apprentissage Autochtone afin de contribuer au développement d'écoles protectrices de leur identité.

Acknowledgments

I would like to acknowledge Dr. Jacob Burack who provided ongoing support throughout the thesis writing process. His contributions have added to my abilities as both a researcher and as a writer and the guidance he provided has made my thesis project a body of work I can be proud of. I would also like to extend my gratitude to Dr. Tara Flanagan. Our mutual interest in this project helped motivate me and her unwavering belief in my abilities encouraged me to continue pursuing this project even in times of doubt.

I would also like to thank my fellow MYST members for their ongoing dedication to this project. Without your assistance, this body of work would not have come to fruition. Specifically, I would like to thank Adrienne Blacklock, Gillian Klassen, Jillian Stewart, and Alexandra D'Arrisso for their friendship and collaborative support throughout this process.

I would also like to thank François Steffann for the French translation of my abstract and for encouraging me to be brave when faced with obstacles throughout the writing process.

To my family and friends, I want to express my gratitude for your love, support, and encouragement. You made me believe that I was capable of seeing this project to the end, even at times when I did not believe this to be true.

Lastly, I would like to extend my most sincere thank you to all the students and staff at the community school. Without your continued enthusiasm and willingness to participate in this project, none of this would have been possible.

List of Tables

List of Figures

Introduction

"Canada recognizes that the inherent right of self-government is an existing aboriginal right under the Constitution, which includes the right of Indigenous peoples to govern themselves in matters that are internal to their communities or integral to their unique cultures, identities, traditions, languages and institutions, and with respect to their special relationship to their land and their resources. This right of self-government includes jurisdiction over the definition of governance structures, First Nation membership, family matters, education, health, and property rights." (Anaya, 2014)

The preceding statement was taken from James Anaya's (2014) report on "the situation of Indigenous peoples in Canada" for the United Nations Special Report on the Rights of Indigenous Peoples. This excerpt is consistent with the notion that self-determination, the process by which a group of people achieve socio-political independence, characterizes a unique right of the Indigenous people of North America. As a political construct, self-determination refers to the *collective* action taken by a group of people to achieve socio-political independence. Self-determination has historically been sought by Canada's Indigenous people who have overcome centuries of oppression to strive to achieve self-governance, independence, and the freedom to express their culture (Monture, 1999). Through active engagement and advocacy in political negotiation, Indigenous populations have taken steps toward becoming more self-determined and these steps are associated with improved mental health outcomes among communities (Chandler & Lalonde, 1998, 2009; Chandler, Lalonde, Sokol, & Hallett, 2003). For example, Chandler and Lalonde (1998) argued that Indigenous communities in British Columbia which had successfully taken steps to secure their right to cultural expression by means of

governance and control were protected against the elevated rates of risky behaviours, including

suicides, that were evident in some of the province's First Nations communities.

Extending beyond the political realm, self-determination as a psychological construct

refers to the volitional actions performed by an *individual* as a result of their own will in which

these behaviours are self-initiated and self-directed (Nota, Soresi, Ferrari, & Wehmeyer, 2011).

Psychological self-determination theorists argue that striving for self-determination is a

developmental task that all young people must confront in achieving independence and

autonomy, and setting personal goals and creating plans for the future must be realized by all

adolescents (Ryan & Deci, 2000; Ward, 1988). However, the cross-cultural application of self-

determination has been contested as this theoretical perspective places a strong emphasis on

Western constructs such as independence and autonomy (Iyengar & DeVoe, 2003; Iyengar &

Lepper, 1999; Markus & Kitayama, 2003), whereas many non-Western societies emphasize

interdependence and collective contributions to the community and family (Dehyle & Margonis,

1995; Fryberg, Covarrubias, & Burack, 2013; Fryberg & Markus, 2003, 2007). Accordingly, the

appropriateness of examining non-Western populations from a self-determination theoretical

perspective must be considered for Indigenous populations.

In this study, the focus will be on the influence of cultural identity in facilitating the

psychological needs which encourage self-determination and how these two factors impact

academic achievement. Academic competence is considered an important developmental task in

childhood and adolescence, and scholastic competence contributes to the long-term adaptive

functioning of an individual (Masten & Coatsworth, 1998; Masten & Powell, 2003). Specifically

among First Nations peoples, academic performance has implications that reach beyond

individual outcomes to impact the well-being of families, communities, and even cultural groups

(Royal Commission on Aboriginal Peoples, 1996). However, academic success is viewed as a Western measure of scholastic abilities that emphasizes individual performance and thus, may not reflect the markers of success important to Indigenous learning such as teacher-student relations and school belongingness (Whitesell, Mitchell, Spicer, & The Voices of Indian Teens Project Team, 2009). Similarly, the use of a self-determination theoretical perspective may not lend itself seamlessly to the study of motivation among First Nations students as it strongly emphasizes an independent mindset and may not be appropriate to use in an Indigenous context in which interdependent representations of self are emphasized. Accordingly, the present study is considered an exploratory investigation to examine some basic issues relevant to promoting academic success and self-determination among First Nations adolescents.

Background

At every level of education, Indigenous people continue to lag far behind the general population. According to the 2011 Canadian household survey, 28.9% of Canada's Indigenous peoples aged 25 to 64 had not finished high school as compared to 12.1% of their non-Indigenous counterparts (Statistics Canada, 2011). The historical loss and trauma experienced by Indigenous peoples has been cited as an explanation for the academic achievement gap between Indigenous and non-Indigenous students (Bombay, Matheson, & Anisman, 2010; Whitbeck, Chen, Hoyt, & Adams, 2004). While failure to complete high school has far reaching consequences for all populations, these consequences are likely to have a stronger negative impact on Canada's Indigenous Peoples due to their unique history of colonization and oppression.

While national surveys are important to monitor the overall progress experienced by Canada's Indigenous people, they can also promote deficit perspectives which do not account for

the ways in which contexts are culturally defined entities that can be appropriate for some, but

not for others (Fryberg et al., 2013). For example, the cultural models of education funded by the

federal and provincial/territorial governments are typically based on the Western approaches to

learning and teaching which emphasize independent representations of self (Henrich, Heine, &

Norenzayan, 2010). In contrast, interdependent representations of self which involve the

collective contributions to the community and family are often emphasized in Indigenous

contexts (Dehyle & Margonis, 1995; Fryberg et al., 2013; Fryberg & Markus, 2003, 2007). The

incongruence between these two sets of culturally diverse values can lead to discomfort, lowered

self-esteem, and a sense of inadequacy that can have harmful effects on academic outcomes for

Indigenous students (Beiser, Erickson, Fleming, & Iacono, 1993; Fryberg et al., 2013). While

national statistics provide concrete information about this population as a whole, they do not

distinguish between individuals and communities with regard to success. On a community-by-

community basis, the interplay of factors such as cultural settings, individual cultural identities,

and positive outcomes must be considered while still recognizing that some common factors may

be present across communities who share a historical legacy of colonization and oppression

(Burack, Blidner, Flores, & Fitch, 2007; Burack, Bombay, Flores, Stewart, & Ponizovsky, 2014).

　　　While acknowledging that Indigenous Peoples continue experiencing hardships as a

result of historical trauma, the many strengths exhibited in this population that promote success

and well-being despite being at-risk must also be noted. Examples of strength have been

identified at the personal, familial, and community levels for Indigenous youth (LaFromboise,

Hoyt, Oliver, & Whitbeck, 2006). Further understanding the trajectories to successful outcomes

and adaptive well-being within the context of each First Nation community will help further

develop and refine the emphasis on the strengths already present in these communities and

ultimately, contribute to the overall well-being of First Nations youth in general.

Indigenous Resilience

Resilience has been the focus of a growing body of research in the psychological domain

aimed at determining factors which promote positive developmental trajectories in the face

ofadversity (Luthar, Sawyer, & Brown, 2006; Masten, 2007). Although resilience can be

operationalized in a variety of ways, it is generally recognized as positive adaptation despite

adversity and it can be associated with specific traits or characteristics of the individual including

social competence, hardiness, flexibility, and intelligence (Iarocci, Root, & Burack, 2008;

Kirmayer, Dandeneau, Marshall, Phillips, & Williamson, 2011). In developmental psychology,

resilience is usually construed as a characteristic unique to the individual, but it is increasingly

recognized as having systemic, collective, or communal dimensions as well (Kirmayer, Sedhev,

Whitley, Dandeneau, & Isaac, 2009). Conceptualizing resilience-promoting factors as extending

beyond the individual to incorporate characteristics of families, communities, or larger cultural

groups is of particular relevance to Indigenous peoples as much of their resilience is thought to

draw from traditional ways of knowing, values and practices (Richmond, Ross, & Egeland,

2007; Stout & Kipling, 2003; Wexler, Moses, Hopper, Joule, & Garoutte, 2013; Whitbeck et al.,

2004).

In this context, models of resilience which include the unique cultures, histories, social

and geographical settings of these people are increasingly adopted (Burack et al., 2007; Fleming

& Ledogar, 2008; Holton, Brass, & Kirmayer, 2009; Kirmayer et al., 2009). According to these

models, the individual and their environmental contexts have transactional influences on one

another. For example, Burack et al. (2007) argue that resilience is neither culturally independent

nor a fixed construct. Rather, resilience is constructed within an individual's unique cultural setting and it can change over time as one matures and from one context to the next. Specifically for Indigenous youth, some students have developed characteristics that promote positive functioning and combat injurious outcomes associated with the risk factors unique to this population (Burack et al., 2014). For example, First Nations children and adolescents who were highly enculturated with their heritage culture demonstrated greater ego strengths which include factors such as hope, competence, fidelity, love, care, and wisdom (Gfellner & Armstrong, 2012). These resilient students are faced with the same challenges as their peers; however, they are able to recover from and adapt to these struggles. Resilience and wellness must also be considered within the context of the individual as what is considered to be resilience-promoting in one domain does not guarantee this effect in all domains. In addition, what may be considered resilience-promoting factors by mainstream standards may be viewed differently from other perspectives (Burack et al., 2007). This emphasizes that resilience is not a static construct, but a dynamic process that must be considered within the environmental context, thereby discrediting the notion of global resilience.

The examination of factors which promote resilience such as academic achievement and self-determination among adolescents is particularly relevant as all youth experience stressful events during their transition into adulthood that put them at-risk for negative outcomes. This risk appears to be magnified for Indigenous youth who have unique challenges to face including the effects of intergenerational historical trauma and cultural discontinuity as a result of the systemic suppression of their culture of heritage (Bombay et al., 2010; Whitbeck et al., 2004). Although faced with extreme adversity, the Indigenous Peoples of Canada have also been remarkable in their capacity to adjust, adapt, and transform in response to challenges and

demands (Burack et al., 2014). For example, Usborne and Taylor (2010) found that cultural

identity predicted personal identity clarity and was marginally predictive of self-esteem and

mood. By drawing on collective history, myths, and shared teachings, these communities have

been able navigate acute and on-going difficulties. The emphasis placed on learning one's

language, culture, and traditions strengthens a sense of identity and counteracts the harmful

effects of cultural discontinuity (Chandler & Lalonde, 1998) and provides pathways to healthy

adaptation (Kirmayer et al., 2011).

Cultural Discontinuity and Cultural Matching Theories

Attempts to account for the academic underperformance of Indigenous youth range from

questions about cognitive ability and motivation to the composition of Indigenous families and

communities to the lack of culturally-relevant programming in schools (Battiste, 2012;

Baumeister & Leary, 1995; Bombay, Matheson, & Anisman, 2014; Coggins, Williams, & Radin,

1997). However, the academic underperformance for Indigenous youth is a composite of these

factors that can best be understood through a cultural discontinuity, and more specifically, a

framework of cultural mismatch (Fryberg et al., 2013). Specifically, in North American

educational institutions, independent representations of self are most prevalent as reflected in the

policies, teaching practices, and curriculum (Fryberg & Markus, 2007; Li, 2003). In contrast,

interdependent representations of self are more prevalent in Indigenous contexts (Fryberg et al.,

2013; Fryberg & Markus, 2003, 2007). While independent traits, such as individuality and

assertiveness may foster motivation and achievement in mainstream contexts, interdependent

traits, such as social support, mentorship, and connection to the community and teacher, may

encourage persistence and academic achievement in an Indigenous context (Fryberg et al., 2013;

Fryberg & Markus, 2007; Gloria & Robinson Kurpius, 2001; LaFromboise et al., 2006).

Gloria and Robinson Kurpius (2001) investigated the influence of cultural match and interdependent traits on the academic nonpersistence decisions of 83 Native American undergraduates. They found that social support and comfort in the university environment were significantly predictive. Specifically, students who had a supportive relationship to faculty/staff and those who perceived a greater fit between themselves and university culture viewed the university environment more positively and made fewer nonpersistence decisions, respectively. This notion of fit between personal and environmental values is consistent with Deci and Ryan's (2008) argument that congruence between personal values and contextual norms encourages autonomous motivation.

This discrepancy between one's identity to their culture of heritage and the cultural norms emphasized in mainstream institutions has been referred to as *cultural discontinuity* in the educational literature (Tyler et al., 2008). For Indigenous youth, identity to their cultural heritage can promote self-esteem and positive affect (Jones & Galliher, 2007; Kenyon & Carter, 2011); however, in certain contexts this strong cultural identity may also act as a risk factor – especially when a mismatch between their personal culture and the culture of their environment is present. In the current study, cultural discontinuity is conceptually defined as a disconnection between one's cultural values in the home environment and the cultural values emphasized in the school context (Tyler et al., 2008). When this disconnect is present, students feel pressured to disengage from their traditional values in order to feel a sense of belonging and connectedness, or they run the risk of feeling isolated and disconnected from school (Powers, 2006).

