

# Factors Associated with School Outcomes among First Nations Youth



**FNIGC Research Series**

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## Executive Summary



This report examines the predictors of educational success among First Nations youth aged 12–17 living on reserve and in northern First Nations communities. The First Nations Regional Early Childhood, Education and Employment Survey (FNREEES) is the only current source of data on the social characteristics, educational experiences and living conditions of these youth, and it provides reliable information that is generalizable to this population.

Following the First Nations Holistic Lifelong Learning Model (FNHLLM), the research study for this report used the FNREEES data to address three main questions:

1. What are the characteristics of youth, families, households and schools that affect school success among First Nations youth?
2. What is the relationship between success at school and other domains of knowledge, including

knowledge of Indigenous traditions, languages, culture and history?

3. What aspects of social support for learning lead to better outcomes in school among First Nations youth?

The study examined two main indicators of educational success: receiving mostly “As” on the last report card and having a score of “good” attendance on a composite indicator that takes into account the average number of days per month a youth missed school, skipped class or was late during their last year in school. Binary logistic regression models were used to estimate the effects of a number of independent variables, including characteristics of youth and their households; parental involvement in education; positive and negative social support; intergenerational Residential School experience; school climate; youth smoking, alcohol and drug behaviours; and cultural, linguistic and historical knowledge.

## Key findings

- Bivariate analyses show that there are important gender and age differences in school grade outcomes and important age differences in the attendance measures. In general, females and youth aged 12–14 more often had mostly “As” than did males or youth aged 15–17. The older age group was late for school, missed school or skipped class more often compared with the younger age group.
- Parental education was one of the most reliable predictors of these measures of educational success, and it was generally significant for males and females and in models for the older and younger age ranges. Overall, youth whose parents had university degrees had more than 2.5 times the odds of having mostly “As” on their last report card compared to those whose parents had less than high school.
- There was some evidence of the importance of parental interaction with schools, controlling for other factors in the models; youth whose parents attended school events and spoke with teachers had more than twice the odds of having mostly “As” in contrast to those whose parents neither attended events nor spoke with teachers.
- Youth who felt that they had a positive school climate, measured by their agreement with statements such as “Overall, I feel safe at school,” were more likely to have received mostly “As” on their last report card.
- Bivariate associations indicate that youth who participated in cultural activities and understand a First Nations language had higher grades, although these factors were not reliable predictors of having mostly “As” or good attendance in most of the multivariate models. This suggests that further work should be dedicated to understanding these relationships, as knowledge of First Nations history and rights was strongly related to receiving mostly “As” on the last report card.



## Introduction



Ensuring educational success among First Nations youth is important for communities and families, as educational attainment affects both collective and individual wellness (Canadian Council on Learning, 2007). Understanding the conditions that lead to better school outcomes is therefore critical, as is identifying appropriate policies and programs that help create the conditions in which children and youth have the best chance of success.

Many factors potentially affect success in school; aspects of families and households, the school environment, and community conditions, as well as the traits and behaviours of children and youth themselves, might influence educational outcomes. In the case of First Nations youth, these factors and their relation to education are complicated by the broader socio-economic, historical and cultural contexts. This includes the historical use of formal education as a tool of assimilation, the contemporary structure and composition of schools and the current socio-economic challenges faced by many Indigenous families and communities.

This is supported by the recent findings and Calls to Action of the Truth and Reconciliation Commission of Canada (TRC), which pointed to a renewed relationship around education as a particularly important part of the reconciliation process (Truth and Reconciliation Commission of Canada [TRC], 2015). The Commission called for action that would close the identified achievement gaps between Indigenous children and others and would revise curricula to include aspects of Indigenous culture and language. The Commission also identified promoting parental involvement in the schools as an important aspect of these educational reforms, with the aim to end the intergenerational transmission of the impact of Residential Schools (TRC, 2015).

In order to measure future progress on educational outcomes and the supports for education among First Nations youth, it is critical for us to understand the current situation. This report makes use of the First Nations Regional Early Childhood, Education and Employment Survey (FNREEES) to examine the

factors affecting school outcomes of youth living in First Nations communities. The FNREEES was administered in 2013/15 in participating First Nations by the First Nations Information Governance Centre (FNIGC), in collaboration with its regional partners according to the guiding principles of ownership, control, access and possession (OCAP®), which ensure that the data are collected and used in ways that support the interests of these First Nations (First Nations Information Governance Centre [FNIGC], 2016b). The FNREEES is one of the few sources of data that can connect aspects of the family and school context to the educational experiences of First Nations children, thereby informing this policy development.

This report examines the predictors of school success among First Nations youth aged 12–17 years using the youth component of the FNREEES. The purpose is to identify those factors that contribute to positive educational outcomes in a formal schooling context as well as identify potential barriers.

### Guiding framework: The First Nations Holistic Lifelong Learning Model

The factors that affect the learning experiences of First Nations children and youth are multiple and complex. The FNREEES uses the Canadian Council on Learning's First Nations Holistic Lifelong Learning Model (FNHLLM) as a framework to guide the identification of influences that are relevant to First Nations peoples in particular. Developed collaboratively with First Nations educators, community practitioners and researchers, the model reinforces the importance of formal and informal learning, in Indigenous and Western traditions, and points to a number of sources of this knowledge, including various nurturing guides (Elders, teachers, parents, mentors and counsellors) and domains and sources of knowledge, including the cultural, the human and the natural world. The model uses the metaphor of a living tree in which the "trunk" of education, rooted in the sources and domains of knowledge, supports individual and collective flourishing

in the spiritual, social, economic and political domains (Canadian Council on Learning, 2007).

The model provides useful perspectives on the factors that might affect the educational success of children and youth, particularly on those that are important to First Nations. Two ideas from the model are particularly important for understanding outcomes among First Nations youth. The first is that there are several important

domains of knowledge to consider; it is not only success in formal schooling that is important, but also knowledge about spirituality, culture, land and waters as well as the world of people. The second important contribution of the model is its recognition that not all education takes place inside the classroom and that home and the broader community are also sites for learning; there is a wide range of external influences that affect learning.



## Background



There have been some analyses done of the factors that affect the educational outcomes of Indigenous youth. Included here are those studies that primarily use survey or other quantitative data and which have First Nations, Inuit or Métis children or youth as the focus of the analysis. Also considered are some key qualitative studies that are directly relevant to understanding educational success among First Nations youth.

Overall, there are relatively few consistent findings in the previous literature. This is at least partly due to differences in the way that outcomes were measured as well as the populations examined. Most of the existing studies use data from Statistics Canada's Aboriginal Peoples Survey (APS), a post-censal survey that collects a range of social, economic, cultural and health data from a sample of the population identified as "Aboriginal" in the census and which also includes some data collected by the census questionnaire. The questions asked in the APS have changed between the 1991, 2001, 2006 and 2012 versions, as have the populations sampled. The target populations for the individual studies are also generally inconsistent, with studies focusing on on- or off-reserve First Nations, Inuit or Métis in a variety of age ranges.

### Measuring educational success among Indigenous youth

There is no single measure of educational success that has been consistently applied to Indigenous children or youth. Some studies have used school completion as a main measure of success. The 1991 APS, which was collected on and off reserve, was used by Brade, Duncan and Sokal (2003) to examine the factors affecting the odds that adults aged 30–49 had some post-secondary education. This version of the APS included retrospective questions about elementary and high school experiences. Similarly, Beavon, Wingert and White (2009) used the 2001 APS to identify predictors of successful completion of high school and post-secondary education among Indigenous youth (15–19) and adults (20–24).

Other studies used indicators of children who had ever been suspended or expelled from school as negative outcomes and indicators of whether a child had skipped a grade as evidence of success (Feir, 2016; Guèvremont & Kohen, 2012; 2014). Feir (2016) also used whether a child had ever received an award at school as a positive indicator of success. Bougie (2009) and Arim, Tam, Bougie and Kohen (2016) used the school attendance of children (skipping school or arriving late in the previous two weeks) as measures of poor school outcomes.

Other studies have focused on grades. The 2012 APS, conducted only off reserve, asked parents to report on the overall grades of their children in their last report card, and Turner and Thompson (2015) use this as a main outcome. That survey also asked whether students were identified as requiring additional help or tutoring, and this was used by Arim et al. (2016) as an indicator that a child was having difficulty in school.

Some studies have considered more subjective measures of the relationship between children and school. For Inuit and First Nations children aged 6–14, Guèvremont and Kohen (2012) used parental agreement to the statement that the child "did well in school" or "looked forward to school," which were included in the 2001 APS as measures of success. Others (Bougie, 2009; Bougie & Senécal, 2010b; Quinless, 2014) have used a similar measure for off-reserve Indigenous children with the 2006 APS. The 2012 APS also included a question about whether the child was "happy at school" (Turner & Thompson, 2015). In a researcher-collected survey of Inuit youth and young adults, O'Gorman and Pandey (2014) used "thinking of dropping out" as well as having missed days of school as indicators of a lack of success at school.

## Studies of school success among youth living in First Nations

Most of the previous studies used surveys of off-reserve children and youth and therefore do not address the same geography (First Nations communities) or age range (youth aged 12–17) that are the focus of this report that uses the FNREEES data. The sources of data that are most comparable to the FNREEES are the 2002/03 and 2008/10 First Nations Regional Health Surveys (RHS Phase 1 and RHS Phase 2, respectively) that were also conducted in First Nations communities by the FNIGC and its partners (FNIGC, 2005; 2012). Like the FNREEES, the RHS used a specific questionnaire for youth aged 12–17 and, although the main focus of the survey was on health, it also collected information on educational success and other indicators of youth well-being.

According to the RHS data, 87.7% of First Nations youth aged 12–17 were attending school at the time of the RHS Phase 2 (FNIGC, 2012, p. 31). As one might expect, those in the youngest age groups were most likely to be attending (93.3% among those aged 12–13) and the oldest were the least likely (77.2% aged 16–17 attending) (FNIGC, 2012, p. 31). The national report of the FNREEES shows that 16.1% of First Nations youth aged 12–17 had left elementary or secondary school at some point, but that 73.3% of those who said they had dropped out had returned to school at the time of that survey (FNIGC, 2016a, p. 37).

These surveys provide some other indications of overall levels of school success among First Nations youth. In the RHS Phase 2, 34.4% of youth reported that they had repeated a grade, an improvement from the 41.7% reported in the RHS Phase 1 (FNIGC, 2012, p. 31). However, 10.2% of youth reported having advanced a grade because of high academic performance in the RHS Phase 2 (FNIGC, 2012, p. 31).

The national report of the FNREEES provides information about the overall school performance of First Nations youth aged 12–17. One in five youth reported having mainly “As” on their last report card and nearly 10% reported having mainly “Ds” or “Fs.” When asked about their school performance relative to others, 15.7% reported doing “above average,” 71.2% were “average” and 13.1% reported doing “below average” (FNIGC, 2016a, p. 36). The FNREEES also measured school attendance and lateness among First Nations

youth; a high proportion (20.1%) reported that they were late for school more than 5 days a month and nearly 20% reported missing school more than 5 days a month (FNIGC, 2016a, p. 36).

## Predictors of school success

There is a wide range of factors that might affect success at school among First Nations youth; these include characteristics of youth, their families and their schools. As described above, previous research does not focus on the same population or age group that is the focus of this study. A majority of the previous studies used surveys of First Nations off-reserve, Inuit or Métis children and most focused on children at elementary school ages, which is younger than the ages of youth addressed here (12–17 years). Nonetheless, many of these factors are potentially important for predicting success among First Nations youth.

## Characteristics of children and youth

There is fairly consistent evidence that girls are more likely to do well in school than are boys and that this effect remains after controlling for other factors. For example, Turner and Thompson (2015) found that among off-reserve Status First Nations children in Grades 1–6, girls had more than twice the odds of having received mostly “As” on their last report card compared with boys, although there were no significant differences in the likelihood of boys or girls being happy at school, repeating a grade or receiving help at school. After adjusting for a range of factors, Bougie (2009) found that off-reserve First Nations boys aged 6–14 were significantly less likely to be doing “well or very well” at school compared with girls.

Among children in general, age is often related to educational outcomes, with younger children and youth generally doing “better” than older children and youth (Arim et al., 2016, p. 34). As described above, school dropout was found to be more likely among older youth in the RHS Phase 2 (FNIGC, 2012, p. 31). When controlling for other factors, a study of outcomes among off-reserve First Nations children in Grades 7–12 found that age in years had a strong, positive relationship to students ever having repeated a grade, although it was not significantly related to reporting mostly “As” on a previous report card, being happy at school or having received help from tutors (Turner & Thompson, 2015). Also, Bougie (2009) found off-reserve First Nations

children aged 11–14 significantly less likely to be reported as doing “well or very well” at school than those aged 6–10.

Several previous studies have included measures of the health status of children mainly as control variables. Results from the RHS Phase 1 demonstrated that 62.5% of First Nations youth with “fair” or “poor” self-rated health had problems learning at school compared with 37.3% of youth whose health was “very good” or “excellent” (FNIGC, 2005, p. 160). Arim et al. (2016) found that among Inuit children aged 6–13 and living in Inuit Nunangat, those with high grade averages were more likely than those with low averages to have excellent or very good health (85% vs. 77%). Bougie (2009) found that off-reserve First Nations children aged 6–14 with activity limitations were less likely than others to do “well or very well” in school, although this effect was not significant in adjusted models. That study also included indicators of whether children had a learning disability or attention deficit disorder. Also, Turner and Thompson (2015) reported that children with learning disabilities were less likely to have mostly “As” on their last report card and were more likely to have repeated a grade or to have received help from a tutor.

## Student behaviours and activities

A number of studies have suggested that the activities and behaviours that children and youth participate in are related to school performance or attendance. These include health-related behaviours such as diet and substance use, sexual activity, and extra-curricular activities such as participating in sports and reading. Participation in cultural or traditional activities or spending time with Elders is addressed in a separate section below.

The RHS Phase 2 found that more First Nations youth aged 12–17 who “sometimes” to “always” had a nutritious diet reported that they attended school, liked school very much and planned to go on to university compared with those who “rarely” ate a nutritious diet. Similarly, smaller percentages with a nutritious diet had repeated a grade or had problems learning in school (FNIGC, 2012, p. 32). Of course, as discussed below, diet should not only be considered as a behaviour of youth, but it may reflect family income and household food security (Bhawra, Cooke, Guo, & Wilk, 2017).

Other health-related behaviours may be linked to school outcomes. In unadjusted models, the RHS Phase 2 found consistent negative relationships between smoking, heavy alcohol consumption, cannabis use in the past year, and other drug use and a number of measures of school performance. Youth who reported these behaviours were less likely to attend school or like school “very much” and more likely to have repeated a grade or have learning problems (FNIGC, 2012, p. 33). In qualitative interviews, drugs and alcohol were identified as barriers to high school completion by Inuit youth in Nunavut (O’Gorman & Pandey, 2014).

The RHS Phase 2 also asked youth about sexual activity and found that those who were not sexually active were more likely to be attending school and liking it “very much” and less likely to have repeated a grade or have learning problems than those who were sexually active (FNIGC, 2012, p. 33). These relationships were not adjusted for other factors, however. Moreover, qualitative interviews with young First Nations parents have highlighted the degree to which early sexual activity, substance use and poor school performance may be interrelated (Cooke, 2013).

A number of extra-curricular activities might be important for school success. The APS has included a question about reading books outside of school, but Arim et al. (2016) failed to find an independent relationship between reading and several measures of school success among Inuit children. Reading books every day has been independently associated with doing “well or very well” in school among First Nations children aged 6–14 living off reserve (Bougie, 2009).

Other extra-curricular activities may be important. The RHS Phase 1 data reported that participating in sports is positively related to school attendance among First Nations youth, with 97.5% of those who participate 4 or more times per week attending school compared with 84.8% of those who never participate in sports (FNIGC, 2005, p. 162). After adjusting for other factors, Bougie (2009) found that off-reserve First Nations children aged 6–14 who played sports at least once a week were more likely to be doing “well or very well” at school. Similarly, those who took part in art or music at least once a week were more likely to do well in school than those who did not. Volunteering in the community or school at least once a week, however, had no independent effects (Bougie, 2009). However, the RHS Phase 1 found no clear bivariate relationship between participating in art and music and attending school (FNIGC, 2005, p. 162).

