

Examining the Promotion of School Connectedness through Extracurricular Participation

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Abstract

The purpose of this study was to examine the association between school connectedness and participation in extracurricular activities. A current gap in the research prevents a complete understanding of the relationship between extracurricular participation and school connectedness; therefore, this study aimed to bridge this gap. It is reasonable to suggest that by simply improving the amount, type, and availability of activities, schools have the potential to help students become more motivated in their role as both a student and a community member. The objective was to provide further support to research implying that increased participation in school-based extracurricular activities improves and encourages school connectedness among students. Overall, the study was aimed at examining what factors predict school connectedness.

Data for this study were collected in a survey format from 252 grade 11 and grade 12 students from several rural Saskatchewan schools. A sequential multiple regression was performed to predict school connectedness. After adjusting for various sociodemographic characteristics, two independent variables predicted school connectedness: health-risk behaviours and extracurricular participation. This research was able to show that beyond factors such as age, gender, grade, and participation in health-risk factors, students who reported being involved in extracurricular activity reported higher scores of school connectedness. Extracurricular participation was associated positively with school connectedness, indicating that participating in extracurricular activities increases school connectedness. Health-risk factors were negative predictors of school connectedness. That is, students who reported participating in health-risk behaviours reported lower school connectedness scores. First Nations students report lower school connectedness scores than Caucasian students. The limitations, directions for future research and implications for practice of these findings are discussed.

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CHAPTER I: Introduction

Introduction

During childhood and adolescence, a significant amount of time is spent in school (Brown & Evans, 2002), therefore school has a substantial impact on the social and academic development of young people. Students who feel like they are cared for and belong at their school have more success in school and have fewer problem behaviours in and out of school (Brown & Evans, 2002). This concept, best understood as school connectedness, is a powerful predictor in a variety of health and academic outcomes (Whitlock, 2006).

Although promoting school connectedness is important at every age, it is particularly vital during adolescence. As children develop, they rely less on their family for autonomy and more on extrafamilial relationships such as those found with friends, at school, and through other experiences (Blum, 2005; Shochet, Dads, Ham, & Montague, 2006). Of major concern are statistics reporting that as children progress through school, they become increasingly disengaged; by age fourteen, 40% to 60% of students at urban, suburban, and rural schools are chronically disengaged (Klem & Connell, 2004). Furthermore, school connectedness is recognized by educators and school health professionals as an important factor in reducing the likelihood that adolescents will experience health-compromising behaviours (i.e., substance use, behaviour problems, violence, emotional distress) and increasing the likelihood of academic success (Blum, 2005). Therefore, schools and communities face the challenge of how to keep students connected and how to reconnect chronically disconnected students (Blum, 2005).

Over fifty years ago, Emile Durkheim (the father of sociology) first described the core youth problem as a lack of connection (Goldstein, 2004). Recent research in the field of neuroscience further supports this claim, describing connectedness to other people as essential to

human health and flourishing (Commission on Children at Risk, 2003). Recently, leading clinicians and researchers in the area of child development have begun examining the crisis among American children and youth relative to the rising rates of mental health problems, emotional distress, and health impairments (Goldstein, 2004). As the number of at-risk children has increased, so have medical and psychotherapeutic treatments focused on reducing symptoms (Goldstein, 2004). Many of these symptom-reducing treatments have been unsuccessful; therefore, new approaches looking for the cause of the increase in childhood mental health problems, rather than simply treating the symptoms are necessary (Goldstein, 2004). Furthermore, as the risks facing children continue to increase, social institutions such as schools must provide young people with the tools for success offered only through preventative measures such as developing connections with positive adults (Commission on Children at Risk, 2003).

In the United States, rates of diagnosable mental and addictive disorders in children are reported to have increased to approximately 20 % (Goldstein, 2004). The increase is not believed to reflect changes in methods of assessment or rates of treatment but an actual increase in these problems making it essential to recognize these increasing risks facing young people and to develop preventative measures to manage the related deficits (Goldstein, 2004). Furthermore, the Index of Child and Youth Well-Being (CWI) reported that over the last fifty years, deaths due to unintentional injuries or health problems fell by about 50%, while youth deaths due to homicide or suicide rose by approximately 130% and 140% respectively (Land & Crowell, 2005). In response to these figures of increased mental health diagnosis and injury, it is imperative that research on childhood health examine factors that promote prevention.

In their research, Bonny, Britto, Klostermann, Hornung, & Slap (2000) identified gender, race, cigarette and alcohol use, and extracurricular involvement as factors associated with school

connectedness. Among these factors are some that are fixed and unchanging while others have the potential to be influenced in ways that will improve a student's connection to school. It is for this reason that researchers in the field of school connectedness began by differentiating between malleable and fixed factors. Fixed factors cannot be changed and include race, gender, and socioeconomic factors (SES), while malleable factors are those within the relative control of agents and systems and can be changed (Perry, 2008) and include cigarette use and extracurricular involvement (Bonny et al., 2000). Additionally, a student's attitude towards school can be influenced by the type of relationships developed at school. Students with caring and supportive relationships with people at school (Klem & Connell, 2004) and adolescents who feel more connected to their school have more positive academic attitudes and school satisfaction and are less likely to engage in violence, initiate sexual activity at an early age, or use substances (e.g., alcohol, cigarettes, marijuana) (Klem & Connell, 2004; McNeely, Nonnemaker, & Blum, 2002).

Increased student connectedness is recognized as important for learning and overall engagement in the academics of school (Finn, 1989). Students see school as a place to be with friends and to participate in activities other than educational ones (Finn, 1989). Participation in extracurricular activities has been shown to improve connectedness among students and is often identified as a primary way to encourage school connectedness (Brown & Evans, 2002). As extracurricular involvement is a malleable factor that can be encouraged and promoted in schools (Bonny et al., 2000), it is often targeted by prevention and intervention strategies aimed at promoting school connectedness (Bonny et al., 2000). Participation in extracurricular activities provides adolescents with an opportunity to learn about themselves and their social environment (Dworkin, Larson, & Hansen, 2003). The extracurricular learning experience is different from

that offered in the classroom. It is a rich context for positive youth development and an environment that facilitates the development of both internal (e.g., managing feelings and identity exploration) and external (e.g., social skills) developmental processes (Dworkin et al., 2003). Recent research has examined the role these activities have in promoting a connection to school (Eccles, Barber, Stone, & Hunt, 2003).

Furthermore, extracurricular activities are a powerful means of reaching disconnected and/or disengaged high school students (Bonny et al., 2000; Brown & Evans, 2002) by helping them identify with school and encouraging greater feelings of belonging (Finn, 1989). Unfortunately, there is little current research examining the relationship between extracurricular participation and school connectedness, and that lack of research is preventing a complete understanding of this complex relationship. Once this gap in the literature is addressed, schools may have the necessary evidence to demand an improvement or reintroduction of their extracurricular programs (Brown & Evans, 2002; Finn, 1989).

Purpose of the Study

Young people require direction and support to attain developmental milestones. When schools and family are unable to meet their needs, adolescents seek out other, often negative sources. Therefore, research is needed that examines the impact of improving school connectedness and how it ultimately contributes to positive developmental outcomes. The purpose of this study was to examine the interaction of positive youth development, extracurricular activities, and school connectedness. More specifically, this study sought to identify extracurricular and health-risk factors that influence school connectedness by examining the relationships between school connectedness and extracurricular activities, health-risk factors

(i.e., substance use, skipping school), and demographic factors (i.e., age, grade, gender, school location).

Organization of Thesis

Chapter II presents the review of the literature pertaining to positive youth development, participation in extracurricular activities, school connectedness, rationale for the research, and the research question and hypotheses. The methodology and results chapters follow concluding with a discussion chapter.

Definitions

School Connectedness

- “The extent to which students feel personally accepted, respected, included and supported by others in the school social environment” (Goodenow, 1993, p. 80).
- “A psychological state of belonging in which individual youth perceive that they and other youth are cared for, trusted, and respected by collections of adults that they believe hold the power to make institutional and policy decisions. Moreover, connectedness is conceptualized as something not merely received but reciprocated as well” (Whitlock, 2006, p. 15).

Extracurricular Activity

- “Activities that are voluntary (i.e., not required for school) and involve some structure, that is, where students’ participation occurs within a system involving constraints, rules, and goals” (Larson, 2000, p. 174).
- Extracurricular activities are high structured activities characterized by “regular participation schedules, rule-guided engagement, direction by one or more adult activity leaders, an emphasis on skill development that is continually increasingly in complexity and challenge,

activity performance that requires sustained active attention, and clear feedback on performance” (Mahoney & Stattin, 2000, p. 114-115).

Positive Youth Development

- “Positive youth development is not a specific program, but rather an approach to structuring services, systems, and supports for youth so that young people develop the skills and competencies they need to thrive and enter adulthood ready to face the myriad challenges of adult life. Grounded in the concept of resiliency, positive youth development seeks to help youth overcome or deal with negative things in their environments. Positive youth development approaches also seek to take advantage of opportunities presented by the various stages of adolescent development to influence behaviors, attitudes, and self-esteem. For some youth, positive youth development approaches may help them maintain safe and healthy behaviors, while for other youth, these approaches may help redirect them to healthier and more positive behaviors” (Positive Youth Development: A Pathway to Healthy Teens, 2002)

Resiliency

- “good outcomes in spite of serious threats to adaptation or development” (Masten, 2001, p. 228)

Disengage

- “Free from connection” (www.dictionary.com)

CHAPTER II: Review of the Literature

The following chapter summarizes the literature published on the construct of school connectedness. A new perspective on child development is introduced. Positive Youth Development is a framework that suggests that to prevent engagement in risky behaviours, it is necessary to help young people achieve their full potential. Presentation of this framework is followed by a review of the literature regarding the complex relationships between school connectedness and extracurricular activities. The impact of participation in health-risk behaviours on school connectedness is discussed, specifically skipping school, drinking alcohol, smoking cigarettes, and smoking marijuana. The body of literature discussing school connectedness is growing around the world in both psychological and education research; however, little has been published looking at Canadian youth or looking specifically at the relationship between extracurricular participation, health-risk factors, and school connectedness. The literature in these areas is reviewed.

Positive Youth Development

Past research in developmental psychology has tended to focus on the negative aspects of at-risk youth and neglected to recognize how young people become socially competent and healthy adults (Larson, 2000). This focus has resulted in the development of intervention programs designed to curb problem behaviours, while disregarding prevention programs designed to promote positive development (Larson, 2000).

In reaction to this conventional perspective on child development, an initiative toward positive psychology is emerging in the literature. This new perspective is referred to as positive youth development and it focuses on markers of positive adjustment. This approach challenges the idea of young people as problems for society and instead views them as resources. It aims to

focus on the unique talents, strengths, interests, and future potential of every child no matter how disadvantaged their background (Damon, 2004). Positive youth development is a framework that suggests helping young people to achieve their full potential is the best way to prevent them from engaging in risky behaviours (National Clearinghouse on Families & Youth, 2006).

Researchers in psychology have examined the impact of positive youth development and have contributed complimentary, yet different definitions. Larson's (2000) research referred to positive youth development as a means to finding the "pathways whereby children and adolescents become motivated, directed, socially competent, compassionate, and psychologically vigorous adults" (p. 170). This approach is grounded in the notion that a surprising number of youth are unexcited about their lives. Regardless of their status from honor students to juvenile delinquents, young people report being bored, unmotivated, and un-invested in their futures (Larson, 2000). Damon's (2004) research provided further insight by describing positive youth development as a proactive approach that resists the notion that development is a process of overcoming deficits and risks. While the approach does recognize the existence of adversities, it challenges the dominant problem-centered vision of youth development. Positive youth development views children as being eager to develop the competencies required to contribute to the world. This perspective suggests that by engaging youth in productive activities, we no longer need to focus on treating the so-called maladaptive tendencies of adolescence (Damon, 2004). Furthermore, positive youth development views every child as being resilient and having vast potential. Positive youth development truly embodies the sports adage that "the best defense is a good offense" (Damon, 2004, p. 17).