Cultural matching theory is of particular relevance to this study since this perspective is specific to Indigenous populations. Stephens, Fryberg, Markus, Johnson, and Covarrubias (2012) initially developed cultural matching theory to describe the academic achievement gap

experienced by first-generation Native American university students in the United States. They

argued that individual performance is contingent on whether people experience a match or a

mismatch between their own cultural norms and the norms that are institutionalized in a given

setting (see Figure 1). Stephens et al. (2012) posited that students would be advantaged when

they experience a cultural match between their own norms and the norms represented in the

school culture, but would be disadvantaged when they experience a cultural mismatch, as this

will influence students' perceptions. For example, students experiencing a cultural match will

feel comfortable in the school environment, which will help them construe the tasks as less

difficult, thereby promoting school success. In contrast, students experiencing a cultural

mismatch will feel uncomfortable in the school environment, which will result in them

construing tasks as more difficult, thereby leading to academic problems. In this context,

students' sense of belonging and potential for success are undermined (Fryberg et al., 2013).

Models of Self-Determination

The interaction between cultural identity and environmental contexts will be considered

through the lens of the construct of self-determination. Self-determination theory, a perspective

that has been adopted in cross-cultural research, is focused on the social contexts that facilitate

self-motivation and adaptive functioning. Strong capacities and available opportunities to be self-

determined facilitate positive functioning despite adversity in various domains including

academic and social success (Field, Hoffman, & Posch, 1997; Wehmeyer, 1996; Wehmeyer,

Agran, Mithaug, & Martin, 2003). Self-determination can be viewed as a resilience-promoting

factor and one's perceived capacities and opportunities to act in a self-determined fashion are

dependent on their environmental contexts.

Self-determination models highlight the environmental conditions that can serve to either promote or hinder motivation, social functioning, and personal well-being (Ryan & Deci, 2000). These models are premised on skill development and mastery within various domains (home, school, and community) that provide optimal learning challenges to build capacity and opportunities to practice autonomy. This emphasis on the importance of context is consistent with Ungar's (2004, 2008) social-based model of resilience in which the role of factors external to the individual, such as community, are considered in the facilitation of healthy psychosocial development in those facing multiple risk factors.

Ryan & Deci's (2000) Self-Determination Theory. Ryan and Deci's (2000) self-determination theory (SDT) is a transactional approach to human motivation that is focused on the social and cultural contexts that facilitate self-motivation and adaptive functioning. The inherent growth tendencies in all humans are stressed in this organismic metatheory, as Ryan and Deci have identified three innate psychological needs that form the basis of the theory. The need for *competence* is satisfied when one experiences an optimal challenge in which the activity being engaged in is challenging yet achievable. The need for *relatedness* is satisfied when one feels close to others. The final psychological need is *autonomy*, which is satisfied when one feels as though they are acting out of their own volition. Although these three needs are theorized to be innate and universal among all people, Ryan and Deci stress the importance of social environments on either promoting or diminishing these psychological needs.

Prior to the development of this theory, motivation was seen as a unitary concept; however, SDT provides a more differentiated approach to motivation by specifying what type of motivation is being exhibited at any given time and then by asking how these different kinds of motivation may affect well-being (Ryan & Deci, 2000). According to SDT, intrinsic motivation

is the type of motivation that is inherent in all humans and that upholds optimal functioning and psychological well-being. Intrinsic motivation taps into one's natural inclination toward mastery, spontaneous interest, and exploration which are vital to both social and cognitive development. However, if one engages in behaviour in order to attain or avoid a separate outcome, they are extrinsically motivated to perform these tasks. Although the natural tendency is to move towards intrinsic motivation, supportive conditions found in the social context must still be met in order for intrinsic motivation to thrive. For Indigenous youth, identity to their culture of heritage can serve as a resilience-promoting factor; however, it may also act as a risk factor in other contexts.

Mithaug's (2003) Self-Determination Learning Theory. This theoretical framework emphasizes the process by which students develop into self-determined learners. Specifically, the focus of this theory is on how students, "interact with opportunities to improve their prospects of getting what they want and need in life" (Wolman, Campeau, Dubois, Mithaug, & Storlarski, 1994, p. 4). When opportunities present themselves as *just-right challenges*, in which they offer close to ideal opportunities for experiencing gain (Mithaug, Mithaug, Agran, Martin, & Wehmeyer, 2003), they are pursued. By pursuing these opportunities, people must adjust and regulate their thoughts, feelings, and actions. Self-determination is dependent on students' *capacities* and *opportunities.*

Capacity refers to knowledge, abilities, and perceptions that allow a student to become a self-determined learner. Knowledge is the degree to which a student understands self-determination and the behaviours it requires. Ability refers to the skills required to perform the necessary self-determination steps specific to a student's own interest and needs effectively. Perceptions include the student's motivation, confidence, self-esteem, and sense of autonomy to

meet their interests and needs, independent from the control or influence of others (Mithaug et al., 2003; Wolman et al., 1994).

Regardless of a student's capacities related to knowledge, abilities, and perceptions, they cannot be self-determined if there are no opportunities to exercise that capacity. *Opportunity* refers to the chances available to the student to apply their capacities related to self-determination. Students are significantly influenced by the environmental contexts in which they are situated, including the home and school. As such, when opportunities and resources are provided within a supportive environment, they enable the student to become more self-determined (Mithaug et al., 2003; Wolman et al., 1994).

Self-Determination Examined Cross-Culturally

Self-determination theorists argue that the basic psychological needs of autonomy, competency, and relatedness are universally needed by individuals from all cultural backgrounds (Ryan & Deci, 2000). Among the three needs overviewed by SDT, *autonomy* and its role in students' education and learning has been the most widely disputed (Chirkov, Ryan, Kim & Kaplan, 2003). Self-determination theorists claim that individual autonomy and autonomy supportive environments contribute to positive academic motivation and developmental trajectories for youths across nations and cultures. The cross-cultural application of SDT is contested because autonomy is perceived as a Westernized construct, reflective of an independent mindset that is often not applicable to more collectivistic societies (Iyengar & DeVoe, 2003; Iyengar & Leeper, 1999; Markus & Kitayama, 2003). Self-determination theorists view 'autonomy' and 'freedom of choice' as interchangeable constructs when in reality, they have different meanings. 'Autonomy' is the extent to which one has full volition over one's actions, whereas 'freedom of choice' implies making an independent decision in which there is

an array of meaningful choices readily available. However, one can be autonomous while following the choice of others if the individual has fully accepted the decision as their own (Bao & Lam, 2008).

The advantages of autonomous motivation in Western populations have been well documented (for an overview, please see Reeve, Deci, & Ryan, 2004); however, the recent empirical cross-cultural research in SDT is essential to determining whether this universalist view can be applicable to Indigenous students. For example, among elementary school students, autonomy plays a significant role in the academic outcomes and perceptions of students from collectivist cultures (Bao & Lam, 2008; Sheldon, Abad, & Omoile, 2009). Sheldon et al. (2009) found that teacher and parent autonomy-support was associated with positive evaluations of school among Nigerian and Indian children attending rural and urban schools, respectively. Similarly, Bao and Lam (2008) found that autonomy towards schoolwork and other tasks was positively associated with motivation among Chinese children. However, for these children, feelings of relatedness towards parents and teachers played a significant role since motivation remained high for those with strong feelings of relatedness, independent of whether they felt autonomous. Thus, while autonomy may still facilitate positive academic outcomes, relatedness may play a more significant role for school aged children from collectivist cultures.

Extending beyond childhood, studies on the effects of autonomy as an adaptive academic behaviour reflect the important role of being self-determined for older students. For instance, Ferguson, Kasser, and Jahng (2011) found that students who felt less autonomously supported by teachers and parents had lower school satisfaction, independent of whether they were from South Korea, the United States, or Denmark. Autonomy support from parents and teachers was also positively associated with the academic motivation of high school students from the individual-

oriented United States and from group-oriented Russia (Chirkov & Ryan, 2001). Similarly, Vansteenkiste, Zhou, Lens, and Soenens (2005) found that autonomously motivated young adults from China were more likely to use adaptive learning strategies, adopt a positive study attitude, and receive higher grades whereas controlled motivation predicted negative outcomes such as, passive-avoidant school behaviours, dropping out, and lower grades. Thus, being self-determined, and more specifically, autonomy-supportive environments are associated with adaptive academic behaviours among children and adolescents from varying cultural affiliations.

The benefits of self-determination extend beyond their influences on academic factors in an array of cultures ranging from those that are independently-oriented to those that interdependently-oriented. For instance, children and adolescents' perceived autonomy-support from teachers and parents was positively correlated with life satisfaction, independent of whether their cultural affiliation was to individualistic societies such as the United States or collectivist societies such as South Korea (Chirkov & Ryan 2001; Ferguson et al., 2011; Sheldon et al., 2009). In general, autonomy support from parents and teachers predicts greater self-esteem and lower depressive symptoms and anxiety among high school students (Chirkov & Ryan 2001; Vansteenkiste et al., 2005). The findings are also applicable to older students as college students who perceive their parents as being more controlling were reported to have lower well-being (Chirkov & Ryan, 2001; Downie et al., 2007) and those who perceived themselves to be more autonomous had better psychological health (Chirkov et al., 2003). Satisfaction of the three needs is related positively to adjustment across both individualistic and relatively more collectivistic societies, but the interplay and relative importance of having each of these needs met may vary depending on one's cultural orientation (Chirkov & Ryan, 2001; Vansteenkiste, Lens, Soenens, & Luyckx, 2006).

Self-Determination and Cultural Identity

Examination of the educational process from a socio-cultural perspective suggests that students need a sense of community and belonging to others in order to maximize learning, engagement, and motivation (Becker & Luthar, 2002; Fredricks, Blumenfeld, & Paris, 2004; Osterman, 2000). This is consistent with the emphasis in self-determination models of the importance of affiliation and belongingness in promoting autonomous motivation and self-determination in one's educational approach (Deci, Vallerand, Pelletier & Ryan, 1991; Martin & Dowson, 2009; Niemiec & Ryan, 2009). Strong feelings of relatedness is especially important for youths' motivation, engagement, and academic performance as they transition from adolescence into young adulthood (Booker, 2006). For example, Isakson and Jarvis (1999) examined the shift in students' perception of school belongingness and found that students felt increasingly disconnected and uncomfortable as they transitioned from junior high school to high school, which in turn, resulted in decreased motivation and achievement.

For minority students, this sense of belonging can be exceptionally difficult to obtain as they are often perceived as cultural outsiders within the dominant, mainstream setting (Tyler et al., 2008). Accordingly, congruence between their personal cultural identity and the dominant norms and values emphasized in their school context is difficult to achieve (Tyler et al., 2008). As congruence is also a necessary component to models of self-determination. Deci and Ryan (2008) argue that a match between an individual's personal values and the perceived norms and beliefs in their context is essential for promoting autonomous motivation. For Indigenous students, an incongruence between their personal culture and the Western approach to learning and teaching is more likely, resulting in deleterious effects (Beiser et al., 1993; Fryberg et al., 2013). Thus, autonomous motivation is arguably more difficult to achieve for these students as

their cultural identity is not in synch with the dominant culture upon which the educational

environment is established. Examining cultural mismatch from a self-determination lens has the

potential to lead to a more nuanced understanding of the processes through which identity to

one's Indigenous culture can impact academic motivation, specifically through individual

connections to and engagement with their proximal school contexts.

Among nonmainstream populations, achievement motivation has been studied

particularly extensively among African American students with regard to how outcomes are

impacted by racial identity context congruence (Booker, 2006; Brand, Felner, Shim, Seitsinger,

& Dumas, 2003; Byrd & Chavous, 2011, 2012; Ryan & Patrick, 2001; Smalls, White, Chavous,

& Sellers, 2007). Throughout adolescence and young adulthood, a strong connection to and

positive feelings about African American culture were found to promote positive developmental

outcomes (Smalls et al., 2007) including achievement motivation (Brand et al., 2003; Ryan &

Patrick, 2001) and educational success (Cokley, 2003; Fordham & Ogbu, 1986; Graham, 1997;

Green, Adams, & Turner, 1988). This is particularly true when school environments were

perceived to be identity safe and inclusive (Chavous et al., 2003; Oyserman, Harrison, & Bybee,

2001) and in which a congruence between their racial identity and the school climate was present

(Byrd & Chavous, 2011, 2012).