## Socio-psychological factors

As described above, most previous studies have used how children feel towards school as outcomes or measures of success rather than as predictors. Of course, the causality is difficult to disentangle using the available cross-sectional data sources; doing well in school might lead a child to have a more positive attitude toward school while those with more positive attitudes might find it easier to engage with learning and therefore do well.

The RHS Phase 2 provided some evidence of the relationship between aspects of emotional well-being and school success. Youth who felt “not at all” or “a little” loved were more likely to have repeated a grade than those who felt loved “quite a bit” (42.8% vs. 33.1%). As well, a smaller percentage of those who had felt “sad, blue or depressed” for 2 weeks in a row were attending school (82.7%) as compared to others who did not have such feelings (89.2%). Similarly, those who felt stressed “quite a bit” were more likely to have repeated a grade and to have learning problems than those who felt stressed “not at all” or “only a little” (FNIGC, 2012, p. 32).

Baydala et al. (2009) specifically tested the relationship between student self-beliefs and their measured academic achievement. Using the Self-Perception Profile for Children (SPPC), which measures children’s perceptions of their scholastic competence, social and athletic competence, appearance, behaviour and global self-worth, they found evidence that, among children in grades 3 to 8, positive perceptions of their own behaviours were positively related to their academic scores. However, the other components of the SPPC were not significant.

## Peer influences

Characteristics of friends and other children in the community might have an effect on the school experience of children. Baydala et al. (2009) found that among older children (Grades 7–8), having close friendships was significantly related to measured academic achievement, although this was not the case in models that included the broader range of children in Grades 3–8 (Baydala et al., 2009). After controlling for other child and family characteristics, O’Gorman and Pandey (2014) found that Inuit children whose friends had dropped out were more likely to have thought about dropping out themselves. The study of Inuit children conducted by Arim et al. (2016) using the 2012 APS found no relation between having siblings who dropped out of high school and achieving success in school.

## Family characteristics

There are a number of ways in which family income and socio-economic status can be related to the educational success of children and reasons that children in low-income households are at risk for poor outcomes. These include the effects of poverty on school readiness, the physiological effects of hunger and the emotional effects of household insecurity (Ferguson, Bovaird & Mueller, 2007).

Indeed, family socio-economic status has been generally found to be positively related to educational attainment among Indigenous children (Bougie, 2009; Bougie & Sénécal, 2010a; Hull, 1990; Quinless, 2014). The effects of household income may be indirect, mediated by the overall health and wellness of the child and other factors (Quinless, 2014). Food security, itself strongly linked to income (Bhawra et al., 2017), has also been found to be related to the likelihood of an Inuit child having high average grades in school (Arim et al., 2016). As well, independent of household income, food security was found to be related to the likelihood of an off-reserve Status First Nations child doing “well or very well” in school (Bougie & Sénécal, 2010a).

Parental educational attainment has been related to some student outcomes. The RHS Phase 2 found bivariate relationships; a lower percentage of First Nations youth whose parents had not completed high school were attending school compared to those whose parents had completed post-secondary education (82.6% vs. 93.0%). These youth were also more likely to have repeated a grade (41.1% vs. 27.5%) (FNIGC, 2012, p. 32). In multivariate models, Arim et al. (2016) found that the odds of missing school were significantly higher for Inuit children for whom neither parent had post-secondary education, after adjusting for other factors including income, but that there was no independent effect on attending school, repeating grades or needing a tutor. Other studies did not find an independent effect of the education level of parents on First Nations student outcomes once income was controlled (Bougie, 2009; Bougie & Sénécal, 2010a; Turner & Thompson, 2015).

Family structure and household size are also thought to be important for the educational outcomes of children and youth. It is important to note, however, that some categories of household types can reproduce “nuclear family” norms that may or may not reflect First Nations families. Nonetheless, Indigenous children in Canada are more likely to be living in households in which only

one parent is present, particularly in families with lone mothers, and this has been identified as having potential implications for income stability and parenting resources (Quinless, 2014). Using the 2006 APS, Guèvremont and Kohen (2014) found that First Nations children of younger mothers were more likely to have failed a grade, less likely to be doing well in school and more likely to be “getting along with” their teachers. Using the 2001 APS dataset and controlling for other factors, Feir (2016) reported that among Indigenous children in Ontario and the western provinces, those with younger mothers were more likely to be suspended or expelled.

Using the 2012 APS, Turner and Thompson (2015) found that First Nations children living in households with one biological, adopted or foster parent were indeed found to be less likely to be happy at school, relative to those in two-parent families. However, the role of family configuration was insignificant in other studies of First Nations and of other Indigenous populations (Arim et al., 2016; Bougie, 2009). Controlling for other household and child characteristics, Bougie and Senécal (2010a) found that off-reserve First Nations children living in six-person households were less likely to be doing “well or very well” at school than those in smaller households. Quinless (2014) found an association between family structure and the number of people in the household in models predicting educational performance. Although household size did not affect parental perceptions of the school performance of children living in lone-parent households, for those in two-parent families, parental reports of children’s educational performance improved as the household size increased (Quinless, 2014).

A potentially important family or household characteristic is residential mobility. Moving between communities or schools has been identified as potentially having negative effects on the academic progression of children and youth (Beavon et al., 2009). Among Indigenous adults in 1991, the level of educational attainment was inversely related to the number of elementary or high schools they had attended as a child (Brade et al., 2003). In 2012, among First Nations children living off reserve, children in Grades 1–6 who had moved schools for reasons other than normal progression through grades were more likely to have repeated a grade and received help from a tutor; those in Grades 7–12 were less likely to have received mostly “As” on their last report card and more likely to have repeated a grade than those who had not moved (Turner & Thompson, 2015). In models adjusted for child, family and school characteristics, the effects of school mobility remained significant only in relation to repeating a grade.

Although it might be expected that parental involvement with the school their children are attending is important for school outcomes, the general evidence regarding this effect is unclear. In other contexts, it has been found to differ by race and socio-economic status (Domina, 2005; Jeynes, 2007). However, there is little evidence in the existing literature for Indigenous children or youth. In the only study to include these factors, Arim et al. (2016) did not find a significant effect of parent or family involvement in school that was independent of parental education, school environment and other factors in their study of Inuit children.

## Parents and Residential School

Children and youth whose parents attended Residential School might be less likely to succeed at school than are other children and youth. Psychological trauma can be transmitted intergenerationally in a number of ways (Gone, 2013), and qualitative research suggests that Residential School Survivors might be less able to engage with the schools their own children attend because of their own traumatizing experiences (Milne, 2016). However, as described above, it is unknown whether parental involvement is related to school outcomes.

The RHS Phase 1 data show that youth whose parents had attended Residential School were more likely to have learning problems and to have repeated a grade than youth whose parents did not attend, although the report did not adjust for possible confounding factors (FNIGC, 2005, p. 161). Using the 2001 APS and controlling for household income, parental education and other factors, Feir (2016) found that children of mothers who attended Residential School were less likely to receive awards at school or to “like school often.” Controlling for the same factors, results from the 2006 APS also found that off-reserve children and youth aged 6–14 whose parents attended Residential School were less likely to do “well or very well” at school (Bougie, 2009).

In a mediation analysis, Bougie and Senécal (2010a; 2010b) found that some of these negative intergenerational effects of Residential Schools could be attributed to lower income, larger household size and periods of food insecurity experienced by families in which parents had attended Residential School. However, no evidence was found for parental expectations of children as a mediator of the effects of Residential School.

## Language and cultural factors

The FNHLLM indicates that knowledge of language and experience of Indigenous cultures are important components of learning for First Nations people; however, the statistical relationship between language knowledge and educational outcomes has not always been in the direction expected. Among Indigenous adults in 1991, being able to read, write and speak an Indigenous language was negatively related to having completed secondary education (Brade et al., 2003). Some research has focused on the role of learning an Indigenous language in school. Using the 2001 APS, Guèvremont and Kohen (2012) found that among First Nations children on selected reserves, those whose teachers helped them to speak an Aboriginal language and those who spoke an Aboriginal language but whose teachers did not help were more likely to do well in school than those who did not speak an Aboriginal language at all. However, those who spoke an Aboriginal language and whose teachers did not help were less likely to look forward to going to school than those who did not speak an Aboriginal language (Guèvremont & Kohen, 2012). In a follow-up study using the off-reserve 2006 APS and controlling for other socio-economic and demographic factors, these authors found that First Nations children who spoke an Indigenous language and had help from teachers learning the language at school were more likely to be rated by their parents as doing “very well” in school than those who did not speak an Indigenous language at all (Guèvremont & Kohen, 2017a). However, there was no relationship between having help learning the language and being in the appropriate grade based on age.

Others have focused on language use at home and in the community. Using the 2006 APS and controlling for other factors, including parents who attended Residential School, Bougie and Sénécal (2010a; 2010b) found that off-reserve First Nations children who spoke an Aboriginal language at home “some” to “all” of the time were more likely to do “well or very well” at school. Using the 2012 APS, Inuit children who were exposed daily to an Inuit language outside the home were more likely to not have repeated a grade, although language was not related to attending school, needing a tutor or skipping school (Arim et al., 2016).

The relationship between participating in other traditional activities and school performance is also unclear. Using 2006 APS data, Bougie (2009) found that in bivariate

models, children and youth who spent time with Elders at least once a week were more likely to succeed in school than those who did not, but this effect was not significant in adjusted models. The RHS Phase 2 found that First Nations youth who never participated in traditional singing, drumming or dancing were the least likely to be attending school (90.5%), and those who participated less than once per week were slightly more likely to attend school (96.3%) than those who participated 1–3 times per week (96.0%) or 4 or more times per week (93.9%). However, these differences were not statistically significant (FNIGC, 2005, p. 162).

## Factors related to schools

Some studies have been able to consider characteristics of schools in their analyses mainly using parental self-reporting of the school climate. Using a subsample of the 1991 APS data, Brade et al. (2003) found that adults who reported that they “liked what was taught about Aboriginal peoples” in high school and elementary school were more likely to have completed secondary and post-secondary education. In 2012, Turner and Thompson (2015) found that among off-reserve First Nations children in Grades 1–6, those whose parents disagreed strongly that their schools “supported Aboriginal culture” had more than twice the odds of having repeated a grade. Among those in Grades 7–12, those whose parents made similar reports were significantly less likely to be happy at school. Among Inuit youth, those whose parents reported a “positive school environment” were more likely to have a high average at school. Those whose parents reported a “negative school environment” were more likely to have needed tutoring (Arim et al., 2016). Among off-reserve First Nations students aged 6–14 in 2006, those whose parents reported that they were “satisfied with school practices” had twice the odds of doing “well or very well” (Bougie, 2009).

## Summary

Overall, the evidence is mixed regarding the factors that predict educational success among Indigenous children and youth. Part of this is no doubt due to a lack of consistency in the outcomes that are measured and the age ranges covered as well as differences between specific populations and contexts. With regard to First Nations youth living in First Nations communities, the focus of this report, there has been much less quantitative research

aimed at understanding the factors predicting school success in this population than in off-reserve populations. This is certainly due to the lack of available data, a situation that is remedied by the FNREEES.

Notwithstanding the lack of consistency in populations and indicators, the previous research does provide some indication of the characteristics of children, families and schools that are likely to be implicated in the school success of First Nations youth. Age and gender are likely to be important predictors, and boys and girls of different age ranges are likely to have different average outcomes, depending on the measures used. The health of youth is also likely to be important.

Characteristics of households and families that are potentially important include family and household composition: the number of people in the household as well as household structure or family status. Socio-economic characteristics, including family income and parental education, are likely to be important predictors.

As described above, there is evidence that effects of Residential School experiences of parents and other family members might be important in predicting the school success of youth. It has been suggested that Residential School experiences might be related to the involvement of parents in their children's schools, which is also a potential predictor of student success.

Various behaviours of youth themselves might be important for success in school. Alcohol use, smoking and drug use have previously been identified as having negative effects. On the other hand, participating in positive activities, including those related to traditional culture, might be related to better outcomes. Although the previous evidence is not clear on this point, knowledge of an Indigenous language might also be related to formal educational outcomes, as indicated by the FNHLLM.

Given the lack of clear results in the previous research and the lack of research attention to First Nations youth living in First Nations communities, the FNREEES data provide an opportunity to better understand the factors that predict school outcomes in this particular population and age group.



## Research Questions



As described above, an important contribution of the FNHLLM is that it reminds us that formal knowledge is not the only educational outcome that is important for First Nations children and youth (Canadian Council on Learning, 2007). Knowledge of tradition, history, language and other aspects of culture are equally valuable. Similarly, not all education takes place in schools, and teachers are not the only ones who guide young people as they acquire knowledge. Elders, peers, parents and other community members all play important roles.

This report focuses on the predictors of success at school, recognizing that positive experiences in formal education are likely related to a range of other factors and types of knowledge. The FNHLLM and the previous literature suggest that several sub-questions can be used to further define the analyses.

1. What are the characteristics of youth, families, households and schools that affect school success among First Nations youth?

The previous literature, described above, indicates a number of characteristics of these different socio-ecological levels that potentially influence the school experiences of First Nations youth. Age and gender appear to reliably affect school outcomes in other populations. Potentially important characteristics of families and households include family socio-economic characteristics, such as parental education, household composition and size and mobility. Of course, aspects of schools can be expected to influence the experience of their students. This analysis will include elements of the school climate, such as the perception that alcohol, drugs or violence were problems in the school.

2. What is the relationship between success at school and other domains of knowledge, including knowledge of Indigenous traditions, languages, culture and history?

Although knowledge in each of these areas is important for young people, themselves and for communities, we expect that these forms of knowledge are not independent. From a holistic perspective, we would predict that those who have good cultural, historical and linguistic knowledge would also be in a good position to do well in school. The FNREEES data, collected with the FNHLLM as a guide, include indicators of these other areas of knowledge, which allow us to examine how they are related to success at school while controlling for important child, family, household and school characteristics.

3. What aspects of social support for learning lead to better outcomes in school among First Nations youth?

The FNHLLM reminds us that learning, within each of the important domains, can be supported and guided by a number of important people in the lives of First Nations youth. Accordingly, the FNREEES includes questions about parental involvement in the education of their children and whether they receive social support in other forms from friends, family and others in the community.



## Methods



The First Nations Regional Early Childhood, Education and Employment Survey (FNREEES) was conducted in 250 First Nations and Northern communities between 2013 and 2015. The survey used a stratified cluster sample method to select communities, and individuals within these communities were randomly selected for each age group and gender in order to generate estimates that are representative of conditions in First Nations communities across Canada. The survey was administered using computer-assisted personal interviewing (CAPI) to children aged 11 and younger (via proxy), youth, and adults. The analyses in this report use self-reported data from 3,842 youth aged 12–17 from the youth component of the survey.

### Measuring educational success

As described in the literature review above, there have been a number of outcomes used in previous studies of educational success among Indigenous children. These have included measures of school outcomes such as grades, attendance, participation, and whether the child had ever been suspended or had left school, among others. Many of these are available in the FNREEES data, and each potentially captures a slightly different dimension of school success.

**Table 1: Indicators of educational success**

OUTCOME CONCEPT	FNREEES QUESTIONS	RESPONSE CATEGORIES
Having mostly “As” on last report card	ES23B_Q01: During your last year in school, what was your overall grade average as a percentage on your last report card?	80% or above (mainly “As”) 70% to 79% (mainly “Bs”) 60% to 69% (mainly “Cs”) 50% to 59% (mainly “Ds”) Under 50% (mainly “Es” and “Fs”) NA (no grades given)
Introductory text: <i>Now, I would like to ask about your school attendance during your last year in school. NOTE: there are approximately 20 school days every month.</i>		
Not arriving late to school	ES23F_Q02A: On average, how many days per month did you arrive late for school?	None 1–2 days 3–5 days 6–9 days 10–15 days 16–20 days
Not missing school	ES23F_Q01A: On average, how many days per month did you miss school?	None 1–2 days 3–5 days 6–9 days 10–15 days 16–20 days
Not having skipped class	ES23F_Q03A: On average, how many days per month did you skip classes?	None 1–2 days 3–5 days 6–9 days 10–15 days 16–20 days

The FNREEES includes several measures of educational success that have been used in other studies, including whether the youth had ever been suspended or dropped out of school, required additional tutoring or help in school or repeated a grade or “skipped” a grade. Although these are potentially informative, the questions ask about situations or events that might have occurred in previous years, while the factors that we are using to predict success are measured in the most recent year only. This is particularly a problem for older youth who could have skipped a grade or have been suspended as much as a decade before the collection of the survey data.