Resiliency is defined as "good outcomes in spite of serious threats to adaptation or development" (Masten, 2001, p. 228). Researchers in the area need to understand both risk and

protective factors, how some at-risk children have good outcomes, and those factors that protect these children from dysfunction (Mash & Dozois, 2003). Numerous protective factors have been identified and can be divided into factors that exist within the child (e.g., good cognitive ability, easy temperament), within the family or other relationships (e.g., positive family climate, connections to prosocial peers), or within the community (e.g., effective schools, health care availability) (Snyder & Lopez, 2007). These identified resources have been translated into strategies for fostering resilience and have been used to develop programs that help young people overcome adversities and build competencies (Snyder & Lopez, 2007). However, many of these resilience programs lacked sufficient research examining their effectiveness and taught life skills that were not reflected in the cultures in which young people lived. While valuable in theory, these efforts were doomed to fail in the real world (Snyder & Lopez, 2007).

In developing an effective resilience based program, there are many challenges. The question asked of successful program developers is why does your program work? Overall, the soundness of a program designed to promote resiliency and positive youth development is established by the degree to which it promotes the *good* and prevents the *bad* in today's youth (Snyder & Lopez, 2007). Furthermore, effective programs incorporate the following three guidelines: more is better -- increased time committed, the better the results; earlier is better -- the younger the participant, the more likely he or she is to develop competence; and structured is better -- programs that are purposeful and systematic can replicate what works more easily (Snyder & Lopez, 2007). With greater emphasis on promoting positive youth development and greater understanding of programs that work, the question becomes how do we promote positive youth development?

Developmental theories maintain that elements of positive social behaviour are biologically hardwired and are universal across cultures (Damon, 2004). At the start of life, all humans have the capacity for moral awareness and prosocial behaviour. These inherent abilities are influenced by the particular belief systems and values of our culture (Damon, 2004). Because each child has the ability to be caring and empathic, positive youth development researchers suggest that exposure to experiences that promote connection to society impact youth development (Damon, 2004). Larson (2000) suggested that structured voluntary activities (i.e., extracurricular activities) provide the rich context necessary to promote positive development and connections to society. Participation in extracurricular activities has been found to be associated with higher self-esteem and lower rates of delinquency, and it has been hypothesized that extracurricular activities help create an environment where adolescents experience intrinsic motivation and become more receptive to the developmental experiences involved in participation (Larson, 2000).

Participation in Extracurricular Activities

Students of all ages report a struggle to connect the relevance of school methods and curriculum to their interests and thoughts of the future (Whitlock, 2006). The resulting environment is one where students easily disengage because they feel unstimulated by a traditional school structure that ignores their developmental needs (Whitlock, 2006). In order to promote learning and alleviate boredom, researchers suggest encouraging a participatory climate in the classroom and creative engagement through extracurricular activities outside the classroom (Whitlock, 2006). Bronfenbrenner (1986) stated that because children develop within multiple contexts, research should reflect these multiple roles within which the development occurs. In reaction to Bronfenbrenner's writings, substantial research has been conducted in the two

environments where children spend the most time, home and school. In the home environment, key characteristics include the availability of physical resources, parenting style, and sibling relationships (Fletcher, Nickerson, & Wright, 2003). In comparison, schools impact development by creating environments that encourage meaningful learning activities, by allowing for the development of higher order thinking skills, and by having teachers who are structured, organized, and engaged in children's learning experiences (Fletcher et al., 2003).

With a greater understanding of the home and school environments established, efforts can now focus on other areas influencing development. In contrast to the substantial research into the home and school environment, less research has examined the developmental impact of leisure activities (Fletcher et al., 2003). Leisure time is a context with unique developmental opportunities for children and youth that promotes autonomy and the chance to exert personal control over the environment (Darling, Caldwell, & Smith, 2005). Leisure activities also encourage skill development, social interaction, and identity exploration (Darling et al., 2005). Furthermore, participation in extracurricular activities is a primary way to increase school connectedness (Brown & Evans, 2002).

School-Based Extracurricular Activities

In Western society, adolescents spend an increasing amount of time in unsupervised and unstructured activities (McHale et al., 2005). Along with the increase in unsupervised time comes a *spike* in juvenile crime rates after school (Shann, 2001). With a reported 25% to 50% of American youth at-risk for not developing into productive and contributing adults, concerned individuals and organizations are seeking effective means of changing this outcome (McHale et al., 2005; Shann, 2001).

Extracurricular activities have the potential to provide developmental benefits to adolescents by increasing opportunities to establish positive social networks (Fredericks et al., 2002). Larson (2000) defined extracurricular activities as voluntary; therefore, not required for school, and participation occurs within a structure involving a system of rules and goals.

This particular research study examines school-based extracurricular activities that provide structured environments for adolescents during their free time. The benefits of participating in structured extracurricular activities are not limited to those based in schools; however, they are one of the few aspects of leisure promoted in schools and are thus influenced by social policy initiatives (Darling et al., 2005). School-based extracurricular activities involve regular participation, schedules, rules, direction from adults, sustained attention, feedback on performance, and opportunities for skill development (Darling et al., 2005). Sports teams, fine-arts activities, and school organizations (e.g., student government, Students against Drinking and Driving (SADD)), represent the prominent areas of school based extracurricular activities.

For some adolescents, a number of barriers to positive outcomes exist because time outside of school is devoted to surviving their out-of-school environments including their low-income communities and/or dysfunctional homes (Shann, 2001). For others, this time is spent in solitary, unsupervised, and unstructured activities such as watching television and playing video games (Gilman, Meyers, & Perez, 2004). Results of a recent national poll revealed that an overwhelming majority of Americans support making after-school programs available to all students (Shann, 2001). However, many schools are eliminating after-school program because of increasing pressure to eliminate all activities that “do not directly contribute to the core academic curricular” (Darling et al., 2005, p. 54). In order to battle against this trend, supporters of extracurricular activities are calling for research documenting the benefits of extracurricular

participation (Darling et al., 2005). Recent studies have found participation in extracurricular activities to be associated with improved adolescent adjustment as well as more academic commitment and better academic performance (Darling et al., 2005).

Extracurricular activities are a unique setting where adolescents engage in activities both emotionally and cognitively. These activities create an environment where adolescents are actively involved in constructing personal change (Dworkin et al., 2003). Furthermore, extracurricular activities are a way to create shared community within the school by giving academically gifted students and academically challenged students the opportunity to excel within a variety of school environments and settings (Darling et al., 2005).

School Connectedness

“School connectedness has been defined in different ways, but common indicators include liking school, a sense of belonging at school, positive relations with teachers and friends at school, and an active engagement in school activities” (Thompson, Iachan, Overpeck, Ross, & Gross, 2006, p. 379). School connectedness is the feeling of belonging and acceptance in your school environment (Bonny et al., 2000), and a student’s interest, emotional involvement, and motivation to learn in school (Klem & Connell, 2004). Having a strong sense of connection to school is related to positive outcomes including increased school success (Brown & Evans, 2002), and decreased risky behaviours (Bonny et al., 2000). Despite its widespread appeal, empirical evidence supporting the relationship between school connectedness and adolescent development is limited and there is little understanding of why some adolescents feel connected while others do not (McNeely, 2002, 2005). To improve our understanding of these relationships, a variety of research modalities should be employed. Research using methods such as interviews, focus groups, and case studies would give a voice to adolescents by inviting their

perspective and a more thorough picture of the importance of school connectedness. Conversely, other researchers have suggested that identifying the malleable factors associated with school connectedness is the first step toward developing school-based prevention strategies (Bonny et al., 2000). Essentially, a number of questions remain unanswered in regards to school connectedness therefore extensive research is still required.

Children enter school with certain predispositions regarding their education as well as a range of support and encouragement from family (McNeely, 2002). Similar to how positive family relationships can promote academic achievement and protect against risky behaviours, supportive and caring relationships with adults and peers at school (i.e., school connectedness) encourages academic success among adolescents (McNeely, 2004). Furthermore, researchers have found that “school connectedness was more protective than any other factor, including family connectedness, against absenteeism, delinquency, drug use, unintentional injury, and pregnancy” (Bonny et al., 2000, p. 1017).

School Connectedness Terminology and Definition

In the past twenty years, the construct and definition of school connectedness has changed. Initially, school connectedness was broadly defined as “the extent to which students feel personally accepted, respected, included and supported by others in the school social environment” (Goodenow, 1993, p. 80). In contrast, recent definitions have become much narrower and more specific; for example, “[school connectedness] is a psychological state of belonging in which individual youth perceive that they and other youth are cared for, trusted, and respected by collections of adults that they believe hold the power to make institutional and policy decisions. Moreover, connectedness is conceptualized as something not merely received but reciprocated as well” (Whitlock, 2006, p. 15).

In the literature, the construct of school connectedness is referred to by several terms including school engagement, school bonding, school involvement and school attachment (Libbey, 2004). Although each term shares similar components of sense of belonging, liking school, and teacher supportiveness, the lack of a consistent definition and method of measurement creates little theoretical consistency among the connectedness-related terms (Libbey, 2004). In addition, because research on school connectedness spans numerous fields including medicine, education, psychology, and sociology, there is no clearly defined empirical base from which to conduct research (Blum, 2005).

Hence, an agreed upon term and definition has not yet been identified, but it is the opinion of this researcher that the term *school connectedness* appears most frequently in the current literature and will therefore be used in this research. In addition, because a single definition has not been established, this research will function within the definitions provided above.

History of School Connectedness

School connectedness was first investigated because it was found to be a critical factor in school retention or dropout (Shochet et al., 2006). As a preamble to recent school connectedness literature, Finn (1989) proposed an understanding of school dropout as a developmental process rather than simply a characteristic of the individual or institution. In this model, leaving school before graduation is a chain of events often beginning in the earliest grades with absenteeism, disruptive behaviour, and delinquency. In order to change this chain of events, Finn (1989) proposed greater attention on the process of withdrawal from school. This includes helping students to identify with and have a sense of attachment to the school environment and to develop a sense of committed to school goals. Finn (1989) suggested that participation in

school-related activities promotes better contact with the school environment, and specifically for students having academic difficulty, extracurricular activities provide alternate routes for maintaining that contact.

Compounding the problems is that specific populations of students form the large majority of students leaving school early without graduating. Disproportionate numbers of students leaving school early are minorities and youth growing up in low socio-economic status situations (Finn, 1989). Furthermore, young offenders are often students who struggled in school because of a learning disability or poor ability. In the end, this group of young people is often dependent on social welfare programs because they lack the opportunities linked to having a high school diploma. Finn's (1989) research examined the relationship between school success and participating in school activities; this line of research continues today with current research examining how extracurricular participation promotes school connectedness.

School Connectedness and the Add Health Study

Numerous authors examining school connectedness and related constructs report on the noteworthy impact of school connectedness on a breadth of outcomes. Much of the recent attention on school connectedness is due to The National Longitudinal Study of Adolescent Health (Add Health). Add Health is a study that explored nationally representative data looking at the causes of health-related behaviors of adolescents in grades 7 through 12 and their outcomes in young adulthood. Add Health seeks to examine how social contexts (families, friends, peers, schools, neighborhoods, and communities) influence adolescents' health and risk behaviors (University of North Carolina, Add Health: The National Longitudinal Study of Adolescent Health, 1997). The Add Health study has been the source of a great deal of data concerning school connectedness (Resnick et al., 1997), and it is credited with initiating the

recent increase in research of school connectedness (Whitlock, 2006). Findings from current research are consistent with Add Health results, confirming that having a connection to school has a significant impact on youth (Whitlock, 2006). The Add Health study identified school connectedness as the only school-related variable that was protective for all measured health-risk behaviours including emotional distress, sexuality, violence, and substance use (Resnick et al., 1997). Furthermore, Resnick et al. (1997) found that even small increases in level of school connectedness were clinically relevant and associated with better health outcomes.