Cultural Identity and Academic Achievement

Cultural identity is created from the interplay of personal, familial, and community

factors and these characteristics unique to Indigenous peoples have been identified as

contributing to the academic success and psychological well-being of Indigenous adolescents

(LaFromboise et al., 2006). A positive association has been found between cultural identity and

educational outcomes among minority (Chavous et al., 2003; Fordham & Ogbu, 1986; Oyserman

et al., 2001; Smith, Atkins, & Connell, 2003) and Indigenous youth (Coggins et al., 1997; Jones & Galliher, 2007; Whitbeck, Hoyt, Stubben, & LaFromboise, 2001). For example, strong cultural identities have been shown to increase academic performance and factors associated with academic success including belongingness and motivation (Cohen & Garcia, 2005; Oyserman, Kemmelmeier, Fryberg, Brosh, & Hart-Johnson, 2003). Specifically, among Indigenous students, Whitbeck et al. (2001) found that youth engagement with their culture of heritage was positively associated with high achievement for 5th through 8th grade Native American students living on three reservations in the upper Midwest. Thus, involvement in traditional Native American activities such as pow-wows, identifying with their heritage culture, and being involved in spiritual activities had a resilience-promoting effect on this group of students.

Extending beyond academics, Coggins et al. (1997) reported that Ojibwa children living on a reservation in northern Michigan aged 3 to 11 with mothers who held more traditional values had better socio-emotional competence in school and performed better in class. Similarly, Dehyle (1992, 1995) found that Navajo adolescents from a border reservation community from homes in which the importance of heritage was emphasized by speaking their tribal language and participating in spiritual and community activities, viewed the school curriculum as more self-relevant and were more successful in school than students from less traditional homes.

A strong identity to one's culture of heritage can act as a source of resilience; however, factors that promote resilience in one domain may serve as risk factors in others (Burack et al., 2007). For example, strong Indigenous cultural values may result in a discrepancy between these traditional values and the values upon which mainstream models of education are established. This discrepancy is often cited as an explanation for the academic achievement gap seen between

Indigenous and non-Indigenous students (Powers, 2006). Thus, a strong cultural identity is not always related to academic success. For example, Guzman, Santiago-Rivera, and Hasse (2005) found high cultural identity was not associated with positive attitudes toward education and school or with higher grade point average for a group of Mexican origin adolescents living in the United States. There have also been studies with less conclusive evidence for Indigenous peoples (Hallett et al., 2008; Powers, 2006; Whitesell et al., 2009). For example, Powers (2006) found that while identification to one's Native American culture was positively correlated with students' intention to finish school and their attendance and participation at school, it was not associated with achievement. Similarly, Whitesell et al., (2009) found no relationship between academic success and Native American identity. They argued that this finding may be due to their narrow definition of success which reflects mainstream cultural values and fails to capture other important indications of school experiences such as connectedness to teachers.

A weakness of the earlier literature is that the interactions between environmental contexts such as the school setting, and the student's personal culture were not assessed. More recently, Fryberg et al. (2013) examined the influence of cultural matching theory to determine how discrepancies between students' cultural identity and the Western norms associated with school success, operationalized as teacher ratings of students' assertiveness, related to academic achievement in First Nations. An interaction effect was found between assertiveness and cultural identity where high assertiveness predicted higher grades regardless of cultural identity. When a student was perceived to be assertive, a match between their personal values and those encouraged at school was present. However, when a student was perceived as being non-assertive, a cultural mismatch was present putting them at-risk for academic failure. For the non-assertive students, a strong cultural identity protected against academic failure.

Cultural identity neither exclusively facilitates or undermines academic success, as this relationship is reliant on the interplay between the values emphasized in one's environments at any given time and one's personal set of values (Burack et al., 2007). One contributor to educational resilience for Indigenous students is a curriculum that students perceive as personally meaningful (Waller et al., 2002). Through the incorporation of traditional ways of knowing into Western education, Indigenous students would likely have a stronger association with the school environment and taught material, promoting academic success (Melnechenko & Horsman, 1998). For example, Battiste (2002) note that educational success among Indigenous students is more likely when Aboriginal languages, heritages, and communities are respected, supported, and connected to elders and education. This claim has been voiced by other researchers who suggest that removing the conflicting, push-pull relationship between traditional norms and mainstream values may be the key to successful adaptation for Indigenous students (Huffman, 2001).

Cultural Identity as a Resilience-Promoting Factor

A strong, positive cultural identity has been shown to serve as a resilience-promoting factor that extends beyond education to various measures of well-being in Indigenous populations (Dukes & Martinez, 1997; Trimble, 2000). For instance, greater affiliation to one's cultural identity has been positively associated with various psychological constructs including self-esteem, self-efficacy, personal mastery, and an internal locus of control (Phinney, 1995; Phinney & Alipuria, 1990; Phinney & Chavira, 1992; Roberts et al., 1999). Thus, a positive cultural identity appears to confer feelings of self-worth, connectedness, and purpose to Indigenous peoples (EchoHawk, 1997; Minore, Boone, Katt, & Kinch, 1991; Wexler, 2014).

These studies emphasize the connection between Indigenous Peoples well-being and their identification and involvement with their culture.

Research on the role of cultural identity in promoting resilience for youth is particularly important as Indigenous children and adolescents are at a heightened risk for a variety of adverse outcomes including substance abuse, suicide, accidental death, violence, and mental health problems (Chandler et al., 2003; Fitzgerald & Farrell, 2012). Cultural identity has been shown to promote psychological well-being in Native American youths. For example, high scores on measures of cultural identity were associated with greater self-esteem and social functioning (Jones & Galliher, 2007) and a higher sense of community and positive affect for Native American adolescents (Kenyon & Carter, 2011). High affiliation with one's cultural identity was associated both with an increase in positive outcomes, but also to a decrease in negative symptomatology. For instance, even when controlling for family background, income, parenting, negative life events, and other factors, Native American youth who reported engaging in traditional activities such as drumming at powwows and using tribal language reported lower levels of depressive symptoms (Whitbeck, McMorris, Hoyt, Stubben, & LaFromboise, 2002).

Perceived discrimination was associated with various negative health and social outcomes (LaFromboise et al., 2006; Whitbeck et al., 2002; Whitbeck et al., 2004; Yoder, Whitbeck, Hoyt, & LaFromboise, 2006) suggesting that discrimination is a significant factor in promoting poor health outcomes in this population. One's level of identification with their cultural group has been shown to be one of the most important variables influencing the impact of discrimination on well-being. For instance, high racial-cultural identity provided protective effects against the impacts of discrimination on self-esteem and community efficacy in Native

Americans (Adams, Fryberg, Garcia, & Delgado-Torres, 2006), and depressive symptoms in

Filipino Americans (Mossakowski, 2003).

In addition, a positive cultural identity has been shown to protect against negative, risky,

and harmful behaviours. For instance, Flanagan et al. (2011) found that both physical and

relational aggression were negatively correlated with cultural identity in a specific Naskapi

community in northern Quebec, suggesting that having a strong association with one's ancestral

culture may serve as a protective factor. Moreover, Native American individuals who

participated in traditional spiritual activities had lower levels of substance use (Kulis, Hodge,

Ayers, Brown, & Marsiglia, 2012) and were more likely to abstain from alcohol consumption

(Stone, Whitbeck, Chen, Johnson, & Olson, 2006; Whitbeck et al., 2004; Spicer, Bezdek,

Manson, & Beals, 2007). Additionally, a connection to and involvement in one's Indigenous

culture is related to a decrease in attempted suicide and a reduction in suicide prevalence

(Chandler & Lalonde, 1998; Garroutte, Goldberg, Beals, Herrell, & Manson, 2003). These

findings support the notion that culture is an important variable that influences how Indigenous

peoples approach, interpret, and respond to adversity.

 The Present Study

The focus of the present study will be on the influence of cultural identity on perceived

levels of self-determination and how these two factors impact academic achievement in a group

of First Nations high school students from a remote community in northern Quebec. Perceived

capacities and opportunities to practice and engage in self-determined behaviours have been

shown to facilitate academic success and psychological well-being for adolescents of varying

cultural identities and for those who can be categorized as at-risk for academic failure (Bao &

Lam, 2008; Chirkov & Ryan, 2001; Ferguson et al., 2011; Field et al., 1997; Sheldon et al.,

2009; Vansteenkiste et al., 2005; Wehmeyer, 1996; Wehmeyer et al., 2003). Moreover, identification with one's culture of heritage can facilitate positive outcomes within the school setting and can promote positive outcomes such as self-esteem and social functioning (Jones & Galliher, 2007).

We ask the following four questions regarding this group of First Nations high school students in a remote community in northern Quebec:

1) What are the correlations between students' capacities to engage in self-determined behaviour and the opportunities available to them at school and home?

2) How do students with varying degrees of perceived capacity to be self-determined and opportunities available to them differ in terms of their academic achievement and identity to their culture of heritage?

3) Do students with high cultural identity differ in their perceived capacity and opportunities to be self-determined compared to those with low cultural identity?

4) Is cultural identity related to academic achievement?

Method

Participants

The participants included 39 students (20 male) who were recruited from the only school in a First Nations community in northern Quebec. The group consists of students enrolled from grade 6 to secondary 5, including those enrolled in the Work Oriented Training Path (WOTP) which is a program designed for those having difficulty in school, preparing them for the job market. This group of students does not represent the entire student body since only the data from the students with complete data on all of the measures were included in the analyses. The distribution of gender by grade is presented in Table 1. The participants ranged in age from 12 to

19 (M = 15.03, SD = 1.80). The means and standard deviations of age by grade are presented in Table 2.

All of the participants self-identified as First Nations, and as having at least one First Nations parent. The language of instruction at the school is in the community's language until grade 2. Beginning in grade 3, students are taught the majority of the curriculum in English.

Measures

The participants completed a battery of self-report questionnaire that were selected by the research team in conjunction with school administrators. Data were also obtained from school records.

Demographics. School records and a demographics form (see Appendix A) were used to obtain information, including age, gender, and culture for every participant.

Self-Determination. The American Institutes for Research (AIR) Self-Determination Scale – Student Form, developed by Wolman et al. (1994) was used to assess self-determination (see Appendix B). This measure was developed based on the self-determined learning theory proposed by Mithaug et al. (2003). Both Capacity and Opportunity subscale scores and a composite total self-determination score can be calculated. A higher score indicates a higher level of self-determination. The AIR Self-Determination Scale – Student Form has 24-items on a five point Likert Scale with ratings ranging from 1 (*Never*) to 5 (*Always)* that are used to assess students' capacity and opportunity for self-determination. The Capacity subscale consists of questions regarding students' abilities, and perceptions that enable them to be self-determined. Capacity ability refers to the skills required to perform the specific self-determination steps necessary to identify one's own interests and needs, and then to satisfy them effectively. Capacity perceptions refers to the student's motivation, confidence, self-esteem, and sense of

freedom to meet their interests and needs. The Opportunity subscale consists of questions

regarding the opportunities students have to engage in self-determination behaviours at home and

school.

The average mean scores for items on each scale and section were calculated separately.

This decision was made to retain reference to the original 5-point Likert scale on which each

item was initially rated by respondents (Wolman et al., 1994). The reliability and validity of the

AIR Self-Determination Scale – Student Form as a measure of self-determination was

demonstrated for a diverse set of students including those of diverse cultural backgrounds and

varying SES, and for students with and without disabilities (Shogren et al., 2008; Wolman et al.,

1994).

Cultural Identity. The Multigroup Ethnic Identity Measure (MEIM), developed by Jean

S. Phinney in 1992, was used to measure cultural identity (see Appendix C). The MEIM is a 23-

item questionnaire that measures three distinct areas of cultural identity. The participants were

asked to self-identify their ethnicity and then answer questions based on this affiliation. All of

the participants self-identified as First Nations and completed the measure according to this

affiliation. The ethnic affirmation/belonging subscale is used to assess ethnic pride and feelings

of belonging and attachment to one's ethnic group (e.g., "I feel good about my cultural or ethnic

background"). The ethnic identity achievement subscale is used to assess the level of interest,

awareness, and clarity concerning one's ethnicity (e.g., "I have a clear sense of my ethnic

background and what it means for me"). The ethnic behaviours subscale is used to assess

involvement in social activities with members of one's group and participation in cultural

traditions (e.g., "I participate in cultural practices of my own group, such as special food, music,

or customs"). Also included in the MEIM are 6-items that assess other-group orientation that are

contrast items used to balance the ethnic identity items (e.g., "I often spend time with people

from ethnic groups other than my own") (Phinney, 1992). Twenty items are rated on a 4-point

Likert scale from 4 (*strongly agree*) to 1 (*strongly disagree*). Scoring for this measure is

represented as a mean of the total scores for each question. Low scores on this measure reflect

low cultural identity while high scores reflect high cultural identity. Also included in the

questionnaire, are three open-ended questions used to assess self-identified ethnicity and the

ethnicity of the participant's mother and father. These three items were not scored, but rather

used as background information (Phinney, 1992). Besides having adequate reliability and

validity (Phinney, 1992; Phinney, Chavira, & Tate, 1993), this measure was chosen because it

has been used with Native American youths aged 13 to 19 (Galliher, Jones, & Dahl, 2011;

Schweigman, Soto, Wright, & Unger, 2011).

Academic Achievement. Final grades for the participants were obtained through end of

year report cards issued from the school in the First Nations community. Composite scores were

calculated for each student with respect to the class average in each grade. The students were

considered to have scored 'high' if they had obtained a grade above their class average and 'low'

if their grade was below average.

Procedure

A team of graduate students and research assistants from McGill University travelled to

the community for a one week period in the spring semester and collected data during regular

school hours. Prior to data collection, the teachers distributed parental forms to all potential

participants in grades 6 through secondary 5. The letter briefly summarized the purpose of the

research, procedure involved, and the rights of the participants. The letter also explained that

participation was completely voluntary and withdrawal from the research would be without

penalty (see Appendix D). The school obtained consent from parents (see Appendix E), and the researchers obtained verbal assent from each of the students (see Appendix F).