We therefore focused on two outcomes that are measured by FNREEES that ask about recent experience (see *Table 1*). First, the FNREEES asked current and former students about their overall grade average on their last report card. Although subject to misreporting, this is a fairly objective indicator of success, inasmuch as students are reporting their most recent academic achievements. Second, we examined school attendance. Again, asking about their last year in school, the FNREEES asked youth to report the average number of days per month that they were late for school, skipped classes or missed school entirely. Each of these attendance concepts (being late, skipping, and missing school) addresses a somewhat different aspect of the more general idea of student engagement with school.

## Independent variables

The selection of independent variables was guided by the FNHLLM as well as the previous literature. They include demographic factors, characteristics of households and schools, linguistic and cultural variables, and family attendance at Residential School (see *Table 2*).

Demographic characteristics were mainly considered to be control variables and include gender and age range of youth, dividing the sample into those aged 12–14 and those aged 15–17 at the time of the survey. Following some of the studies reviewed above, the health of youth was included as a control variable. Responses to the self-rated physical health question were recoded into a binary indicator of excellent or very good health versus good to poor health.

Characteristics of households included the highest education of the parent(s) or guardian(s). The FNREEES collected the educational attainment of

up to two parents or guardians, and the education of the parent or guardian with the highest education was included in the models. Although previous research had included household income as a predictor of educational success, this measure is not available in the FNREEES youth dataset.

Household crowding was included as the Household Crowding Index. This was calculated using Statistics Canada’s methodology, which divides the number of usual residents (adults and children) by the number of rooms in the household. Households with more than one person per room were coded as “crowded.”

As described in the literature review, mobility can potentially affect the educational experience of youth. The FNREEES asked youth the number of times that they had changed their school for reasons other than regular academic progression, such as a change from elementary to high school. For the purposes of this report, this was considered as a household characteristic, as family mobility is likely an important reason for children changing schools, although it is recognized that young people might change schools for other reasons.

Physical barriers to attending school, such as distance and the availability of transportation, are also potentially important, particularly with regard to attendance. The FNREEES includes questions on the length of time to travel to school as well as how often youth have a “reliable way of getting to school.” These were combined into a single measure. Youth who either had a journey of 20 minutes or more to get to school or who did not have a reliable way to get to school “most of the time” or “all of the time” were coded as having a barrier to attendance.

School characteristics were captured by FNREEES questions regarding positive aspects of school climate, such as whether students were happy there or the school offered opportunities for parental involvement and cultural learning. Negative aspects, such as the presence of drugs, alcohol, racism or bullying were also captured. Responses to each were given on four-point agree–disagree scales. A factor analysis confirmed that even with the negative questions inversely coded, the two sets of questions addressed different underlying constructs. We therefore created two separate scales by averaging responses. Cronbach’s alpha reliability<sup>1</sup> was 0.687 for the Positive School Climate Scale and 0.838 for the Negative School Climate Scale.

<sup>1</sup> A measure of internal consistency of items within a scale; Cronbach’s alpha can range from 0 to 1, with higher values indicating higher consistency.

**Table 2: Independent variables and FNREEES questions**

INDEPENDENT CONCEPT	FNREEES QUESTION
<b>DEMOGRAPHIC CHARACTERISTICS</b>	
Age	Age: Calculated age based on date of birth
Gender	DI3: Are you male or female?
Health	HE1: In general would you say your physical health is.. ?
<b>HOUSEHOLD CHARACTERISTICS</b>	
Highest education of parent or guardian	ES23K_Q02A: What is the highest level of formal education that your mother or female guardian has completed?
	ES23K_Q02B: What is the highest level of formal education that your father or male guardian has completed?
Household overcrowding	HC1: How many adults, 18 years and over, currently live in this household the majority of the time?
	HC2: Including yourself, how many children or youth under the age of 18 live in this household the majority of the time?
	HC4: How many rooms are there in your home? <i>Note: Include kitchen, bedrooms, living rooms and finished basement rooms. Do not count bath- rooms, halls, laundry rooms and attached sheds</i>
Mobility	ES23A_Q02A: Up to and including your current grade, how many times have you changed schools?
	ES23A_Q02B: How many of these school changes were for reasons OTHER than a regular progression through the school system?
Barriers to school attendance	ES23A_Q05: How often do you/did you have a reliable way of getting to school?
	ES23A_Q07: On average, how many minutes did/does it take you to get to school (one way)?
<b>SCHOOL CHARACTERISTICS</b>	
Positive school climate	ES23C_Q01: Overall, I felt/feel safe at school.
	ES23C_Q02: Overall, I was/am happy at school.
	ES23C_Q03: Most students in the school enjoy/enjoyed being there.
	ES23C_Q03B: The school offers/offered parents many opportunities to be involved in school activities.
	ES23C_Q04A: My school supports/supported First Nations culture (through teaching and/or activities).
Negative school climate	ES23C_Q05A: Racism is/was a problem at school.
	ES23C_Q06A: Bullying (physical or emotional) was/is a problem at the school (including cyber-bullying).
	ES23C_Q07A: The presence of alcohol is/was a problem at school.
	ES23C_Q08A: The presence of drugs was/is a problem at school.
	ES23C_Q09A: Physical violence was/is a problem at school
<b>CULTURAL PARTICIPATION: LINGUISTIC AND HISTORICAL KNOWLEDGE</b>	
Historical knowledge	HK1: How much do you know about the history of your people?
	HK2: How much do you know about the inherent rights of your people (e.g., Territory Rights, Treaty Rights, etc.)?
	HK3: How much do you know about the history of Indian Residential Schooling?
Cultural participation	ES23E_Q04A: Did you participate in First Nations cultural activities (e.g., drumming, singing, storytelling, powwow, traditional dancing, hunting and gathering, beading, ceremonies)?
	ES23E_Q04B: How often did you participate in First Nations cultural activities (outside of school hours)?

INDEPENDENT CONCEPT	FNREEES QUESTION
Linguistic knowledge	LAN1: Do you have any knowledge of a First Nations language (even if only a few words)?
	LAN3: How would you rate your ability to understand (when someone speaks to you) in [First Nations language]?
<b>SOCIAL SUPPORT FOR LEARNING</b>	
Parent and family member involvement	Did/Do your parent(s), guardian(s) or any other family member do any of the following...
	ES23D_Q01: Speak to, correspond with or visit your teacher(s) (including parent–teacher interviews)?
	ES23D_Q02: Attend a school event in which you participated (for example, a play, cultural event, sports competition or science fair)?
	ES23D_Q03: In general, how often did/do your parent(s)/guardian(s)/any other family member... Discuss with you how you are doing in school (grades, interest, course material)?
	ES23D_Q04: In general, how often did/do your parent(s)/guardian(s)/any other family member... Try to help you with homework when you needed/need it?
Positive social support	GS2: I have family and friends who help me feel safe, secure and happy.
	GS3: There is someone I trust whom I would turn to for advice if I were having problems.
	GS5: There are people I can count on in times of trouble.
Negative social support	GS1: If something went wrong, no one would help me.
	GS4: There is no one I feel comfortable talking with about problems.
<b>FAMILY RESIDENTIAL SCHOOL ATTENDANCE</b>	
	RS_Q01_A: Were any of the following a student at an Indian Residential School or a federal industrial school? [Mother or female guardian]
	RS_Q01_B: Were any of the following a student at an Indian Residential School or a federal industrial school? [Father or male guardian]
	RS_Q01_D: Were any of the following a student at an Indian Residential School or a federal industrial school? [At least one grandparent]
<b>STUDENT BEHAVIOURS</b>	
Smoking	SM1: At the present time, do you smoke cigarettes daily, occasionally, or not at all?
Alcohol use	AL1: During the past 12 months, have you had a drink of any beer, wine, liquor or any other alcoholic beverages?
	AL2: How often in the past 12 months have you had five or more drinks on one occasion?
Drug use	DU1: During the last 12 months, have you used or tried marijuana, cannabis or hashish?
Attendance composite	ES23F_Q01A: On average, how many days per month did you miss school? Note: there are approximately 20 school days every month
	ES23F_Q02A: On average, how many days per month did you arrive late for school? Note: there are approximately 20 school days every month
	ES23F_Q03A: On average, how many days per month did you skip classes? Note: there are approximately 20 school days every month

We included measures of family Residential School attendance. The FNREEES asked whether male or female parents or guardians as well as at least one grandparent had ever attended Residential or industrial school. We combined these into a single variable, indicating whether a parent only, a grandparent only, both a parent and a grandparent, or none of these family members had attended.

Measures of social support for learning were taken from two sets of FNREEES questions. The survey asked

youth directly about the involvement that their parents or guardians or other family members had with their schooling. Students were asked whether their parents or guardians had spoken with their teachers or had attended school events in which the youth also participated. These were combined into a single variable that indicated whether parents spoke with teachers only, attended events only, did both or did neither. Separate variables were included to measure how often parents or family members discussed school with the youth and how often they helped with homework.

The FNREEES questionnaire also asked youth about their general social support, asking for their agreement on a four-point scale (strongly agree to strongly disagree) with three positively worded and two negatively worded questions. As with the school climate scales, a factor analysis confirmed that these were better considered as two separate dimensions, and two scales were created by taking the mean responses.

Historical and linguistic knowledge and participation in cultural activities were included as measures of different dimensions of connection to First Nations culture and knowledge. Historical knowledge was measured by three questions: the youth's knowledge of the history of his or her people, knowledge of inherent rights and knowledge of the history of Residential Schools. For each of these, youth graded their knowledge on a four-point scale from "nothing" to "a lot." These responses were averaged to create a continuous measure (Cronbach's alpha: 0.797). Participation in cultural activities outside of school was categorized to identify those who did not participate at all, those that participated fewer than 3 times per month and those who participated weekly or more. Self-reported knowledge of a First Nations language was coded into four categories ranging from "cannot understand" to "very well (fluent)."

A number of potentially important behaviours were also captured in the FNREEES data. Youth smoking was identified by one question, and the responses were recoded to indicate those who did not smoke, versus those who smoked daily or occasionally. Alcohol consumption was similarly recoded into a binary variable indicating whether the youth had consumed 5 or more drinks on one occasion in the previous year. Lastly, use of marijuana or hashish was recoded to identify those who had used or tried these drugs in the previous year versus those who had not.

Lastly, attendance was included as a predictor variable in the models predicting having mostly "As." In this case, we recoded the composite attendance variable into three categories: those with scores of 0 ("very good" attendance), scores of 1 or 2 ("mid-attendance") and scores of 3 to 15 ("poor" attendance).

There were 3,842 youth aged 12–17 in the complete FNREEES sample. After removing those who had been schooled at home or had not attended school, there were 2,461 who were attending school and 1,084 who were not attending during the time of the survey, for a total of 3,545 attendees and school leavers.

Those currently attending and those who had attended school, but who were not attending at the time of the survey, were asked similar questions about their most recent school experiences. However, 188 non-attendees who indicated their highest grade completed was Grade 11 or Grade 12 and who had not completed high school were removed from the analysis because of an issue related to the skip logic of the survey. A small number who were missing a response (didn't know the answer or refused to answer) for the health question were also removed.

## Statistical analysis

Following the descriptive bivariate analysis, the general approach we took was to model binary outcome indicators as functions of a set of independent variables, using logistic regression. This regression technique is used to predict the odds of one outcome on a dichotomous dependent variable, as compared to the odds of the alternative outcome, based on one or more independent variables. The unadjusted odds ratios examine the bivariate relationships between each of the independent variables and each of the two outcome measures. The odds ratios that are calculated for the full multivariate models allow for the interpretation of the effects of specific independent variables while controlling for the effects of other variables in the model.

When an odds ratio (OR) is less than 1, the odds of a predicted outcome (e.g., receiving mostly "As" or having good attendance) are lower for the corresponding group than for the reference group; when the OR is equal to 1, the odds of the predicted outcome are the same for that group as for the reference group; and when the OR is greater than 1, the odds of the outcome are higher for that group than for the reference group.

The report card grades indicator was recoded so models that predicted having mostly "As" on the last report card indicated a clear measure of educational success. Responses to the three attendance questions were combined by summation to produce a composite attendance measure. This measure ranged from 0 for those who had not been late, skipped class nor missed school to 15 for those who had *each* of these attendance problems 16 to 20 days per month on average. As one would expect, the distribution of scores was rather right-skewed, with a high proportion reporting none of these behaviours or being late, skipping class or missing school only a small number of days per month. This composite

outcome was recoded to a binary variable, indicating “good” attendance with a score of 0 to 2 or “poor” attendance with a score of 3 or higher.

Five multivariate models were estimated for each of the outcome variables. The first was a general model for males and females combined, with gender and age group as cofactors. This model made use of the whole sample, providing the greatest power to detect relationships. However, the background literature and the examination of the outcome variables by age group and gender suggests that there might be different factors affecting school success among males and females and for those in older and younger age ranges. Rather than test all possible interactions in models that already had a large number of categorical variables, we stratified the models, examining the same effects for males and females separately, with age as a cofactor, and for those aged 12–14 and 15–17 separately, with gender as a cofactor.

Each of these was constructed as a series of sequential models, adding blocks of variables separately in order to assess their effects on other variables in the models. The first step included gender or age group (or both) and self-rated physical health as a control variable. The second step added the household and family characteristics: parental education, the number of times the youth changed schools, household crowding and the presence of a barrier to attending school. To these, family attendance at Residential School was added. The variables capturing aspects of family support for education were added as a block, as were the two scales that measured youth perception of social support and those that measured the school climate. The behavioural variables—alcohol use, cannabis use and cigarette smoking—for the models of receiving mostly “As” on the last report card and attendance score were also added as a group. The final step added the cultural and linguistic variables—including cultural participation, linguistic knowledge and the historical knowledge scale—to produce a full model.

Although no single question had a large proportion of cases with missing values, there were a fairly large number of cases (nearly 30%) missing a value on at least one of the variables used in the analyses. In order to retain as many cases as possible for the analyses, most of the categorical independent variables were coded such that a “missing” category was retained, which included those who reported “don’t know” or who refused to respond. For the scale variables, cases were retained in the calculation if they were missing one item on a scale but were deleted from the analyses if they were missing two or more items of any scale. There were also between 100 and 200 cases that were missing a value for each of the two outcome variables. In order to retain as large a sample for analysis as possible, each dependent variable was modelled using the cases with valid responses for that variable. This means that there was a slightly different sample for each outcome.

In order to account for the design effects, including the various strata and clusters, inherent in the complex sampling plan, SPSS Complex Samples statistical software was used to adjust the estimates. All analyses were conducted at FNIGC’s First Nations Data Centre.



## Results

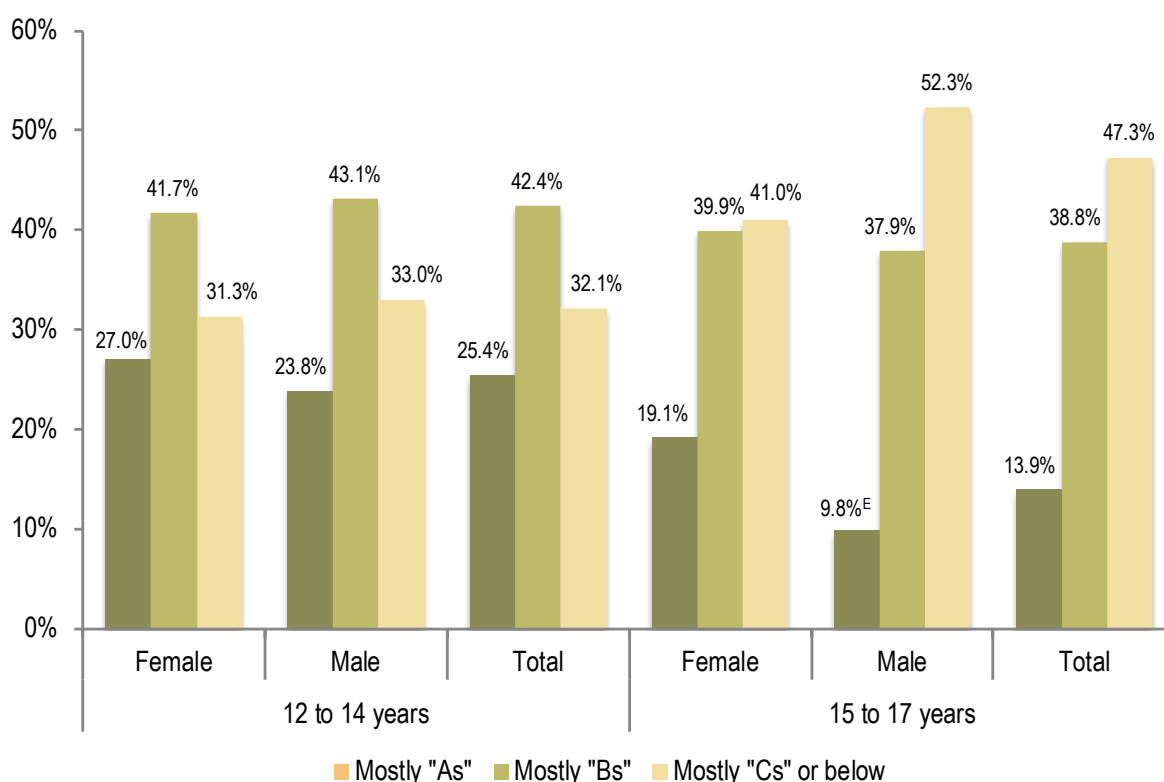


This section first presents a descriptive analysis focusing on the two main outcome concepts: the grades on the last report card and the attendance measures. The analysis sample is described next, and the bivariate relationships between the independent variables and the two outcome measures are examined before presenting the results of the multivariate models.