Using data from the Add Health study, researchers have begun to examine the contribution of specific variables to school connectedness. These researchers have examined the school environment and its relationship to demographic composition, teacher qualifications, discipline policies, structural characteristics, percent of students who do not participate in extracurricular activities, and classroom management climate (McNeely et al., 2002). Results of this study indicate that: 1) school connectedness was lowest in racially integrated schools; 2) school connectedness was lower in schools that expel students for infractions more serious than cheating or smoking; 3) school connectedness decreases with larger school size (weak association); 4) school connectedness declines with less classroom management; and 5) school connectedness increases with more extracurricular activities.

School Connectedness and the School Environment

Creating a school environment that promotes school connectedness is the outcome of efforts by school officials, administrators, teachers, and health professionals (Blum, 2005). Recent researchers examining the relationship between school connectedness and four developmental supports (meaningful roles at school, safety, creative engagement, and academic engagement) suggest that student's feelings of being cared for, trusted, and respected at school

are influenced by a variety of experiences, pressures, and relationships in the school environment (Whitlock, 2006). These researchers identified two variables that affect school connectedness independent of the demographic and context variables gender, race, extracurricular participation, and grade level (Whitlock, 2006). The two variables are having an opportunity to provide meaningful input into school policies and practices, and the extent to which students are engaged in class material (Whitlock, 2006). In addition, finding ways to promote attachment to school versus simply enforcing zero-tolerance policies is more effective in reducing school violence (Shochet et al., 2006).

Another factor identified as affecting sense of school connectedness is peer relationships (Hamm & Faircloth, 2005). Friendships during adolescence play an important role in developing a sense of connection (Hamm & Faircloth, 2005). Adolescents who report having close friends at school experience companionship and emotional attachment to their school, leading to valuing of the school community and feeling valued by people in that environment. Furthermore, positive interpersonal experiences reinforce a sense of belonging to a community and, for adolescents, quality friendships lead to greater involvement and overall positive affect (Hamm & Faircloth, 2005).

Researchers have also identified three characteristics of schools that help young people to feel connected to school while simultaneously encouraging student achievement (Blum, 2005). The first is setting high academic standards combined with strong teacher support, the second is creating an environment with positive and respectful adult and student relationships, and the third is schools where students feel physically and emotionally safe (Blum, 2005). Students in schools with these characteristics have a greater sense of belonging and behave in ways that follow school norms and values (McNeely, 2005).

School Connectedness and Mental Health

The Commission on Children at Risk (2003), concerned with the psychosocial health of children and adolescents, conducted a lengthy multidisciplinary study that brought further attention to the importance of school connectedness. The authors of the report concluded that current negative trends in child and adolescent mental health may be linked to community and institutional failure to facilitate youth connectedness to key socializing domains. Furthermore, as incidences of school violence increase, better ways of identifying youth who are disconnected or alienated from school has become increasingly critical (Bonny et al., 2000).

Recent school connectedness research has begun to look at the impact of connectedness for specific populations of children. Schochet and colleagues (2006) conducted a study to gain further understanding of the links between school connectedness and mental health symptoms in adolescents. They found that students with lower levels of school connectedness were receiving more counselling support at school than those with higher school connectedness scores. The researchers then looked specifically at depression, anxiety, and general functioning. Schochet and colleagues (2006) found a strong association between school connectedness and depression that was substantially stronger than those reported previously in the literature. This suggests that levels of school connectedness should be further emphasized as a contributing factor in adolescent depression. In addition, decreased school connectedness was found to be predictive of future depressive symptoms for both boys and girls as well as predictive of future anxiety symptoms in girls (Schochet et al., 2006). These preliminary results imply that further research dedicated to understanding the association of school connectedness and mental health is essential.

School Connectedness and Demographic Factors

Bonny and colleagues (2000) found that students who reported higher school connectedness scores had better academic performance, more extracurricular involvement, better health status, and less use of cigarettes and alcohol. In comparison, lower school connectedness scores were reported by female students, black students, and students with age-grade asynchrony, urban school attendance and lower parental education (Bonney et al., 2000). In addition, studies report lower school connectedness scores for individuals of ethnic minorities (Bonny et al., 2000; Brown & Evans, 2002) possibly due to anti-academic norms held within the minority group (Goodenow & Grady, 1993). It has been suggested that academic success is a form of *acting white*, and therefore a form of ethnic disloyalty (Goodenow & Grady, 1993).

There are distinctive age-related differences in how students experience school connectedness (Whitlock, 2006). Overall, younger students have higher levels of connectedness compared to their older peers (Whitlock, 2006). While all students identified meaningful roles as a powerful predictor of school connectedness, students defined meaningful roles in very different ways depending on their age. Youth in grades eight to ten link meaningful roles to experiences where they have access to individual adults and to the specific situations where they have the opportunity to exercise agency (i.e., classroom or student government; Whitlock, 2006). However, grade eleven and twelve students associate meaningful roles with opportunities where they can have the greatest impact on institutional policies and practices (Whitlock, 2006). These findings suggest that distinct age group differences, traditionally written off as a normal part of development, could be the result of the schools' inability to fulfill the developmental needs of students in the senior grades (Whitlock, 2006).

School Connectedness and Intervention for At-Risk Youth

Involvement in health-risk behaviours is shown to increase an adolescent's risk of maladjustment. Students with poor school connectedness experience more negative life outcomes and have higher rates of delinquency, substance use, and school dropout (Maddox & Prinz, 2003). By increasing their sense of belonging at school, adolescents face fewer barriers to learning and have greater opportunity for academic success (Catalano et al., 2004). Furthermore, students who feel connected to school are less likely to use substances, exhibit emotional distress, demonstrate violent or deviant behaviour, experience suicidal thoughts or attempt suicide, and become pregnant independent of how they are faring academically (Blum, 2005).

Growing public and professional attention on school connectedness has prompted the development of primary and secondary prevention strategies designed, respectively, to promote connectedness among all students, and to identify and reconnect disconnected youth (Bonny et al., 2000). Intervention strategies implemented in elementary school increases levels of school bonding at age 18 (Bonny et al., 2000). In comparison, secondary prevention strategies that target youth already identified as disconnected have been limited in scope and evaluation (Bonny et al., 2000). Overall, prevention strategies have been impeded by the limited knowledge of the factors that differentiate youth who do or do not feel connected to their schools (Bonny et al., 2000).

Participation in Extracurricular Activities and School Connectedness

In order to discover ways of improving school connectedness, it is first necessary to identify the factors associated with school connectedness. A number of potential malleable factors affecting school connectedness have been recognized (Bonny et al., 2000), with participation in extracurricular activities argued as the primary malleable factor influencing

school connectedness (Brown & Evans, 2002). The benefit of participation in extracurricular activities is twofold in that as students have more positive school experiences, participation in extracurricular activities increases, and as participation increases, so do feelings of school satisfaction (Gilman et al., 2004). The impact of participating in school-based activities potentially can lead students to feel more connected to the social fabric of their school, thereby facilitating school identity and ultimately preventing dropout (Gilman et al., 2004).

Participation in extracurricular activities is a central nonacademic means to enhance school connectedness. Involvement in extracurricular activities may be particularly critical for students at risk for school failure (Gilman et al., 2004) or students who have less access to resources (Darling et al., 2005). In addition, it has been hypothesized that the association between extracurricular involvement and positive outcomes creates additional exposure and new opportunities for positive adult role models (Darling et al., 2005). For at-risk students who are at a heightened risk for substance use, poor grades, more negative attitudes toward school, and lower academic aspirations (Darling et al., 2005), the availability of structured extracurricular activities can help mitigate the negative outcomes associated with these factors (Shann, 2001).

The relationship between school connectedness and extracurricular involvement during adolescence is predictive of a number of positive outcomes (Hansen, Larson, & Dworkin, 2003). These include lower levels of delinquency and arrests (Darling et al., 2005), decreased school dropout and substance use (Brown & Evans, 2002), higher levels of academic commitment and performance (Darling et al., 2005), and higher levels of self-esteem (McHale et al., 2005). However, some research has indicated that playing team sports results in greater involvement with drinking alcohol and getting drunk through the high school years (Eccles & Barber, 2003). This same research goes further to explain that students who participate in team sports liked

school better, were more likely to attend and graduate from college, and was predictive of having a productive job at age 24 (Eccles & Barber, 2003). Overall, extracurricular activities are known to encourage prosocial behaviours, increase engagement with school, promote interaction with non-parental adults, and develop personal strengths (Gilman et al., 2004). Furthermore, they help build resilience in adolescents who are at higher risk for adjustment problems (Darling et al., 2005).

Research into extracurricular involvement has received less than adequate attention because it is unclear why adolescents who choose to participate in school-based extracurricular activities differ from non-participants. This blurred relationship makes it difficult to untangle the connections between participation and adolescent adjustment from selection effects (Darling et al., 2005). Research is required to determine the underlying factors that make a student more connected and whether those factors are the same as those that make a student more likely to participate in extracurricular activities. Does increased participation affect adolescents positively or are students who become more involved more likely to experience success despite extracurricular participation? (Fletcher et al., 2003)

Adolescents who participate in school-based extracurricular activities often share qualities such as higher social class, more positive orientation toward school and adult standards, and a family structure that is authoritative. The relationship becomes further complicated as distinctions by gender, race, and grade exist for both rates of participation and the type of activity. Female students are more likely to participate in all classes of extracurricular activities whereas males are more likely to participate in sports. Furthermore, older students are relatively more likely to be involved in non-sport activities than are younger students (Darling et al., 2005). Brown and Evans (2002) examined the relationship between extracurricular participation of

minority youth and school connectedness. Regardless of ethnicity, participation in extracurricular activities resulted in greater levels of school connection. When examining the results for minority youth, the relationship between extracurricular participation and school connection was particularly strong. While these results are encouraging, minority youth continue to participate less in extracurricular activities with the exception of sports (Brown & Evans, 2002). It is also interesting to note that adolescent males are more connected to their schools than adolescent females (Bonny et al., 2000), and yet women in adulthood tend to value connection more and are more strongly linked to the wider social context than adult males (Townsend & McWhirter, 2005). These complex relationships require further investigation. The following study intends to address some of these relationships and add to the current research in the area of school connectedness.

Rationale for Research

Although it is widely believed that school connectedness is an important psychosocial factor influencing adolescent development, the process by which young people acquire a sense of connection is not fully understood (Brown & Evans, 2002). Given the scarce but growing research in the area, considerably more studies are required to substantiate the positive outcomes found in the research conducted to date (Brown & Evans, 2002). Furthermore, it is worthwhile to gain a better understanding of factors that could lead to higher levels of school connectedness and conversely risk factors that affect negatively levels of school connectedness (Thompson et al., 2006). Further research is required to establish whether the relationship found between extracurricular activities and increased school connectedness is present in diverse youth populations (Brown & Evans, 2002; Whitlock, 2006).

Research Question

This study investigated the relationship between school connectedness and participation in extracurricular activities to answer the following question: What factors predict school connectedness?

CHAPTER III: Methodology

This chapter describes the materials and procedures used to collect and analyze the data for this study. The study examines the constructs of school connectedness, extracurricular participation, involvement in health-risk behaviours, and select demographic factors. Multiple regression analysis was utilized in a non-experimental research design.