The participants completed the questionnaires in classrooms with their peers over a 4 day period and the research assistants visited each classroom three to four times over the course of the week to help assist teachers and students in completing the questionnaires. In addition, each student was assigned an identification number which was written on all materials instead of their given names. The research team emphasized anonymity which hopefully encouraged students to answer the questionnaires honestly. The research team read the questionnaires aloud to all students from Grade 6 to Grade 8 in order to avoid confounds associated with reading level. At the end of the week, the participants were offered small gifts for their participation. In accordance with a community-based research approach, local educators provided input throughout the process to ensure that the project meets the community's specific research needs and that the measures were developmentally and culturally appropriate for the students.

Results

What are the correlations between students' capacities to engage in self-determined behaviour and the opportunities available to them at school and home? A two-tailed Pearson Product Moment Correlations was run to assess the relationship between a student's abilities ("things I do") and perceptions ("how I feel") to act in a self-determined fashion and the opportunities available to them at school and at home to engage in self-determined behaviour. Preliminary analyses revealed the relationship to be linear with all variables being normally distributed, as assessed by Shapiro-Wilk's Test ($p > .05$), and there were no outliers. Abilities and perceptions to be self-determined were strongly correlated, $r(37) = .829$, $p < .001$. Additionally, correlations were also found between ability to be self-determined and the

opportunities available at home and school, $r(37) = .451$, $p = .004$; $r(37) = .336$, $p = .036$, respectively, and between perceived self-determination and the opportunities available at home and school, $r(37) = .474$, $p = .002$; $r(37) = .408$, $p = .010$, respectively. No significant association were found between opportunities to be self-determined at home and at school, $r(37) = .167$, $p = .309$. A summary of the intercorrelations among the AIR Self-Determination subscales is presented in Table 3.

How do students with varying degrees of perceived capacity to be self-determined and opportunities available to them differ in terms of their academic achievement and identity to their culture of heritage? We sorted the participants based on their reported capacity and opportunities to be self-determined using a median split (MacCallum, Zhang, Preacher, & Rucker, 2002). The students were considered to have high capacity scores if they obtained a rating above the average ($M = 3.524$) and low if their ratings were below average. The students were considered to have high opportunity scores if they had obtained a rating above the average ($M = 3.474$) and low if their ratings were below average. We created four distinct groups: High Capacity/High Opportunity, High Capacity/Low Opportunity, Low Capacity/High Opportunity, and Low Capacity/Low Opportunity. We conducted two one-way Welch ANOVAs to determine whether the mean cultural identity scores and grades differ for the participants in each group.

A one-way Welch ANOVA was conducted to determine if self-reported cultural identity was different for groups with varying degrees of perceived capacity and opportunity to be self-determined. Participants were classified into four groups: High Capacity/High Opportunity ($n = 11$), High Capacity/Low Opportunity ($n = 5$), Low Capacity/High Opportunity ($n = 8$), and Low Capacity/Low Opportunity ($n = 14$). There was one outlier in the High Capacity/High Opportunity as assessed by a boxplot for values greater than 1.5 box-lengths from the edge of the

box, and it was removed for the subsequent analysis as it was contributing to significant positive

kurtosis and thus, non-normal distribution. After having removed the outlier, cultural identity

scores were normally distributed for the four groups, as assessed by Shapiro-Wilk's test of

normality ($p > .05$). The assumption of homogeneity of variances was violated, as assessed by

Levene's Test of Homogeneity of Variance, $F(3, 34) = 7.214$, p = 0.001. One's self-reported

cultural identity was statistically significant between groups categorized on level of capacity and

opportunity to be self-determined, Welch's $F(3, 12. 134) = 7.528$, $p = 0.004$. The results of the

one-way Welch ANOVA are summarized in Table 4. The cultural identity increased from the

High Capacity/High Opportunity (3.260 ± .192), Low Capacity/Low Opportunity (2.827 ± .319),

High Capacity/Low Opportunity (2.714 ± .466), and Low Capacity/High Opportunity (2.616 ±

.696), in that order. The means and standard deviations of cultural identity are presented in Table

5. Games-Howell post-hoc analysis revealed that cultural identity was significantly higher in the

High Capacity/High Opportunity group compared to the Low Capacity/Low Opportunity group

(.433, 95% CI (.147 to .720), $p = 0.002$).

Another Welch's one-way ANOVA was conducted to determine if final grades were

different for the varying groups. There was one outlier in the High Capacity/Low Opportunity

group as assessed by a boxplot for values greater than 1.5 box-lengths from the edge of the box.

However, it was not removed for the subsequent analysis as it did not contribute to significant

skewness or kurtosis. Final grades were normally distributed for the four groups, as assessed by

Shapiro-Wilk's test of normality ($p > .05$). The assumption of homogeneity of variances was

violated, as assessed by Levene's Test of Homogeneity of Variance, $F(3, 35) = 3.391$, $p = 0.029$.

The final grades increased from the Low Capacity/Low Opportunity (64.392 ± 9.486), High

Capacity/High Opportunity (60.442 ± 14.139), Low Capacity/High Opportunity (60.256 ±

5.812), and High Capacity/Low Opportunity (56.080 ± 11.813), in that order. The means and standard deviations of final grades are presented in Table 6. However, they did not differ among the groups, Welch's $F(3, 13.959) = .842$, $p = 0.494$. The results of the one-way Welch ANOVA are summarized in Table 4.

Do students with high cultural identity differ in their perceived capacity and opportunities to be self-determined compared to those with low cultural identity? We sorted the participants based on their reported identity to their heritage of culture using a median split (MacCallum et al., 2002). The students were considered to have high cultural identity scores if they obtained a rating above the average ($M = 2.877$) and low if their ratings were below average. Eighteen students were in the Low Cultural Identity group and 21 students in the High Cultural Identity group. We conducted an Independent Samples T-test to compare the two groups on their perceived capacity for self-determination. There were three outliers in the Low Cultural Identity group as assessed by a boxplot for values greater than 1.5 box-lengths from the edge of the box. However, they were not removed for the subsequent analysis as they did not contribute to significant skewness or kurtosis. Capacity scores were normally distributed for the low and high cultural identity groups, as assessed by Shapiro-Wilk's test of normality ($p > .05$). The assumption of homogeneity of variances was met, as assessed by Levene's Test of Homogeneity of Variance, $F(37) = .598$, $p = 0.444$. Those in the High Cultural Identity group had higher perceived capacities to be self-determined (3.742 ± .509) when compared with those in the Low Cultural Identity group (3.269 ± .698), a statistically significant difference of 0.473 (95% CI, -.866 to 0.081), $t(37) = -2.444$, $p = 0.019$. Further, Cohen's effect size value ($d = .774$) suggests a moderate to high practical significance. The results of the independent t-test and the descriptive statistics for capacity by cultural identity are presented in Table 7.

Another Independent Samples T-test was conducted to compare the two groups on their perceived opportunities to engage in self-determined behaviour. No outliers were found and the Opportunity scores were normally distributed for the low and high cultural identity groups, as assessed by Shapiro-Wilk's test of normality ($p > .05$). The assumption of homogeneity of variances was met, as assessed by Levene's Test of Homogeneity of Variance, $F(37) = .767$, $p = 0.387$. Those in the High Cultural Identity group had higher perceived opportunities to be self-determined ($3.671 \pm .432$) when compared with those in the Low Cultural Identity group ($3.245 \pm .568$), a statistically significant difference of 0.426 (95% CI, -.750 to 0.101), $t(37) = -2.654$, $p = 0.012$. Further, Cohen's effect size value ($d = .844$) suggests a high practical significance. The results of the independent t-test and the descriptive statistics for opportunity by cultural identity are presented in Table 7.

Is cultural identity related to academic achievement? We conducted an Independent Samples T-test to compare the high cultural identity group and the low cultural identity group on their academic achievement. No outliers were found and the final grades were normally distributed for the low (64.183 ± 6.982) and high cultural identity (58.760 ± 12.918) groups, as assessed by Shapiro-Wilk's test of normality ($p > .05$). The assumption of homogeneity of variances was violated, as assessed by Levene's Test of Homogeneity of Variance, $F(37) = .8.897$, $p = 0.005$. The groups did not differ on grade, 5.423 (95% CI, -.1.229 to 12.074), $t(31.632) = 1.661$, $p = 0.107$. Further, Cohen's effect size value ($d = .522$) suggests a moderate practical significance. The results of the independent t-test and the descriptive statistics for final grades by cultural identity are presented in Table 7.

Discussion

The focus of the current study was on the interplay of cultural identity, academic achievement, and self-determination as factors which promote positive developmental outcomes and strength despite adversity in a sample of First Nations students (Fryberg et al., 2013). Specifically, we integrated prior scholarship from both a Western and Indigenous perspective when considering the relationship between First Nations youths' identification with their culture of heritage, their academic achievement, and their perceived capacities and opportunities to be self-determined. While most prior research on resilience examines specific traits or characteristics of the individual (Iarocci et al., 2008; Kirmayer et al., 2011), we extend this definition to incorporate characteristics of one's cultural settings and values.

The primary findings of this study suggest an association between the degree to which one identifies with their heritage culture and one's levels of self-determination, but neither levels of self-determination nor cultural identity influence final grades. Additionally, correlational analyses indicate that First Nations students' capacities to engage in self-determined behaviour and the opportunities available to them at school and home are associated. However, one's perceived opportunities to be self-determined at home and school are not significantly associated.

Patterns in Self-Determination: A Disconnect Between Opportunities at Home and School

A student's environmental contexts have significant influences on whether their ability to be self-determined will be promoted or hindered. When opportunities and resources are provided within their environments, students feel supported and encouraged to act in a self-determined manner when approaching challenges (Mithaug et al., 2003; Wolman et al., 1994). The present findings support the importance of perceived opportunities in promoting self-determination as

both opportunities at home and school were positively associated with one's capacities to be self-determined. Although the directionality of this relationship is unclear, the association between one's environments and abilities to meet their needs and interests effectively are evident. This relationship is consistent with both Ryan and Deci's (2000) self-determination theory and Mithaug's (2003) self-determination learning theory which emphasize the importance of affiliation and belongingness to one's environmental contexts in promoting self-determination (Deci et al., 1991; Martin & Dowson, 2009; Niemiec & Ryan, 2009).

For the First Nations youths in this study, the perceived opportunities to be self-determined at home and at school were not significantly correlated with one another. Thus, feeling supported in one environmental context is not associated with feeling supported in another context. A possible explanation for this finding is that the values emphasized in schools are different from the traditional values emphasized in the home. Specifically, the Canadian education system is based on a Western approach in which independent representations of self are most prevalent (Henrich et al., 2010), whereas interdependent representations of self are emphasized in Indigenous contexts (Dehyle & Margonis, 1995; Fryberg et al., 2013; Fryberg & Markus, 2003; 2007). For students identifying with mainstream culture, independent traits such as individuality and assertiveness would likely be emphasized in various environmental contexts, including school and home. Thus, they would more likely feel a sense of belonging and that their capacities to be self-determined would be fostered in both contexts. In contrast, Indigenous students are more likely to perceive incongruity in values as interdependent traits such as social support and mentorship are emphasized in the home. Thus, a disconnection between perceived opportunities to be self-determined at home and at school is more likely to be present as feelings

of affiliation and self-determination support in one context may not be present in other contexts.

Cultural Identity as Facilitating Self-Determination

The results from the independent t-tests indicate that, as compared to those with low identity to their heritage culture, those with a high identity to their heritage culture had higher perceived capacities and opportunities to be self-determined. Similarly, the one-way Welch ANOVA revealed that students who had high capacities and opportunities for self-determination were more likely to have a strong cultural identity as compared to those with low capacities and opportunities. These findings are consistent with past research demonstrating the importance of a strong connection to and positive feelings about one's cultural values and community in promoting positive developmental outcomes (Smalls et al., 2007), including those related to motivation and self-determination (Becker & Luthar, 2002; Fredricks et al., 2004; Martin & Dowson, 2009; Niemiec & Ryan, 2009).

Strong connection to culture of heritage promotes resilience among Canada's Indigenous Peoples who are faced with unique challenges resulting from the historical legacy of oppression and ongoing discrimination (Burack et al. 2014; Richmond et al., 2007; Stout & Kipling, 2003; Wexler et al., 2013; Whitbeck et al., 2004). The findings from this study contribute to this body of knowledge as those with deeper ties to their traditional heritage were more likely to perceive their environments as facilitating self-determination and to perceive themselves as having the necessary capacities to realize their goals in a self-determined fashion. Strong capacities and opportunities to be self-determined may have far reaching implications for these First Nations students as these elements facilitate positive functioning in various domains including academic and mental health (Chirkov et al., 2003; Chirkov & Ryan, 2001; Downie et al., 2007; Field et al., 1997; Vansteenkiste et al., 2005; Wehmeyer, 1996; Wehmeyer et al., 2003).