Figure 1 presents the population estimates of the percentage of First Nations youth who received “Mostly ‘As,’” “Mostly ‘Bs,’” and “Mostly ‘Cs’ or below” on their last report card. Confidence intervals (CIs) are reported in

the Appendix Tables. Overall, females were more likely to have better grades and less likely to have worse ones than were males. As Figure 1 shows, outcome patterns on this indicator are different for the two age groups, as the gender difference is much stronger among those aged 15–17 years. In that age group, 52.3% (95% CI [45.9, 58.6]) of males and 41.0% (95% CI [34.8, 47.5]) of females reported having mostly “Cs” and below compared with 33.0% (95% CI [27.4, 39.2]) of males and 31.3% (95% CI [25.2, 38.1]) of females aged 12–14 years.

**Figure 1: Grades on last report card, by gender and age group**

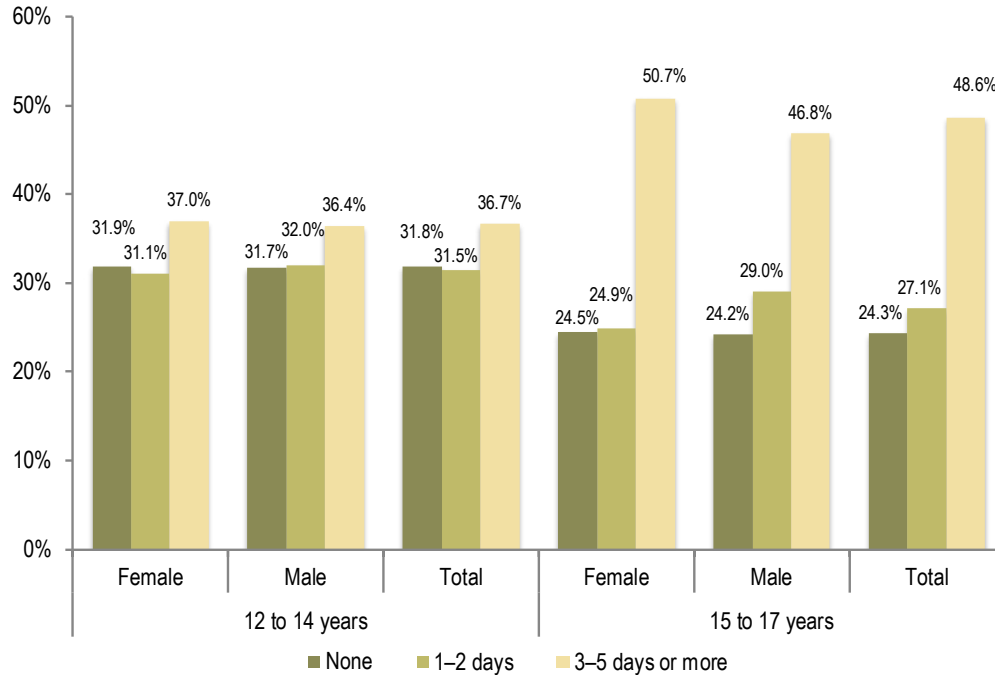


<sup>E</sup> High sampling variability, interpret with caution.

Figure 2 shows the average number of days youth reported that they were late, by age and gender. Among those aged 12–14, 31.8% (95% CI [27.6, 36.3]) indicated that they were not late at all. Note that more

than one third of youth aged 12–14 reported being late three or more days per month, on average (36.7%, 95% CI [32.2, 41.1]), and that this was much higher among those aged 15–17 (48.6%, 95% CI [43.7, 53.4]).

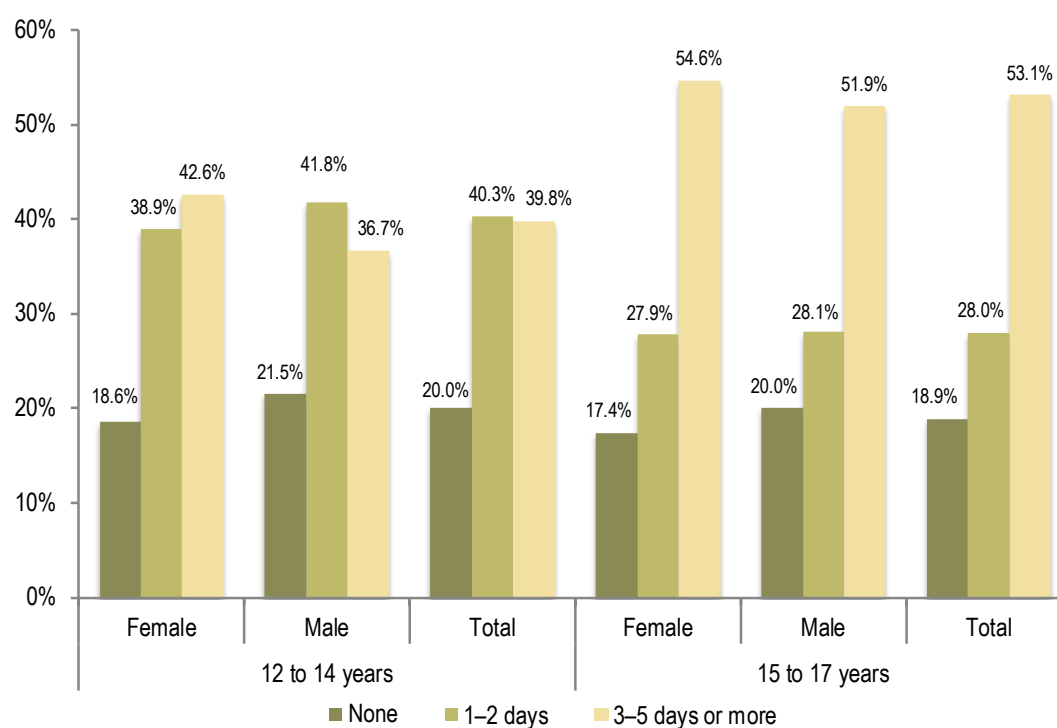
**Figure 2: Number of days arrived late per month, on average, by gender and age group**



The FNREEES also asked youth who were late for school at least one day per month, on average, the question “Why were you late for school?” The response categories are provided in Table 3. The single most often-reported category was “Didn’t wake up on time” for school, followed by problems with transportation. It may be of interest that fewer than 10% of youth reported being late because they disliked school, had problems with their teachers or had difficulties with school work.

**Table 3: Reasons reported for being late**

REASON	%	[95%CI]
Didn't wake up in time	71.7	[67.3, 75.7]
Problems with transportation	28.0	[23.7, 32.8]
Illness or injury	17.9	[14.5, 21.9]
Medical appointment	12.9	[10.6, 15.6]
Disliked or disinterested in school	8.9	[7.2, 11.1]
Helped out at home	8.2	[6.4, 10.4]
Family-related issues	6.2	[4.6, 8.4]
Problems with teachers	6.2	[4.7, 8.1]
Difficulties with school work	5.1	[4.1, 6.4]
Problems with other students	4.2 <sup>E</sup>	[2.6, 6.9]
Help with/Participate in traditional activities	1.0 <sup>E</sup>	[0.7, 1.6]
Note: Respondents could choose more than one response.		
<sup>E</sup> High sampling variability, interpret with caution.		

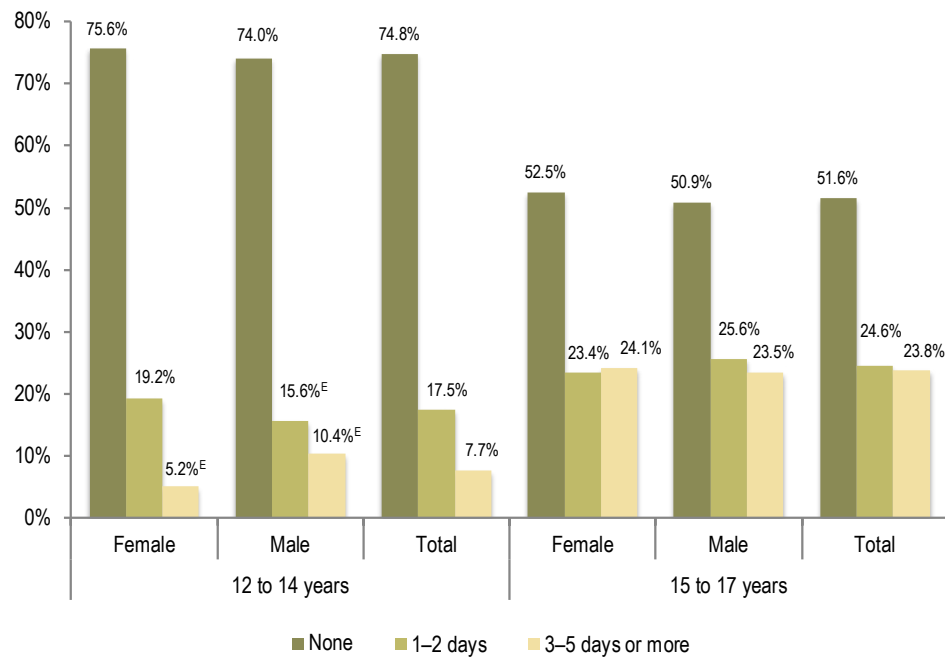
**Figure 3: Number of days missed school per month, on average, by gender and age group**

The number of days of school missed per month was also differently distributed in the two age ranges. Among those aged 12–14, 20.0% (95% CI [17.1, 23.2]) missed zero days of school in the average month over the previous year. Two in five youth missed 1–2 days per month (40.3%, 95% CI [35.7, 45.0]) and 3–5 days or more (39.8%, 95% CI [35.0, 44.7]). Among youth in the older age group, the percentage missing zero days per month (18.9%, 95% CI [15.6, 22.6]) was similar to that of the younger group. However, missing 3 or more days was much more prevalent among older youth (53.1%, 95% CI [48.6, 57.6]). There did not appear to be important gender differences for this indicator for either age group.

As with being late, the survey collected youths' self-reported reasons for missing school (see Table 4). In this case, health reasons were among the most commonly reported, with more than half the youth (56.3%) citing illness or injury, and more than one-quarter (25.8%) missing school because of medical appointments. Sleeping in was also often mentioned as a reason for missing school (43.0%).

**Table 4: Reasons reported for missing school**

REASON	%	[95%CI]
Illness or injury	56.3	[52.2, 60.4]
Slept in	43.0	[38.7, 47.5]
School was closed	28.8	[25.1, 32.7]
Medical appointment	25.8	[22.5, 29.5]
Family-related issues	16.0	[13.5, 18.8]
Problems with transportation	15.3	[11.9, 19.4]
Disliked or disinterested in school	13.7	[11.5, 16.2]
Helped out at home	10.0	[8.0, 12.3]
Suspended or expelled from school	7.3	[6.0, 8.9]
Problems with other students	7.0 <sup>£</sup>	[4.6, 10.4]
Difficulties with school work	6.3	[4.7, 8.5]
Problems with teachers	6.2	[4.6, 8.4]
Helped with/Participated in traditional activities	3.8	[2.9, 5.0]
Wanted to work instead	1.2 <sup>£</sup>	[0.8, 1.7]
Note: Respondents could choose more than one response.		
<sup>£</sup> High sampling variability, interpret with caution.		

**Figure 4: Number of days skipped classes per month, on average, by gender and age group**

<sup>E</sup> High sampling variability, interpret with caution.

The last of the indicator variables, the average number of days youth skipped classes, is presented in Figure 4. Again, the age differences are fairly clear. Among those aged 12–14, a large majority did not skip any classes per month, on average (74.8%, 95% CI [70.8, 78.5]). There appears to be a gender difference in the proportions skipping classes 3 days or more, but the small cell sizes mean that sampling variability is too large to draw a firm conclusion. As with missing school and arriving late, skipping classes was more common among older youth. Of those aged 15–17, 24.6% (95% CI [20.8, 28.9]) skipped an average of 1–2 days per month and 23.8% (95% CI [20.4, 27.6]) skipped an average of 3 days or more.

Table 5 describes the unadjusted relationships between the categorical variables and the first outcome variable, having mostly “As” on the last report card. Note that cases missing values on the dependent variable are deleted from this analysis, as are those on some of the independent variables, particularly when there were too few to include them as a separate category. For most of the variables, the odds ratios shown are adjusted by this separate category, but those effects are not presented.

As expected, given the results described above, gender and age were both related to receiving mostly “As.” Males were significantly less likely to have received mostly “As” than females (odds ratio [OR]: 0.55, 95% CI [0.36, 0.83]).

Youth aged 12–14 had more than twice the odds of receiving mostly “As” compared to those aged 15–17 (OR: 2.63, 95% CI [1.88, 3.69]). Self-reported physical health was also significant with those youth reporting very good or excellent health more likely to have received mostly “As” than those with health that was “good,” “fair” or “poor” (OR: 1.51, 95% CI [1.04, 2.18]).

The education level of parents was related to positive school outcomes, with stronger effects evident at higher levels of education. Youth whose parents had completed high school had significantly higher odds (OR: 1.89, 95% CI [1.16, 3.11]) of having mostly “As” than those whose parents had less than high school. Children of parents with some post-secondary education (OR: 2.86, 95% CI [1.70, 4.81]) or a university degree (OR: 2.98, 95% CI [1.83, 4.86]) had almost three times the odds of receiving mostly “As” than those whose parents had less than high school.

Mobility was not significantly related to report card outcomes, and those who lived in crowded households were also not significantly more or less likely to have mostly “As” than those who lived in uncrowded ones. However, youth who had a barrier to attending school (they did not have reliable transportation or travel was 20 minutes or longer) were less likely to have mostly “As” than those who had neither of these barriers to attendance (OR: 0.69, 95% CI [0.48, 0.99]).