Participants

Participants were 252 grade eleven and twelve students from a rural Saskatchewan school division. Of the 252 students who were available to complete the survey, 247 surveys were completed and used in this study. Therefore, this study had a 98% response rate. Grade eleven and twelve students were chosen because of the variety of school-based extracurricular activities offered in the senior grades, and because they are sixteen years or older each student could provide their own informed consent and it was not required to have signed parental consent for each student (i.e., passive consent). The purpose for a consent procedure that did not require signed parental consent was to allow participation from all students regardless of barriers caused by requiring parental consent for each individual participant. Sampling criteria for the study required that the participants: 1) fall between 16-19 years of age; 2) be in grades eleven or twelve; 3) attend school; and 4) be willing to complete the survey.

Instrument

All participants completed a survey with questions asking about demographics (i.e. age, gender, grade, ethnicity), involvement in health-risk behaviours, participation in extracurricular activities, and school connectedness.

Dependent Variable

School Connectedness. School connectedness was assessed by the Psychological Sense of School Membership (PSSM; see Appendix D). The PSSM is an 18-item scale developed for use with adolescent students (Goodenow, 1993). The PSSM includes items that address both perceived liking (e.g., “I feel like a real part of this school”) and respect and encouragement for participation (e.g., “Other students in this school take my opinion seriously”). Items on the PSSM are responded to using a 5-point Likert-type format, with choices ranging from not at all true (0) to completely true (4). The internal consistency reliability (Cronbach’s alpha) for the PSSM is considered acceptable for an attitude scale and ranges from .77 to .88 (Goodenow, 1993). The internal consistency of the PSSM in this study was .91.

Independent Variables

Demographic information. Demographic information was gathered from self-reported information. Participants were asked to indicate their gender (male or female), age (16, 17, 18, or 19), grade (eleven or twelve), and ethnicity (Aboriginal, African American, Asian, Caucasian, Latin American, Métis, Middle Eastern, or other).

Health-risk behaviours. Four health-risk behaviours were measured: cigarette use, marijuana use, alcohol consumption, and skipping school. Participants were asked to self-report: a) the average the number of classes they skip per week; b) the average number of cigarettes they smoke per week; c) the average number of alcoholic beverages they drink per week; and d) the average number of times they smoke marijuana per week (Appendix D).

School-based extracurricular activities. Extracurricular participation was measured by a self-report instrument developed for this study. The instrument involved a list of possible extracurricular activities where participants indicated if they participated in each activity and

reported the number of hours per week they participated in each school-based extracurricular activity (see Appendix D).

Procedures

Participants completed the questionnaire in approximately 30 minutes. The researcher administered the paper and pencil questionnaire in groups of 15 to 50 participants. Prior to completing the questionnaire, participants were given a brief summary of the purpose of the study and were then asked to complete the questionnaire. Students were informed that they were not required to complete the questionnaire and could choose to discontinue participation at any time during the administration of the questionnaire. The students were then informed that by completing the questionnaire, they were providing their consent to participate.

Analysis

Multiple Regression

Multiple regression is a flexible statistical technique that is especially useful when examining real-world problems that cannot be assessed in a laboratory setting (Tabachnick & Fidell, 2007). Multiple regression evaluates the relationship between one dependent variable (DV) and several independent variables (IV) seeking an answer to the question: What are the expected changes in the DV as a result of changes (observed or induced) in the IVs? (Pedhauzer, 1982) Therefore, the purpose of a multiple regression analysis is to predict the outcome of the DV (i.e. school connectedness) using the fewest number of IVs (i.e., extracurricular activity, cigarette use, skipping school).

Multiple regression aims to reveal relationships among variables and does not imply that the relationships are causal (Tabachnick & Fidell, 2007). Even when a relationship between two variables appears strong, that relationship may stem from many sources and may be influenced

by variables not measured in the analysis (Tabachnick & Fidell, 2007). Another limitation surfaces when determining the inclusion of variables. The researcher determines which DVs and IVs should be included and why they should be included.

There are three major types of multiple regression including standard multiple regression, statistical (stepwise) regression, and sequential (hierarchical) multiple regression (Tabachnick & Fidell, 2007). For the purposes of this research, sequential multiple regression will be used. Sequential multiple regression allows the researcher to determine the order the IVs (or set of IVs) enter the equation (Tabachnick & Fidell, 2007). This allows the researcher to enter lesser or nuisance variables first and the variables of major importance later, allowing the major set of variables to be evaluated in terms of what it contributes to the prediction over and above the lesser set(s) (Tabachnick & Fidell, 2007).

In the present analysis, the independent variables were entered in three separate blocks. The demographic variables, age, gender, grade, were entered into the regression equation first. The demographic variables were not of primary interest, but rather were considered potential confounders in the relationship between extracurricular participation and school connectedness. The health-risk behaviours were entered next because previous research has associated health-risk behavior with school connectedness. Extracurricular participation was entered last to determine if extracurricular participation could account for any of the variance above and beyond the demographic and health-risk factors.

Power and Assumptions of Multiple Regression

In order to ensure sufficient power, an appropriately large sample size was desirable. Tabachnick and Fidell (2007) suggest using the formula $N \geq 50 + 8m$ (where m is the number of

IVs), as the minimum number of participants necessary to run a multiple regression. When applied to this research, the minimum number of participants required was 114.

Multiple regression has a number of assumptions. Although multiple regression may be robust to violations of its assumptions, it is necessary to test for them (Tabachnick & Fidell, 2007). The assumptions of multiple regression include normality, linearity, homoscedasticity of residuals, absence of multicollinearity and singularity, independence of error, and absence of outliers in DV, IVs, and solution (Tabachnick & Fidell, 2007). When the assumptions are violated, the analysis is not invalid but the power of the relationship between the IVs and DV will be weakened (Tabachnick & Fidell, 2007). Therefore, this research tested the assumptions in the following ways: (1) Normality – large sample size and/or histograms; (2) Linearity – correlations and/or scatterplots; (3) Homoscedasticity or residuals – scatterplots; (4) Absence of multicollinearity and singularity – correlations, pairwise plots, and/or examination of regression coefficients; (5) Independence of error – residuals analysis; (6) Absence of outliers in the DV, IVs, and the final solution – the residuals plot (Tabachnick & Fidell, 2007).

Preliminary Analysis

Once data were collected and entered, data were checked for errors in data entry, missing data or outliers, and problems with multicollinearity or singularity. This first step of data cleaning was to compare the original data to the SPSS data file and check for any errors in entry. One-hundred percent verification was conducted. Methods used included out-of-range values, plausible means and standard deviations, and univariate outliers. The potentially large data set was also screened for accuracy by examining the descriptive statistics and graphic representations of the variables (Tabachnick & Fidell, 2007).

Missing data are one of the most pervasive problems in data analysis (Tabachnick & Fidell, 2007), resulting from participant drop-out, missing responses, equipment malfunction, and entry mistakes. If fewer than 5% of values are missing in the data set and those missing values are distributed randomly, they can be left as missing (Tabachnick & Fidell, 2007). Otherwise, missing values are estimated and the analysis repeated with and without missing data (Tabachnick & Fidell, 2007).

As mentioned previously, the data were examined for problems with multicollinearity and singularity by checking pairwise plots and correlation values. Data were examined for normality by plotting the variables and by checking skewness and kurtosis. If required, variables would be transformed as a remedy for outliers or for failures of normality, linearity, and homoscedasticity. Transformed variables are sometimes harder to interpret, however, transforming a data set often substantially improves the results of the analysis when done appropriately (Tabachnick & Fidell, 2007).

Level of Statistical Significance and Power

In the current research, a statistical significance level of 0.05 was employed. This level was chosen based on the nature of the research question. Because the research is examining and predicting the relationship between variables, and no interventions or treatment is prescribed, a less conservative alpha level than 0.01 is suitable. However, a more liberal significance level, such as 0.10 leaves much room for implying relationships are statistically significant when in fact they may not be important or noteworthy. The significance level of 0.05 allows enough room to adequately assess the relationships without reducing the appropriateness of implications based on results.

CHAPTER IV: Results

Data Screening

All data entry was completed by the researcher. The data were double-checked for errors of entry using frequency tables, descriptive statistics, and graphic representations of the variables. Four participants were not included in the analysis due to being uncooperative during data collection. The participants were allowed to complete the survey but their responses were removed from the analysis. One participant was eliminated because she reported being 20 years old and therefore did not meet the age criteria for the study. Nineteen participants missed one or more questions on the School Connectedness Questionnaire and therefore their responses were not included in the analysis. There was a small number of outliers. Scores on variables from three participants were found to be outliers; these scores were not eliminated from the data set but were transformed by substituting the mean of the variable plus three times the standard deviation of the variable (Tabachnick & Fidell, 2007).

Participant Characteristics

The descriptive statistics for the continuous variables are reported in Table 4.1. Data from 247 grade eleven and twelve students from a rural Saskatchewan school division were analyzed. Table 4.2 reports the frequencies and percentages for categorical variables. Of the 247 participants, 123 (49.8%) were male and 124 (50.2%) were female. The students ranged in age from 16 to 19 years, with 44% being 16, 45% being 17, 8% being 18, and 3% being 19 years of age. In terms of ethnicity, 82% of the participants reported being Caucasian, 9% Aboriginal, 4% Métis, and the remaining 4% either African American, Asian, Middle Eastern or other. Student ratings of how much they liked school varied, with 9.7% reporting they like school ‘a lot’, 43.3% reporting they like school ‘mostly’, 37.2% reporting

they like school ‘not really’, and 9.3% reporting they like school ‘not at all’.

Correlation Analysis

Table 4.3 displays the correlations between the dependent variable of school connectedness, and the independent variables. A statistically significant positive correlation was found between school connectedness and participation in extracurricular activity, $r(198) = .36, p < .01$. A statistically significant negative correlation was found between school connectedness and classes skipped per week, $r(198) = -.24, p < .01$. Of the remaining health-risk behaviours, two variables were correlated negatively but the correlations were not statistically significant: cigarettes smoked per week, $r(198) = -.05$; and marijuana smoked per week, $r(198) = -.08$; alcoholic drinks per week was not correlated with school connectedness, $r(198) = .01$.

Negative correlations were found between extracurricular participation and skipping classes, $r(198) = -.23, p < .01$; cigarettes smoked per week, $r(198) = -.14, p < .05$; and marijuana smoked per week, $r(198) = -.15, p < .05$. No statistically significant correlations were found between extracurricular participation and alcoholic drinks per week. All four health-risk behaviours (classes skipped per week, cigarettes smoked per week marijuana smoked per week, and alcoholic drinks per week) were correlated positively with each other.

Extracurricular activities were divided into categories of sports, arts, and other. The extracurricular activities were divided in the following ways: 1) Sports: badminton, baseball/softball, basketball, cheerleading, cross-country running, cross-country skiing, curling, football, golf, hockey, lacrosse, rugby, rowing/kayaking, soccer, tennis, track and field,

Table 4.1
 Descriptive Statistics for Continuous Variables

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Min Value	Max Value
School Connectedness	228	65.46	12.82	33	89
Extracurricular Participation (EA)	247	5.60	5.66	0	28
Average Classes Skipped Per Week	246	.84	1.90	0	15
Average Cigarettes Per Week	243	12.68	32.10	0	175
Average Alcoholic Bev. Per Week	232	6.71	9.77	0	60
Average Marijuana Used Per Week	240	1.06	4.12	0	30

Note: *N* = number; *M* = mean; *SD* = standard deviation

Table 4.2
 Frequencies and Percentages for Categorical Variables

Variable	<i>N</i>	Percentage
Gender		
Male	123	49.8
Female	124	50.2
Grade		
Eleven	120	48.6
Twelve	127	51.4
Age		
16	108	43.7
17	110	44.5
18	20	8.1
19	7	2.8
Ethnicity		
First Nations (Aboriginal & Metis)	30	12.1
Caucasian	202	81.8
Other (African American, Asian, Middle Eastern or other)	11	4.4
Like School		
A lot	24	9.7
Mostly	107	43.3
Not really	92	37.2
Not at all	23	9.3

wrestling, volleyball; 2) Arts: band, choir, dance, drama group, drama production, visual art club; and 3) Service Groups: gay-straight alliance, peer support, peer tutoring, SADD, student government, yearbook.