Impact of Cultural Identity on Academic Achievement

The findings from the independent t-test indicate that final grades did not significantly differ between students with low and high identity to their heritage culture. These findings are inconsistent with evidence of a positive association between cultural identity and educational outcomes among Indigenous youth (Coggins et al., 1997; Jones & Galliher, 2007; Whitbeck et al., 2001). However, the link between cultural identity and academic outcomes is not straightforward as the interactions between environmental contexts such as the school setting, and the student's personal culture must be considered. Specifically, the students with strong Indigenous cultural values may have experienced a cultural mismatch between their traditional values and the values upon which mainstream models of education are established. This mismatch may have contributed to feelings of discomfort in the school environment, which undermines their sense of belonging and potential for success (Beiser et al., 1993; Fryberg et al., 2013).

Another possible explanation for these findings is that the curriculum was not perceived to be personally meaningful or culturally relevant. Accordingly, students with a strong identity to their heritage of culture may not associate with the school environment and taught material, which, in turn, hinders academic success (Melnechenko & Horsman, 1998). These findings support the notion that Indigenous students may require a different approach to education which incorporates their unique ways of knowing, traditions, and histories into Western education (Canadian Council on Learning, 2007; Partington, 2002). By incorporating traditional ways of knowing into Western education, students with a strong cultural identity may have a stronger connection to their education, promoting academic achievement (Battiste, 2002) and successful adaptation (Huffman, 2001).

The lack of a relationship between cultural identity and school success could also be attributed to our limited definition of success. Only final grades were examined as a measure of academic achievement, which failed to capture important indicators of school experiences such as interactions with teachers, feelings of belongingness in the classroom, and learning style (Whitesell et al., 2009). Additionally, achievement was defined in terms of mainstream cultural values, including high grades and outperforming peers, rather than examining the markers of success in Indigenous learning.

Impact of Self-Determination on Academic Achievement

Another surprising finding was the lack of association between self-determination and academic outcome. The results from the one-way Welch ANOVA indicate that final grades did not significantly differ for students with varying levels of perceived capacities and opportunities to be self-determined. These findings are contrary to the self-determination literature in which the association between self-determination and academic outcomes has been well documented in both mainstream (Reeve et al., 2004) and minority cultures (Bao & Lam, 2008; Chirkov & Ryan, 2001; Ferguson et al., 2011; Sheldon et al., 2009; Vansteenkiste et al., 2005). The failure to find a relationship between these factors could also be attributed to the limited definition of academic success adopted. A broader definition of academic success that extends beyond simple performance to include school satisfaction, learning strategies, and study attitude has been used in other studies (Ferguson et al., 2011; Sheldon et al., 2009; Vansteenkiste et al., 2005). Adopting a wider research lens for a larger array of factors may reveal an association between self-determination and scholastic success for First Nations students.

Another possible explanation for the lack of association between self-determination and academic success is that scholastic achievement and performance are individualistic goals, which

may not reflect the goals considered important in an Indigenous context. Thus, the inclusion of

variables more attuned to collective goals, particularly goals consonant with First Nations

cultural values such as engagement in community service activities (Whitesell et al., 2009),

might lead to findings that levels self-determination have an influence on one's abilities to

achieve these goals effectively. Thus, the findings presented here provide support for the need to

re-define how success is measured in Indigenous learning, recognizing that the goals they hope

to achieve may not conform to Western expectations. In the case of these First Nation

adolescents, the lack of association between self-determination and academic achievement may

be accounted for by the discontinuity between the values held by the student and the values

salient in the mainstream schools they attend. Accordingly, these students may not identify with

the notion of independent success in school in the same way as adolescents in more Western

societies do.

Limitations

Although this study highlights some important findings regarding the interplay of cultural

identity, self-determination, and academic achievement in First Nations youth, its implications

are constrained by certain limitations. One, as is the case in all studies with youths from a

specific community or context, the findings from this group of First Nations youths are not

generalizable to all First Nations youths. However, this limitation is inherent to the study of

Indigenous communities, thereby leading to the necessity of developing a meaningful body, or

mosaic, of research from the study of similar constructs across many different communities.

Two, our measure of academic achievement was limited in that it was defined in terms of

mainstream cultural values and failed to capture important indicators of the school experience in

an Indigenous context. A next step would include the examination of and redefinition of how

success is measured in Indigenous learning and consider how cultural identity and self-determination influence these markers of success. Three, the measures used may not adequately address the nuances of cultural differences between the school and family contexts. Future research might be focused on some of the contextual differences that may have diminished the significance of the findings in this study. Four, median splits were used as a method for turning continuous variables into categorical ones, which can result in a loss of power (Aiken, West, & Reno, 1991). Five, the data from many participants had to be excluded because they were missing data. Accordingly, the internal validity of this study may be called into question as the differences between students with complete and incomplete data may account for the final results and conclusions. Six, the results are based on self-report measures that could be inaccurate for different reasons including, but not limited to, social desirability, bias, error in recall, and ambiguity. Seven, as the person-environment fit between one's personal values and the values emphasized in the school context was not examined; the conclusions drawn regarding cultural mismatch are purely speculative.

Conclusion and Future Directions

Although faced with extreme adversity resulting from the historical legacy of intergenerational trauma and oppression, the Indigenous Peoples of Canada have also been remarkable in their capacity to adjust, adapt, and transform in response to challenges and demands. Specifically, a strong identity to culture of heritage has been associated with positive outcomes and resilience in this population. This study contributes to this area of research with evidence of the interplay between how First Nations youth identify with their culture of heritage, their academic achievement, and their perceived capacities and opportunities to be self-determined as resilience-promoting factors. The importance of cultural identity was highlighted

by the finding that those with high cultural identity were more likely to act in a self-determined fashion compared to those with low cultural identity. In contrast, neither levels of self-determination or cultural identity were associated with academic outcomes. The findings support the growing literature on cultural identity as a resilience-promoting factor and point towards the importance of culturally relevant curriculum for First Nations students. Future research should be focused on redefining and examining markers of success in Indigenous learning in order to contribute to developing identity safe schools.

References

Adams, G., Fryberg, S. A., Garcia, D. M., & Delgado-Torres, E. U. (2006). The psychology of

engagement with indigenous identities: A cultural perspective. *Cultural Diversity,*

Ethnicity and Minority Psychology, 12, 493-508. doi: 10.1037/1099-9809.12.3.493

Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting*

interactions. Newbury Park, CA: Sage Publications

Anaya, J. (2014). The United Nations Special Rapporteur on the rights of indigenous peoples

presented to the United Nations General Assembly in accordance with Human Rights

Council resolution 21/24. Symbol number: A/68/317

Battiste, M. (2012). Enabling the autumn seed: Toward a decolonized approach to Aboriginal

knowledge, language, and education. In S. Z. Burke & P. Milewski (Eds.), *School in*

transition: Readings in Canadian history of education (pp. 253-287). Toronto, ON:

University of Toronto Press.

Battiste, M. (2002). *Indigenous knowledge and pedagogy in First Nations education: A literature*

review with recommendations. Ottawa: Indian and Northern Affairs Canada. Retrieved

from http://www.educationactiontoronto.com

Bao, X., & Lam, S. (2008). Who makes the choice? Rethinking the role of autonomy and

relatedness in Chinese children's motivation. *Child Development, 79*, 269-283. doi: 1467-

8624.2007.01125.x

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal

attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529.

doi: 10.1037/0033-2909.117.3.497

Becker, B. E. & Luthar, S. S. (2002). Social-emotional factors affecting achievement outcomes

among disadvantaged students: Closing the achievement gap. *Educational Psychologist,*

37, 197-214. doi: 10.1207/S15326985EP3704_1

Beiser, M., Erickson, D., Fleming, J. A., & Iacono, W. G. (1993). Establishing the onset of

psychotic illness. *The American Journal of Psychiatry, 150*, 1349-1354. Retrieved from

http://www.psycnet.apa.org

Bombay, A., Matheson, K., & Anisman, H. (2010). Decomposing identity: Differential

relationships between several aspects of ethnic identity and the negative effects of

perceived discrimination among First Nations adults in Canada. *Cultural Diversity and*

Ethnic Minority Psychology, 16, 507-516. doi: 10.1037/a0021373

Bombay, A., Matheson, K., & Anisman, H. (2014). The intergenerational effects of Indian

Residential Schools: Implications for the concept of historical trauma. *Transcultural*

Psychiatry, 51, 320-338. doi: 10.1177/1363461513503380

Booker, K. C. (2006). School belonging and the African American adolescent: What do we know

and where should we go? *The High School Journal, 89*, 1-7. doi: 10.1353/hsj.2006.0005

Brand, S., Felner, R., Shim, M., Seitsinger, A., & Dumas, T. (2003). Middle school improvement

and reform: Development and validation of a school-level assessment of climate, cultural

pluralism, and school safety. *Journal of Educational Psychology, 95*, 570-588. doi:

10.1037/0022-0663.95.3.570

Burack, J. A., Blidner, A., Flores, H., & Fitch, T. (2007). Constructions and deconstructions of

risk, resilience and wellbeing: A model for understanding the development of Aboriginal

adolescents. *Australasian Psychiatry, 15*, S18-S23. doi: 10.1080/10398560701701148

Burack, J. A., Bombay, A., Flores, H., Stewart, J., & Ponizovsky, V. (2014). Developmental

perspectives on the role of cultural identity in well-being: Evidence from Aboriginal

communities in Canada. In J. A. Burack & L. A. Schmidt (Eds.), *Cultural and contextual*

perspectives on developmental risk and well-being (pp. 81-106). New York, NY:

Cambridge University Press.

Byrd, C. M., & Chavous, T. (2011). Racial identity, school racial climate, and school intrinsic

motivation among African American youth: The importance of person-context

congruence. *Journal of Research on Adolescence, 21*, 849-860. doi: 10.1111/j.1532-

7795.2011.00743.x

Byrd, C. M., & Chavous, T. M. (2012). The congruence between African American students'

racial identity beliefs and their academic climates: Implications for academic motivation

and achievement. In J. M. Sullivan & A. M. Esmail (Eds.), *African American identity:*

Racial and cultural dimensions of the Black experience (pp. 345-369). Lanham, MD:

Lexington Books.

Canadian Council on Learning (2007). Redefining how success is measured in First Nations,

Inuit, and Metis learning, Report on learning in Canada. Ottawa: Canadian Council on

Learning. Retrieved from http://www.ccl-cca.ca

Chandler, M. J., & Lalonde, C. (1998). Cultural continuity as a hedge against suicide in

Canada's First Nations. *Transcultural Psychiatry, 35*, 191-219. doi:

10.1177/136346159803500202

Chandler, M. J., & Lalonde, C. E. (2009). Cultural continuity as a moderator of suicide risk

among Canada's First Nations. In L. Kirmayer & G. Valaskakis (Eds.), *Healing traditions: The mental health of Aboriginal peoples in Canada* (pp. 221-248). Vancouver: University of British Columbia Press.

Chandler, M. J., Lalonde, C. E., Sokol, B. W., & Hallett, D. (2003). Personal persistence, identity development, and suicide: A study of Native and non-Native North American adolescents. *Monographs of the Society for Research in Child Development, 68*, vii-130. Retrieved from http://www.uvic.ca

Chavous, T. M., Bernat, D. H., Schmeelk-Cone, K., Caldwell, C. H., Kohn-Wood, L., & Zimmerman, M. A. (2003). Racial identity and academic attainment among African American adolescents. *Child Development, 74*, 1076-1090. doi: 10.1111/1467-8624.00593

Chirkov, V. I., & Ryan, R. M. (2001). Parent and teacher autonomy-support in Russian and US adolescents: Common effects on well-being and academic motivation. *Journal of Cross-Cultural Psychology, 32*, 618-635. doi: 10.1177/0022022101032005006

Chirkov, V., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology, 84*, 97-110. doi: 10.1037/0022-3514.84.1.97

Cohen, G. L., & Garcia, J. (2005). "I am us": Negative stereotypes as collective threats. *Journal of Personality and Social Psychology, 89*, 566-582. doi: 10.1037/0022-3514.89.4.566

Cokley, K. O. (2003). What do we know about the motivation of African American students? Challenging the "anti-intellectual" myth. *Harvard Educational Review, 73*, 524-558. Retrieved from http://search.proquest.com/docview/212296854?accountid=12339

Coggins, K., Williams, E., & Radin, N. (1997). The traditional tribal values of Ojibwa parents

    and the school performance of their children: An exploratory study. *Journal of American*

    Indian Education, 36, 1-15. Retrieved from http://jaie.asu.edu/v36/V36S3tra.htm

Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being

    across life's domains. *Canadian Psychology, 49*, 14-23. doi: 10.1037/0708-5591.49.1.14

Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education:

    The self-determination perspective. *Educational Psychologist, 26*, 325-346. doi:

    10.1207/s15326985ep2603&4_6

Dehyle, D. (1992). Constructing failure and maintaining cultural identity: Navajo and Ute school

    leavers. *Journal of American Indian Education, 31*, 24-47. Retrieved from

    http://www.eric.ed.gov/

Dehyle, D. (1995). Navajo youth and Anglo racism: Cultural integrity and resistance. *Harvard*

    Educational Review, 65, 403-444. Retrieved from

    http://search.proquest.com/docview/212249580?accountid=12339

Dehyle, D., & Margonis, F. (1995). Navajo mothers and daughters: Schools, jobs, and the

    family. *Anthropology & education quarterly, 26*, 135-167. doi:

    10.1525/aeq.1995.26.2.05x1252d

Downie, M., Chua, S. N., Koestner, R., Barrios, M. F., Rip, B., & M'Birkou, S. (2007). The

    relations of parental autonomy support to cultural internalization and well-being of

    immigrants and sojourners. *Cultural Diversity and Ethnic Minority Psychology, 13*, 241-

    249. doi: 10.1037/1099-9809.13.3.241

Dukes, R., & Martinez, R. (1997). The effects of ethnic identity, ethnicity, and gender on

adolescent well-being. *Journal of Youth and Adolescence*, *26*, 503-516. doi: 10.1023/A:1024525821078

EchoHawk, M. (1997). Suicide: The scourge of Native American people. *Suicide and Life-Threatening Behavior, 27*, 60-67. doi: 10.1111/j.1943-278X.1997.tb00503.x

Ferguson, Y. L., Kasser, T., & Jahng, S. (2011). Differences in life satisfaction and school satisfaction among adolescents from three nations: The role of perceived autonomy support. *Journal of Research on Adolescence, 21*, 649-661. doi: 10.1111/j.1532-7795.2010.00698.x

Field, S., Hoffman, A., & Posch, M. (1997). Self-determination during adolescence a developmental perspective. *Remedial and Special Education, 18*, 285-293. doi: 10.1177/074193259701800504

Fitzgerald, H. E., & Farrell, P. (2012). Fulfilling the promise: Creating a child development research agenda with native communities. *Child Development Perspectives, 6*, 75-78. doi: 10.1111/j.1750-8606.2011.00216.x

Flanagan, T., Iarocci, G., D'Arrisso, A., Mandour, T., Tootoosis, C., Robinson, S., & Burack, J. A., (2011). Reduced ratings of physical and relational aggression for youths with a strong cultural identity: Evidence from the Naskapi People. *Journal of Adolescent Health*, 49, 155-159. doi:10.1016/j.jadohealth.2010.11.245

Fleming, J., & Ledogar, R. J. (2008). Resilience, an evolving concept: A review of literature relevant to Aboriginal research. *Pimatisiwin, 6*, 7-23. Retrieved from http://www. nih.gov.com

Fordham, S., & Ogbu, J. U. (1986). Black students' school success: Coping with the "burden of 'acting white'". *The Urban Review, 18*, 176-206. doi: 10.1007/BF01112192

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*, 59-109. doi: 10.3102/00346543074001059

Fryberg, S. A., Covarrubias, R., & Burack, J. A. (2013). Cultural models of education and academic performance for Native American and European American students. *School Psychology International, 34*, 439-452. doi: 10.1177/0143034312446892

Fryberg, S. A., & Markus, H. R. (2003). On being American Indian: Current and possible selves. *Self and Identity, 2*, 325-344. doi: 10.1080/714050251

Fryberg, S. A., & Markus, H. R. (2007). Cultural models of education in American Indian, Asian American and European American contexts. *Social Psychology of Education, 10*, 213-246. doi: 10.1007/s11218-007-9017-z

Fryberg, S. A., Troop-Gordon, W., D'Arrisso, A., Flores, H., Ponizovskiy, V., Ranney, J. D., . . . Burack, J. A. (2013). Cultural mismatch and the education of Aboriginal youths: The interplay of cultural identities and teacher ratings. *Developmental Psychology, 49*, 72-79. doi: 10.1037/a0029056

Galliher, R.V., Jones, M. D., & Dahl, A. (2011). Concurrent and longitudinal effects of ethnic identity and experiences of discrimination on psychosocial adjustment of Navajo adolescents. *Developmental Psychology, 47*, 509-526. doi: 10.1037/a0021061

Garroutte, E. M., Goldberg, J., Beals, J., Herrell, R., & Manson, S. M. (2003). Spirituality and attempted suicide among American Indians. *Social Science & Medicine, 56*, 1571-1579. doi: 10.1016/S0277-9536%2802%2900157-0

Gfellner, B. M., & Armstrong, H. D. (2012). Ego development, ego strengths, and ethnic identity

among first nation adolescents. *Journal of Research on Adolescence, 22*, 225-234. doi:

10.1111/j.1532-7795.2011.00769.x

Gloria, A. M., & Robinson Kurpius, S. E. (2001). Influences of self-beliefs, social support, and

comfort in the university environment on the academic nonpersistence decisions of

American Indian undergraduates. *Cultural Diversity and Ethnic Minority Psychology, 7*,

88-102. doi: 10.1037/1099-9809.7.1.88

Graham, S. (1997). Using attribution theory to understand social and academic motivation in

African American youth. *Educational Psychologist, 32*, 21-34. doi:

10.1207/s15326985ep3201_2

Green, C. W., Adams, A. M., & Turner, C. W. (1988). Development and validation of the School

Interracial Climate Scale. *American Journal of Community Psychology, 16*, 241-259. doi:

10.1007/BF00912525

Guzman, M. R., Santiago-Rivera, A. L., & Hasse, R. F. (2005). Understanding academic

attitudes and achievement in Mexican-origin youths: Ethnic identity, other-group

orientation, and fatalism. *Cultural Diversity and Ethnic Minority Psychology, 11*, 3-15.

doi: 10.1037/1099-9809.11.1.3

Hallett, D., Want, S. C., Chandler, M. J., Koopman, L. L., Flores, J. P., & Gehrke, E. C. (2008).

Identity in flux: Ethnic self-identification, and school attrition in Canadian Aboriginal

youth. *Journal of Applied Developmental Psychology, 29*, 62-75. doi:

10.1016/j.appdev.2007.10.008

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?

Behavioral and Brain Sciences, 33, 61-83. doi: 10.1017/S0140525X0999152X

Holton, F. S., Brass, G. M., & Kirmayer, L. J. (2009). The discourses of resilience,

"enculturation" and identity in Aboriginal mental health research. In T. Teo, P. Strenner,

A. Rutherford, E. Park, & C. Baervedlt (Eds.), *Varieties of theoretical psychology: International, philosophical, and practical concerns* (pp. 194-204). Concord: Captus.

Huffman, T. E. (2001). Resistance theory and transculturation hypothesis as explanations of college attrition and persistence among culturally traditional American Indian students. *Journal of American Indian Education*, *40*, 1-23. Retrieved from http://www.inpathways.net

Iarocci, G., Root, R., & Burack, J. A. (2008). Social competence and mental health among Aboriginal youth: An integrative developmental perspective. In L. J. Kirmayer & G. Valaskakis (Eds.), *Healing traditions: The mental health of Aboriginal peoples in Canada* (pp. 80-106). Vancouver: University of British Columbia Press.

Isakson, K., & Jarvis, P. (1999). The adjustment of adolescents during the transition into high school: A short term longitudinal study. *Journal of Youth and Adolescence, 28*, 1-26. doi: 10.1023/A:1021616407189

Iyengar, S. S., & DeVoe, S. E. (2003). Rethinking the value of choice: Considering cultural mediators of intrinsic motivation. In V. Murphy-Berman & J. J. Berman (Eds.), *Cross-cultural differences in perspectives on the self* (pp. 146-191). Lincoln, NE: University of Nebraska Press.

Iyengar, S. S., & Lepper, M. R. (1999). Rethinking the value of choice: A cultural perspective on intrinsic motivation. *Journal of Personality and Social Psychology, 76*, 349-366. doi: 10.1037/0022-3514.76.3.349

Jones, M. D., & Galliher, R. V. (2007). Ethnic identity and psychosocial functioning in Navajo

adolescents. *Journal of Research on Adolescence, 17*, 683-696. doi: .10.1111/j.1532-7795.2007.00541.x

Kenyon, D. B., & Carter, J. S. (2011). Ethnic identity, sense of community, and psychological well-being among Northern Plains American Indian youth. *Journal of Community Psychology, 39*, 1-9. doi: 10.1002/jcop.20412

Kirmayer, L. J., Dandeneau, S., Marshall, E., Phillips, M. K., & Williamson, K. J. (2011). Rethinking resilience from indigenous perspectives. *The Canadian Journal of Psychiatry, 56*, 84-91. Retrieved from

http://search.proquest.com/docview/858387599?accountid=12339

Kirmayer, L. J., Sedhev, M., Whitley, R., Dandeneau, S. F., & Isaac, C. (2009). Community resilience: Models, metaphors and measures. *Journal of Aboriginal Health, 43*, 23-41. Retrieved from http://citeseerx.ist.psu.edu

Kulis, S., Hodge, D. R., Ayers, S. L., Brown, E. F., & Marsiglia, F. F. (2012). Spirituality and religion: Intertwined protective factors for substance use among urban American Indian youth. *The American Journal of Drug and Alcohol Abuse, 38*, 444-449. doi: 10.3109/00952990.2012.670338

LaFromboise, T. D., Hoyt, D. R., Oliver, L., & Whitbeck, L. B. (2006). Family, community, and school influences on resilience among American Indian adolescents in the upper Midwest. *Journal of Community Psychology, 34*, 193-209. doi: .10.1002/jcop.20090

Li, J. (2003). U.S and Chinese cultural beliefs about learning. *Journal of Educational Psychology, 95*, 258-267. doi: 10.1037/0022-0663.95.2.258

Luthar, S. S., Sawyer, J. A., & Brown, P. J. (2006). Conceptual issues in studies of resilience.

Annals of the New York Academy of Sciences, 1094, 105-115. doi:

10.1196/annals.1376.009

MacCallum, R. C., Zhang, S., Preacher, K. J., & Rucker, D. D. (2002). On the practice of

dichotomization of quantitative variables. *Psychological Methods, 7*, 19-40. doi:

10.1037/1082-989X.7.1.19

Markus, H. R., & Kitayama, S. (2003). Models of agency: Sociocultural diversity in the

construction of action. In V. Murphy-Berman & J. J. Berman (Eds.), *Cross-cultural*

differences in perspectives on the self (pp. 18-74). Lincoln, NE: University of Nebraska

Press.

Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and

achievement: Yields for theory, current issues, and educational practice. *Review of*

Educational Research, 79, 327-365. doi: 10.3102/0034654308325583

Masten, A. S. (2007). Resilience in developing systems: Progress and promise as the fourth wave

rises. *Development and Psychopathology, 19*, 921-930. doi:

10.1017/S0954579407000442

Masten, A. S., & Coatsworth, J. (1998). The development of competence in favorable and

unfavorable environments: Lessons from research on successful children. *American*

Psychologist, 53, 205-220. doi: 10.1037/0003-066X.53.2.205

Masten, A. S., & Powell, J. L. (2003). A resilience framework for research, policy, and practice.

In S. S. Luthar (Ed.), *Resilience and vulnerability: Adaptation in the context of childhood*

adversities (pp. 1-25). Cambridge, UK: Cambridge University Press.

Melnechenko, L., & Horsman, H. (1998). Factors that contribute to Aboriginal students success

in school in grades six to nine. Executive summary prepared for Saskatchewan

Education. Retrieved from http://www.cla.sd57.bc.ca/fileadmin/sites/cla.sd57.bc.ca/

SPSS/ab_ed/Factorsthatcontribute.pdf

Minore, B., Boone, M., Katt, M., & Kinch, R. (1991). Looking in, looking out: Coping with

adolescent suicide in the Cree and Ojibway communities of northern Ontario. *The

Canadian Journal of Native Studies*, *11*, 1-24. Retrieved from http://www.brandonu.ca

Mithaug, D. E., Mithaug, D. K., Agran, M., Martin, J. E., & Wehmeyer, M. L. (2003). *Self-

determined learning theory: Construction, verification, and evaluation*. Mahwah, NJ:

Lawrence Erlbaum Associates Publishers.

Monture, P. A. (1999). *Journeying forward: Dreaming First Nations' independence*. Halifax,

N.S: Fernwood.