**Table 5: Unadjusted odds ratios of predicting mostly “As” on the last report card**

INDICATOR	PERCENT <sup>1</sup>	ODDS RATIO	[95% CI]
<b>DEMOGRAPHIC CHARACTERISTICS</b>			
Male (female = ref)*	51.3	<b>0.549</b>	<b>[0.363–0.829]</b>
Age group 12–14 (15–17 = ref)*	46.0	<b>2.630</b>	<b>[1.875–3.689]</b>
Very good/Excellent self-rated physical health (good/fair/poor = ref)*	68.3	<b>1.505</b>	<b>[1.039–2.181]</b>
<b>PARENTS EDUCATION*</b>			
Bachelor’s or higher	9.4	<b>2.982</b>	<b>[1.831–4.857]</b>
Some post-secondary	28.7	<b>2.858</b>	<b>[1.700–4.805]</b>
High school	25.3	<b>1.894</b>	<b>[1.155–3.106]</b>
Less than high school	24.4	1.00	
<b>NUMBER OF TIMES CHANGED SCHOOL FOR REASONS OTHER THAN NORMAL PROGRESSION</b>			
2 or more times	13.6	0.802	[0.512–1.257]
Once	17.0	0.799	[0.528–1.211]
Did not change schools	60.4	1.00	
<b>HOUSEHOLD CROWDING</b>			
One person or fewer per room (More than one person per room = ref)	64.0	1.261	[0.809–1.964]
<b>BARRIER TO ATTENDING SCHOOL*</b>			
Had a barrier (had reliable transportation and school less than 20 minutes away = ref)	40.2	<b>0.694</b>	<b>[0.483–0.996]</b>
<b>FAMILY-SCHOOL INTERACTIONS*</b>			
Spoke with teachers and attended events	60.0	<b>4.673</b>	<b>[2.327–9.385]</b>
Spoke with teachers or attended events	19.5	1.350	[0.657–2.774]
Neither spoke with teachers nor attended events	12.8	1.00	
<b>FAMILY DISCUSSED SCHOOL*</b>			
Several times a week	35.2	1.601	[0.953–2.688]
Once or several times a month	37.8	0.912	[0.561–1.482]
Never to a few times per year	20.9	1.00	
<b>FAMILY HELPED WITH HOMEWORK</b>			
Most or all the time (none or some of the time = ref)	49.1	1.008	[0.697–1.459]
<b>PARTICIPATION IN CULTURAL ACTIVITIES*</b>			
Once or more per week	19.5	<b>2.162</b>	<b>[1.341–3.488]</b>
Less than 3 times per month	30.8	1.394	[0.859–2.261]
Does not participate	44.9	1.00	
<b>UNDERSTANDING OF A FIRST NATIONS LANGUAGE</b>			
Relatively well/very well	21.9	<b>1.709</b>	<b>[1.042–2.803]</b>
With effort/basic	18.0	0.993	[0.643–1.533]
Only a few words	39.7	1.308	[0.865–1.976]
None/cannot understand	20.5	1.00	
<b>FAMILY RESIDENTIAL SCHOOL ATTENDANCE</b>			
Only parent attended	6.7	1.314	[0.683–2.528]
Only grandparent attended	41.4	1.136	[0.784–1.644]
Both parent and grandparent attended	12.8	1.068	[0.529–2.158]
Neither parent nor grandparent attended	23.7	1.00	

INDICATOR	PERCENT <sup>1</sup>	ODDS RATIO	[95% CI]
<b>STUDENT BEHAVIOURS</b>			
Had 5+ drinks on at least one occasion in the past year (no = ref)*	22.8	<b>0.217</b>	<b>[0.147–0.319]</b>
Smokes cigarettes daily or occasionally (no = ref)*	22.1	<b>0.188</b>	<b>[0.112–0.314]</b>
Tried marijuana, cannabis or hashish in past year (no = ref)*	37.7	<b>0.293</b>	<b>[0.182–0.472]</b>
<b>ATTENDANCE*</b>			
Poor attendance	51.5	<b>0.374</b>	<b>[0.238–0.589]</b>
Mid attendance	32.0	0.933	[0.575–1.516]
Very good attendance	14.6	1.00	
* Variable is significant at a <.05 using a Wald F test. <b>Bold</b> indicates individual effect OR is significantly different from 1.00 (a <.05).			
<sup>1</sup> Weighted percentages. Total unweighted N = 2131. Non-response categories are not shown and percentage totals may therefore not sum to 100.			

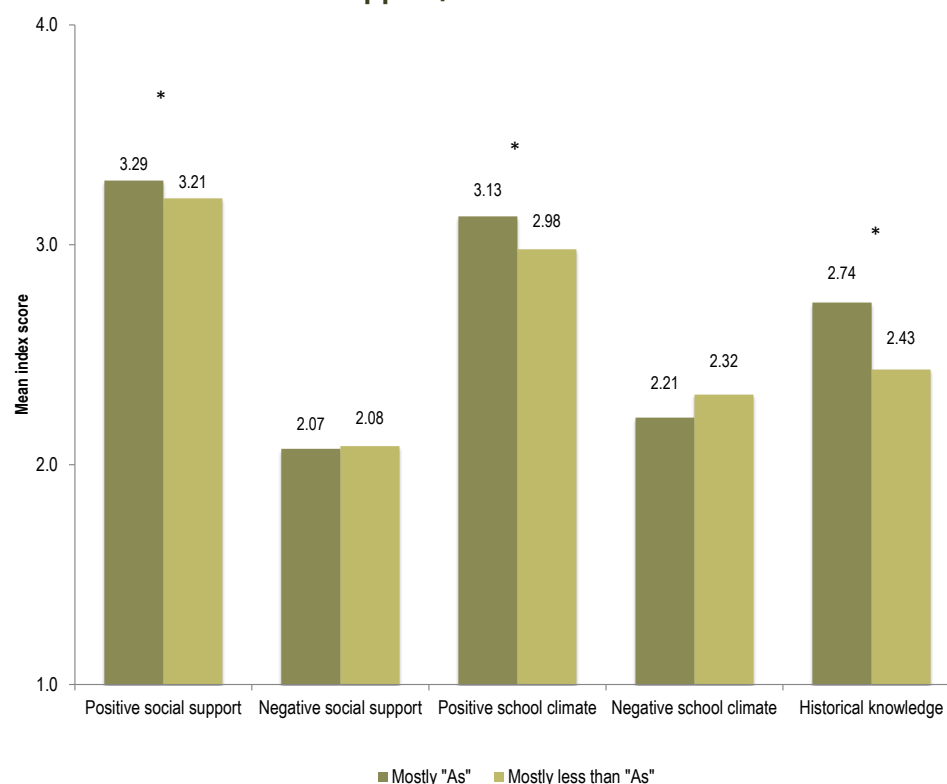
Family–school interaction was related to receiving mostly “As.” Sixty percent of the youth reported that their parents or family members spoke with teachers and attended school-related events, and those youth had higher odds of receiving mostly “As” than those whose parents or family members neither spoke with teachers nor attended school events (OR: 4.67, 95% CI [2.33, 9.39]). The frequency of discussing school with parents or family members was significantly related to the outcome variable judged by a Wald test (significance= 0.029), but none of the response categories had odds ratios that were significantly different from 1.

Participation in cultural activities was also related to having mostly “As.” In this case, the only significant category was the highest frequency of attendance: attending once or more per week. The 19.5% of youth who were in this category had

more than twice the odds of having mostly “As” compared to those who did not participate in cultural activities (OR: 2.16, 95% CI [1.34, 3.49]). Similarly, those who reported understanding a First Nations language “relatively well” or “very well” had higher odds of having mostly “As” than those who did not understand a First Nations language at all (OR: 1.71, 95% CI [1.04, 2.80]); but, those in lower categories of linguistic understanding (“with effort/basic” and “only a few words”) were not significantly different from those who did not understand a First Nations language at all. Family experience of Residential Schools had no significant bivariate relationship with this outcome.

Student behaviours were very clearly related to having mostly “As” on the last report card. The 22.8% of youth who reported having had 5 or more drinks at least on one

**Figure 5: Mean scores on social support, school climate and historical knowledge, by report card outcome**



occasion in the past year were less likely to receive mostly “As” than those who had not (OR: 0.22, 95% CI [0.15, 0.32]). Likewise, those who smoked cigarettes occasionally or daily (OR: 0.19, 95% CI [0.11, 0.31]) and those who had tried marijuana in the past year (OR: 0.29, 95% CI [0.18, 0.47]) had lower odds of having mostly “As” than those who did not participate in those behaviours. Those with better attendance also had better grades; having a poor attendance score on the composite missed, skipped and lateness indicator was associated with an odds ratio of 0.38 (95% CI [0.24, 0.59]). The mean values on the continuous variables for those who received mostly “As” and those who received mostly less than “As” on their last report card are shown in Figure 5. Each of the social support, school climate and historical knowledge measures ranged from 1 to 4. Significantly different means are indicated by asterisks. Confidence intervals are presented in the Appendix Tables.

As shown in Figure 5, those who received mostly “As” had significantly higher mean scores on the positive social support indicators than those who received mostly less than “As” (3.29 vs. 3.21) while the difference on negative social support was not significant. Similarly, youth who received mostly “As” had significantly higher average positive school climate scores (3.13 vs. 2.98). Those who received mostly less than “As” had a higher mean score on the negative school climate indicator, but this difference was not statistically significant. Those who received mostly “As” also had higher average historical knowledge scores than those who received mostly less than “As” (2.74 vs. 2.43).

Table 6 presents the unadjusted odds ratios of having good attendance, rather than poor attendance, on the composite missing school, skipping class and lateness indicator.

In this case, there is no relationship between gender and having a good attendance score. However, having good attendance was more common among those aged 12–14 than those aged 15–17 (OR: 2.19, 95% CI [1.70, 2.82]). As expected, self-rated health was also related to attendance, with more of those with very good or excellent health having good attendance than those with good, fair or poor health (OR: 1.76, 95% CI [1.34, 2.30]).

The education of parents or guardians was also significantly related to attendance score, as it was to report card outcomes. Youth whose parents had high school education had twice the odds of having good

attendance compared to those whose parents had less than high school (OR: 1.99, 95% CI [1.32, 3.01]), as were those whose parents had some post-secondary education (OR: 2.00, 95% CI [1.33, 3.01]) or a university degree (OR: 2.07, 95% CI [1.31, 3.28]).

Changing schools was related to attendance score. Those who reported changing schools 2 or more times had significantly lower odds of having good attendance than those who did not change schools (OR: 0.52, 95% CI [0.36, 0.74]), although changing schools once had no significant effect. Household crowding was significantly related to this outcome, with those living in households with one person or fewer per room having higher odds of good attendance (OR: 1.50, 95% CI [1.07, 2.10]) compared with those in households with more than one person per room. Those without reliable transportation to school or living more than 20 minutes from school were also less likely to report having good attendance (OR: 0.73, 95% CI [0.56, 0.94]).

Youth whose parents spoke with their teachers about school and attended school events had higher odds of having good attendance (OR: 2.21, 95% CI [1.22, 4.01]) compared to those whose parents neither spoke with teachers nor attended school events. Youth who reported discussing school with their parents or family members several times a week or having family help with homework were also more likely to have good attendance than those who never discussed school with their parents or only did so a few times per year (OR: 1.60, 95% CI [1.11, 2.30]). Having family who regularly helped with homework was also positively related to this attendance measure (OR: 1.38, 95% CI [1.03, 1.85]) (see Table 6).

The cultural participation and linguistic knowledge variables were unrelated to youth having good versus poor attendance. Family experience of Residential Schools was also not a significant predictor of attendance.

As with the other outcome variable of having received mostly “As” on the last report card, student behaviours were related to attendance. Youth who reported having 5 or more alcoholic drinks on at least one occasion in the last year were less likely to have good attendance than those who did not report this behaviour (OR: 0.32, 95% CI [0.22, 0.47]). Those who smoked cigarettes were less likely to have good attendance than those who did not (OR: 0.27, 95% CI [0.16, 0.44]), as were those who had tried cannabis in the past year (OR: 0.29, 95% CI [0.21, 0.41]).

**Table 6: Unadjusted odds ratios for predicting good attendance**

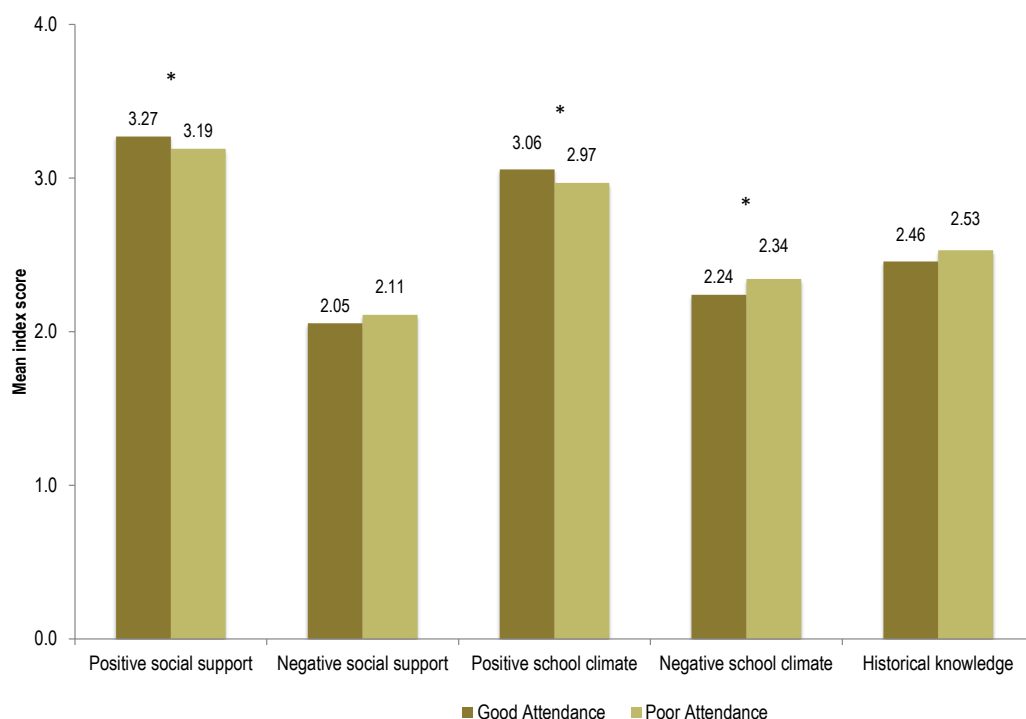
INDICATOR	PERCENT <sup>1</sup>	ODDS RATIO	[95% CI]
<b>DEMOGRAPHIC CHARACTERISTICS</b>			
Male (female = ref)*	51.5	0.820	[0.582, 1.156]
Age group 12–14 (15–17 = ref)*	45.9	<b>2.188</b>	<b>[1.697, 2.822]</b>
Very good/Excellent self-rated physical health (good/fair/poor = ref)*	67.3	<b>1.757</b>	<b>[1.341, 2.303]</b>
<b>PARENTAL EDUCATION*</b>			
Bachelor's or higher	9.3	<b>2.073</b>	<b>[1.309, 3.283]</b>
Some post-secondary	28.3	<b>1.998</b>	<b>[1.328, 3.006]</b>
High school	25.3	<b>1.993</b>	<b>[1.319, 3.013]</b>
Less than high school	24.0	1.00	
<b>NUMBER OF TIMES CHANGED SCHOOL FOR REASONS OTHER THAN NORMAL PROGRESSION*</b>			
2 or more times	13.8	<b>0.516</b>	<b>[0.359, 0.742]</b>
Once	17.5	0.680	[0.450, 1.027]
Did not change schools	59.6	1.00	
<b>HOUSEHOLD CROWDING*</b>			
One person or fewer per room (More than one person per room = ref)	63.8	<b>1.495</b>	<b>[1.065, 2.098]</b>
<b>BARRIER TO ATTENDING SCHOOL*</b>			
Had a barrier (had reliable transportation and school less than 20 minutes away = ref)	40.8	<b>0.725</b>	<b>[0.558, 0.941]</b>
<b>FAMILY-SCHOOL INTERACTIONS*</b>			
Spoke with teachers and attended events	59.7	<b>2.213</b>	<b>[1.222, 4.010]</b>
Spoke with teachers or attended events	19.5	0.968	[0.543, 1.726]
Neither spoke with teachers nor attended events	13.5	1.00	
<b>FAMILY DISCUSSED SCHOOL*</b>			
Several times a week	35.6	<b>1.595</b>	<b>[1.108, 2.297]</b>
Once or several times a month	37.3	1.341	[0.940, 1.914]
Never to a few times per year	20.8	1.00	
<b>FAMILY HELPED WITH HOMEWORK*</b>			
Most or all the time (none or some of the time = ref)	49.1	<b>1.381</b>	<b>[1.033, 1.847]</b>
<b>PARTICIPATION IN CULTURAL ACTIVITIES</b>			
Once or more per week	19.5	1.261	[0.891, 1.785]
Less than 3 times per month	31.2	1.046	[0.725, 1.509]
Does not participate	44.8	1.00	
<b>UNDERSTANDING OF A FIRST NATIONS LANGUAGE</b>			
Relatively well/Very well	21.1	1.075	[0.699, 1.653]
With effort/Basic	18.4	0.730	[0.469, 1.135]
Only a few words	39.7	0.833	[0.595, 1.165]
None/Cannot understand	20.7	1.00	

INDICATOR	PERCENT <sup>1</sup>	ODDS RATIO	[95% CI]
<b>FAMILY RESIDENTIAL SCHOOL ATTENDANCE</b>			
Only parent attended	6.6	0.605	[0.348, 1.053]
Only grandparent attended	41.3	0.703	[0.482, 1.026]
Both parent and grandparent attended	12.8	0.755	[0.397, 1.434]
Neither parent nor grandparent attended	23.2	1.00	
<b>STUDENT BEHAVIOURS</b>			
Had 5+ drinks on at least one occasion in the past year (no = ref)*	23.3	<b>0.317</b>	<b>[0.216, 0.465]</b>
Smoked cigarettes daily or occasionally (no = ref)*	22.0	<b>0.268</b>	<b>[0.162, 0.444]</b>
Tried marijuana, cannabis or hashish in past year (no = ref)*	37.9	<b>0.293</b>	<b>[0.211, 0.405]</b>
* Variable is significant at a <.05 using a Wald F test. <b>Bold</b> indicates individual effect OR is significantly different from 1.00 (a <.05).			
<sup>1</sup> Weighted percentages. Total unweighted N = 2222. Non-response categories are not shown and percentage totals may therefore not sum to 100.			