Table 4.4 displays the correlations between numerous variables including the frequency of sports extracurricular activities (sports EA), arts extracurricular activities (arts EA), school connectedness, gender, grade, ethnicity, skip school, cigarettes per week, drinks per week, and drugs per week. Sports EA was found to be correlated with school connectedness, $r(228) = .38$, $p < .01$, whereas arts EA was not correlated with school connectedness. Sports EA was correlated negatively with two of the health-risk behaviours, average classes skipped per week, $r(246) = -.20$, $p < .01$ and average times smoked marijuana per week, $r(240) = .13$, $p < .05$. Arts EA was correlated negatively with average classes skipped per week, $r(245) = -.14$, $p < .05$.

A statistically significant correlation was found between school connectedness and ethnicity, $r(216) = .15$, $p < .05$. These scores indicate that First Nations (self-reported as Aboriginal or Métis) students had lower school connectedness scores than Caucasian students; however, this correlation is likely not that practical because it only accounts for 3% of the variance.

Sequential Multiple Regression

A sequential multiple regression analysis was conducted to predict level of school connectedness. This type of regression was utilized with the independent variables entered in three separate models. The demographic variables, age, gender, grade, and ethnicity were entered into the regression equation first, health-risk behaviours were entered next, and extracurricular participation was entered third. This method of multiple regression was utilized to determine the contribution of extracurricular participation to level of school connectedness above and beyond the contribution of demographics and involvement in health-risk behaviours.

Table 4.3

Correlation Matrix – School connectedness (SC), gender, age, grade, ethnicity, skip school, cigarettes per week, drinks per week, drugs per week, extracurricular participation (EP)

Variables	1	2	3	4	5	6	7	8	9	10
1. SC		-.008	.069	.104	.138*	-.237**	-.049	.096	-.077	.358**
2. gender			.032	.050	.007	-.004	-.135*	-.194*	-.122*	.038
3. age				.683	-.199*	.001	.135*	.049	.080	-.143*
4. grade					.071	.009	.078	.170	-.041	-.110
5. ethnicity						-.118*	-.031	.080	-.270**	.112
6. skip school							.135*	.176*	.127*	-.233**
7. cigarettes per week								.240**	.238**	-.140*
8. drinks per week									.027	-.014
9. drugs per week										-.146*
10. EP										

Note. * Correlation is statistically significant at the 0.05 level (1-tailed).

** Correlation is statistically significant at the 0.01 level (1-tailed).

Table 4.4

Correlation Matrix – sports EA, arts EA, school connectedness (SC), gender, grade, skip school, cigarettes per week, drinks per week, drugs per week, and ethnicity

Variables	1	2	3	4	5	6	7	8	9	10
1. sports EA		.143*	.383**	-.118	-.113	.093	-.196*	-.068	.021	-.134*
2. arts EA			.052	.260**	-.003	.104	-.141*	-.102	-.122	-.108
3. SC				.007	.063	-.150*	-.289**	-.120	.053	-.144*
4. gender					.053	.074	-.099	-.159*	-.186**	-.099
5. grade						.039	.032	.097	.143*	-.072
6. ethnicity							-.077	-.022	.014	-.256**
7. skip school								.331**	.257**	.313**
8. cigarettes per week									.395**	.327**
9. drinks per week										.155*
10. drugs per week										

Note. * Correlation is statistically significant at the 0.05 level (2-tailed).

** Correlation is statistically significant at the 0.01 level (2-tailed).

All the assumptions of multiple regression were analyzed using histograms and scatterplots, and all assumptions were met. Multicollinearity between predictors was not present; the correlations between predictors were modest. There were no standardized residuals greater than +/- 3. Given the substantial sample size, these multivariate outlier scores were not examined further. Although the standardized residuals were positively skewed and examination of the p-p plot revealed substantial deviation from normality, the sample size was substantial. Examination of the standardized residuals versus standardized predicted values plot and the partial plots showed no evidence of non-linearity or heteroscedasticity.

Table 4.5 displays the results of the Sequential Multiple Regression for the three models predicting school connectedness. The first model that included demographic factors was not statistically significant, $F(4, 193) = 1.49, p < .21, R^2 = .03$. Although not statistically significant, ethnicity approached statistical significance ($\beta = .143, p < .053$). Students who self-identified as being Aboriginal or Metis were coded as 1 and Caucasian students were coded as 2, thus indicating that Caucasian students report somewhat higher school connectedness scores.

The second model represented health-risk behaviours and included the predictor variables of classes skipped per week, cigarettes smoked per week, marijuana smoked per week, and alcoholic drinks per week was statistically significant, $F(8, 189) = 2.51, p < .013, R^2 = .09$. The second model was an improvement over the first model in terms of the amount of variance accounted for in school connectedness, $\Delta F(4, 189) = 3.44, p < 0.10, \Delta R^2 = .066$. The statistically significant predictor ($p < .001$) in the second model was skipping school ($\beta = .240$); average alcoholic drinks approached statistical significance ($\beta = .13, p < .074$).

The third model that represented total extracurricular participation was also statistically significant, $F(9, 188) = 5.00, p < .001, R^2 = .193$. The improvement in variance accounted for

from the second to third model was statistically significant, $\Delta F(1, 188) = 22.68, p < 0.001, \Delta R^2 = .097$. The statistically significant predictor ($p < .001$) was total extracurricular participation ($\beta = .328$); and skipping school remained a statistically significant predictor. The third model accounted for approximately 20% of the variance in the dependent variable. The R^2 value of .20 indicates that nearly a fifth of the variability in level of school connectedness is predicted by all the predictors that were entered in the third model.

The regression equation for the model: school connectedness = $57.671 + (-1.458 * \text{skip school}) + (.756 \text{ extracurricular activity})$. The variables that remained in the equation were skipping school ($t = -2.934, p < .004$) and extracurricular participation ($t = 4.946, p < .001$).

Table 4.5

A Sequential Multiple Regression Analysis Predicting School Connectedness From Sociodemographic Factors, Health-Risk Behaviours, and Extracurricular Participation

Variable	B	SE B	β	r
Model 1				
Gender	-.347	1.806	-.014	-.008
Age	1.201	1.923	.064	.069
Grade	1.276	2.582	.050	.104
Ethnicity	5.951	3.059	.147	.138
Model 2				
Gender	.094	1.820	.004	-.008
Age	1.313	1.900	.070	.069
Grade	.792	2.569	.031	.104
Ethnicity	4.262	3.099	.105	.138
Average Classes Skipped Per Week	-1.915	.572	-.240**	-.237
Average Cigarettes Smoked Per Week	-.026	.035	-.054	-.049
Average Alcoholic Drinks Per Week	.203	.113	.135	.096
Average Times Marijuana Smoked Per Week	-.044	.259	-.013	-.077
Model 3				
Gender	-.187	1.725	-.007	-.008
Age	1.737	1.802	.093	.069
Grade	1.407	2.436	.055	.104
Ethnicity	3.617	2.938	.089	.138
Average Classes Skipped Per Week	-1.349	.555	-.169*	-.237
Average Cigarettes Smoked Per Week	-.012	.034	-.025	-.049
Average Alcoholic Drinks Per Week	.171	.107	.113	.096
Average Times Marijuana Smoked Per Week	.047	.246	.014	-.077
Extracurricular Participation	.755	.159	.328**	.358

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

CHAPTER V: Discussion

The aim of this study was to understand how the concept of school connectedness influences positive developmental outcomes. Previous research has indicated that extracurricular participation and health-risk factors influence school connectedness and this research intended to explore these relationships in detail in a population of students ages 16 to 19.

The framework for the study was from a perspective focusing on markers of positive adjustment using an approach called positive youth development (Damon, 2004). This framework suggests that when young people are encouraged to achieve their full potential, they are less likely to engage in risky behaviours (National Clearinghouse on Families & Youth, 2006). Furthermore, positive youth development creates additional opportunities to participate in activities that promote connections to society (Damon, 2004). One such environment is participating in extracurricular activities that are believed to promote higher self-esteem, positive development, and more connections to your community. Positive youth development challenges the traditional approach of previous research focused on the negative factors influencing developmental outcomes, and encourages an approach focused on the positive aspects of adolescence (Damon, 2004). The intent of this research was to examine adolescents from a more positive perspective than traditional research in the area of adolescent development.

Recently, the field of psychology has started to become increasingly oriented towards a strength-based resiliency approach, with an increasing demand for information regarding the predictors of positive outcomes. This research examined several factors that may predict school connectedness for adolescents including participation in extracurricular activities, ethnicity, and involvement with health-risk behaviours including skipping school, smoking cigarettes, drinking alcohol, and smoking marijuana.

Discussion of Findings

The results of a sequential multiple regression indicate that after adjusting for various sociodemographic characteristics, two independent variables predicted school connectedness: health-risk behaviours and extracurricular participation. Health-risk factors were negative predictors of school connectedness. Students who reported participating in increased levels of health-risk behaviours reported lower school connectedness scores. In contrast, extracurricular participation was associated positively with school connectedness, indicating that participating in extracurricular activities increased school connectedness.

Health-Risk Behaviours

In the present study, students who had increased involvement with one or more of the health-risk behaviours had decreased school connectedness and were involved in less extracurricular activities. This finding is consistent with previous research indicating that adolescents who report their school climate to be fair, caring, and emotionally engaging report less involvement with numerous behaviours including, cigarette smoking, alcohol binging, cannabis use, depression and suicidal ideation, fighting, and sexual activity (Carter, McGee, Taylor, & Williams, 2007). Carter et al. not only found these results for students with high levels of engagement but the effects were also associated with medium levels of engagement.

Extracurricular Participation

The results of the multiple regression show that extracurricular participation was a statistically significant predictor of school connectedness. Extracurricular participation alone accounted for 10% of the variance and the other variables combined accounted for another 10% of the variance. Thus, it was observed in this study that as extracurricular involvement increased, school connectedness also increased. In line with existing literature, students who

participated in more extracurricular activities reported higher scores of school connectedness. This increase in participation is associated with positive adjustment that is linked to better academic and psychological outcomes, positive peer groups, lower dropout rates, lower delinquency, and less frequent substance use (Frederick & Eccles, 2008).

In order to further investigate the results, the present study divided extracurricular activities into categories of sports extracurricular activities (sports EA) and arts extracurricular activities (arts EA). Higher school connectedness scores were related to sports EA's but not to arts EA's, indicating that participation in sports had a greater impact on school connectedness for the students in this study. Furthermore, participation in sport EA was related to less marijuana smoking and both sports EA and arts EA were related to fewer classes skipped per week.

School Connectedness and Extracurricular Participation

In order to develop intervention strategies that work, we must find ways to increase student involvement in extracurricular activities outside of the school hours dedicated to academics. Extracurricular participation is a resource within the relative control of communities and school, and most importantly is something that is unfixed within a young person's life (Perry 2008); for these reasons, extracurricular participation has emerged as the most common target variable addressing school disconnection (Perry, 2008). A strong association between school connectedness and extracurricular participation has been found in this research and throughout the literature indicating that intervention efforts should focus on this relationship. An overwhelming amount of research supports the positive relationship between school connectedness and extracurricular activities and this research recognizes extracurricular activities as one of the most effective means of promoting school connectedness. The effect of higher school connectedness appears to benefit students managing the demands of high school. The

mechanisms underlying this association cannot be determined from the results of this study. However, research suggests that the underlying mechanism may arise as a result of higher self-esteem, increased academic motivation, and positive peers (Shochet et al., 2007). Overall, the payoffs from increased participation are noticeable in numerous areas of a young person's life making the argument that increased exposure and greater encouragement to participate in a variety of extracurricular activities is essential for all youth.