Mossakowski, K. N. (2003). Coping with perceived discrimination: Does ethnic identity protect

mental health? *Journal of Health and Social Behavior, 44*, 318-331. doi:

10.2307/1519782

Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom:

Applying self-determination theory to educational practice. *Theory and Research in

Education, 7*, 133-144. doi: 10.1177/1477878509104318

Nota, L., Soresi, S., Ferrari, L., & Wehmeyer, M. L. (2011). A multivariate analysis of the self-

determination of adolescents. *Journal of Happiness Studies, 12*, 245-266. doi:

10.1007/s10902-010-9191-0

Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of

Educational Research, 70*, 323-367. doi: 10.3102/00346543070003323

Oyserman, D., Harrison, K., & Bybee, D. (2001). Can racial identity be promotive of academic

efficacy? *International Journal of Behavioral Development, 25*, 379-385. doi: 10.1080/01650250042000401

Oyserman, D., Kemmelmeier, M., Fryberg, S., Brosh, H., & Hart-Johnson, T. (2003). Racial-ethnic self-schemas. *Social Psychology Quarterly, 66*, 333-347. doi: 10.2307/1519833

Partington, G. (2002). Why Indigenous issues are an essential component of teacher education programs. *Australian Journal of Teacher Education, 27*. doi: 10.14221/ajte.2002v27n2.4

Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research, 7*, 156-176. doi: 10.1177/074355489272003

Phinney, J. S. (1995). Ethnic identity and self-esteem: A review and integration. In A. Padilla (Ed.), *Hispanic psychology critical issues of theory and research* (pp. 57-70). Thousand Oaks: Sage

Phinney, J. S., & Alipuria, L. L. (1990). Ethnic identity in college students from four ethnic groups. *Journal of Adolescence, 13*, 171-183. doi: 10.1016/0140-1971%2890%2990006-S

Phinney, J. S., & Chavira, V. (1992). Ethnic identity and self-esteem: An exploratory longitudinal study. *Journal of Adolescence, 15*, 271-281. doi: 10.1016/0140-1971%2892%2990030-9

Phinney, J. S., Chavira, V., & Tate, J. D. (1993). The effect of ethnic threat on ethnic self-concept and own-group ratings. *The Journal of Social Psychology, 133*, 469-478. doi: 10.1080/00224545.1993.9712171

Powers, K. M. (2006). An exploratory study of cultural identity and culture-based educational programs for urban American Indian students. *Urban Education, 41*, 20-49. doi: 10.1177/004208590528224

Reeve, J., Deci, E. L., & Richard M. (2004). Self-determination theory: A dialectical framework

for understanding sociocultural influences on student motivation. In D. M. McInerney &

E. S. Van (Eds.) *Big theories revisited*. Greenwich, Conn: Information Age Publisher.

Richmond, C. A., Ross, N. A., & Egeland, G. M. (2007). Social support and thriving health: A

new approach to understanding the health of indigenous Canadians. *American Journal of

Public Health, 97*, 1827-1833. doi: 10.2105/AJPH.2006.096917

Roberts, R. E., Phinney, J. S., Masse, L. C., Chen, Y., Roberts, C. R., & Romero, A. (1999). The

structure of ethnic identity of young adolescents from diverse ethnocultural groups. *The

Journal of Early Adolescence, 19*, 301-322. doi: 10.1177/0272431699019003001

Royal Commission on Aboriginal Peoples. (1996). People to people, nation, to nation: Highlights

from the report of the royal commission on Aboriginal peoples. Ottawa: Ministry of

Supply and Services Canada.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic

motivation, social development, and well-being. *American Psychologist, 55*, 68-78. doi:

10.1037/0003-066X.55.1.68

Ryan, A. M., & Patrick, H. (2001). The classroom social environment and changes in

adolescents' motivation and engagement during middle school. *American Educational

Research Journal, 38*, 437-460. doi: 10.3102/00028312038002437

Schweigman, K., Soto, C., Wright, S., & Unger, J. (2011). The relevance of

cultural activities in ethnic identity among California Native American youth. *Journal of

Psychoactive Drugs, 43*, 343-348. doi: 10.1080/02791072.2011.629155

Sheldon, K. M., Abad, N., & Omoile, J. (2009). Testing self-determination theory via Nigerian

and Indian adolescents. *International Journal of Behavioral Development, 33*, 451-459.

doi: 10.1177/0165025409340095

Shogren, K. A., Wehmeyer, M. L., Palmer, S. B., Soukup, J. H., Little, T. D., Garner, N., &

Lawrence, M. (2008). Understanding the construct of self-determination: Examining the

relationship between the Arc's Self-determination Scale and the American Institutes for

Research Self-Determination Scale. *Assessment for Effective Intervention, 33*, 94-107.

doi: 10.1177/1534508407311395

Smalls, C., White, R., Chavous, T., & Sellers, R. (2007). Racial ideological beliefs and racial

discrimination experiences as predictors of academic engagement among African

American adolescents. *Journal of Black Psychology, 33*, 299-330. doi:

10.1177/0095798407302541

Smith, E. P., Atkins, J., & Connell, C. M. (2003). Family, school, and community factors and

relationships to racial-ethnic attitudes and academic achievement. *American Journal of

Community Psychology, 32*, 159-173. doi: 10.1023/A:1025663311100

Spicer, P., Bezdek, M., Manson, S. M., & Beals, J. (2007). A program of research on spirituality

and American Indian alcohol use. *Southern Medical Journal*, *100*, 430–432. doi:

10.1097/SMJ.0b013e318031715c

Statistics Canada (2011). National Household Survey's Report on Aboriginal Peoples in Canada.

Retrieved from http://www12.statcan.gc.ca/

Stephens, N. M., Fryberg, S. A., Markus, H. R., Johnson, C. S., & Covarrubias, R. (2012).

Unseen disadvantage: How American universities' focus on independence undermines

the academic performance of first-generation college students. *Journal of Personality

and Social Psychology, 102,* 1178-1197. doi: 10.1037/a0027143

Stone, R. A., Whitbeck, L. B., Chen, X., Johnson, K., & Olson, D. M. (2006). Traditional

practices, traditional spirituality, and alcohol cessation among American Indians. *Journal*

of Studies on Alcohol, 67, 236-244. Retrieved from http://www.jsad.com

Stout, M. D., & Kipling, G. D. (2003). *Aboriginal people, resilience and the residential school*

legacy. Ottawa, ON: Aboriginal Healing Foundation. Retrieved from

http://www.ahf.ca/downloads/resilience.pdf

Trimble, J. E. (2000). Social psychological perspective on changing self-identification among

American Indians and Alaska Natives. In R. H. Dana (Ed.), *Handbook of cross-cultural*

and multicultural personality assessment (pp. 197-222). Mahwah, NJ: Lawrence

Erlbaum.

Tyler, K. M., Uqdah, A. L., Dillihunt, M. L., Beatty-Hazelbaker, R., Conner, T., Gadson, N., . . .

Stevens, R. (2008). Cultural discontinuity: Toward a quantitative investigation of a major

hypothesis in education. *Educational Researcher, 37*, 280-297. doi:

10.3102/0013189X08321459

Usborne, E., & Taylor, D. M. (2010). The role of cultural identity clarity for self-concept clarity,

self-esteem, and subjective well-being. *Personality and Social Psychology Bulletin, 36*,

883-897. doi: 10.1177/0146167210372215

Vansteenkiste, M., Lens, W., Soenens, B., & Luyckx, K. (2006). Autonomy and relatedness

among Chinese sojourners and applicants: Conflictual or independent predictors of well-

being and adjustment? *Motivation and Emotion, 30*, 273-282. doi: 10.1007/s11031-006-

9041-x

Vansteenkiste, M., Zhou, M., Lens, W., & Soenens, B. (2005). Experiences of autonomy and

control among Chinese learners: Vitalizing or immobilizing? *Journal of Educational Psychology, 97*, 468-483. doi: 10.1037/0022-0663.97.3.468

Ungar, M. (2004). A constructionist discourse on resilience: Multiple contexts, multiple realities among at-risk children and youth. *Youth & Society, 35*, 341-365. doi: 10.1177/0044118X03257030

Ungar, M. (2008). Resilience across cultures. *British Journal of Social Work, 38*, 218-235. doi: 10.1093/bjsw/bcl343

Waller, M. A., Okamoto, S. K., Hankerson, A. A., Hibbeler, T., Hibbeler, P., McIntyre, P., & McAllen-Walker, R. (2002). The hoop of learning: A holistic, multisystemic model for facilitating educational resilience among Indigenous students. *Journal of Sociology and Social Welfare, 29*, 97-116. Retrieved from http://www.jenjenson.com

Ward, M. J. (1988). The many facets of self-determination. *National Information Center for Children and Youth with Handicaps Transition Summary*, S, 2-3.

Wehmeyer, M. L. (1996). Self-determination as an educational outcome: Why is it important to children, youth and adults with disabilities. In D. J. Sands & M. L. Wehmeyer (Eds.), *Self-determination across the life span: Independence and choice for people with disabilities* (pp. 15-34). Baltimore: Paul H. Brookes.

Wehmeyer, M. L., Agran, M., Palmer, S., Mithaug, D., & Martin, J. (2003). The effects of problem solving instruction on the self-determined learning of secondary students with disabilities. In D. E. Mithaug, D. Mithaug, M. Agran, J. Martin, & M. L. Wehmeyer (Eds.), *Self-determined learning theory: Construction, verification, and evaluation* (pp. 158-171). Mahwah, NJ: Lawrence Erlbaum Associates.

Wexler, L. (2014). Looking across three generations of Alaska Natives to explore how culture

fosters indigenous resilience. *Transcultural Psychiatry, 51*, 73-92.

doi:10.1177/1363461513497417

Wexler, L., Moses, J., Hopper, K., Joule, L., & Garoutte, J. (2013). Central role of relatedness in

Alaska native youth resilience: Preliminary themes from one site of the Circumpolar

Indigenous Pathways to Adulthood (CIPA) study. *American Journal of Community*

Psychology, 52, 393-405. doi: 10.1007/s10464-013-9605-3

Whitbeck, L. B., Chen, X., Hoyt, D. R., & Adams, G. W. (2004). Discrimination, historical loss

and enculturation: Culturally specific risk and resiliency factors for alcohol abuse among

American Indians. *Journal of Studies on Alcohol, 65*, 409-418. Retrieved from http://

jsad.com

Whitbeck, L. B., Hoyt, D. R., Stubben, J. D., & LaFromboise, T. (2001). Traditional culture and

academic success among American Indian children in the upper Midwest. *Journal of*

American Indian Education, 40, 48-60. Retrieved from http://www.researchgate.net

Whitbeck, L. B., McMorris, B. J., Hoyt, D. R., Stubben, J. D., & LaFromboise, T. (2002).

Perceived discrimination, traditional practices, and depressive symptoms among

American Indians in the upper Midwest. *Journal of Health and Social Behavior, 43*, 400-

418. doi: 10.2307/3090234

Whitesell, N. R., Mitchell, C. M., Spicer, P., & The Voices of Indian Teens Project Team.

(2009). A longitudinal study of self-esteem, cultural identity, and academic success

among American Indian adolescents. *Cultural Diversity and Ethnic Minority Psychology,*

15, 38-50. doi: 10.1037/a0013456

Wolman, J. M., Campeau, P. L., Dubois, P., Mithaug, D., & Storlarski, V. (1994) AIR Self-

Determination Scale and User Guide. Palo Alto, CA: American Institute for Research.

Yoder, K. A., Whitbeck, L. B., Hoyt, D. R., & LaFromboise, T. (2006). Suicidal ideation among

American Indian youths. *Archives of Suicide Research, 10*, 177-190. doi:

10.1080/13811110600558240

Table 1

Distribution of Gender by Grade

| | | Grade | | | | | | | |
		Grade 6	Sec I	Sec II	Sec III	Sec IV	Sec V	WOTP	Total
Gender	M	1	3	3	3	4	3	3	20
	F	2	1	4	3	7	2	0	19
Total		3	4	7	6	11	5	3	39

Table 2

Means and Standard Deviations of Age by Grade

Grade	*M*	*SD*	*n*
Grade 6	12	.00	3
Sec I	13	.00	4
Sec II	13.86	.26	7
Sec III	15.67	.68	6
Sec IV	15.73	.27	11
Sec V	17.4	1.14	5
WOTP	15.67	1.16	3

Table 3

Intercorrelations among Subscales on AIR Self-Determination Scale – Student Form

	1	2	3	4
1. Abilities (Thing I do)	1.00			
2. Perceptions (How I Feel)	.474**	1.00		
3. Opportunities at School	.336*	.408**	1.00	
4. Opportunities at Home	.451**	.474**	.167	1.00

*$p < 0.05$, **$p < 0.01$

Table 4

One-Way Welch ANOVA of Cultural Identity and Grades by Levels of Self-Determination

	F	*df*1	*df*2	*P*
Cultural Identity	7.528	3	12.134	0.004*
Grades	.842	3	13.959	0.494

*p < 0.05

Table 5

Means and Standard Deviations of Cultural Identity

Group	*N*	*M*	*SD*
High Capacity/High Opportunity	11	3.260	.192
High Capacity/Low Opportunity	5	2.714	.466
Low Capacity/High Opportunity	8	2.616	.696
Low Capacity/Low Opportunity	14	2.827	.319

Table 6

Means and Standard Deviations of Final Grades

| Group	*N*	*M*	*SD*
High Capacity/High Opportunity	11	60.442	14.139
High Capacity/Low Opportunity	5	56.080	11.813
Low Capacity/High Opportunity	8	60.256	5.812
Low Capacity/Low Opportunity	14	64.392	9.486

Table 7

Results of Independent T-tests and Descriptive Statistics for Capacity, Opportunity, and Final Grades by Cultural Identity

Outcome	Cultural	Identity				95% CI for Mean		
	High			Low		Difference		
	M	*SD*	*N*	*M*	*SD*	*n*		*t*	*df*
Capacity	3.742	.509	21	3.269	.698	18	-.866, 0.081	-2.444*	37
Opportunity	3.671	.432	21	3.245	.568	18	-.750, 0.101	-2.654*	37
Grades	58.760	12.918	21	64.183	6.982	18	-.1.229, 12.074	1.661	31.632