Figure 6 presents the average scores on the social support, school climate and historical knowledge indicators for youth with good attendance and those with poor attendance. As with the outcome variable of having mostly “As” on the last report card, the differences between the means are in the directions expected given the literature. Those with good school attendance had higher mean scores on positive social support and lower mean scores on negative social support than those with poor attendance, although although the latter difference was not statistically significant.

The differences in positive school climate scores and negative school climate scores were significant, with those with good attendance having higher mean scores on positive school climate (3.06 vs. 2.97) and lower negative climate scores (2.24 vs. 2.34) than those with poor attendance. There was no significant difference on the historical knowledge scale between the two groups. Confidence intervals are provided in the Appendix Tables.

**Figure 6: Mean scores on social support, school climate and historical knowledge, by composite attendance variable**



## Multivariate models

The following tables show the five multivariate models that were estimated for each of the outcome variables: a general model for males and females combined, with gender and age group as cofactors; and four stratified

models examining the same effects for males and females separately with age as a cofactor and for those aged 12–14 and 15–17, separately, with gender as a cofactor.

**Table 7: Logistic regression results predicting having mostly “As” on last report card (full models)**

	ALL YOUTH (UNSTRATIFIED MODEL)	MALES	FEMALES	AGE 12 TO 14	AGE 15 TO 17
INDICATOR	OR [95%CI]	OR [95%CI]	OR [95%CI]	OR [95%CI]	OR [95%CI]
Male	0.550 [0.392, 0.772]	—	—	0.744 [0.503, 1.099]	0.363 [0.242, 0.543]
Female	1.00	—	—	1.00	1.00
Age 12–14	1.944 [1.395, 2.709]	1.873 [1.176, 2.984]	1.702 [1.070, 2.708]	—	—
Age 15–17	1.00	1.00	1.00	—	—
<b>SELF-RATED PHYSICAL HEALTH</b>					
Very good or excellent	1.215 [0.863, 1.710]	1.059 [0.643, 1.744]	1.620 [1.043, 2.515]	1.240 [0.804, 1.913]	1.372 [0.892, 2.111]
Good/Fair/Poor	1.00	1.00	1.00	1.00	1.00
<b>PARENTAL EDUCATION</b>					
University degree	2.530 [1.496, 4.279]	1.437 [0.597, 3.457]	3.823 [1.937, 7.544]	3.388 [1.700, 6.752]	1.431 [0.760, 2.695]
Some post-secondary	2.074 [1.266, 3.398]	1.622 [0.814, 3.231]	2.800 [1.455, 5.389]	3.547 [1.847, 6.809]	1.119 [0.627, 1.997]
High school	1.736 [1.035, 2.910]	1.702 [0.839, 3.453]	1.439 [0.701, 2.955]	2.866 [1.487, 5.527]	0.826 [0.423, 1.613]
Less than high school	1.00	1.00	1.00	1.00	1.00
<b>NUMBER OF TIMES CHANGED SCHOOL FOR REASONS OTHER THAN NORMAL PROGRESSION</b>					
Two or more times	0.954 [0.612, 1.489]	1.476 [0.796, 2.735]	0.666 [0.362, 1.225]	0.877 [0.487, 1.580]	0.856 [0.481, 1.523]
Once	1.046 [0.698, 1.568]	1.137 [0.624, 2.071]	1.041 [0.595, 1.821]	0.685 [0.384, 1.223]	1.270 [0.760, 2.123]
Did not change schools	1.00	1.00	1.00	1.00	1.00
<b>HOUSEHOLD CROWDING</b>					
Not crowded	1.166 [0.787, 1.728]	1.183 [0.713, 1.961]	1.410 [0.855, 2.323]	1.487 [0.922, 2.397]	1.161 [0.748, 1.802]
Crowded (>1 person/ room)	1.00	1.00	1.00	1.00	1.00
<b>BARRIER TO ATTENDING SCHOOL (DISTANCE/TRANSPORTATION)</b>					
Had a barrier to attending school	0.953 [0.677, 1.341]	0.647 [0.382, 1.096]	1.333 [0.861, 2.064]	1.105 [0.693, 1.762]	0.911 [0.625, 1.329]
No barrier	1.00	1.00	1.00	1.00	1.00
<b>FAMILY RESIDENTIAL SCHOOL ATTENDANCE</b>					
Parent attended	2.076 [1.052, 4.096]	3.356 [1.493, 7.544]	1.424 [0.562, 3.610]	3.646 [1.843, 7.211]	0.964 [0.447, 2.080]
Grandparent attended	1.231 [0.860, 1.761]	0.924 [0.534, 1.599]	1.617 [0.954, 2.743]	1.457 [0.867, 2.449]	1.018 [0.645, 1.605]
Both parent and grandparent attended	1.268 [0.643, 2.501]	1.063 [0.405, 2.788]	1.652 [0.729, 3.742]	0.605 [0.200, 1.834]	2.683 [1.457, 4.942]
Neither parent nor grandparent attended	1.00	1.00	1.00	1.00	1.00
<b>FAMILY-SCHOOL INTERACTIONS</b>					
Spoke with teachers and attended events	1.973 [1.050, 3.708]	1.012 [0.499, 2.054]	3.986 [1.794, 8.855]	1.353 [0.598, 3.063]	4.237 [2.015, 8.907]
Spoke with teachers or attended events	1.019 [0.526, 1.972]	0.474 [0.200, 1.127]	1.787 [0.758, 4.214]	0.546 [0.213, 1.400]	2.571 [1.129, 5.857]
Did not interact with school	1.00	1.00	1.00	1.00	1.00
<b>FAMILY DISCUSSED SCHOOL</b>					
Several times a week	1.278 [0.794, 2.058]	1.925 [1.016, 3.644]	1.108 [0.643, 1.907]	1.412 [0.818, 2.438]	1.033 [0.611, 1.747]
Once to several times a month	0.928 [0.576, 1.495]	0.920 [0.479, 1.768]	1.159 [0.667, 2.014]	1.217 [0.710, 2.086]	0.685 [0.418, 1.123]
Never to a few times a year	1.00	1.00	1.00	1.00	1.00
<b>FAMILY HELPED WITH HOMEWORK</b>					
Most or all of the time	0.747 [0.535, 1.045]	0.679 [0.431, 1.071]	0.692 [0.432, 1.108]	0.623 [0.391, 0.992]	1.098 [0.742, 1.623]
None or some of the time	1.00	1.00	1.00	1.00	1.00

	ALL YOUTH (UNSTRATIFIED MODEL)	MALES	FEMALES	AGE 12 TO 14	AGE 15 TO 17
INDICATOR	OR [95%CI]	OR [95%CI]	OR [95%CI]	OR [95%CI]	OR [95%CI]
<b>SCHOOL CLIMATE</b>					
Positive school climate	<b>1.588 [1.139, 2.213]</b>	<b>1.755 [1.083, 2.846]</b>	1.213 [0.816, 1.804]	<b>1.856 [1.191, 2.893]</b>	1.103 [0.734, 1.657]
Negative school climate	0.962 [0.735, 1.259]	1.214 [0.839, 1.757]	0.754 [0.543, 1.047]	0.916 [0.662, 1.267]	1.072 [0.786, 1.461]
<b>SOCIAL SUPPORT</b>					
Positive social support	1.079 [0.792, 1.470]	1.195 [0.768, 1.859]	0.871 [0.563, 1.349]	1.074 [0.722, 1.599]	1.013 [0.669, 1.534]
Negative social support	1.213 [0.937, 1.569]	1.376 [0.970, 1.952]	0.830 [0.563, 1.225]	<b>1.469 [1.043, 2.069]</b>	1.035 [0.706, 1.516]
<b>ALCOHOL USE</b>					
Had 5+ drinks on at least one occasion in the past year	0.620 [0.370, 1.040]	0.398 [0.145, 1.098]	0.928 [0.482, 1.789]	0.563 [0.196, 1.618]	0.629 [0.385, 1.028]
Did not have 5+ drinks on at least one occasion in the past year	1.00	1.00	1.00	1.00	1.00
<b>DRUG USE</b>					
Tried marijuana or hashish in the past year	0.660 [0.415, 1.050]	<b>0.452 [0.234, 0.871]</b>	0.620 [0.353, 1.088]	<b>0.452 [0.251, 0.815]</b>	0.679 [0.437, 1.057]
Did not try marijuana or hashish	1.00	1.00	1.00	1.00	1.00
<b>SMOKING</b>					
Smoked daily or occasionally	<b>0.400 [0.212, 0.757]</b>	0.396 [0.153, 1.027]	0.479 [0.218, 1.055]	0.563 [0.144, 2.204]	<b>0.287 [0.156, 0.529]</b>
Did not smoke	1.00	1.00	1.00	1.00	1.00
<b>ATTENDANCE</b>					
Poor attendance	<b>0.509 [0.336, 0.772]</b>	<b>0.544 [0.307, 0.963]</b>	<b>0.459 [0.254, 0.829]</b>	<b>0.570 [0.345, 0.942]</b>	<b>0.513 [0.297, 0.888]</b>
Mid attendance	0.740 [0.492, 1.115]	1.081 [0.629, 1.859]	<b>0.515 [0.306, 0.866]</b>	0.782 [0.490, 1.247]	0.783 [0.441, 1.390]
Very good attendance	1.00	1.00	1.00	1.00	1.00
<b>PARTICIPATION IN CULTURAL ACTIVITIES</b>					
One or more times a week	1.415 [0.927, 2.161]	1.098 [0.599, 2.014]	<b>2.021 [1.209, 3.379]</b>	<b>2.147 [1.328, 3.471]</b>	0.649 [0.362, 1.165]
Less than 3 times a month	1.143 [0.762, 1.715]	0.895 [0.517, 1.549]	1.398 [0.840, 2.327]	1.654 [0.984, 2.778]	0.725 [0.447, 1.177]
Did not participate	1.00	1.00	1.00	1.00	1.00
<b>UNDERSTANDING OF A FIRST NATIONS LANGUAGE</b>					
Relatively well/Very well	1.068 [0.644, 1.769]	0.963 [0.452, 2.055]	1.308 [0.687, 2.487]	<b>2.129 [1.076, 4.211]</b>	<b>0.441 [0.250, 0.780]</b>
With effort/Basic	0.671 [0.419, 1.074]	1.001 [0.496, 2.020]	<b>0.504 [0.267, 0.953]</b>	0.804 [0.430, 1.501]	0.523 [0.268, 1.019]
Only a few words	0.916 [0.610, 1.374]	1.514 [0.865, 2.649]	<b>0.564 [0.329, 0.967]</b>	1.008 [0.538, 1.890]	0.740 [0.418, 1.311]
None/Cannot understand	1.00	1.00	1.00	1.00	1.00
<b>HISTORICAL KNOWLEDGE</b>					
Historical knowledge	<b>1.809 [1.449, 2.258]</b>	<b>1.989 [1.479, 2.674]</b>	<b>1.576 [1.177, 2.112]</b>	<b>2.162 [1.610, 2.903]</b>	<b>1.622 [1.230, 2.141]</b>
N (unweighted)	2402	1143	1259	1079	1323
Nagelkerke R <sup>2</sup>	0.299	0.343	0.370	0.365	0.300
Note: Models adjusted for non-response categories on some variables; effects are not shown. Effects significant at $\alpha \leq 0.05$ <b>bolded</b> .					

In Table 7, the five full models for the first outcome of having mostly “As” on the last report card are presented. The sub-models are not included in the table, but overall the addition of each block of variables had little effect on the estimates or the significance of the parameters that had already been in the model. Note that for the stratified models, some of the missing value categories of the covariates were excluded from the analysis because of small cell counts. Effects significant at the 0.05 level are bolded.

Controlling for the other effects in the model, gender was significant in the unstratified model. Males were less likely to have mostly “As” than females in the fully adjusted model (OR: 0.55, 95% CI [0.39, 0.77]). Age was significant in the unstratified model and the male- and female-only models. The odds of a First Nations youth aged 12–14 receiving mostly “As” were 94% higher than the odds for a 15–17- year-old (OR: 1.94, 95% CI [1.40, 2.71]) after adjustment for the other effects. Similar effects can be seen in the models for males and females only (see Table 7).

Self-rated health was not significant in most of the full models. In the model-building, it had generally been significant until the perceptions of social support variables were added, indicating that these were accounting for some of the same variance. In the model for females only, those with very good or excellent physical health were more likely to have received mostly “As” (OR: 1.62, 95% CI [1.04, 2.52]).

The education level of parents was one of the clearest predictors of this outcome. In the unstratified model, the effects suggest that the higher the education level of the parents, the more likely youth will have a strong report card. Youth whose parents had not completed high school (the reference category) were the least likely to have mostly “As,” controlling for other factors, and those whose parents who had completed high school were significantly more likely to have received mostly “As” (OR: 1.74, 95% CI [1.04, 2.91]). Those whose parents had a university degree appeared most likely to have mostly “As” (OR: 2.53, 95% CI [1.50, 4.28]) compared to those with less than high school. In the female-only model and the model for those aged 12–14, the effects were similarly strong for most categories, although the gradient of increasing effects at higher levels of education was not as clear. Note that in the male-only model and the model for youth aged 15–17 none of these effects were significant.

The other aspects of households did not have significant independent effects. Having changed school for reasons other than academic progression was not significantly related to a youth having mostly “As” (see Table 7), nor was the Household Crowding index or the variable indicating the presence of a barrier to attending school.

The effects of family experiences of Residential School on report card grades for youth were in the opposite direction to that expected given the literature. In the unstratified model, the model for males only and the models for those aged 12–14, youth whose parents had attended Residential Schools were more likely to have “As” than those who had neither a parent nor a grandparent who attended, controlling for the other effects in the models. In the unstratified model, these effects were fairly strong (OR: 2.08, 95% CI [1.05, 4.10]), and they were stronger in the male-only and age 12–14 models. There were no significant effects of having grandparents who attended, although having both a parent and a grandparent who attended was significant in the model for those aged 15–17 (OR: 2.68, 95% CI [1.46, 4.94]) (see Table 7).

The effects of family interactions with schools were

significant in the unstratified model in which youth whose parents spoke with teachers and attended school-related events had odds of receiving mostly “As” (OR: 1.97, 95% CI [1.05, 3.71]) that were nearly twice those youth whose parents did not interact with the school in either of these ways. This was also the case in the female-only (OR: 3.99, 95% CI [1.79, 8.86]) and the age 15–17 (OR: 4.24, 95% CI [2.02, 8.91]) models. In the older age group, youth whose parents or family members either spoke with teachers or attended events were also more likely to have mostly “As” than those whose families did neither (2.57, 95% CI [1.13, 5.86]).

Discussing school with family members and having help with homework from them were not generally predictive of youth having mostly “As” on their last report card. However, male youth who discussed school with family members several times a week had nearly twice the odds of having mostly “As” (OR: 1.93, 95% CI [1.02, 3.64]) compared with those who discussed school never or only a few times a year. When family helps with homework most or all of the time, youth aged 12–14 had lower odds of having mostly “As,” compared to those with family who helped some or none of the time, but family helping with homework was not significant in any of the other models.

A positive school climate was positively related to having mostly “As” in the unstratified model (OR: 1.59, 95% CI [1.14, 2.21]) among males (OR: 1.76, 95% CI [1.08, 2.85]) and youth aged 12–14 (OR: 1.86, 95% CI [1.19, 2.89]). It was not significant in the female-only or age 15–17 models. A negative school climate was not significant in any of the models.