The benefits of extracurricular involvement are seen at the macro level but also at the micro or psychological level. It is argued that extracurricular activities provide an environment for identity work, developing emotional competencies, and learning social skills (Dworkin, et al., 2003). Furthermore, youth begin to make choices about what they would like to be doing during their free time, and the choices made during this developmental period can have important implication for future trajectories. Involvement in these types of activities serves as an important context where youth experiment with different roles, develop different skills and competencies, and form relationships with non-familial adults, and with peers (Fredricks & Eccles, 2008).

Another important component of this research is broadening our understanding of the benefits of extracurricular participation beyond the physical health benefits exclusive to sports related extracurricular activities. Associated with all types of extracurricular activities are the mental health benefits. By increasing school connectedness, extracurricular involvement offers students opportunities for success in the school environment outside the academic demands of the classroom. Increased school connectedness is also associated with positive outcomes in terms of higher self-esteem, higher psychological resiliency, and lower rates of depression (Fredricks & Eccles, 2008). Extracurricular participation can be viewed as a mechanism to promote success or as a protective factor. Unfortunately, extracurricular activities are not

currently available to all youth, but could be made more available to all young people while in school with changes to current education systems.

A recent shift in the American education system aimed at impacting student performance has moved towards standardized testing but scholars in education express that this shift has failed to address the crises of student boredom and disengagement (Perry, 2008). Improving school connectedness is being viewed as an antidote for poor academic achievement and school dropout. With findings from previous and the current research recognizing extracurricular involvement as a mechanism to impact the current crises of student boredom and disengagement, education systems may begin to notice.

But what is happening in Canadian schools? The Canadian education system is exponentially different from that of our southern neighbours. Recent data collected in the National Longitudinal Survey of Children and Youth (NLSCY) (2000/2001) reveal that a majority (86%) of Canadian children and teens report taking part in at least one organized extracurricular activity during the previous year. As well, urban youth aged 14 to 17 were more likely than those in rural areas to play organized sports (Statistics Canada Health Reports, 2008). Other than information from Statistics Canada, little data regarding the status of extracurricular activities in Canadian education systems are available. This research adds to the limited information currently available regarding school connectedness, extracurricular participation and Canadian youth.

Implications of the Current Study

School connectedness is understood as something that can address conditions that are amenable to change as opposed to the relatively fixed characteristics of families (e.g., parent level of education, family income) that dominate the traditional discussions on school success

(Perry, 2008). Recent paradigm shifts toward finding intervention strategies have recognized school connectedness as one such process that can promote student resilience to the otherwise pre-existing realities of young peoples lives. In order to achieve a goal that will improve later outcomes, an overall change in social systems is required (Durlak et al., 2007).

The present research focused on activities offered within school because they represent an equal opportunity for all students that are not available in community-based activities as a result of barriers including financial limitations and not having reliable transportation. However, the notion of equal opportunity for all student participation in school-based extracurricular activities has begun to change (Hoff & Mitchell, 2006). Some schools in the United States are now requiring that students pay fees if they want to participate in activities. *Pay-to-play* is a participation fee aimed at curbing the increasing expenditures of extracurricular programs (Hoff & Mitchell, 2006). Factors such as potential for college scholarships, better facilities, safety equipment, increased supervision, and increased liability insurance all have affected the ability of schools to fund extracurricular programs (Hoff & Mitchell, 2006). The harm of pay-to-play fees is most felt by students from underprivileged families for whom the benefits of extracurricular participation have the greatest impact (Hoff & Mitchell, 2006). To offset the negative impact of fees, some schools have introduced fee waivers for the students who cannot afford to pay. Although fee waivers appear to be a valid solution to the problem, students are very sensitive to being identified as poor. This phenomenon is shown repeatedly in schools where students forgo free lunch programs to avoid the stigma attached to participation in this type of program. Therefore, it is logical to conclude that the students who benefit the most from the enrichment opportunities associated with extracurricular activities, but who cannot because of fees, will choose not to participate.

Contributions to Research Literature

The current study may have implications for research, practice, and policy/program development. First, the study makes several unique contributions to the school connectedness literature. It makes an important contribution to the literature on school connectedness by providing insight into ways of promoting school connectedness and recognizes the potential of school connectedness to reduce involvement in health-risk behaviours.

The findings of the study suggest that participation in extracurricular activities has a substantial impact on school connectedness. The results of this study indicated that participation in sports resulted in higher school connectedness scores than participating in the arts. The source of this difference is not clear. Given that the data were collected in rural and somewhat isolated communities, the greater availability of sports and the limited availability of arts based activities may have skewed the results. Further discussion of this is beyond the scope of the current study, and further research is needed to examine the causal mechanisms behind this finding.

Another contribution this study makes to the literature is that the research data were collected from a small localized area and contributes to the limited data that currently exist in terms of the adolescent population in rural Saskatchewan. While this geographic limitation may have negative effects on the generalizability of this study, localized data will facilitate comparisons with national norms and may allow for regional comparisons.

The present study also provides information regarding Caucasian and First Nation adolescents in terms of reported school connectedness. Although the number of First Nation students who participated in the study was limited, First Nations students report lower school connectedness scores than Caucasian students. This result is not surprising given the overwhelming amount of existing research in the U.S. showing that minority youth consistently

report lower levels of school connectedness (Bonny et al., 2000; Brown & Evans, 2002; Perry, 2008).

Limitations

The results of the present study should be interpreted with caution and viewed in light of the study's limitations. First, the research is based on self-report data and therefore is limited by the ability of youth to report accurately on their own experiences. Second, the data used to test the hypotheses were correlational, which limits the extent to which one can make causal inferences (Prelow, Bowman, & Weaver, 2007). Third, while the use of within-person comparisons in this study reduced the influence on the findings of self-selection into activities, the possibility that differences in personality, talent, and history of experiences in who chose to join and remain in particular activities affected the results in complex ways cannot be ruled out (Fredericks & Eccles, 2008).

The current research did not investigate the interactive effects of participating in extracurricular activities and socioeconomic status. Few studies have investigated these factors, but Marsh and his colleagues (2002) found that youth from lower socioeconomic status families benefit more from extracurricular participation. Further research investigating these effects may help to expand our understanding of who benefits more from organized activity involvement.

Lastly, the results of this study and previous studies imply that mental health factors impact school connectedness and yet few studies have investigated this interaction. In the future, further research dedicated to understanding the association of school connectedness and mental health factors will be essential. Despite these limitations, the present study adds to the growing research that identifies the links between school connectedness and various factors: demographic, health-risk factors, extracurricular participation, and school connectedness.

Conclusions

Within the current study, school connectedness was demonstrated to be predicted by extracurricular participation and number of classes skipped per week. Although no statistically significant relationships were found between ethnicity or average alcoholic drinks per week, both variables approached statistical significance. No statistically significant relationship was observed between average times smoking cigarettes per week and average times smoking marijuana per week. These findings along with prior research suggest that participation in extracurricular activities increases school connectedness across a diverse group of youth. Furthermore, the results of this study indicate that participation in sports has more impact than participation in arts. Hence, it seems that for students in this rural population, sports involvement created a greater sense of belonging to their school.

Previous researchers have asked the question: Can the association between participation in extracurricular activities and adolescent outcomes be documented when controlling for such selection factors as demographic characteristics and prior adjustment? (Darling et al., 2005). Although the present research does not completely respond to this question, it does contribute to the growing body of research supporting the assumption that participation does lead to more positive outcomes. This research was able to show that beyond factors such as age, gender, grade, and participation in health-risk factors, students who reported being involved in extracurricular activity reported higher scores of school connectedness.

This study contributes to the existing literature regarding both school connectedness and extracurricular activities particularly for Canadian students. There remains limited understanding of the overall impact of school connectedness for Canadian youth and even less understanding of why students engage in school or do not. By examining the results through a

positive youth development framework, we can understand how school and community based organized activities provide a context for youth to use their leisure time in productive ways, connect with supportive adults and prosocial peers, and learn competencies and skills. The study shows how extracurricular activities are a context offering distinct opportunity for developing school connectedness. The additional evidence supporting the positive effects of extracurricular participation further encourage increasing availability and student involvement in extracurricular activities. Consequently, even in times when resources are shrinking and student needs are increasing, it is imperative to recognize extracurricular participation as a means of increasing school connectedness and acknowledge both as integral parts of education, academic achievement, and student development.

References

- Bonny, A. E., Britto, M. T., Klostermann, B. K., Hornung, R. W., & Slap, G. V. (2000). School disconnectedness: Identifying adolescents at risk. *Pediatrics, 106*, 1017-1021.
- Blum, R.W. (2005). A case for school connectedness. *Educational Leadership, 62*, 16-20.
- Bronfenbrenner, U. (1986). Ecology of the family a context for human development: Research perspectives. *Developmental Psychology, 22*, 723-742.
- Brown, R., & Evans, W. P. (2002). Extracurricular activity and ethnicity: Creating greater school connection among diverse student populations. *Urban Education, 37*, 41-58.
- Carter, M., McGee, R., Taylor, B., Williams, S. (2007). Health outcomes in adolescence: Associations with family, friends and school engagement. *Journal of Adolescence, 30*, 51–62.
- Catalano, R. F., Haggerty, K. P., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the social development research group. *Journal of School Health, 74*, 252-261.
- Commission on Children at Risk. (2003). *Hardwired to Connect: The New Scientific Case for Authoritative Communities*. Retrieved on February 17, 2009, from <http://www.surgeongeneral.gov/news/speeches/children09092003.htm>
- Damon, W. (2004). What is positive youth development? *The ANNALS, 591*, 13-24.
- Darling, N., Caldwell, L. L., & Smith, R. (2005). Participation in school-based extracurricular activities and adolescent adjustment. *Journal of Leisure Research, 37*, 51-76.
- Durlak, J.A., Taylor, R.D., Kawashima, K., Pachan, M. K., DuPre, E.P., Celio, C.I., et al. (2007). Effects of positive youth development programs on school, family, and community systems. *American Journal of Community Psychology, 39*, 269-286.

- Dworkin, J.B., Larson, R., & Hansen, D. (2003). Adolescents' accounts of growth experiences in youth activities. *Journal of Youth and Adolescence, 32*, 17-26.
- Eccles, J. S., & Barber, B. L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matter? *Journal of Adolescent Research, 14*, 10-43.
- Eccles, J. S., Barber, B. L., Stone, M., & Hunt, J. (2003). Extracurricular activities and adolescent development. *Journal of Social Issues, 59*, 865-889.
- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research, 59*, 117-142.
- Fletcher, A. C., Nickerson, P., & Wright, K. L. (2003). Structured leisure activities in middle childhood: Links to well-being. *Journal of Community Psychology, 31*, 641-659.
- Fredericks, J. A., Alfeld-Liro, C. J., Hruda, L. Z., Eccles, J. S., Patrick, H., & Ryan, A. M. (2002). A qualitative exploration of adolescents' commitment to athletics and the arts. *Journal of Adolescent Research, 17*, 68-97.
- Fredericks, J. A. & Eccles, J. S. (2008). Participation in extracurricular activities in the middle school years: Are there developmental benefits for African American and European American youth? *Journal of Youth and Adolescence, 37*, 1029-1043.
- Gilman, R., Meyers, J., & Perez, L. (2004). Structured extracurricular activities among adolescents: Findings and implications for school psychologists. *Psychology in the Schools, 4*, 31-41.
- Goldstein, S. (2004). *Connections*. Retrieved February 13, 2007, from <http://www.samgoldstein.com/template.php?page=postings&type=articles&id=59>.
- Goodenow, C. (1993). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools, 30*, 79-90.