*$p < 0.05$

Figure 1

Cultural Mismatch Theory. Model of the pathways by which a match or mismatch between the cultural norms emphasized in the educational context and the cultural norms of a student can facilitate or thwart academic outcomes.
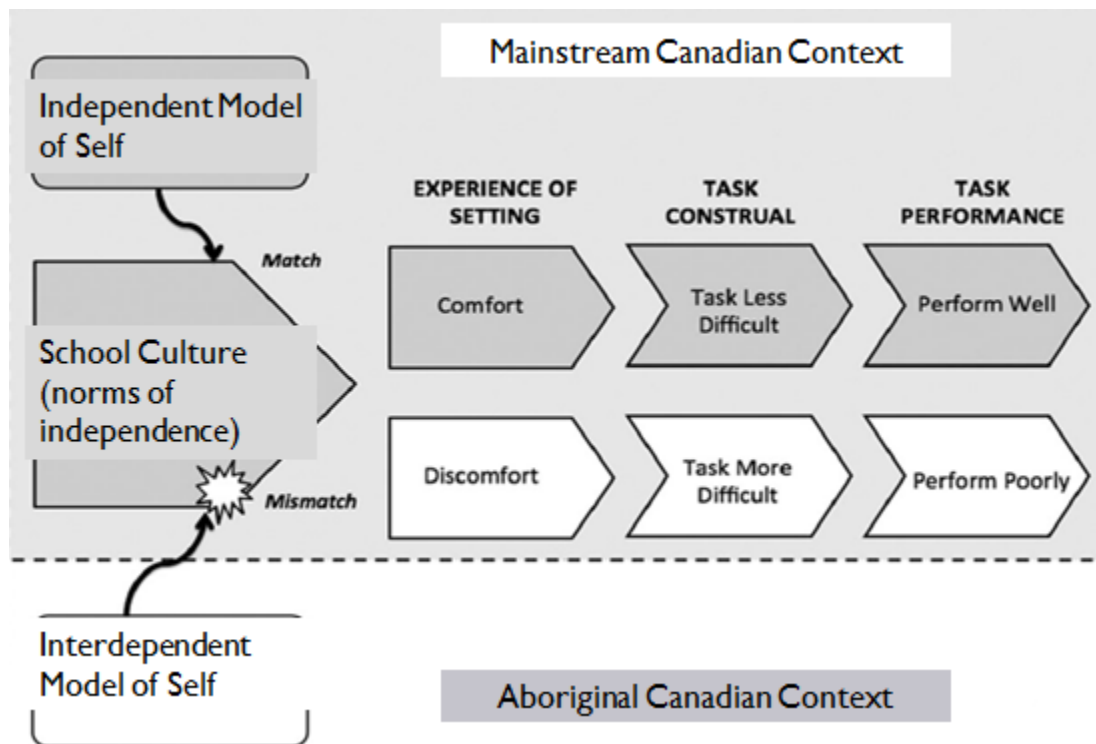
Appendix A

Demographics Questionnaire

People who live in your house :

1. How many older brothers do you have?

2. How many older sisters do you have?

3. How many younger brothers do you have?

4. How many younger sisters do you have?

5. Which adults live in your house? (check all that apply)

Mother (a) _____ Grandmother (b) _____ Aunt (c) _____ Step-mother (d) _____

Foster-mother (e) _____

Father (f) _____ Grandfather (g) _____ Uncle (h) _____ Step-father (i) _____

Foster parent (j) _____ Other (k) _____

6a. Your father is   Naskapi _____
Montagnais _____
Other First Nations _____
Other _____

6b. Your mother is   Naskapi _____
Montagnais _____
Other First Nations _____
Other _____

Appendix B

AIR Self-Determination Scale – Student Form

THINGS I DO

	1 Never	2 Almost Never	3 Sometimes	4 Almost Always	5 Always
1. I know what I need, what I like, and what I'm good at.					
2. I set goals to get what I want or need. I think about what I am good at when I do this.					
				Things I Do Total: Items 1-2	
3. I figure out how to meet my goals. I make plans and decide what I should do.					
4. I begin working on my plans to meet my goals as soon as possible.					
				Things I Do Total: Items 3-4	
5. I check how I'm doing when I'm working on my plan. If i need to, I ask other what they think of how I'm doing.					
6. If my plan doesn't work, I try another one to meet my goals.					
				Things I Do Total: Items 5-6	

HOW I FEEL

	1 Never	2 Almost Never	3 Sometimes	4 Almost Always	5 Always

7. I feel good about what I like, what I want, and what I do well.				
8. I believe that I can set goals to get what I want.				
			How I Feel Total: Items 1-2	
9. I like to make plans to meet my goals.				
10. I like to begin working on my plans right away.				
			How I Feel Total: Items 3-4	
11. I like to check on how well I'm doing in meeting my goals.				
12. I am willing to try another way if it helps me to meet my goals.				
			How I Feel Total: Items 5-6	

What Happens at SCHOOL

	1 Never	2 Almost Never	3 Sometimes	4 Almost Always	5 Always
13. People at school listen to me when I talk about what I want, what I need, or what I'm good at.					
14. People at school let me know that I can set my own goals to get what I want or need.					
				What Happens at School Total: Items 1-2	
15. At school, I have learned how to make plans to meet my goals and to feel good about them.					
16. People at school encourage me to start working on my plans right away.					
				What Happens at School Total: Items 3-4	

17. I have someone at school who can tell me if I am meeting my goals.					
18. People at school understand when I have to change my plan to meet my goal. They offer advice and encourage me when I'm doing this.					
				What Happens at School Total: Items 5-6	

What Happens at HOME

	1 Never	2 Almost Never	3 Sometimes	4 Almost Always	5 Always
19. People at home listen to me when I talk about what I want, what I need, or what I'm good at.					
20. People at home let me know that I can set my own goals to get what I want or need.					
				What Happens at Home Total: Items 1-2	
21. At home, I have learned how to make plans to meet my goals and to feel good about them.					
22. People at home encourage me to start working on my plans right away.					
				What Happens at Home Total: Items 3-4	
23. I have someone at home who can tell me if I am meeting my goals.					
24. People at home understand when I have to change my plan to meet my goal. They offer advice and encourage me when I'm doing this.					
				What Happens at Home Total: Items 5-6	

Appendix C

Multigroup Ethnic Identity Measure (MEIM)

Instructions

In this country, people come from a lot of different cultures and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Mexican-American, Hispanic, Black, Asian-American, American Indian, Anglo-American, and White. Every person is born into an ethnic group, or sometimes two groups, but people differ on how important their ethnicity is to them, how they feel about it, and how much their behavior is affected by it. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Please fill in:

In terms of ethnic group, I consider myself to be _____

Use the numbers given below to indicate how much you agree or disagree with each statement.

Items

Use the following response options:	Strongly Disagree 1	Somewhat Disagree 2	Somewhat Agree 3	Strongly Agree 4
1. I have spent time trying to find out more about my own ethnic group, such as its history, traditions, and customs.	1	2	3	4
2. I am active in organizations or social groups that include mostly members of my own ethnic group.	1	2	3	4
3. I have a clear sense of my ethnic background and what it means for me.	1	2	3	4
4. I like meeting and getting to know people from ethnic groups other than my own	1	2	3	4
5. I think a lot about how my life will be affected by my	1	2	3	4

ethnic group membership				
6. I am happy that I am a member of the group I belong to.	1	2	3	4
7. I sometimes feel it would be better if different ethnic groups didn't try to mix together.	1	2	3	4
8. I am not very clear about the role of my ethnicity in my life.	1	2	3	4
9. I often spend time with people from ethnic groups other than my own.	1	2	3	4
10. I really have not spent much time trying to learn more about the culture and history of my ethnic group.	1	2	3	4
11. I have a strong sense of belonging to my own ethnic group	1	2	3	4
12. I understand pretty well what my ethnic group membership means to me, in terms of how to relate to my own group and other groups	1	2	3	4
13. In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.	1	2	3	4
14. I have a lot of pride in my ethnic group and its accomplishments.	1	2	3	4
15. I don't try to become friends with people from other ethnic groups.	1	2	3	4
16. I participate in cultural practices of my own group, such as special food, music, or customs.	1	2	3	4
17. I am involved in activities with people from other ethnic groups.	1	2	3	4
18. I feel a strong attachment towards my own ethnic group.	1	2	3	4
19. I enjoy being around people from ethnic groups other than my own.	1	2	3	4
20. I feel good about my cultural or ethnic background.	1	2	3	4
21. My ethnicity is _____				

22. My father's ethnicity is _____

23. My mother's ethnicity is _____

Appendix D

![McGill logo]

Faculty of Education	Faculte des sciences de l'education	Facsimile/Telecopier
McGill University	Universite McGill	(514) 398- 6968
3700 McTavish Street	3700, rue McTavish	
Montreal, PQ, Canada H3A1Y2	Montreal, PQ, Canada H3A 1Y2	

Dear Parents:

As part of the McGill Youth Study Team's continued research collaboration with [insert school name], we will continue to conduct our project in identifying the factors that predict school and personal success among the high school students. In order to help us better understand the factors that lead to success in school and social relationships, the students from secondary 1 through secondary 5 will be asked to complete a series of questionnaires. These questionnaires cover a range of areas including problem-solving abilities, behavior, relationships with friends and family members, emotions, and identity with their local culture. In addition, we will ask for records of school grades from the entire school year. The students will fill out these questionnaires during 2-3 class sessions when we visit the school during the week of [insert dates].

Please be advised that the data in this study will be used only for research purposes and will be held in the strictest confidence. Your son's/daughter's results will not affect their status at [insert school name] in any way. When the results will be published it will be as group averages and no personal information will be used in the publication of findings.

We would greatly appreciate your child's participation. If you are willing to allow your son or daughter to participate in this study, please sign the attached consent form. Your child will be asked if they wish to participate and will be told that they can stop at anytime. Your child will receive a small present, regardless of whether s/he completes the questionnaires.

If you have any questions, please contact Jake Burack at 514-398-3433.

Sincerely,

Jake Burack, Ph.D.
Professor and Director
McGill Youth Study Team

Appendix E

McGill

Faculty of Education	Faculte des sciences de l'education	Facsimile/Telecopier
McGill University	Universite McGill	(514) 398- 6968
3700 McTavish Street	3700, rue McTavish	
Montreal, PQ, Canada H3A1Y2	Montreal, PQ, Canada H3A 1Y2	

This consent form specifies the purpose, procedures and conditions required for your child's participation in the study that is being conducted by the McGill Youth Study Team from McGill University.

1. **Purpose**

   The purpose of this research is to study the academic and emotional functioning of school aged children in your community. The data gathered may provide answers to important questions about child development in this community.

2. **Procedures**

   Your child will be asked to complete paper and pencil questionnaires. These questionnaires present no known risks and have been used before with persons of the same age as your child. Everything your child is asked to do will be explained to him/her beforehand and he/she will be asked for verbal assent to participate. If your child wishes to stop or not complete the questionnaires, he or she may do so at any point. Your child's answers to these questions will not affect his or her status, in school or otherwise, in any way. The researchers will have access to your child's report cards in order to record grades and will ask your child's teacher to provide some information. Your child will be told that this is the case before participating in the study.

3. **Conditions of Participation**

   The tasks will be presented as questionnaires in a group setting and your child will receive a small gift regardless of completion of the questionnaires. Your child's name will not be used in reports but his or her identity will be known to the researchers. All data will be stored in a locked cabinet. The researchers will disclose information only if compelled by law in the event that your child reveals information that indicates they may cause harm to themselves or others or if there is a suspicion of child abuse. The data will be used for research purposes only. In the published reporting of this study, the results will be reported as group averages and your child's name or any other personal information will never used in these reports. The researchers involved will be available to answer any questions regarding the procedures of this study.

   ****

   If you have any questions or concerns about your rights as a volunteer in this project you may contact the McGill Research Ethics Officer at 514-398-6831

I HAVE BEEN GIVEN INFORMATION ABOUT THE STUDY IN THE PARENT LETTER AND HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND MY PARTICIPATION IN THIS AGREEMENT. I VOLUNTARILY AGREE AND FREELY CONSENT FOR MY CHILD TO PARTICIPATE IN THIS STUDY.

_____   _____

Child's Name   Child's date of birth

_____   _____

Date   Signature of Parent or Legal Tutor

Jake Burack, Ph.D., Professor and Director, McGill Youth Study Team, (514) 398-3433

Appendix F

McGill

Faculty of Education
McGill University
3724 McTavish, room 100 Montreal, PQ,
Canada H3A 1Y2

YOUTH ASSENT FORM

Why are we doing this study?
The goal of our study is to learn more about children and adolescents your age and what things help you do well in school. We will be asking you about your thoughts on many different things in your lives as school, your culture, your parents and your peers as well as your emotions and behaviors.

What will happen during this study?
You will be asked to fill out some questionnaires in your classroom. A researcher will read out every question and give you time to answer it individually. It will take approximately 34 sessions of about 1 hr each to complete all the questionnaires over the course of one week. Your teacher will be asked to provide some information about you and the researchers will also have access to your report cards in order to record your grades.
You can ask questions at any time and you can stop doing the study at any time if you want for any reason.

Are there good things and bad things about this study?

You might find helping out in this study fun. You will also get to learn more about research. You will have to miss some of your classroom activities in order to fill out the questionnaires.

Can I decide if I want to do these activities?
Your parents have given permission for you to participate in this testing. You do not have to participate in this process if you don't want to. Nobody will be angry or upset if you do not want to be in the study. If you do want to participate you can decide not to answer any questions that you don't want to. You can stop participating at any time.

Who will know what I did in this study?
The answers you provide on the questionnaires will only be seen by members of our research team. Your name will never appear on any of the questionnaires you give us and you will be given a code to use instead. The only time we will ever ask you about your answers on the questionnaires, is if you write that you might seriously cause harm to yourself or others. When we present what we find from this study in papers and presentations all of the information will be shown as group averages so that no one will ever be singled out.

Do you have any questions? Would you like to participate?

Assent
I read this form to _____ and acknowledge that he/she gave verbal assent to participate.

Signature _____   Date _____