Social support was generally not related to having mostly “As.” However, in one model there was a significant relationship in the direction opposite to what was expected: Negative social support was positively associated with having mostly “As” in the model for those aged 12–14 (OR: 1.47, 95% CI [1.04, 2.07]).

Youth behaviours had significant effects in several models that were generally in the direction expected. Alcohol use was not significant in any of the models. Having tried marijuana in the past year was associated with lower odds of having “As” among male youth (OR: 0.45, 95% CI [0.23, 0.87]) and those aged 12–14 (OR: 0.45, 95% CI [0.25, 0.82]), and smoking daily or occasionally reduced the likelihood of having mostly “As” in the unstratified (OR: 0.40, 95% CI [0.21, 0.76]) and age 15–17 (OR: 0.29, 95% CI [0.16, 0.53]) models.

The composite attendance variable had significant effects in all the models. In the unstratified model, those with poor attendance were less likely to have mostly “As” (OR: 0.51, 95% CI [0.34, 0.77]) than those with very good attendance, and the effects were similar in all of the models. In the female-only model, those with middle-level attendance were also less likely to have mostly “As” (OR: 0.52, 95% CI [0.31, 0.87]).

Cultural participation was significant in the models for females only and youth aged 12–14. In these models, those who participated in cultural activities weekly had greater odds of having received mostly “As” compared to those who did not participate (OR: 2.02, 95% CI [1.21, 3.38] for females; OR: 2.15, 95% CI [1.33, 3.47] for 12-to-14-year-olds).

Knowledge of a First Nations language had an unclear relationship to having received mostly “As,” controlling for the other variables in the models. This variable was not significant in the unstratified or male-only models, but in the model for females only, the effects of linguistic knowledge on report grades were negative. The odds ratio for “understanding only a few words” was 0.56 (95% CI [0.33, 0.97]) and it was 0.50 (95% CI [0.27, 0.95]) for having a “basic” understanding of a First Nations

language compared to the reference category of having no understanding of a First Nations language. Those aged 12–14 who understood a First Nations language “well” or “very well” had more than twice the odds of having mostly “As” compared to the reference category (OR: 2.13, 95% CI [1.08, 4.21]), while the relationship to grades was, again, negative for those aged 15–17 (OR: 0.44, 95% CI [0.25, 0.78]).

Historical knowledge had a clearly positive relationship with this measure of educational success, and the effect was significant in all of the models (see Table 7). The effects varied somewhat in the models, from an odds ratio of 1.58 (95% CI [1.18, 2.11]) in the model for females, to 2.16 (95% CI [1.61, 2.90]) in the model for those aged 12–14.



**Table 8: Logistic regression results predicting good attendance (full models)**

	ALL YOUTH (UNSTRATIFIED MODEL)	MALES	FEMALES	AGE 12 TO 14	AGE 15 TO 17
INDICATOR	OR [95%CI]	OR [95%CI]	OR [95%CI]	OR [95%CI]	OR [95%CI]
Male	0.821 [0.587, 1.149]	—	—	0.871 [0.562, 1.350]	<b>0.71 [0.500, 0.983]</b>
Female	1.00	—	—	1.00	1.00
Age 12–14	1.257 [0.922, 1.713]	<b>1.495 [1.019, 2.194]</b>	0.923 [0.577, 1.478]	—	—
Age 15–17	1.00	1.00	1.00	—	—
<b>SELF-RATED PHYSICAL HEALTH</b>					
Very good or excellent	<b>1.627 [1.223, 2.165]</b>	1.467 [0.937, 2.295]	<b>1.748 [1.194, 2.560]</b>	1.307 [0.869, 1.967]	<b>2.117 [1.477, 3.036]</b>
Good/Fair/Poor	1.00	1.00	1.00	1.00	1.00
<b>PARENTAL EDUCATION</b>					
University degree	<b>2.009 [1.242, 3.250]</b>	<b>2.645 [1.416, 4.939]</b>	1.420 [0.708, 2.848]	1.722 [0.867, 3.420]	<b>2.249 [1.209, 4.182]</b>
Some post-secondary	<b>1.602 [1.072, 2.394]</b>	<b>2.200 [1.312, 3.689]</b>	1.442 [0.838, 2.483]	1.356 [0.795, 2.313]	<b>1.967 [1.154, 3.351]</b>
High school	<b>1.751 [1.152, 2.662]</b>	<b>2.700 [1.624, 4.489]</b>	0.973 [0.515, 1.838]	1.618 [0.915, 2.860]	1.710 [0.956, 3.057]
Less than high school	1.00	1.00	1.00	1.00	1.00
<b>NUMBER OF TIMES CHANGED SCHOOLS FOR REASONS OTHER THAN NORMAL PROGRESSION</b>					
Two or more times	0.725 [0.477, 1.104]	1.242 [0.700, 2.203]	<b>0.522 [0.301, 0.906]</b>	<b>0.571 [0.335, 0.975]</b>	0.778 [0.424, 1.427]
Once	0.931 [0.619, 1.400]	1.565 [0.942, 2.600]	<b>0.465 [0.274, 0.790]</b>	0.778 [0.466, 1.298]	1.080 [0.673, 1.734]
Did not change schools	1.00	1.00	1.00	1.00	1.00
<b>HOUSEHOLD CROWDING</b>					
Not crowded	1.354 [0.954, 1.923]	1.156 [0.750, 1.781]	<b>1.664 [1.013, 2.734]</b>	1.411 [0.994, 2.003]	<b>1.746 [1.104, 2.761]</b>
Crowded (>1/ person/ room)	1.00	1.00	1.00	1.00	1.00
<b>BARRIER TO ATTENDING SCHOOL (DISTANCE/TRANSPORTATION)</b>					
Had a barrier to attending school	0.852 [0.641, 1.133]	1.419 [0.989, 2.037]	<b>0.536 [0.357, 0.807]</b>	<b>0.577 [0.376, 0.885]</b>	1.323 [0.919, 1.905]
No barrier	1.00	1.00	1.00	1.00	1.00
<b>FAMILY RESIDENTIAL SCHOOL ATTENDANCE</b>					
Parent attended	1.053 [0.590, 1.880]	1.053 [0.510, 2.176]	1.087 [0.429, 2.758]	0.985 [0.489, 1.981]	1.481 [0.792, 2.769]
Grandparent attended	0.958 [0.657, 1.399]	1.162 [0.696, 1.939]	0.808 [0.495, 1.320]	1.655 [0.980, 2.795]	<b>0.538 [0.323, 0.897]</b>
Both parent and grandparent attended	1.082 [0.462, 2.534]	1.373 [0.538, 3.507]	0.583 [0.176, 1.927]	0.613 [0.165, 2.278]	1.415 [0.573, 3.497]
Neither parent nor grandparent attended	1.00	1.00	1.00	1.00	1.00
<b>FAMILY-SCHOOL INTERACTIONS</b>					
Spoke with teachers and attended events	1.140 [0.606, 2.144]	1.191 [0.608, 2.333]	1.295 [0.653, 2.569]	1.733 [0.753, 3.988]	0.954 [0.523, 1.742]
Spoke with teachers or attended events	0.722 [0.387, 1.346]	0.872 [0.429, 1.769]	0.852 [0.436, 1.665]	1.164 [0.503, 2.694]	0.558 [0.303, 1.030]
Did not interact with school	1.00	1.00	1.00	1.00	1.00
<b>FAMILY DISCUSSED SCHOOL</b>					
Several times a week	1.199 [0.796, 1.806]	1.232 [0.683, 2.221]	1.409 [0.776, 2.559]	1.305 [0.767, 2.220]	1.105 [0.651, 1.877]
Once to several times a month	1.152 [0.794, 1.670]	1.378 [0.850, 2.236]	1.076 [0.633, 1.828]	1.004 [0.584, 1.726]	1.236 [0.789, 1.936]
Never to a few times a year	1.00	1.00	1.00	1.00	1.00
<b>FAMILY HELPED WITH HOMEWORK</b>					
Most or all of the time	1.152 [0.830, 1.600]	1.303 [0.866, 1.962]	0.905 [0.594, 1.379]	0.985 [0.657, 1.475]	1.293 [0.853, 1.959]
None or some of the time	1.00	1.00	1.00	1.00	1.00

	ALL YOUTH (UNSTRATIFIED MODEL)	MALES	FEMALES	AGE 12 TO 14	AGE 15 TO 17
INDICATOR	OR [95%CI]	OR [95%CI]	OR [95%CI]	OR [95%CI]	OR [95%CI]
<b>SCHOOL CLIMATE</b>					
Positive school climate	1.118 [0.779, 1.604]	1.165 [0.760, 1.786]	1.345 [0.850, 2.129]	1.111 [0.677, 1.824]	1.159 [0.733, 1.831]
Negative school climate	0.869 [0.689, 1.096]	1.145 [0.829, 1.582]	<b>0.735 [0.550, 0.984]</b>	0.798 [0.599, 1.063]	1.058 [0.786, 1.422]
<b>SOCIAL SUPPORT</b>					
Positive social support	1.090 [0.828, 1.435]	1.529 [0.951, 2.461]	0.826 [0.560, 1.217]	1.310 [0.868, 1.976]	0.938 [0.667, 1.318]
Negative social support	1.152 [0.890, 1.490]	1.317 [0.918, 1.889]	0.952 [0.641, 1.412]	1.169 [0.798, 1.713]	1.056 [0.744, 1.498]
<b>ALCOHOL USE</b>					
Had 5+ drinks on at least one occasion in the past year	0.767 [0.527, 1.117]	0.968 [0.600, 1.560]	<b>0.548 [0.338, 0.891]</b>	1.553 [0.702, 3.433]	0.677 [0.436, 1.050]
Did not have 5+ drinks on at least one occasion in the past year	1.00	1.00	1.00	1.00	1.00
<b>DRUG USE</b>					
Tried marijuana or hashish in the past year	<b>0.495 [0.332, 0.738]</b>	<b>0.318 [0.197, 0.512]</b>	0.600 [0.334, 1.078]	<b>0.478 [0.267, 0.855]</b>	<b>0.457 [0.276, 0.754]</b>
Did not try marijuana or hashish	1.00	1.00	1.00	1.00	1.00
<b>SMOKING</b>					
Smoked daily or occasionally	<b>0.550 [0.354, 0.854]</b>	0.717 [0.438, 1.173]	<b>0.378 [0.194, 0.735]</b>	1.168 [0.427, 3.194]	<b>0.384 [0.251, 0.588]</b>
Did not smoke	1.00	1.00	1.00	1.00	1.00
<b>PARTICIPATION IN CULTURAL ACTIVITIES</b>					
One or more times a week	1.241 [0.856, 1.799]	0.854 [0.461, 1.581]	<b>2.037 [1.189, 3.489]</b>	1.075 [0.659, 1.752]	1.313 [0.768, 2.245]
Less than 3 times a month	0.945 [0.662, 1.350]	0.776 [0.480, 1.253]	1.264 [0.795, 2.011]	1.203 [0.793, 1.825]	0.772 [0.487, 1.226]
Did not participate	1.00	1.00	1.00	1.00	1.00
<b>KNOWLEDGE OF A FIRST NATION LANGUAGE</b>					
Relatively well/Very well	1.108 [0.692, 1.773]	1.051 [0.586, 1.886]	1.169 [0.656, 2.085]	1.052 [0.508, 2.181]	0.870 [0.481, 1.577]
With effort/Basic	0.706 [0.433, 1.149]	0.539 [0.268, 1.082]	0.917 [0.489, 1.721]	0.645 [0.336, 1.238]	0.776 [0.453, 1.330]
Only a few words	0.818 [0.580, 1.153]	0.975 [0.611, 1.554]	0.742 [0.469, 1.174]	0.823 [0.496, 1.364]	0.749 [0.487, 1.150]
None/Cannot understand	1.00	1.00	1.00	1.00	1.00
<b>HISTORICAL KNOWLEDGE</b>					
Historical knowledge	0.833 [0.692, 1.002]	0.768 [0.590, 1.000]	0.974 [0.740, 1.282]	0.890 [0.682, 1.163]	0.834 [0.542, 1.084]
N (unweighted)	2431	1156	1275	1098	1333
Nagelkerke R <sup>2</sup>	0.235	0.262	0.342	0.211	0.328
Note: Models also adjusted for non-response categories on some variables; effects are not shown. Effects significant at $\alpha \leq 0.05$ <b>bolded</b> .					

Similar models were estimated to predict whether a youth had a good score on the composite measure of skipping school, missing class or being late (see *Statistical analysis* subsection under *Methods* for definitions of “good” and “poor” attendance). Models were constructed following a similar procedure, starting with gender, age and self-reported physical health and then adding family and household characteristics, family attendance at Residential School, social supports for learning, school climate, student behaviours and cultural and linguistic knowledge. The full

unstratified model and those stratified by gender and age group are presented in Table 8.

Unlike the models for receiving mostly “As,” gender and age groups were not generally significant predictors of the attendance score. The exceptions were the models for males only and for the age 15–17-year-olds: male youth aged 12–14 were significantly more likely to have a good attendance score than those aged 15–17 (OR: 1.50, 95% CI [1.02, 2.19]), and males aged 15–17 were more likely to have poor

attendance than females aged 15–17 (OR: 0.70, 95% CI [0.50, 0.98]).

Self-rated physical health was significantly associated with attendance, independent of the other variables in the model. In the unstratified model, those with very good or excellent health were more likely to have a good attendance score (OR: 1.63, 95% CI [1.22, 2.17]. This effect was also significant in the female-only (OR: 1.75, 95% CI [1.19, 2.56]) and age 15–17 (OR: 2.12, 95% CI [1.48, 3.04]) models.

As in the previous models, parental education was significantly associated with having good attendance. In the unstratified model, youth whose parent(s) had high school (OR: 1.75, 95% CI [1.15, 2.66]), some post-secondary (OR: 1.60, 95% CI [1.07, 2.39]) or a university degree (OR: 2.01, 95% CI [1.24, 3.25]) had significantly higher odds of having a good attendance score than those whose parents had less than high school. Each of these categories of parental education levels was significant in the model for males only, but none met the criteria for significance in the female-only model. In the age-stratified models, a parent having a university degree (OR: 2.25, 95% CI [1.21, 4.18]) or some post-secondary education was significant for the 15–17-year-olds (OR: 1.97, 95% CI [1.15, 3.35]).

Having to change schools was not a significant predictor of the attendance score in most of the models. Among females, those who changed schools once (OR: 0.47, 95% CI [0.27, 0.79]) and those who changed schools 2 or more times (OR: 0.52, 95% CI [0.30, 0.91]) were less likely to report good attendance than those who had not changed schools. Those aged 12–14 who changed schools 2 or more times (OR: 0.57, 95% CI [0.34, 0.98]) also had significantly lower odds of good attendance than those who had not changed schools.

Living in a crowded household was related to the composite attendance indicator in some models. The crowding index was significant in the female-only model, indicating that female youth who lived in uncrowded households had higher odds of having good attendance than those who lived in households with more than one person per room, after adjustment for the other variables in the models (OR: 1.66, 95% CI [0.36, 0.81]). Youth aged 15–17 who lived in households with one person or fewer per room were also more likely to have good attendance (OR: 1.75, 95% CI [1.10, 2.76]).

The variable indicating the presence of a barrier to attending school was significant only in the models for females (OR: 0.54, 95% CI [0.36, 0.81]) and 12–14-year-olds (OR: 0.58, 95% CI [0.38, 0.89]) in which those who either had a lack of reliable transportation or travelled more than 20 minutes to school were less likely to have had good attendance. In both models, youth who indicated such a barrier had a little more

than half the odds of having good attendance, compared with those who had no such barrier.

A history of family attending Residential School generally did not independently predict school attendance for youth. In the model for youth aged 15–17 years, those who indicated that a grandparent, but not a parent, had attended were less likely to have good attendance (OR: 0.54, 95% CI [0.32, 0.90]), but the other categories of Residential School attendance did not have significant effects.

Unlike the models of receiving mostly “As” on the last report card, there were no significant effects of family– school interaction. Having discussed school with family members and having received help with homework were also unrelated to attendance.

School climate and social support were also not generally associated with attendance. The one exception was the model for females, in which having a negative school climate predicted poor attendance (OR: 0.74, 95% CI [0.55, 0.98]).