- Goodenow, C., & Grady, K. E. (1993). The relationship of school belonging and friends' values to academic motivation among urban adolescent students. *Journal of Experimental Education, 62*, 60-71.
- Hamm, J.V., & Faircloth, B.S. (2005). The role of friendship in adolescents' sense of school belonging. *New Directions for Child and Adolescent Development, 107*, 61-78.
- Hansen, D. M., Larson, R. W., & Dworkin, J. B. (2003). What adolescents learn in organized youth activities: A survey of self-reported developmental experiences. *Journal of Research on Adolescence, 13*, 25-55.
- Hoff, D. L. & Mitchell, S. N. (2006). Pay-to-play: Fair or foul? *Phi Delta Kappan, 611*, 230-234.
- Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health, 74*, 262-273.
- Land, K. C., & Crowell, J. F. (2005). *The Foundation for Child Development Index of Child Well-Being (CWI), 1975-2003 with Projections for 2004: A composite index of trends in the well-being of our Nation's children*. Duke University: Durham, North Carolina.
Retrieved on May 8, 2007 from <http://www.soc.duke.edu/~cwi/>
- Larson, R.W. (2000). Toward a psychology of positive youth development. *American Psychologists, 55*, 170-183.
- Libbey, H.P. (2004). Measuring student relationships to school: Attachment, bonding, connectedness, and engagement. *Journal of School Health, 74*, 274-283.
- Maddox, S. J., & Prinz, R. J. (2003). School bonding in children and adolescents: Conceptualization, assessment, and associated variables. *Clinical Child and Family Psychology Review, 6*, 31-49.

- Mahoney, J.L., & Stattin, H. (2000). Leisure activities and adolescent antisocial behavior: The role of structure and social context. *Journal of Adolescence, 23*, 113-127
- Marsh, H. W., & Kleitman, S. (2002). Extracurricular school activities: the good, the bad, and the non-linear. *Harvard Educational Review, 72*, 464-514.
- Masten, A.S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist, 56*, 227-238.
- Mash, E. & Dozois D. (2003). Child psychopathology: A developmental-systems perspective. In E. Mash & Barkley, R. (Eds.), *Child psychopathology (2nd ed.)*. New York: Guilford Press.
- McHale, J. P., Vinden, P. G., Bush, L., Richer, D., Shaw, D., & Smith, B. (2005). Patterns of personal and social adjustment among sport-involved and noninvolved urban middle-school children. *Sociology of Sport Journal, 22*, 119-136.
- McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the national longitudinal study of adolescent health. *Journal of School Health, 72*, 138-146.
- McNeely, C., & Falci, C. (2004). School connectedness and the transition into and out of risk behavior among adolescents: A comparison of social belonging and teacher support. *Journal of School Health, 74*, 284-292.
- McNeely, C. (2005). Connection to school. In K. A. Moore, & L. H. Lippman (Eds.), *What do children need to flourish?: Conceptualizing and measuring indicators of positive development*. New York: Springer.
- National Clearinghouse on Families & Youth (2006). Positive youth development. Retrieved September 19, 2006, from <http://www.ncfy.com/pyd>.

- Pedhauzer, E. J. (1982). *Multiple regression in behavioural research: Explanation and prediction*. New York, NY: CBS College Publishing.
- Perry, Justin C. (2008). School engagement among urban youth or color: Criterion pattern effects of vocational exploration and racial identity. *Journal of Career Development, 34*, 397-422
- Positive Youth Development: A Pathway to Healthy Teens. (2002) Grant Makers Health. Washington, DC. Retrieved on February 17, 2009, from http://www.gih.org/usr_doc/positive_youth_development.pdf
- Prelow, H. M, Bowman, M. A. & Weaver, S. R. (2007). Predictors of psychosocial well-being in urban African American and European American youth: The role of ecological factors. *Journal of Youth and Adolescents, 36*, 543-553.
- Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K., & Jones, J. (1997). Protecting adolescents from harm: Findings from the national longitudinal study on adolescent health. *Journal of the American Medical Association, 278*, 823-832.
- Schochet, I. M, Dadds, M. R., Ham, D., & Montague, R. (2006). School connectedness is an underemphasized parameter in adolescent mental health: Results of a community prediction study. *Journal of Clinical Child and Adolescent Psychology, 32*, 170-179.
- Shann, M.H. (2001). Students' use of time outside of school: A case for after school programs for urban middle school youth. *The Urban Review, 33*, 339-356.
- Snyder, C. R., & Lopez, S. J. (2007). *Positive psychology: The scientific and practical explorations of human strengths*. Thousand Oaks, California: Sage Publications.
- Statistics Canada (2008). *Health Reports 19(3)*, Catalogue no. 82-003-XPE.
- Tabachnick, B. G., & Fidell, L. S. (2007) *Using multivariate statistics (5th ed.)*. Boston, MA: Pearson Education.

- Thompson, D. R., Iachan, R., Overpeck, M., Ross, J. G., & Gross, L. A. (2006). School connectedness in the health behavior in school-aged children study: The role of student, school, and school neighborhood characteristics. *Journal of School Health, 76*, 379-386.
- Townsend, K.C., & McWhirter, B.T. (2005). Connectedness: A review of the literature with implications for counseling, assessment, and research. *Journal of Counseling and Development, 83*, 191-201.
- University of North Carolina. Retrieved on January 28, 2007, from <http://www.cpc.unc.edu/projects/addhealth>
- Whitlock, J. L. (2006). Youth perceptions of life at school: Contextual correlates of school connectedness in adolescence. *Applied Developmental Science, 10*, 13-29.

Appendix A: Confirmation of Ethical Exemption



University of Saskatchewan: Behavioural Research Ethics Board (Beh-REB)

Certificate of Approval

PRINCIPAL INVESTIGATOR	DEPARTMENT	BEH#
Laurie-ann Hcllsten-Bzovcy	Educational Psychology and Special Education	07-187

INSTITUTION(S) WHERE RESEARCH WILL BE CONDUCTED (STUDY SITE)

University of Saskatchewan
Saskatoon SK

STUDENT RESEARCHERS

Jileon Saelhof

SPONSOR

UNFUNDED

TITLE

An Examination of the Relationship between School Connectedness and Participation in School-Based Extracurricular Activities

APPROVAL DATE

19-Sep-2007

EXPIRY DATE

18-Sep-2008

APPROVAL OF:

Ethics Application
Letter of Consent
Survey


CERTIFICATION

The University of Saskatchewan Behavioural Research Ethics Board has reviewed the above-named research project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS

In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for further instructions: <http://www.usask.ca/research/ethical/shtml>



John Rigby
University

Sept 21/07

Appendix B: Ethics Application

Behavioural Research Ethics Board (Beh-REB)

1. **Name of researcher:** Jileon Saelhof, Master of Education Candidate
 - 1a. **Name of student:** Jileon Saelhof, M.Ed. Candidate
 - 1b. **Anticipated start and completion date:** October 1, 2007 – April 30, 2008
2. **Title of Study: An Examination of the Relationship between School Connectedness and Participation in School-Based Extracurricular Activities**

3. **Abstract (100-250 words)**

School connectedness is the feeling of belonging and acceptance in your school environment (Bonny, Britto, Klostermann, Hornung, & Slap, 2000). Research in the area of school connectedness has shown that students with poor school connectedness experience more negative life outcomes (Maddox & Prinz, 2003). Furthermore, results of The National Longitudinal Study of Adolescent Health (Add Health), found school connectedness to be more protective than any other factor, including family connectedness, against absenteeism, delinquency, drug use, unintentional injury, and pregnancy (Bonny et al., 2000).

Participation in extracurricular activities has been found to be a central non-academic means to enhance school connectedness. Therefore, the purpose of the proposed research is to examine the relationships between school connectedness and extracurricular activity, as well as its relationship to participation in risky behaviour and certain demographic factors.

The research question for this study is: What factors predict school connectedness? This research has 4 hypotheses. The hypotheses are: 1) Students who participate in school based extracurricular activities will have significantly higher scores on the measure of school connectedness; 2) Students who smoke, drink, use marijuana, and skip school will have significantly lower scores on the measure of school connectedness; 3) Scores on the measure of school connectedness will differ significantly between Caucasian and non-Caucasian students; and 4) Students who's academic performance is similar or better than other students in their school, will have significantly higher scores on the measure of school connectedness.

4. **Funding:** There is no funding for this study.

5. **Expertise**

N/A

6. **Conflict of Interest**

Although I am an employee of the school division in which I will be performing my research, there will be no relationship between myself and the students who participate in this study. The schools that I will be responsible for in my position as psychologist will not be eligible to participate in this research.

7. Participants:

Participants will be recruited using a simple random sampling of high schools with approval from the participating school division. Approximately 300 grade 11 and 12 high-school students who are 16 years of age or older who attend the participating high schools, will be approached. The researcher expects that approximately 300 students will respond. Females and males will be equally included, depending upon the particular make-up of the class. Participants will not receive compensation (financial or in-kind) for their participation.

Approval for the project has been obtained from the participating school division pending ethics approval from the University of Saskatchewan Behavioural Research Ethics Board. Administrators from participating high schools will also be approached requesting permission to conduct this study in their school.

Individual participants will be provided with a letter of information and a consent form to take home. Prior to administering the survey, I will read the letter of information and consent form to the participants and then provide time for an informal discussion to answer any questions the students may have. Students will be informed that they have the right to withdraw at any time.

8. Consent

Individual student consent will be sought. A consent form (Appendix A) and letter of information (Appendix A) will be provided to each student and they will be provided with a copy of each to keep for themselves. At the commencement of the survey, we will read the information sheet and consent letter aloud, explaining about the study and what signing the letter of consent means. Student consent will be required for the students to be allowed to participate. Student consent will be collected individually with the teacher out of the room. Students who choose not to participate will be offered an alternative activity in another room.

The participants in this study will all be 16 years of age and older. Students who are 16 years of age and older are considered old and mature enough to provide their own consent; therefore, parental consent will be waived. Parental consent is being waived in order to allow participation from all students who wish to participate and to ensure a representative sample of students from the participating schools. Furthermore, parental consent is being waived in order to maximize participation from all students including those who may be at-risk. If parental consent of at-risk students is required, the potential important information gathered from these adolescents will be jeopardized due to the logistics involved in obtaining parental consent from such adolescents.

The option of withdrawal or the decision not to answer specific questions is emphasized in the letter of consent. Withdrawal will have no consequences for the participants. When consent is collected, individuals will be informally checked to ensure that they really do wish to participate.

9. Methods/Procedures

Participants will complete a paper and pencil questionnaire (Appendix B). The participants will complete the questionnaire during a regularly scheduled class. Completion of the questionnaire will take approximately 30-45 minutes. The questionnaire will be administered by the researcher, and the students' teacher will not be present when it is being completed and collected. Approval for the project has been obtained from the participating school division pending ethics approval from the University of Saskatchewan Behavioural Research Ethics Board. In addition, administrators from each participating high school will be provided information concerning the project and will also be approached requesting permission to conduct this study in their school.

Prior to participating students will have been advised of the study and will be required to provide their consent (Appendix A). Any student who objects to participating will be provided with an alternative activity to be organized in conjunction with the teacher (suggested activities include: silent reading, work period, etc.).

10. Storage of Data

All data will be securely stored and retained by Dr. Laurie Hellsten at the University of Saskatchewan for a minimum of five years in accordance with the University of Saskatchewan's guidelines. The data will be destroyed after the five-year period.

11. Dissemination of Results

The data collected for this study will appear in a Master's thesis, completed by the researcher in partial fulfillment for the degree of Master of Education. The data collected for this study may also appear in scholarly journal and be presented at seminars and/or conferences. All data will be in aggregate form.

12. Risk, Benefits, and Deception

There are no risks or deceptions involved with this study and it does not pose any known physical, psychological, or social risks. The purpose of the study will be clearly communicated to participants both in the Consent Form and verbally in-person prior to the beginning of administering each paper and pencil survey. Participation in the study is voluntary. Data collected will be anonymous. Although some participants may be under 18 years of age they are believed capable of consenting because of their maturity level (students will be 16+ years). Participants will be informed of their right to withdraw from the study at any point without penalty, and that all data collected from them will be destroyed and not used in the study.