Alcohol use was not independently related to this outcome variable except in the model for females, in which having 5 or more drinks on at least one occasion in the past year was associated with poor attendance (OR: 0.55, 95% CI [0.34, 0.89]).

Having tried marijuana in the past year was significant in reducing the odds of good attendance by half in the unstratified model (OR: 0.50, 95% CI [0.33, 0.74]) among those aged 12–14 (OR: 0.48, 95% CI [0.27, 0.86]) and aged 15–17 (OR: 0.46, 95% CI [0.28, 0.75]). Marijuana use in the past year was also negatively associated with good attendance in the male-only model (OR: 0.32, 95% CI [0.20, 0.51]) but not significant in the female-only model. Smoking daily or occasionally also had negative effects in the unstratified model (OR: 0.55, 95% CI [0.35, 0.85]) among females (OR: 0.38, 95% CI [0.19, 0.74]) and those aged 15–17 (OR: 0.38, 95% CI [0.25, 0.59]).

Cultural participation was generally not associated with good attendance. However, among youth aged 12–14, those who participated in cultural activities one or more times per week had twice the odds of good attendance as those who did not (OR: 2.04, 95% CI [1.19, 3.49]), although participating less than 3 times per month was not significant compared to those who did not participate at all. There was no evidence of a general relationship of linguistic knowledge to the attendance score, and historical knowledge was also unrelated to attendance in these models (see Table 8).



## Discussion



In this report, data from the FNREEES was used to examine factors associated with school success among First Nations youth aged 12–17. The focus was on two measures of school success: having received mostly “As” on the last report card and having a good attendance score as measured by a composite of lateness, skipping class and missing school variables. These outcomes represent positive aspects of school success, and the multivariate models were constructed to identify the relationships between a range of factors and these positive outcomes.

Following the FNHLLM and the previous literature, the focus was on three main questions discussed below.

1. What are the characteristics of youth, families, households and schools that affect school success among First Nations youth?

The FNREEES data provide evidence of several important factors. Among youth, age and gender were important predictors of the likelihood of receiving high marks on report cards (mostly “As”), with females and younger youth (aged 12–14) more likely to receive high marks. Although the bivariate relationships among elements of attendance (skipping class, missing school and being late) were related to age, they were not as clearly related to gender. When we examined the predictors of “good” attendance in the multivariate models rather than differentiating between levels of poor attendance, the effects of age were significant only among males, with younger male youth more likely to have good attendance. Among older youth, females were more likely to have good attendance than were males.

The physical health of youth was included as a control variable in the models. Some of the reasons for lateness and missing school most commonly given were related to health, including illness and attending medical appointments. Indeed, youth who had worse physical health were generally less likely to have good attendance scores, independent of other factors. However, no relationship between very good or excellent physical health and receiving mostly “As” was found in the multivariate models, with the exception of the model for females only.

We included two measures of school climate: a positive measure that captured whether youth felt safe, happy and

supported and a negative one identifying whether racism, substance use or bullying was a problem at school. School climate appears to have different relationships to grade outcomes and attendance. In the bivariate models, youth who experienced a positive school climate were more likely to receive mostly “As” on their report card and to have better attendance scores. This relationship remained predictive of students having mostly “As” in most of the multivariate models but was not predictive of attendance. A negative school climate, measured by the presence of racism, bullying or substance use, had a bivariate association with poor attendance but not with poor grades. In the multivariate models, a negative school climate predicted poor attendance among females only.

The behaviours of youth in relation to alcohol, drugs and smoking were related to grades and attendance, although they did not always remain once other factors were controlled, and they were not important for all subgroups. Smoking had the most reliably significant effect, but this suggests that more work should be done to unpack how these behaviours might impact differently among males and females and among older and younger youth.

Attendance at school, measured by the composite arriving late, skipping class and missing school variable, was an important negative predictor of having mostly “As.” This was significant in all models when controlling for other factors.

The characteristics of families were also important. Of all the factors assessed here, perhaps the most important is the education level of parents. Youth whose parent(s) had a higher education were more likely to receive “As” on their report card and to have good attendance scores compared to those whose parents had less than high school. This bivariate relationship was retained once a range of other factors was controlled, and existed in most models. Importantly, this relationship is retained when characteristics of family support or learning are controlled.

Other aspects of households that might present barriers to educational success were not found to have independent effects. Having changed schools, which could reflect other dynamics in addition to household mobility, was not a reliable independent predictor of youth having mostly “As” or having good attendance scores in most models, although

it was negatively associated with good attendance among females. Having unreliable transportation to school or having to travel longer than 20 minutes to attend school was a predictor of attendance among females and younger youth, but it was not an independent predictor of grades. Although some previous literature had suggested that household crowding might be a barrier to success in other contexts, we did not generally find evidence that it was related to the likelihood of First Nations youth receiving mostly “As,” although it was negatively associated with the attendance variable in models for females and those aged 12–14.

Although there is reason to expect that Residential School might have intergenerational effects on the educational success of youth, we did not find strong evidence of this. In some models, there were significant effects of having a parent or grandparent attend Residential School; however, these were not consistent. In some models, the effects were in a direction opposite to what was expected given the literature. Any effects of a parent or grandparent who attended Residential School that could impact on the educational experience of youth would be mediated by a range of other factors, such as family income or education level of parents, so it could be that these effects were masked by the inclusion of other factors in the model. However, these bivariate relationships were also not significant, suggesting that there might not be detectable effects in these types of quantitative models.

2. What is the relationship between success at school and other domains of knowledge, including knowledge of Indigenous traditions, languages, culture and history?

We included measures of youth participation in cultural activities and knowledge of First Nations languages, history and rights in the models. Cultural participation was not a consistent independent predictor of educational success, although participation had positive effects on report card marks among females and those aged 12–14, and these effects were stronger as participation increased. Among females, those who participated in cultural activities on a weekly basis were also more likely to have had “good” attendance, controlling for other factors.

Historical knowledge was reliably related to having mostly “As” on the last report card in all models. This might be, at least partly, because this knowledge is reflected in the school curriculum. It was not related to school attendance. Linguistic knowledge was a much less reliable predictor; there was one model (12–14-year-olds) in which knowledge of a First Nations language had a significant positive relationship with receiving mostly “As” on the last report card but the relationship was negative in other models.

Further research is required to understand the role of First Nations languages in the educational success of First Nations youth. This was the major conclusion of a recent study that used the 2012 APS and found negative associations between school outcomes and linguistic knowledge among young First Nations adults (aged 17–25) living off reserve. These were no longer significant after controlling for a number of possibly confounding factors, including education levels of parents and family attendance at Residential School, leading to the conclusion that the negative associations might be spurious (i.e., due to confounding factors) (Guèvremont & Kohen, 2017b). The study also found that young adults who had been taught an Indigenous language at school but could not speak it were less likely to have received mainly “As” on their last report card. The authors suggest that this might be due to the fact that an Indigenous language might be part of the curriculum in many First Nations schools and that those who do not speak or understand the language well might therefore receive poor grades.

3. What aspects of social support for learning lead to better outcomes in school among First Nations youth?

The FNREEES data included several measures of support for learning from parents, families and others. In several models, having parents, caregivers or other family members who attended school events or spoke with their teachers was positively associated with receiving high marks on report cards. This factor was not independently related to attendance, however. Other measures of support for learning—receiving help with homework and discussing school with family members—were not significantly related to these outcomes in most models, although there is some evidence of a relationship between discussing school with family members and receiving “As” among male youth.

Measures of positive and negative social support were also included, with the expectation that positive social support (having family and friends to count on) would be positively related to success at school while negative social support (feeling as though there is no one who can help) would be a barrier to success. In the end, no evidence was found of independent effects of positive social support; but in one model (12–14-year-olds), negative social support was positively related to receiving mostly “As.”



## Conclusion



Although the FNREEES data currently provide the best opportunity to examine formal school outcomes among First Nations youth, we acknowledge that there are some limitations to the data and to our use of them to address these questions. One is that the survey is cross-sectional and, therefore, impossible to ascertain causal relationships between the predictor variables and educational outcomes. Another is that the measures used here, including predictors and outcome measures, are based on self-reports of youth themselves. This might account for some of the missing data seen across the questions in the survey.

The research that is presented here is in some ways exploratory. It was guided by general research questions about the factors that affect school success, and it used a set of indicators that were suggested by the FNHLLM, the previous research, and by the availability of measures in the FNREEES dataset. In general, the results are similar to those that have come from other large datasets, mainly the Aboriginal Peoples Survey. In that research and in this study, some of the factors examined had the expected relationships to the educational attainment outcomes, while others were either unrelated or had relationships that were in the opposite of the expected direction. This is useful and, in the case of the present report, the only contemporary examination of educational success among First Nations youth living in First Nations communities. Future research, however,

might more explicitly examine the interrelationships among these factors, including how some might mediate or moderate the effects of others and to consider other aspects of school, family or community contexts.

In consideration of the FNHLLM's acknowledgement that a First Nations perspective on learning encompasses several domains of knowledge, many of which go beyond formal classroom settings, it must be noted that this study relies on commonly accepted Western measures of educational success: high grades and good attendance. Future research that examines additional educational outcomes and correlates—as defined and understood in the context of First Nations peoples and their communities—would be a valuable complement to this study. Perhaps, with movement towards more self-determination in education, as called for in the Truth and Reconciliation Commission's Calls to Action and the United Nations Declaration on the Rights of Indigenous Peoples, additional First Nations indicators of formal and informal educational success will be accepted and incorporated into future surveys and research on the topic.



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## Appendix Tables



**Table A1: Grades on last report card, by gender and age group**

Gender and age	Mostly "As"		Mostly "Bs"		Mostly "Cs" or below	
	%	[95%CI]	%	[95%CI]	%	[95%CI]
<b>FEMALES</b>						
12–14	27.0	[22.3, 32.3]	41.7	[35.6, 48.1]	31.3	[25.2, 38.1]
15–17	19.1	[14.9, 24.1]	39.9	[34.8, 45.3]	41.0	[34.8, 47.5]
Total	22.9	[19.6, 26.5]	40.8	[36.5, 45.3]	36.3	[31.5, 41.5]
<b>MALES</b>						
12–14	23.8	[18.5, 30.2]	43.1	[37.0, 49.5]	33.0	[27.4, 39.2]
15–17	9.8 <sup>E</sup>	[6.9, 13.7]	37.9	[32.0, 44.2]	52.3	[45.9, 58.6]
Total	15.6	[12.3, 19.5]	40.1	[35.5, 44.8]	44.4	[39.6, 49.3]
<b>MALES AND FEMALES</b>						
12–14	25.4	[21.8, 29.5]	42.4	[38.2, 46.8]	32.1	[28.1, 36.5]
15–17	13.9	[11.2, 17.1]	38.8	[34.3, 43.5]	47.3	[42.1, 52.6]
Total	19.0	[16.5, 21.7]	40.4	[37.0, 43.9]	40.6	[36.7, 44.6]
Note: <sup>E</sup> High sampling variability, interpret with caution.						

**Table A2: Number of days arrived late per month, on average, by gender and age group**

Gender and age	None		1–2 days		3–5 days or more	
	%	[95%CI]	%	[95%CI]	%	[95%CI]
<b>FEMALES</b>						
12–14	31.9	[26.5, 37.8]	31.1	[25.1, 37.7]	37.0	[30.9, 43.6]
15–17	24.5	[19.7, 29.9]	24.9	[19.9, 30.6]	50.7	[44.4, 56.9]
Total	28.0	[23.9, 32.4]	27.8	[23.7, 32.3]	44.2	[39.6, 48.9]
<b>MALES</b>						
12–14	31.7	[25.4, 38.7]	32.0	[27.1, 37.2]	36.4	[29.7, 43.6]
15–17	24.2	[19.4, 29.8]	29.0	[23.1, 35.6]	46.8	[40.4, 53.4]
Total	27.3	[23.3, 31.8]	30.2	[26.1, 34.7]	42.5	[37.6, 47.5]
<b>MALES AND FEMALES</b>						
12–14	31.8	[27.6, 36.3]	31.5	[27.7, 35.6]	36.7	[32.2, 41.1]
15–17	24.3	[20.8, 28.2]	27.1	[22.8, 31.9]	48.6	[43.7, 53.4]
Total	27.6	[24.7, 30.8]	29.1	[25.9, 32.4]	43.3	[39.9, 46.8]

**Table A3: Number of days of school missed per month, on average, by gender and age group**

Gender and age	None		1–2 days		3–5 days or more	
	%	[95%CI]	%	[95%CI]	%	[95%CI]
<b>FEMALES</b>						
12–14	18.6	[15.2, 22.5]	38.9	[32.6, 45.5]	42.6	[35.8, 49.7]
15–17	17.4	[13.4, 22.3]	27.9	[23.1, 33.3]	54.6	[47.7, 61.4]
Total	18.0	[15.0, 21.4]	33.2	[28.8, 37.8]	48.9	[43.5, 54.3]
<b>MALES</b>						
12–14	21.5	[17.4, 26.3]	41.8	[35.4, 48.5]	36.7	[30.1, 43.9]
15–17	20.0	[15.4, 25.7]	28.1	[22.7, 34.1]	51.9	[46.0, 57.7]
Total	20.7	[17.3, 24.5]	33.8	[29.4, 38.5]	45.6	[40.9, 50.3]
<b>MALES AND FEMALES</b>						
12–14	20.0	[17.1, 23.2]	40.3	[35.7, 45.0]	39.8	[35.0, 44.7]
15–17	18.9	[15.6, 22.6]	28.0	[23.9, 32.5]	53.1	[48.6, 57.6]
Total	19.4	[17.0, 22.0]	33.5	[30.1, 37.1]	47.2	[43.6, 50.8]

**Table A4: Number of days skipped classes per month, on average, by gender and age group**

Gender and age	None		1–2 days		3–5 days or more	
	%	[95%CI]	%	[95%CI]	%	[95%CI]
<b>FEMALES</b>						
12–14	75.6	[70.5, 80.0]	19.2	[15.1, 24.1]	5.2 <sup>£</sup>	[3.7, 7.3]
15–17	52.5	[45.3, 59.5]	23.4	[18.7, 28.9]	24.1	[19.5, 29.3]
Total	63.3	[58.8, 67.7]	21.4	[18.2, 25.1]	15.2	[12.6, 18.3]
<b>MALES</b>						
12–14	74.0	[67.2, 79.8]	15.6 <sup>£</sup>	[11.1, 21.6]	10.4 <sup>£</sup>	[6.9, 15.3]
15–17	50.9	[44.2, 57.5]	25.6	[20.2, 31.9]	23.5	[18.5, 29.4]
Total	60.3	[55.5, 65.5]	21.5	[17.5, 26.1]	18.2	[14.6, 22.3]
<b>MALES AND FEMALES</b>						
12–14	74.8	[70.8, 78.5]	17.5	[14.4, 21.0]	7.7	[5.8, 10.3]
15–17	51.6	[46.9, 56.3]	24.6	[20.8, 28.9]	23.8	[20.4, 27.6]
Total	61.8	[58.4, 65.0]	21.5	[18.9, 24.3]	16.8	[14.5, 19.3]

Note: <sup>£</sup> High sampling variability, interpret with caution.

**Table A5: Mean scores on social support, school climate and historical knowledge, by report card outcome**

Indicator	Mostly "As"		Mostly "Bs" or below	
	Mean	[95%CI]	Mean	[95%CI]
Positive social support	3.29	[3.24, 3.35]	3.21	[3.17, 3.25]
Negative social support	2.07	[1.98, 2.16]	2.08	[2.02, 2.14]
Positive school climate	3.13	[3.01, 3.19]	2.98	[2.95, 3.01]
Negative school climate	2.21	[2.09, 2.34]	2.32	[2.27, 2.36]
Historical knowledge	2.74	[2.62, 2.85]	2.43	[2.36, 2.50]

**Table A6: Mean scores on social support, school climate and historical knowledge, by composite attendance variable**

Indicator	Good attendance		Poor attendance	
	Mean	[95%CI]	Mean	[95%CI]
Positive social support	3.27	[3.23, 3.32]	3.19	[3.15, 3.24]
Negative social support	2.05	[1.98, 2.13]	2.11	[2.05, 2.17]
Positive school climate	3.06	[3.01, 3.10]	2.97	[2.93, 3.01]
Negative school climate	2.24	[2.17, 2.31]	2.34	[2.29, 2.40]
Historical knowledge	2.46	[2.38, 2.53]	2.53	[2.45, 2.61]



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