13. Confidentiality

The data will be treated as confidential. The following procedures will be used to ensure confidentiality:

a) Permission will be obtained from the school for the students to move their desks and/or selves any place in the room to provided them with maximum personal space.

b) Design of the questionnaire: The questionnaire has been designed so that completed pages will not be exposed.

c) Administration of the questionnaire: Students will be pointedly told NOT to put their names or any other identifying marks on the survey. Surveys will be collected by having the students put their completed questionnaires into an envelope and then sealing the envelope. The teacher will NOT be in the classroom while the survey if being administered.

d) Coding: Questionnaires will be coded numerically so that the researcher will be able to identify the school and the date of the administration, but will not be able to identify any individual respondents. The researcher and her supervisor will be the only people who actually see the actual questionnaires. All data will be in aggregate form.

14. Data/Transcript Release

N/A

15. Debriefing and feedback

Participants will not be individually debriefed; however, they will be offered the opportunity to contact me for a copy of my master's thesis or any publication which arises out of the study. The results of the survey will be provided to the School Board and to the Principals of each participating school.

16. Required Signatures

Jileon Saelhof – Master’s Candidate, Department of Educational Psychology and Special Education, University of Saskatchewan

Dr. Laurie Hellsten, Assistant Professor, Department of Educational Psychology and Special Education, University of Saskatchewan

Dr. David Mykota Department Head, Department of Educational Psychology and Special Education, University of Saskatchewan

17. Required Contact Information

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Appendix C: Information for Students and Letter of Consent

School Experiences and Participation in Extracurricular Activities

Student Researcher
Jileon Saelhof, M.Ed. Candidate
Ed. Psych and Special Education
School and Counselling Psychology
College of Education
University of Saskatchewan
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Faculty Supervisor
Dr. Laurie Hellsten
Ed. Psych and Special Education
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laurie.hellsten@usask.ca

Why are we asking you to complete this survey?

We are asking you to complete this survey as part of research study looking at your involvement in extracurricular activities and your thoughts and experiences of school.

What will happen during the survey?

The survey is a pencil and paper questionnaire. It will take about 30-45 minutes to complete. It will ask you about your opinions of school and your participation in extracurricular activities. Your teacher will not be in the room when the survey is being administered.

Who will know what my answers were?

If you choose to fill out the survey, please do NOT put your name or any identifying marks on it. We want to make sure that no one, not even the researcher will be able to identify who answered and what they answered. Neither your teacher nor your parents, nor the school board will ever see the questionnaires. The results of the survey will be added together and the total results will be available to the researcher. You can ask about the results of the survey once it is completed.

Can I decide that I don't want to fill out the survey?

If you do not wish to fill out the survey, you can choose to go into another classroom with other students who also do not want to fill it out. If you don't want your classmates to know that you are not participating, you are free to take the survey and pretend to complete it. We will throw away any blank surveys that we receive.

If you choose to fill out the survey, you can choose NOT to answer any questions on the survey. If you get part way through and decide that you do not wish to continue answering, you can either leave the room, or choose to "doodle" on the survey so that your classmates will not know that you are not filling the survey out.

If you think that you want to fill out the survey and then change your mind or decide not to answer some of the questions, no one will be upset or disappointed, and if you don't want to finish answering you do not have to.

Is there anything about the survey that might hurt me?

I do not think that you could be hurt in any way by filling out the survey. There is a possibility that you might feel uncomfortable with some of the questions, and if you do, you can decide not to answer them.

We have tried to make the survey easy to read and to understand. We have tried to use both common language and technical terms to describe the activities that we are asking about. If you do not understand what you are being asked, please feel free to ask me to explain. I can answer your questions in private, if you want.

If you feel you would like some additional support concerning any feelings brought up by completing this survey or other concerns you may have, you can call the Kids Help Phone at 1-800-668-6868 or contact your school counsellor.

Do you have any other questions or concerns you would like to ask or talk to the researcher about?

Consent

I am a graduate student at the University of Saskatchewan working on my Master of Education in School and Counselling Psychology.

I would like you to complete a survey with respect to your thoughts and experiences of school and your involvement in extracurricular activities. The paper and pencil survey will take approximately 30 minutes to complete. The results will be completely anonymous, that is, we will be not able to connect you with any particular set of survey answers. You can choose not to answer any questions, as well as decide to discontinue participation in the survey at any time during its administration. If you do not wish to participate an alternative activity will be taking place in a different classroom.

Please ensure that you have read and understood the information provided, that you have received a copy of this form for your own records, that you willingly agree to participate, and that you know you may withdraw from the study for any reason, at any time, without penalty. Completion of the questionnaire implies that you consent to participate in this study.

If you have any questions concerning the study, now, or at a later date, feel free to contact the researcher Jileon Saelhof (306-111-1111), the researcher's supervisor Laurie Hellsten (306-966-7723), or the University of Saskatchewan Ethics Office (306-966-2084).

Appendix D: Measure

A Survey of School Experiences and Participation in Extracurricular Activities

Instructions

1. Do not write your name or any identifying information on this survey.
2. Please remember that your participation is completely voluntary.
3. Please completely fill-in each circle of the questions you choose to answer.

The following are some statements about your school. Please answer how true you feel each statement is in your school.

	Not At All True		Sometimes True		Completely True
1. I feel like a real part of this school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. People here notice me when I am good at something.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. It is hard for people like me to be accepted here.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Other students in this school take my opinion seriously.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Most teachers at this school are interested in me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Sometimes I feel as though I don't belong here.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. There's at least one teacher or other adult at this school that I can talk to if I have a problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. People at this school are friendly to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Teachers here are not interested in people like me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I am included in lots of activities at this school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I am treated with as much respect as other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I feel very different from most other students here.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I can really be myself at this school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. The teachers here respect me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. People here know I can do good work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I wish I were in a different school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. I feel proud of belonging to this school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Other students here like me the way I am.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following are some questions about you? Please answer each question as truthfully as possible.

19. Are you male or female?

- Male
- Female

20. What grade are you in?

- Eleven
- Twelve

21. How old are you?

- 16
- 17
- 18
- 19

22. What year and month were you born?

- | | | |
|----------------------------|--------------------------------|---------------------------------|
| <input type="radio"/> 1988 | <input type="radio"/> January | <input type="radio"/> July |
| <input type="radio"/> 1989 | <input type="radio"/> February | <input type="radio"/> August |
| <input type="radio"/> 1990 | <input type="radio"/> March | <input type="radio"/> September |
| <input type="radio"/> 1991 | <input type="radio"/> April | <input type="radio"/> October |
| | <input type="radio"/> May | <input type="radio"/> November |
| | <input type="radio"/> June | <input type="radio"/> December |

23. What is your ethnicity?

- | | |
|---|--------------------------------------|
| <input type="radio"/> Aboriginal | <input type="radio"/> Latin American |
| <input type="radio"/> African American | <input type="radio"/> Métis |
| <input type="radio"/> Asian | <input type="radio"/> Middle Eastern |
| <input type="radio"/> Caucasian (White) | <input type="radio"/> Other _____ |

24. How tall are you?

_____ Feet, _____ Inches *OR* _____ Meters, _____ Centimetres

25. How much do you weigh?

Pounds _____ *OR* Kilograms _____

26. How much do you like school?

- A lot
- Mostly
- Not really
- Not at all

27. Compared to other students in your school how would you rate your grades?

- Above Average
- Average
- Below Average

28. Think about the classes you took this year and last year, would you say most of your marks are/were in the:

- 90s
- 80s
- 70s
- 60s
- below 50

29. Think about the last month and answer the following four questions...

On average, how many classes do you skip per week? _____

On average, how many cigarettes do you smoke per week? _____

On average, how many alcoholic beverages do you drink per week? _____

On average, how many times do you smoke marijuana per week? _____

30. Think about this school year and the last school year. Which of the following extracurricular activities, which are offered at your school, did you or are you participating in? On average, how many hours per week were you involved in each activity.

	Yes	1-2 hrs	3-4 hrs	5-6 hrs	7 + hrs	Not Available
badminton	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
band	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
baseball/softball	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
basketball	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
cheerleading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
choir	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
cross-country running	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
cross-country skiing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
curling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
dance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
drama group (improv, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
drama production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
football	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
gay-straight alliance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
golf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
hockey	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
lacrosse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
peer support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
peer tutoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
rugby	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
rowing/kayaking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SADD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
soccer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
student government (leadership)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
tennis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
track & field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
visual art club	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
wrestling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
yearbook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
volleyball	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
other:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
other:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31. Please think about the past 4 months. Now consider a typical week (7 days) during the past 4 months. How many times, on the average, did you do the following kinds of exercise for more than 15 minutes during your free time?

	Times Per Week
a. STRENUOUS EXERCISE (heart beats rapidly, breathing heavy) e.g., jogging, hockey, soccer, roller blading, aerobic dance classes	_____
b. MODERATE EXERCISE (heart beat accelerates, not exhausting) e.g., fast walking, baseball, tennis, volleyball, badminton, dancing	_____
c. MILD EXERCISE (heart rate normal, minimal effort) e.g., easy walking, yoga, fishing, bowling, golf, snowmobiling	_____

32. For exercise to be considered **regular** it must be done for *at least 15 minutes at a time* (or more) per day, and be done *at least 4 days per week*. For example, you could take a 15-minute brisk walk or ride a bicycle for 30 minutes. Exercise includes such activities as walking briskly, biking, swimming, line dancing, and aerobics classes or any other activities where the exertion is similar to these activities. Your heart rate and/or breathing should increase, but there is no need to exhaust yourself.

According to the definition above do you exercise regularly?

- No, and I do not intend to begin exercising in the next 6 months.
- No, but I intend to begin exercising in the next 6 months.
- No, but I intend to begin exercising regularly in the next 30 days.
- Yes, I have been exercising, but for less than 6 months.
- Yes, I have been exercising for more than 6 months.

33. Motives to Exercise & Perceived Cues to Exercise

Answer the following question while thinking about:

"What helps you (or would help you) to exercise?"

	Strongly Disagree	Moderately Disagree	Disagree	Neither Disagree or Agree	Agree	Moderately Agree	Strongly Agree
Having a friend to exercise with	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having a friend who encourages me to exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeing spring/summer clothes you would like to buy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having organized physical activities outside of school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having a parent who exercises	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Looking at myself in a mirror	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having my parents encourage me to exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being reminded about the health benefits of exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading about exercise in magazines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking a physical education class in school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seeing pictures of physically active or fit people in magazines or on TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watching exercise on TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

34. Perceived Benefits of Exercise

Answer the following questions while thinking about:

“What are the reasons you exercise or would consider exercising?”

	Strongly Disagree	Moderately Disagree	Disagree	Neither Disagree or Agree	Agree	Moderately Agree	Strongly Agree
To stay in shape	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To lose weight	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To increase my energy level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To reduce stress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To improve my self-esteem (feel better about myself)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To become more physically attractive to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To become strong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To do something active with other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To have fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For cardiovascular (protect heart) fitness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To be competitive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To be accepted by my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35. Perceived Barriers to exercise

Answer the following questions while thinking about:

"What are the reasons you do not exercise or would not consider exercising?"

	Strongly Disagree	Moderately Disagree	Disagree	Neither Disagree or Agree	Agree	Moderately Agree	Strongly Agree
I do not have time to exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to do other things with my time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am too tired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not motivated to exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not have a place to go and exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not think that exercise will give me the results I want	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not enjoy exercising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not interested in exercising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that exercise is too hard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not know how to exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not have a safe environment to exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not think exercise is important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>